Catalogue

Version management

Publishing date	Applicant	Application item	Content
2017-12-01	Guo Tianyi	M7 benchmarking item	Increase chapters 2.15, 2.16, 2.1.4, 2.5.20, extend the fields of 1.5.14 and 2.8.1.
2017-12-0	Di		Increase chapter 2.1.5, S+265

5	Jingjing		
2017-12-14	Di Jingjing		Increase 1.1.36 obtain the setting template of the frame rate,
2017-12-18	Guo Tianyi	M7 benchmarking item	1. 2.3.31 extend S+, 2. increase 2.5.21, 2.16.4 2. Modify the protocol mode of 2.16.1, 2.16.2, 2.16.3
2017-12-18	Di Jingjing		3. Update 1.1.36, increase video standard parameters
2017-12-26	Guo Tianyi	M7 benchmarking item	1. Extend 1.3.9, 1.3.11, 2.15.1, 2.15.4, 2.16.1 2. Modify 2.3.31
2017-12-26	Liu Jianfeng	Skyeye item	1. Increase 1.8.10, 2.14.47, 2.14.28, 2.14.49, 2.14.50 2. Modify 1.9.4, 1.9.5, 2.14.1, 2.14,2, 2.14.15, 2.14.16, 2.14.17, 2.14,19, 2.14.2, 2.14.22, 2.14.25, 2.14.36, 2.14.38, 2.14.39, 2.14.40,2.14.42, 2.14.43
2017-12-28	Li Jingfang		1. Modify 2.14.28 protocol head LicenseSetting spelling error
2018-01-05	Guo Tianyi	M7 benchmarking	1. Modify 1.3.12,2.3.32,2.4.1,2.16.3 2. Increase 2.3.40, 2.5.22
2018-01-17	Guo Tianyi	M7 benchmarking	Modify 2.3.31, 2.3.32, 2.15.1
2018-01-23	Guo Tianyi	M7 benchmarking	Modify 2.3.31, 2.3.32
2018-01-23	Liu Jianfeng	Skyeye item	1.Modify 2.14.21, 2.14.22, increase non-snap lines 2. Increase 2.14.51 analogue trigger snap—use of traffic camera
2018-1-29	Guo Tianyi	M7 benchmarking	1. Increase 2.5.23
2018-2-5	Yang Pengfei	Skyeye item	1. Modify 1.1.35
2018-2-5	Liu Xiuqi	Skyeye item	1. Increase 2.14.0 type explanations 2. Modify 2.14.17, 2.14.18, 2.14.19, 2.14.20, 2.14.50
2018-2-5	Wang Huijie	Skyeye item	1. Modify 2.14.42, 2.14.43
2018-2-5	Guo Tianyi	M7 benchmarking	1. Increase 2.5.24
2018-2-9	Liu Jianfeng	Skyeye item	1. Modify 1.1.31, increase ITS information 2. Increase 1.14.52 3. Modify 2.14.46, 1.3.1 4. Modify 2.14.42, 2.14.43
2018-2-10	Liu Jianfeng	Skyeye item	1. 2.3.16 increase ITS_CHN ITS_SNAP,ITS_SYS, ITS_DOMDEV
2018-3-8	Liu Jianfeng	Skyeye item	1. Increase 2.14.53 2. Modify 2.14.37, 2.14.25, 2.14.32, 2.14.30, 2.14.46
2018-3-14	Liu Jianfeng	Skyeye item	1.cgi modify <analogTriggerInterval> analogue trigger interval range in 2.14.35 2. Increase 2.14.53 realize all coil trigger information default value as zero 3. Increase 2.14.54 set single coil trigger information default value as zero
2018-3-19	Guo Tianyi	M7 benchmarking item	1. Increase 2.1.6 2.1.7 2. Modify 2.15.1-2.15.5 support channel number
2018-3-21	Guo Tianyi	M7 benchmarking item	1. Modify 1.1.2 increase manually setting DNS field 2. Increase 2.1.8 increase obtaining results of video parameters

			3. Modify protocol format of 2.1.7, put keywords before channel No.
2018-3-26	Jiao Zan	Skyeye item	1. Increase 2.14.55 2. Modify 2.3.1, 2.14.0, 2.14.26, 2.14,36 Modify 2.14.38, 2.14.39, 2.14.40, 2.14.42, 2.14.43, 2.14.44 increase type
2018-3-28	Jiao Zan	Skyeye	1.Modify 2.14.26 two types of English translation 2. Modify 2.14.55 two types of English translation
2018-4-8	Jiao Zan	Skyeye	1. Modify 2.14.38 increase testSpeedEnabled 2. Modify 2.14.39 increase testSpeedEnabled 3. Modify 2.14.36 increase notes
2018-4-8	Guo Tianyi	M7 benchmarking	1. Whether IPC supports cloud upgrading 1.6.1 featured alert alarm interaction reuse old protocol 1.6.2 featured alert defense time reuse old protocol 2.3.31 featured alert capabilities and relevant contents, etc. 2. Increase 1.1.37 DHCP 2.3.41 obtain screen resolution list 2.3.42 obtain/set current resolution 2.7.41-47 featured alert and relevant contents
2018-4-11	Guo Tianyi	M7 benchmarking	1.1.11 extend manual DNS or not, 1.6.1 extend featured alert parameters under the white light interaction enabling, 2.3.18 reason for extending P2P not being on line 2.3.42 delete a useless XML field (voDevId), 2.7.47 delete two useless XML fields (channels)(scene), 2.3.43 increase obtaining all current screen resolution 2.3.44 increase IPC version information 2.7.43 increase explanations on key parameters
2018-4-12	Lin Yan	Skyeye	1.Modify 2.14.55 description
2018-4-16	Guo Tianyi	M7 benchmarking	1. 1.1.37 modify interface in URL to be interfaces 2. 2.3.31 extend capability set field 3. 2.7.46 delete the effective alert type field 4. 2.15.4 increase status code 5. 2.7.48 increase obtaining/setting currently effective alert type
2018-4-17	Guo Tianyi	M7 benchmarking	1. 2.7.46 url increases type
2018-4-17	Li Yunfei		1. Modify 1.1.31 increase 232 and 485 number
2018-4-19	Liu Xiuqi	Skyeye	1. Modify license plate supplementary lighting CGI protocol, increase exposure type
2018-4-25	Xu Xindi	Skyeye	1. Modify 2.2.16, 2.2.17, 2.2.18, 2.14.10 increase type
2018-4-25	Guo Tianyi	M7 benchmarking	1. Modify field: 2.7.43 mode under algorithm type; 2.7.46 distinguish target type and detection mode; 2. Modify notes: 1.1.10, 1.1.13, 1.1.27, 1.2.5, 1.5.2, 1.5.6, 2.3.5, 2.3.8, 2.3.27, 2.5.14, 2.5.17, 2.7.3, 2.7.17, 2.7.40, 2.7.45, 2.13.1 3.Increase notes: 1.1.1, 1.1.8, 2.12.11
2018-4-27	Jiao Zan	Skyeye	1. Increase 2.14.37 type
2018-5-2	Li Yunfei	Skyeye	Modify 2.14.5 protocol; the length limit of junction name characters is extended from 63 to 93
2018-5-2	Jiao Zan	Skyeye	1. Modify 2.14.44 protocol to obtain single-lane illegal parking region; 2. Increase 2.14.57 set obtaining multi-lane illegal parking region protocol 3.Modify 2.14.25 increase vehicle type
2018-5-3	Wang		1. Modify 2.14.55 and 2.14.26

	Jiadong		
2018-5-11	Jiao Zan	Skyeye item	1. Increase obtaining equipment registration status
2018-5-11	Guo Tianyi	Benchmarking	Increase: 1.1.38 obtain front-end basic properties, 2.7.49 intelligent analysis pause, 2.7.50 intelligent analysis recovery Modify: 1.5.14 increase two fields, 1.6.1 modify featured alert comment, 2.3.29 increase a hot standby status code, 2.3.32 increase a field, 2.7.46 modify and distinguish target fields
2018-5-14	Wang Jiadong	Skyeye	Modify: 2.14.26, increase vehicle front and rear detection Modify: 2.14.55, increase vehicle front and rear detection
2018-5-21	Guo Tianyi	M7	1. Modify 2.15.5 increase status description
2018-5-21	Wang Jiadong	Skyeye	1. 2.14.45 lane type increases pedestrian crossing
2018-5-21	Jiao Zan	Skyeye	1. 2.3.9 increase version type
2018-5-23	Han Yongqiang	V300 miniaturization item	1. Increase 2.2.43 image parameter summarization protocol
2018-5-24	Di Jingjing		1 Increase 1.7.3 obtain white light
2018-5-24	Jiao Zan	Skyeye	1. Increase 2.14.25 vehicle type
2018-5-29	Han Yongqiang	V300 miniaturization item	1. Update 2.2.43 protocol, increase Brightness field
2018-5-29	Di Jingjing	Universal	1、Increase 2.2.44 minimum exposure time 2、Extend 2.3.31 equipment channel capability set
2018-6-6	Di Jingjing	Universal	1、Extend 1.7.2 obtain parameters of transferring color to black 2、Extend 2.3.31 equipment channel capability set
2018-6-11	Di Jingjing	Alert gun item	1、Increase 2.2.45 obtain/set equipment NP system
2018-06-12	Guo Tianyi	M7	1、Increase video recording status notes of 2.5.1 2、Extend 2.1.1 event parameter template enabling under audio and video parameters, 2.6.6 current mode under transferring color to black
2018-06-13	Guo Tianyi	M7	1、 Increase one XML field of 1.5.8 2、 Modify explanations on key parameters in 2.7.42, 2.7.46
2018-6-21	Di Jingjing	Universal	1、 Extend 2.1.1 meaning of SVC field 2、 Increase 2.7.9 target detection sensibility level
2018-6-22	Di Jingjing	Universal	1. Increase 2.13.2 manually control equipment status protocol
2018-6-27	Di Jingjing	Universal	1. Supplement 2.7.9 explanations on scene field in protocol
2018-6-29	Di Jingjing	Universal	1、Modify 1.7.2 obtain meaning of IR lamp control mode in parameters of transferring color to black
2018-07-3	Guo Tianyi	M7	3、 Increase type of obtaining alarm status, including: old alert, perimeter alert, trip-line alert, illegal parking, parking space guard, safety helmet.
2018-7-5	Xu Xindi	Skyeye	1、Increase analogue trigger increase lane selection
2018-08-13 2018-08-1	Mao Heyu, Fan	M7 super-fusion item	1、Increase 2.3.47 typed equipment restart 2、Increase 2.14.58 bayonet equipment parameters (single-channel)

3	Dongdong		3、Increase 2.14.59 bayonet equipment parameters（multi-channel） 4、Increase 2.14.60 lane management junction/place parameters（single-channel） 5、Increase 2.14.61 lane management junction/place parameters（multi-channel） 6、Increase 2.14.62 lane management lane/detection region parameters（single-channel） 7、Increase 2.14.63 lane management lane/detection region parameters（multi-channel） 8、Increase 2.14.64 upload setting parameters 9、Increase 2.14.65 host machine No. 10、Increase 2.14.66 picture deletion strategy 11、Increase 2.14.67 query bayonet data 12、Increase 2.14.68 total query bayonet data 13、Increase 2.14.69 delete bayonet data 14、Increase 2.14.70 modify bayonet query data 15、Increase 2.14.71 obtain bayonet query condition capability set
2018-08-13	Fan Dongdong, Mao Heyu	M7 super-fusion item	1、Extend 1.6.1 event interaction extension human face identification part 2、Extend 1.6.2 event interaction extension human face identification part 3、Extend 2.7.19 query statement 4、Extend 2.7.23 export statement 5、Increase 2.7.51 human face configuration channel enabling status 6、Increase 2.7.52 human face identification alarm parameters 7、Increase 2.7.53 human face identification base parameters 8、Increase 2.7.54 batch obtain human face identification base parameters 9、Increase 2.7.55 import human face base 10、Increase 2.7.56 export human face base 11、Increase 2.7.57 progress of importing/exporting human face base 12、Increase 2.7.58 synchronize human face base to front-end for obtaining 13、Increase 2.7.59 synchronize human face base to front-end for setting 14、Increase 2.7.60 import human face basemap picture 15、Increase 2.7.61 manage human face basemap picture 16、Increase 2.7.62 query human face information 17、Increase 2.7.63 identify human face import picture from group photo 18、Increase 2.7.64 identify human face identification results from group photo 19、Increase 2.7.65 map query human face information sending conditions 20、Increase 2.7.66 map query human face information obtaining results 21、Increase 2.7.67 export human face basemap 22、Increase 2.7.68 release transaction cache data 23、Increase 2.7.69 target alarm statistics 24、Increase 2.7.70 target alarm details 25、Increase 2.7.71 channel alarm statistics 26、Increase 2.7.72 obtain single-channel front-end

			human face identification capability set 27、Increase 2.7.73 obtain super-brain performance 28、Increase 2.7.74 obtain quantity of new alert sounds
2018-8-22	Chang Guoxing	@XM20180111-TJ traffic management bureau guarantee item	1、Extend 2.14.51，Type 2.
2018-9-4	Chang Guoxing	XM20180111-TJ traffic management bureau guarantee item	1、Extend 2.14.24, 2.14.25 increase queuing length of flow statistics
2018-8-29	Chang Guoxing	XM20180111-TJ traffic management bureau guarantee item	1、Extend 2.14.36 increase vertical snap enabling
2018-09-04	Mao Heyu	Chao Ronghe	Increase 2.7.75 and 2.7.76
2018-08-22	Jiao Zan	XM20180090-4K structured item	1、 Extend 1.5.14，increase intelligent analysis type, structured algorithm. 2、 Extend 1.6.1，increase defense and alarm interaction type，vehicle detection, mixed target detection, license plate shielding 3、 Extend 1.7.2，increase setting of type of transferring color to black，supplementary lighting mode 4、 Increase 2.7.75，structured algorithm protocol; 5、 Increase 2.7.77，target picture protocol; 6、 Increase 1.1.39，structured algorithm mode switchover protocol; 7、 Extend 2.7.36, intelligent analysis algorithm start type，structured 8、 Extend 2.3.31，increase channel capability level type，client side drawing human face 9、 Extend 2.7.19 and 2.7.23，increase statement query and export type 10、 Extend 2.3.1，increase character size type 128*128 Extend 2.12，increase size properties
2018-09-07	Jiao Zan	XM20180090-4K structured item	1. Extend 1.5.14，increase intelligent analysis type, increase algorithms of vehicle detection, mixed target detection, and license plate shade detection. 2. Extend 1.6.1 and 1.6.2，increase defense and alarm interaction type，vehicle detection, mixed target detection, license plate shielding, FTP server exception 4、 Extend 2.7.36，intelligent analysis algorithm start type，vehicle detection, mixed target detection, and license plate shade detection 5、 Increase 2.7.79 vehicle detection protocol 6、 Increase 2.7.80 mixed target detection protocol 7、 Increase 2.7.81 license plate shade detection protocol 8、 Extend 2.7.12，increase push graph strategy timing mode
2018-09-10	Fan Dongdo	M7 super-fusion	1、Extend 2.7.1 obtain alarm information type 2、Modify 2.7.56 human face base export

	ng, Mao Heyu	item	3、Increase 2.7.81 human face base export is divided into two protocols 4、Modify 2.7.59 increase deletion command 5、Modify 2.7.61 increase human face picture path 6、Extend 2.8.1 obtain alarm status type
2018-09-13	Jiao Zan	XM20180090-4K structured item	1. Extend 2.7.19, increase the type of query content being unknown
2018-9-18	Jiao Zan	Structured	1. Modify 2.7.36, 2.7.12, 2.7.78, 2.7.79, 1.5.14, 2.7.1, 2.8.1
2018-09-10	Fan Dongdong	M7 super-fusion item	1、Extend 1.5.1 set obtaining intelligent analysis algorithm start parameters 2、Extend 1.5.14 set obtaining intelligent analysis algorithm capability set 3、Extend 1.6.1 set obtaining alarm interaction parameters 4、Extend 1.6.2 set obtaining defense time parameters 5、Extend 2.3.9 obtain equipment version information 6、Extend 2.7.1 obtain alarm information parameters 7、Extend 2.7.2 set alarm information clearing 8、Extend 2.7.6 set obtaining license plate identification parameters 8、Extend 2.7.36 set obtaining intelligent analysis algorithm start parameters 9、Extend 2.7.40 obtain intelligent analysis algorithm capability set 10、Extend 2.7.54 batch obtain human face identification base parameters 11、Increase 2.7.82 set obtaining safety helmet parameters
2018-9-18	Jiao Zan	Structured	1. Modify 1.5.14, increase structured algorithm mode type 2. Delete 2.7.78 vehicle detection protocol 3. Modify 2.7.79 mixed target detection protocol, extension mode type, comprehensive quality parameters
2018-09-25	Fan Dongdong, Mao Heyu	M7 super-fusion item	1、Modify 2.7.64 query analyzed human face results 2、Modify 2.7.20 black and white license plate obtaining and setting 3、Modify 2.7.7 parking space guard obtaining and setting
2018-09-29	Ping Xinxin	XM20180090-4K structured item	1、2.7.23 Export list protocol increase export language field（language）
2018-09-29	Fan Dongdong	M7 super-fusion item	1、Extend 1.6.1 increase shm alarm
2018-10-11	Jiao Zan	XM20180090-4K structured item	1. Extend 2.8.1, increase FTP server exception alarm status type
2018-10-11	Ping Xinxin	XM20180090-4K structured	1. 2.3.31 whether support the illuminance of white light
2018-10-18	Jiao Zan	XM20180090-4K structured item	1. Extend 2.2.30, increase opt properties report exposure mode list 2. Extend 2.2.16, increase the maximum and minimum aperture setting
2018-11-02	Cai Zhaoxu	XM20180119-16CV500 front-end seriation	1. 2.7.53 Extend threshold and picstreamEnable fields 2. 2.7.25 Extend faceHeatMap 3. Increase 2.7.83 4. Increase 2.7.84

			5. Increase 2.7.85 6. Increase 2.7.86
2018-11-03	Fan Dongdong		1、1.1.31 Increase the maximum number of human face base and the maximum number of human face pictures
2018-11-07	Cai Zhaoxu	XM20180119-16CV500 front-end seriation	1. 2.7.83, 2.7.84 <responseStatus> change to standard mode
2018-11-09	Cai Zhaoxu	XM20180119-16CV500 front-end seriation	1. 2.3.32 Extend spaceHeatMap：space heat map. algoResourceProcess：algorithm resource distribution
2018-11-10	Fan Dongdong		1、Increase 2.3.48, set the user name and password of enabling certification 2、Increase 2.3.49, set and obtain enabling status of enabling certification 3、Extend 2.7.55, increase password of importing human face base 4、Extend 2.7.56, increase password of exporting human face base
2018-11-13	Guo Yongfang		1、Modify 2.3.48, set the user name and password of enabling certification, word spelling error, increase length of user name
2018-11-15	Cai Zhaoxu		1、2.7.83 Increase GET
2018-11-29	Cai Zhaoxu		1、2.7.12 push graph strategy extension access (access control mode)
2018-12-07	Cai Zhaoxu		1、Increase 2.3.50 port output current use
2018-12-12	Huang Kuifeng		1、2.14.36 Increase <peopleRedSnapEnable> 2、2.14.37 Extend 50: human face small picture, 3-human face small picture (pedestrian running red light mode), increase <picIndex>, <facePicSize>, <faceTargetFrame> 3、1.1.35 Increase <smallFaceUpload> 4、2.14.29 Increase <lightDetectTimeOut> 5、2.14.46 Increase <productNumber> 6、2.14.55 Increase running traffic jam 7、2.14.0 Increase running traffic jam 8、Increase 2.14.72, 2.14.73 9、2.14.7 Increase < flashStrobLampEnable >, < autoFlashStrobLampEnable >
2018-12-15	Guo Yongfang		1、Extend 1.6.1 increase interaction front-end port alarm output field
2018-12-19	Fan Dongdong	DZ18636-Dubai connection videoguard customization	1、Increase setting and obtaining WebService information 2.3.51
2018-12-19	Wang Lijun	XM20180119-16CV500 front-end seriation	1、Increase modeling report progress protocol 2.7.87
2018-12-22	Yin Chong	XM20180135-skyeye series	1、Increase 2.14.74 parameters of motor vehicles giving precedence to pedestrians

		traffic camera upgrading	
2019-01-01	Cai Zhaoxu	XM20180119-16CV500 front-end seriation	1、2.7.62 Increase <downloadfacePath> field, encrypt the file name, remove the digest certification to solve the CGI download
2019-01-09	Guo Yongfang		1、Modify 2.3.31, increase HD template in the capability set type 2、Increase setting and obtaining channel expansion way number protocol
2019-01-14	Guo Yongfang		1、 Increase 2.3.53/2.3.54/2.3.55/2.2.46 2、 2.3.31 Extend defaultSchedule：HD template recovery default
2019-01-15	Yin Chong		1、 2.14.6 Extend 2-horizontally arrange two and close-up image; 3-vertically arrange two and close-up image
2019-01-19	Guo Yongfang		1、 Increase 1.1.40
2019-03-06	Zhang Bao		1、 2.3.31 Extend video turning：videoFlip, NP system setting：npModeSwitch
2019-03-013	Wang Lijun		1、 2.7.12 Increase switches of transmitting big pictures and small pictures
2019-03-013	Liu Quanwei		1、 2.3.31 Increase human face detection and demographics mutual exclusion FaceDetectDemographics
2019-03-018	Wang Lijun		1、 Delete the contents of chapter 2.7.12 as below, including the example contents <BigPic> transmit big picture type enabling <SmallPic> transmit small picture type enabling <Feature> transmit picture feature data type enabling 2、 Increase chapter 2.7.88, about snap extension parameters 3、 Modify 2.7.12 snap times snapTimes notes 10 times
2019-03-028	Wang Shan	DZ19153	1、 Increase 2.7.89 unlock human face base 2、 Extend 2.7.53 3、 Extend 2.7.54 4、 Extend 2.7.62 5、 Extend 2.7.66
2019-4-02		DZ19163.4	1、Increase type OSD line number 2、Increase type OSD block number
2019-04-04	Jiao Zan	DZ18719.1	1、Increase character size scale 72*72
2019-3-27	Liu Quanwei	DZ19079 Meituan customized	1、Extend 2.7.11 demographics minimum target size (pixel)
2019-04-11	Wang Lijun	XM20190056-500W human face snap machine	1、 Increase 2.3.56 post focusing control 2、 Increase 2.3.57 ABF function switch Extend 2.3.31 ABF(AutoBackFocus) capability set
2019-04-17	Ma Ruichao	Universal	1、Increase 2.7.89 human face detection region parameters 2、Increase 2.7.90 human face detection region list 3、Increase 2.7.91 intelligent analysis scene recovery time 4、Increase 2.7.92 intelligent analysis cruise enabling type

			5、Increase 2.7.93 intelligent analysis cruise template 6、Extend 2.3.31 equipment channel capability set 3、 7、Extend 2.7.88 snap extension parameter
2019-04-17	Zhang Chenglun	Universal	1、Delete 2.7.28 intelligent tracking parameters 2、Extend 1.5.15 intelligent tracking parameters 3、Extend 1.5.1 intelligent analysis algorithm start parameters 4、 4、Extend 2.7.41 featured alert call scene
2019-04-17	Zhang Jianzhong	Universal	5、 1、Extend 2.7.81 safety helmet detection parameters
2019-04-17	Yin Chong	Skyeye upgrading	1、 Increase 2.14.75 and 2.14.76
2019-4-15	Liu Jiaxing	Universal	1、 Increase 1.8.11 set the clearing setting 2、 Increase 1.8.12 clearing configuration item capability level 3、 Increase 1.8.13 acceleration sensor correction protocol 4、 Increase 1.8.14 obtain peripheral type list capability level 5、 Increase 1.8.15 peripheral type parameter protocol 6、 Increase 1.8.16 dome camera title name protocol 7、 Increase 1.8.17 dome camera menu parameter protocol 8、 Increase 1.8.18 dome camera PTZ relevant parameter protocol 9、Extend 1.8.2 PTZ protocol setting WorkMode new peripheral mode type
2019-4-15	Zhang Jianzhong	Universal	1、 Increase 1.8.19 focusing mode parameters 2、 Increase 1.8.20 minimum focusing distance parameters
2019-4-18	Zhang Bao	Universal	1、 Increase shielding region protocol 2、 Extend capability level, increase support shielding area setting
2019-4-18	Zhang Jianzhong	XM20190041-5MP alert dome	1、 Increase 1.8.21 set focusing region
2019-4-23	Ma Ruichao	XM20190041-5MP alert dome	1、Increase 2.7.96 calibrate tracking magnification
2019-4-25	Zhang Bao	XM20190041-5MP alert dome	1、Increase mutually exclusive function type when it is larger than 25 frames/30 frames
2019-4-24	Wang Shan	XM20190062 nvr compatible ipc three intelligent functions	1、 Extend 2.3.31 capability and type 2、 Extend 2.3.31 capability and type 3、 Increase 1.1.41 Increase 1.6.3
2019-4-26	Wang Lin	XM20190041-5MP alert dome	1、Modify shielding region protocol, increase rule number and scene type
2019-4-28	Wang Shan	DZ19153.1	Increase 1.4.2
2019-04-25	Ping Xinxin	XM20190041	1、 Extend 2.3.31 equipment channel capability set Extend 2.1.2 key region parameters
2019-04-29	Yin Chong	Skyeye upgrading	1、 Supplement 2.14.0 type explanations

2019-05-06	Cheng Zhaoduan	XM20190041-5MP alert dome	1、 2.3.11 Extend gat1400
2019-05-01	Zhang Bao	XM20190041-5MP alert dome	1、 Increase supporting for setting electronic anti-shake class capability level; 2、 Extend electronic anti-shake class setting
2019-05-01	Zhang Bao	XM20190041-5MP alert dome	1、 Increase alarm type of alarm interaction parameter setting: temperature and humidity alarm type 2、 Increase defense time setting type： temperature and humidity alarm type; 3、 Increase temperature and humidity alarm parameters
2019-05-06	Ping Xinxin	XM20190041-5MP alert dome	1、 2.3.1/CGI/System/Video/inputs/channels/<ID>/overlays/types/<ID>increase Chinese date overlaying
2019-05-08	Zhang Jianzhong	XM20190041-5MP alert dome	1、 2.3.31 Extend system capability set， increase serial port mode, priority mode， and temperature control mode 2、 2.7.41 Extend scene call support privacy shielding
2019-05-08	Yin Chong	Skyeye upgrading	1、 Increase 2.14.77, 2.14.78 2、 2.3.16 Extend IMAGE： represent image parameters 3、 2.14.5 Increase <channelProperty>
2018-5-16	Wang Lijun	DZ19273.2-16 CV500 SenseTime human body algorithm import customization	1、 Increase 2.7.97 human shape snap parameters 2、 Modify 1.5.1 increase Human： human shape detection 3、Modify 1.5.14 add human shape algorithm
2018-5-20	Ma Ruichao	XM20190041-5MP alert dome	1、 2.7.9 Advanced parameter extension SceneType
2019-05-20	Zhang Bao	XM20190041-5MP alert dome	1、 Increase alarm type of alarm interaction parameter setting: temperature and humidity alarm type 2、 Increase defense time setting type： temperature and humidity alarm type; 3、Increase temperature and humidity alarm parameters
2019-05-20	Zhang Bao	XM20190041-5MP alert dome	1、 Extend 2.8.1 increase temperature and humidity alarm
2019-05-20	Zhang Bao	XM20190041-5MP alert dome	1、 1、2.3.31 Capability level protocol increases Onvif support 265 video access， and modifies ture in description to be true 2、 2.3.11 Extend platform start information， increase whether onvif allows to access the H265 video;
2019-05-20	Ping Xinxin	XM20190041-5MP alert dome	1、 Extend 2.3.23 privacy shielding parameters
2019-5-21	Hou Xianglin	BD20190481	1、 2.7.12 Increase living body detection switch protocol
2019-5-24	Hua Qiang	DZ19221	1、 Extend type in Url for obtaining QR code/SN code protocol 2、 Extend type in Url for obtaining/setting reserved information
2019-5-29	Wang Jianlong	XM20190062 nvr compatible ipc three	1、 Extend 2.3.31 capability and type Intelligent alarm support multi areas： smartAlmMulArea,

		intelligent functions	
2019-6-5	Qin Guiqian	XM20190080-water conservancy gun and water conservancy ball	1、 Extend 2.7.83 intelligent resource management switchover protocol
2019-6-19	Wang Xiaowei	DZ19176.2	1、Increase RFID coil configuration protocol
2019-6-18	Xu Xindi	XM20190100	Increase protocol corresponding to setting IO converter IO port and flow camera lane No.;
2019-6-19	Liu Zhaogu ang	XM20190100	Increase setting and obtaining flow camera connection information
2019-06-1 8	Zhang Bao	XM20190100	1、 Extend flow statistics parameter setting protocol 1.9.2 and 1.9.3 2、 Extend intelligent resource management switchover protocol 2.7.83 3、 Extend obtaining traffic flow statistics information protocol 2.14.25 4、 Extend traffic setting lane parameter protocol 2.14.5 5、Increase setting lane trigger passing signal
2019-6-26	Jia Tinghe	BD20190607--1_2 disk position human face NVR increase outlet （universe, neutral）model patching	1、Modify 2.7.61 certType field explanations, increase two types 2、Extend 2.7.61 field Increase country, address, company name 3、Modify 2.7.62 certType field explanations, increase two types 4、Extend 2.7.62 field Increase country, address, company name 5、Modify 2.7.66 certType field explanations, increase two types 6、Modify 2.7.69 certType field explanations, increase two types
2019-06-1 8	Xu Xindi	XM20190100	1、Extend protocol corresponding to setting IO converter IO port and flow camera lane No.;
2019-6-26	Wang Jiajing	DZ19330.3	1、Increase equipment automatic snap configuration protocol
2019-7-05	Jia Tinghe	BD20190607--1_2 disk position human face NVR increase outlet （universe, neutral）model patching	1、Modify 2.7.62 certType field explanations, increase country, address, and company name
2019-7-10	Zhang Chenglu n	DZ19310	1、Increase 2.3.59 /CGI/System/Network/Tencent/<ID>
2019-07-6	Wang Xiaowei	DZ19473-Shanghai overload control station weighing instrument connection	1、Extend peripheral serial port protocol 1.8.10 ： 17, weighing instrument SH
2019-6-29	Wang	XM20190107-	1. Increase 2.7.98 oilfield monitoring protocol

	Lijun	Tianjin oilfield pipeline monitoring	2. Increase 2.7.99 switchover scene snap protocol 3. Modify 1.5.1 add Pept：oilfield monitoring 4. Modify 1.5.14 add Pept oilfield monitoring algorithm 5. Modify 1.6.1 add Pept oilfield monitoring alarm interaction 6. Modify 1.6.2 add Pept oilfield monitoring defense time 7. Modify 2.3.31 add switchover scene snap capability set 8. Modify 2.7.1 add PeptIntrusion oilfield monitoring-defense region intrusion alarm PeptResident oilfield monitoring-exception settlement alarm 9. Modify 2.7.2 add PeptIntrusion oilfield monitoring -defense region intrusion alarm PeptResident oilfield monitoring-exception settlement alarm clearing Modify 2.8.1 add PeptIntrusion oilfield monitoring-defense region intrusion alarm PeptResident oilfield monitoring-exception settlement alarm
2019-7-15	Zhang Chenglun	DZ19502-KS ActiveSDK connection customization	1、Add 2.3.60
2019-7-16	Di Jingjing Fan Dongdong	BD20190696CGI file test patching	1、 Globally search Jiao Zan, Ping Xinxin, Yang Jianqiang, Guo Tianyi, Mao Heyu, Guo Yongfang, y3 j, Han Yongqiang, remove annotation 2、 .1.26 GeneralResource line feed 3、 1.5.2 1.5.13 2.7.28 deleted, file deleted directly 4、 1.2.1 modified to be /ISAPI/Security/adminAccesses 5、 1.1.11 modified to be /ISAPI/System/Network/interfaces/IPandPort/<ID> Keep consistent with equipment realization. 6、 1.1.4 Supplement explanations. Key parameters modified to be <useSSL> represented purpose, NVR： download: selected download, upgrade: selected upgrading, IPC：ture filling, not using this parameter 7、 2.2.5 Key parameter <id> represents ID, modified <id> represents Schedule corresponding sequence number 8、1.5.1 2.7.36 Modify key parameter explanations to be <enabled> represents intelligent analysis enabling, IPC： true: open, false: close NVR： disable non-enabling, local intelligent analysis enabling, remoteIPC intelligent analysis enabling 9、2.13.1 Increase type, one is AllCapabilities , currently only supporting this type query 10、Delete repetitive protocol 1.5.5 same as 2.7.32 1.5.9 same as 2.7.33 1.5.7 same as 2.7.34 1.5.10 same as 2.7.35 1.5.8 same as 2.7.37 1.5.2 same as 2.7.38 1.5.1 same as 2.7.36 Delete same consequential chapter
2019-07-2	Wang	XM20190130-	1.Modify 2.7.61 extension document type, add passport

2	Lijun	16CV500 full range human face product upgrading	and employee No.
2019-07-29	Di Jingjing	BD20190696	1、 1.1.1 Modify initials of outputVolume and echoRestrain in case to be lowercase. 2、 1.1.20 Improve type parameter introduction 3、1.1.28 Only requires explanations on agreement 4、1.1.29 Supplement explanations on agreement 5、1.1.31 Protocol only has get, modified to be response XML 6、1.1.36 Exchange request XML resolution height-width 7、1.1.39 Modify key parameter explanations to be type, modify hyperlink in XML BLOCK and put cases,
2019-07-29	Di Jingjing	BD20190696	1、1.2.1 Supplement key parameter explanations 2、1.2.3 Supplement key parameter explanations 3、1.2.6 Response XML unified to be GET Supplement explanations on agreement
2019-07-29	Di Jingjing	BD20190696	1、1.6.1 Shielding alarm loss/
2019-07-29	Di Jingjing	BD20190696	1、1.7.2 The opt in mode supplements fillLight. The infraredLampMode in request case is modified to be 1 PUT and GET commands correspond to protocol The infraredLampMode in XML BLOCK supplements 1 Protocol is modified to be CGI, IE uses CGI 2、1.7.3 Request case removes blank space, and is modified to be contrltype.
2019-07-29	Di Jingjing	BD20190696	1、2.1.1 The videoCodecType in StreamingChannelXML BLOCK removes HK.264 in opt Modify parameter explanations vbrLowerCap H264Profile np-Mode 2、2.1.2 Remove blank spaces before and behind dynamicEnable in request case 3、2.1.3 Supplement size explanations in key parameter explanation
2019-07-29	Di Jingjing	BD20190696	1、2.2.1 Supplement key parameter explanations 2、2.2.6 Repetitive with 1.7.2, delete 2.2.6 3、2.2.8 Supplement explanations on agreement 4、2.2.9 Supplement key parameter explanations 5、2.2.10-14 Delete red font part 6、2.2.17 Title painter is black. Delete red font part. 7、2.2.18 Supplement key parameter explanations XML Block deletes red font part 8、2.2.19-25,28,31,33-39,41, delete currentTemplate in XML Block 9、Delete 2.2.29, because it is repeated with 2.2.13. 10、2.2.42 Delete red font. 11、2.2.44 Delete "speed" (two characters in Pinyin: Su Du) in key parameter explanations 12、2.2.46 Modify interface name.
2019-07-29	Di Jingjing	BD20190696	1、2.3.1 Actually use type. Modify the protocol according to this field. **Line feed General Resource v2.0** 2、2.3.2 Delete redundant partial red font in key parameter

			explanations 3、2.3.3 Modify PrivacyMaskXML Block explanation, and key parameter explanations 4、2.3.6 Supplement key parameter explanations 5、2.3.7 2.3.8 Remove network in protocol 6、2.3.22 Modify key parameter explanations, remove red font 7、2.3.23 Modify test case 8、2.3.36 Protocol is repeated with 2.3.3, and is fully deleted.
2019-07-29	Di Jingjing	BD20190696	1、2.9.5 Modify test case
2019-07-29	Di Jingjing	BD20190696	1、2.13.1 2.13.2 Modify explanations on agreement
2019-07-29	Hou Xianglin	BD20190696	1、1.5.11 Increase <audioInputException> field meanings 2、2.3.59 Increase meanings of id and key 3、2.3.60 Delete blank spaces 4、Delete blank spaces between fields 5、2.7.30 Increase < sensitivityLevel > < invasionTime > meanings and value range
2019-07-29	Wang Lijun	BD20190696	1、Modify 1.5.12 modify xml element definition, delete useless contents 2、Modify 2.7.13, PUT case deletes redundant blank spaces, modify alarmrule to be displayRule 3、Modify 2.7.15 increase explanations on off-duty time and on-duty number of people 4、Modify 2.7.16 add explanations on illegal parking detection time and enabling time
2019-07-29	Liu Quanwei	BD20190696-CGI	1、1.6.1 Modify /ISAPI/Event/triggers/alert -1 protocol, increase version explanations 2、2.7.7 Modify /CGI/Smart/GuardPark/protocol, improve protocol format 3、2.7.9 Modify /CGI/Smart/Advance/channels/, improve protocol format, increase explanations on protocol xml field enable. 4、2.7.11 Modify /CGI/Smart/Demographics, improve protocol format. 5、2.7.12 Modify /CGI/Smart/FaceDetect/, improve protocol format, pushMode increases collision line opt collisionLine. 6、1.5.3 Modify /ISAPI/Smart/DoubleLineDetection, delete useless xml field intelliBackSearch, normalizedScreenWidth, normalizedScreenHeight, and increase explanations on minObjectSize and maxObjectSize. 7、1.5.10 Modify /ISAPI/Smart/AudioDetection/, delete PUT protocol.
2019-07-29	Wang Jiajing	BD20190696	1、2.14.13 Improve protocol file description and modify cases. 2、 2.14.15 Improve agreement file description and modify cases. 3、 2.14.16 Modify cases; 4、 2.14.24 Modify cases; 5、 2.14.25 Modify cases; 6、 2.14.26 Improve cases; 7、 2.14.27 Improve cases; 8、 2.14.28 Improve cases;

			9、 2.14.29 Improve cases;
2019-07-29	Zhang Jun	BD20190696	1、2.14.2 Improve cases; 2、2.14.8 Modify cases; 3、2.14.11 Improve cases; 4、2.14.12 Improve cases; 5、2.14.13 Improve cases; 6、2.14.31 Improve cases; 7、2.14.32 Improve cases; 8、2.14.33 Improve cases; 9、2.14.34 Improve cases; 10、2.14.35 Improve cases; 11、2.14.36 Improve agreement file description and cases; 12、2.14.37 Improve cases; 13、2.14.39 Improve cases;
2019-07-29	Zhang Bao	BD20190696	1、1.8.10 Modify cases, modify Chinese quotation marks in English;
2019-07-22	Zhang Bao	BD20190696	1、 1.1.24 Improve agreement file description, remove redundant blank spaces in cases 2、 1.1.26 Complete agreement file description and key field meanings; 3、 1.1.27 Improve agreement file description, remove redundant fields 4、 2.14.1 Improve agreement file description, remove redundant blank spaces 5、 2.14.73 Increase test cases 6、 2.14.76 Increase test cases 7、 2.14.80 Remove blank spaces in agreement cases 8、 2.14.81 Remove first line version information and other headers in cases 9、 2.14.82 Remove GET in cases
2019-07-29	Xu Xindi	BD20190696	1、2.14.18 Modify PUT response XML in cases to be ResponseStatus 2、2.14.42 Supplement file parameter units, modify Chinese quotation marks in cases; 3、2.14.44 Increase parameter explanations, remove redundant cases; 4、2.14.47 Increase key parameter range; 5、2.14.49 Delete PUT in cases, increase key parameter description 6、2.14.50 Supplement cases; 7、2.14.79 Modify cases and description;
2019-07-29	Tang Qifu	BD20190696	1、2.14.40 Supplement parameter range and case modification; 2、2.14.43 Supplement parameter range and case modification; 3、2.14.45 Supplement parameter range and case modification; 4、2.14.46 Supplement parameter description and case modification; 5、2.14.55 Supplement parameter description and case modification; 6、2.14.56 Supplement parameter description and case modification; 7、2.14.57 Supplement parameter description and case modification;
2019-7-29	Ma Ruichao	BD20190696	1.5.1 Modify table first line format; modify <enabled> field meanings;

			Remove blank cases in PUT case <sceneName>; 2、1.5.3 Explain ID in URL; <identifyType> modify "human and vehicle" <sensitivityLevel> field to <tripwireMinTimeInterval> increase range explanations 3、1.5.4 Explain ID in URL; <alarmColor>, <noAlarmColor>, <invasionTime> increase range; <positionX>, <positionY> increase range
2019-7-29	Ma Ruichao	BD20190696	1、2.7.3 <alarmColor>, <noAlarmColor> increase range 2、2.7.4 Remove redundant <id> in AttendedBaggageXML; <alarmColor>, <noAlarmColor>, <alarmTime> increase range 3、<alarmColor>, <noAlarmColor>, <alarmTime> increase range 4、Increase PUT cases
2019-7-29	Liu Zhaoguang	BD20190696	1、Improve 1.1.2 <ipAddress> description in key parameter explanations 2、Modify 1.1.4 describe error and test cases 3、Modify 1.1.6 XMLBolck description 4、Modify 1.1.7 key parameter explanations, delete redundant contents 5、1.1.10 Agreement interface description format boldface, increasing put cases 6、1.1.13 Increase description of key parameters to the supported login mode and encrypted modes 7、1.1.16 Increase description of partial key parameter support types 8、1.1.35 Increase description of meanings and range of key parameters contentType and contentDefine. 9、1.8.2 Modify head description, supplement description of key parameters, modify Chinese quotation marks in xml description, delete redundant blank spaces in <WorkMode> 10、1.8.3 Modify Chinese quotation marks in XML description, supplement lacked \ in test cases 11、1.8.4 and 1.8.5 supplement test cases 12、1.8.6 and 1.8.7 supplement blank spaces of protocol head in tables, supplement test cases 13、Modify 1.8.8 function description in tables 14、Modify 1.8.9 protocol head contents in tables, modify Chinese quotation marks in xml description 15、Modify 1.8.11 and 1.8.12 test cases 16、Modify 1.8.13 table description, supplement explanations on key parameters, delete redundant blank spaces in test cases. 17、Delete 1.8.15 redundant blank spaces in xml description 18、Modify 1.8.16 test case use XML description, modify Chinese quotation marks, delete redundant blank spaces 19、Modify 1.8.17 test cases 20、Supplement 1.8.19, 1.8.20, 1.8.21 explanations on Template in key parameters 21、Supplement 2.12.1 explanations on agreement, supplement get test cases, modify protocol head of put test cases 22、Supplement 2.12.2 explanations on agreement, supplement get test cases

			23、Modify 2.12.5 and 2.12.6 test cases 24、Modify 2.12.12 description of explanations on key parameters 25、Modify 2.12.18 function description in tables 26、Modify 1.8.17 and 1.8.18 contents of test cases 27、Modify 1.8.19, 1.8.20, 1.8.21 put protocol in test cases
2019-7-29	Wei Shilin	BD20190696	1、 1.1.1 Improve cases 2、 1.1.4 Improve explanations on agreement 3、 1.1.10 Improve explanations on agreement 4、 1.1.14 Improve explanations on agreement; 5、 1.1.23 Improve explanations on agreement and cases; 6、 1.1.24 Improve cases; 7、 1.1.25 Improve cases; 8、 1.1.32 Improve explanations on agreement and cases; 9、 1.1.39 Improve explanations on agreement 10、 1.1.40 Improve explanations on agreement 11、 1.2.7 Improve explanations on agreement and cases 12、 1.3.1 Improve explanations on agreement 13、 1.3.2 Improve explanations on agreement 14、 1.3.3 Improve explanations on agreement and cases 15、 1.3.4 Improve explanations on agreement 16、 1.3.5 Improve explanations on agreement 17、 1.3.6 Delete 18、 1.3.9 Improve cases 19、 1.3.10 Improve cases 20、 1.3.11 Improve cases 21、 1.3.16 Improve cases 22、 1.3.18 Improve cases 23、 1.3.19 Improve explanations on agreement and cases 24、 1.3.20 Improve cases 25、 1.3.25 Improve cases 26、 1.3.26 Improve explanations on agreement and cases 27、 1.4.1 Improve cases 28、 1.4.2 Improve cases 29、 1.5.1 Improve explanations on agreement 30、 1.5.14 Improve explanations on agreement and cases 31、 1.5.15 Improve cases 32、 1.6.1 Improve explanations on agreement 33、 1.7.2 Improve explanations on agreement and cases 34、 1.7.3 Improve cases 35、 1.8.9 Improve explanations on agreement and cases 36、 1.8.11 Improve cases 37、 1.8.12 Improve cases 38、 1.8.13 Improve explanations on agreement and cases 39、 1.8.15 Improve cases
2019-7-29	Wei Shilin	BD20190696	1、 2.3.5 Improve cases 2、 2.3.17 Improve cases 3、 2.3.18 Improve cases

			4、 2.3.21 Improve cases 5、 2.3.24 Improve cases 6、 2.3.25 Improve cases 7、 2.3.26 Improve explanations on agreement and cases 8、 2.3.27Improve explanations on agreement and cases 9、 2.3.29 Improve explanations on agreement 10、2.3.30 Improve cases 11、2.3.31 Improve explanations on agreement and cases 12、2.3.32 Improve cases 13、2.3.33 Improve cases 14、2.3.34 Improve cases 15、2.3.35 Improve cases 16、2.3.42 Improve cases 17、2.3.43 Improve explanations on agreement and cases 18、2.3.49 Improve cases 19、2.3.51 Improve explanations on agreement 20、2.3.52 Improve explanations on agreement and cases 21、2.3.53 Improve cases 22、2.3.54 Improve cases 23、2.5.5 Improve explanations on agreement and cases 24、2.5.8 Improve cases 25、2.5.9 Improve cases 26、2.5.10Improve explanations on agreement and cases 27、2.5.14 Improve explanations on agreement 28、2.5.15 Improve explanations on agreement 29、2.5.16 Improve cases 30、2.5.17 Improve explanations on agreement and cases 31、2.5.18 Improve cases 32、2.5.19 Improve cases 33、2.5.21 Improve explanations on agreement and cases 34、2.6.2 Improve cases 35、2.7.2 Improve explanations on agreement and cases 36、2.7.14 Improve explanations on agreement and cases 37、2.7.18 Improve explanations on agreement and cases 38、2.7.19 Improve explanations on agreement and cases 39、2.7.22 Improve cases 40、2.7.23 Improve explanations on agreement and cases 41、2.7.24 Improve explanations on agreement 42、2.7.27 Improve explanations on agreement 43、2.7.43 Improve explanations on agreement 44、2.7.46 Improve explanations on agreement 45、2.7.61Improve cases 46、2.7.64 Improve explanations on agreement 47、2.7.65Improve cases 48、2.7.66Improve cases 49、2.8.3Improve cases 50、2.14.71Improve cases
2019-7-30	Jia Tinghe	BD20190696	1、 Modify 2.7.63 cases 2、 Modify 2.7.71 cases 3、 Modify 2.7.22 cases 4、 Modify 2.5.1 formats 5、 Modify 2.8.5 explanations
2019-07-30	Di Jingjing	BD20190696	1、Modify the problem of wrong marking sequence 2、The file mixes int and integer, thus is replaced by integer uniformly. The XML uses full Pinyin. 3、Globally search "brick" (砖 with Pinyin Zhuan) and change to "transfer" (转 with Pinyin Zhuan).

2019-7-31	Liu Zhaoguang	BD20190696	1、 Modify 1.8.1 request xml contents and test case content format 2、 Modify the Chinese quotation marks in xml of 1.8.2, 1.8.17, 1.8.18, delete redundant blank spaces 3、 Delete the redundant blank spaces in xml of 1.8.19 4、 Modify the Chinese quotation marks in xml of 2.12.1 and 2.12.2
2019-8-1	Zhang Chenglun	DZ19536	1、2.3.60 Increase IntelliFusion platform 2、2.3.11 Increase IntelliFusion platform
2019-8-07	Liu Zhaoguang	DZ19579	1、Modify 2.3.7 equipment ID and name length description, extend maximum support 128 characters
20190805	Jia Tinghe	XM20190139-full range human face NVR upgrading item	1、 Increase 2.5.26 set/obtain picture storage setting parameters 2、 Increase 2.5.27 set/obtain automatically access IPC switch of onvif 3、 Increase 2.5.28 set/obtain NVR allowing onvif accessing the H265 switches 4、 Increase 2.7.93 set/obtain in-vivo detection switches of super-brain NVR
20190816	Jia Tinghe	XM20190133-2019Q3 hot NVR iteration upgrading	1、 Modify 2.5.28 set/obtain NVR allowing onvif accessing the H265 switches
20190820	Jia Tinghe	XM20190139-full range human face NVR upgrading item	1、 Increase 1.1.42 set/obtain continued transmission center information
2019-08-23	Han Yuejuan	DZ19617-customize as depicted	2、 1、Increase 2.3.59 obtain equipment IP address and gateway after successful PPPOE dialing, or obtain 28181 equipment online/offline status
2019-08-23	Ping Xinxin	2MP international fixed focus upgrading	1、 Extend protocol, increase max properties, control the maximum character length supporting input
20190823	Jia Tinghe	XM20190139-full range human face NVR upgrading item	1、 Increase 2.7.** increase compressed export/import of human face basemap 2、 Increase protocol“obtain universal import/export progress” 3、 2.7.59 Result of searching by pictures, increase similarity field
20190826	Jia Tinghe	XM20190139-full range human face NVR upgrading item	1、 Increase 2.7.94 modify POST to be PUT, modify notes 2、 Modify 2.7.96
20190827	Zhang Chenglun	DZ19572	1、 2.3.58 Increase minimum human face alarm number of people
2019-5-29	Hou Xianglin	XM20190142 pandaeye	1、Increase 2.7.97 number of people exception alarm 2、Extend 1.6.1 number of people exception alarm interaction 3、Extend 1.6.2 number of people exception alarm defense

			4、Extend 2.7.12 push graph strategy and time parameters 5、Extend 1.5.1 intelligent analysis algorithm type 2、 Extend 1.5.12 intelligent analysis algorithm capability set
2019-5-29	Ping Xinxin	XM20190124	1、Extend protocol, increase max properties, control the maximum code rate of support 2. Extend protocol, increase opt, report snap resolution list
2019-5-29	Hou Xianglin	XM20190142 pandaeye	1、2.7.97 Increase sensibility level
2019-9-10	Hou Xianglin	Universal	1、Extend Dzcommon protocol explanations, increase voluntary registration of Questyle
2019-9-10	Jia Tinghe	XM20190139-full range human face NVR upgrading item	1、 Modify 2.7.66, increase field “maximum opening quantity” 2、 Modify 2.3.60 increase field “result quantity” 3、 Modify 2.7.96 URL, modify ”PUT”to be ”POST” 4、 Increase feature statistics asynchronous request, asynchronous query result protocol 5、 Increase target alarm statistics asynchronous request, asynchronous query result protocol 6、 Increase channel alarm statistics asynchronous request, asynchronous query result protocol 7、Increase asynchronous task status control request
2019-9-12	Hou Xianglin	Universal	1、 1. Extend 2.8.1 algorithm type
2019-9-12	Ping Xinxin	Universal	1、 Increase 1.1.34 2、 1.1.1 Extend double walkie-talkie channel
2019-09-23	Zhang Bao	DZ19699	1、 2.3.11 Platform start information extension increase imgupload; 2、Increase 2.3.61 /CGI/System/ImgUpload/Info
2019-09-02	Wang Lijun	XM20190094-politics and law ball upgrading item	1. Add audio voice change (2.1.9), single interrogation/unattended (2.7.105), sleeping post (2.7.106), new fight (2.7.107), personnel stand up (2.7.108), height limit (2.7.109), new off-duty (2.7.110), stranded (2.7.111), single stay alone (2.7.112), deliver goods through window (2.7.113), human face mosaic (2.7.114), color tracking (2.7.115), intelligent resource distribution timing switchover (2.7.116) 2. Modify 1.5.1 add politics and law algorithm relevant enabling contents 3. Modify 1.5.12 add politics and law relevant algorithm capability set 4. Modify 1.6.1 add politics and law relevant alarm interaction 5. Modify 1.6.2 add politics and law relevant monitoring defense time 6. Modify 2.7.1 add politics and law relevant alarm information 7. Modify 2.7.2 add politics and law relevant alarm clearing information 8. Modify 2.7.76 increase intelligent supervisory committee, intelligent public security, intelligent education, intelligent control, with resource distribution

			timing switchover 9. Modify 2.7.83 modify human face detection region parameters, add setting preset position mode 10. Modify 2.7.97 number of people exception, add shielding region setting 11. Modify 2.8.1 add politics and law relevant alarm information 12. Modify 2.3.30 add politics and law relevant algorithm capability set Modify 2.3.31 add politics and law relevant algorithm capability set
2019-09-18	Wang Lijun	XM20190094-politics and law ball upgrading item	1. Add calibration relevant contents 2.12.20, 2.12.21 2. Modify 2.3.31 add calibration capability set 3. Modify 2.7.83 detection region setting preset position mode
20191010	Jia Tinghe	XM20190139-full range human face NVR upgrading item	1、 Increase 2.7.* human face basemap batch import progress 2、2.3.60 is useless and repetitive with 2.3.61, thus is deleted.
2019-10-11	Jiao Zan	XM20190094-politics and law ball upgrading item	1、 Increase 2.2.45, 2.2.46, 2.2.47, and 2.2.48 protocols 2、 2.3.31 capability set extension
2019-10-10	Xu Xindi	Universal	1、 Extend 1.6.1 alarm interaction item, increase interaction red and blue lights 2、 Extend 2.3.31, increase alarm light capability set
2019-10-12	Wang Lijun	XM20190094-politics and law ball upgrading item	1、 Modify 2.3.31, add human face detection and human face identification interaction alarm light capability set
2019-10-13	Xu Xindi	DZ19479-signal converter	1、 Increase 2.6.3 DZ19749 required access platform parameters in signal converter customization 2、 Increase 2.14.83DZ19749 set and obtain parameters of access motor in signal converter customization
2019-10-15	Wang Lei	Human face upgrading item	1、 Modify 2.3.61 obtain increasing asynchronous export statement type in universal progress 2、Increase asynchronous export statement start request 3、Increase asynchronous export statement result request
2019-10-15	Zhang Bao	XM20190087-4MP pan-intelligent item	1、Extend 2.7.76, increase two modes as road monitoring and mixed detection
2019-10-15	Wang Jiajing	XM20190087-4MP pan-intelligent item	1、Extend 2.14.56, newly extend types of motor vehicle detection, non-motor vehicle detection, and pedestrian detection 2、Extend 2.14.27, newly extend types of motor vehicle detection, non-motor vehicle detection, and pedestrian detection
2019-10-16	Hou Xianglin	XM20190087-4MP pan-intelligent item	1. Extend 2.14.38, extend Type 2. Extend 2.14.78 extend character overlaying information
2019-10-17	Wang Lijun	XM20190094-politics and law ball upgrading item	1、Modify 2.7.35, add text description of alert contingency plan template No.

2019-10-17	Zhang Kaifang	Universal	1、Extend2.3.31 increase scanning mode equipment capability level
2019-10-21	Wang Lei	XM20190139-1_2_8 disk human face NVR upgrading item	1、Modify 2.7.118 increase type field in request XML 2、Modify 2.7.119 increase request file name in URL, delete transaction ID in URL
2019-10-22	Qin Guiqian	XM20190094-politics and law ball upgrading	1、 2.3.12, 2.3.44 “set aperture correction” protocol extension channel number 2、 2.3.13 “set lens resetting” protocol extension channel number
2019-10-22	Ma Ruichao	XM20190094-politics and law ball upgrading item	1. 2.7.1, 2.7.2, 2.8.1 Delete： single query/unattended, increase： single query/unattended event type
2019-10-22	Zhang Bao	XM20190087-4MP pan-intelligent item	1、 Extend 2.14.11， increase template type description
2019-10-28	Wang Lei	XM20190173_analogue network mixed XVR	1、 Modify 1.1.31 increase analogue channel quantity, synthetic channel quantity field 2、 Modify 2.3.30 increase loop detection alarm field 3、 Modify 1.3.8 increase channel type field 4、 Modify 1.3.9 increase channel type field 5、 Modify 1.1.22 increase loop detection field 6、 Increase setting and obtaining protocol verification mode protocol 2.3.63
2019-10-28	Zhang Bao	XM20190087-4MP pan-intelligent item	1、 Extend 2.14.52， increase intelligent snap type
2019-10-29	Zhang Chenglun	XM20190094-politics and law ball upgrading item	1、Increase 2.7.120 set/obtain cruise lock time
2019-10-30	Zhang Bao	XM20190087-4MP pan-intelligent item	1、 Extend 2.3.16， increase all traffic parameters
2019-10-30	Zhang Chenglun	XM20190094-politics and law ball upgrading item	1、 Extend 2.7.34， type in newly extended xml 2、 Extend 2.7.44， extend url， increase scene
2019-10-30	Xu Xindi	XM20190087-4MP pan-intelligent item	1、 Extend 1.6.1， increase alarm interaction traffic external trigger 2、 Extend 2.3.31， increase alarm interaction supporting traffic external trigger capability set
2019-10-31	Jia Tinghe	XM20190201-universak nvr upgrading	1、2.3.30 protocol increasing enumeration AutoTestClodeIPC, AutoChangeIPCTime 2、2.3.31 protocol, increasing enumeration autoTestClode 3、Increase protocol 2.3.64 obtain/set NVR automatic timing IPC time parameters 4、Increase protocol 2.3.65 obtain/set universal parameters of equipments 5、Increase protocol 2.3.66 obtain automatic detection status of cloud upgrading

			6、Increase protocol 2.3.67 obtain equipment information of cloud upgrading
2019-10-31	Wang Lijun	XM20190094-politics and law ball upgrading item	1、Extend 2.3.31, newly extend resource distribution timing switchover capability set 2、Extend 2.7.76, delete timing switchover contents
2019-11-04	Wang Lei	XM20190173-mixed XVR	1、Extend 2.3.9 increase PUT method setting equipment name
2019-11-06	Jia Tinghe	XM20190201-universak nvr upgrading	1、Newly extended bayonet capability set protocol 2.14.87 2、2.14.68, increase vehicle sub-brand field 3、2.14.71 increase vehicle sub-brand and license plate color field
2019-11-06	Zhang Bao	XM20190087-4MP pan-intelligent item	1、Correct 2.14.38 time format interval to be 7 characters
2019-11-06	Xu Xindi	XM20190087-4MP pan-intelligent item	1、Extend 2.3.31, increase structured property capability set
2019-11-06	Jia Tinghe	XM20190201-universak nvr upgrading	1、1.3.7 increase IPv6 relevant fields 2、1.3.13 Increase IPv6 relevant fields and error reason for returning to correct Ip 3、Supplement 1.1.44 port mapping status information
2019-11-06	Jia Tinghe	XM20190201-universak nvr upgrading	1、2.3.30 Extend NetCardGather: whether to support network card aggregation mode
2019-11-06	Tang Qifu	XM20190087-4MP pan-intelligent item	1、Extend 1.8.10, increase supplementary light type LED-ZX-B1045-Z-KT

Schedule

Schedule 1:

Explanations on transaction ID		
Definition	Type is unified as unsigned long long type（u64）.	
High 32-bit represents request source, client side generation	No. 61-64bit	4bit client side type （range 0-15）: 0-others 1-NVR main program 2-GUI 3-network client side 4-CGI client side 5-trade external hanging ……
	No. 33-60bit	28bit client side sole identification: when the request is initiated each time, the client side itself generates a non-repetitive identification code for distinguishing multiple client sides of same type.

Low 32-bit represents transaction, main program human face module distribution	No. 25-32bit	8bit transaction type（range 0-255）： 0-others 1-video stream analysis 2-picture stream analysis 3-single picture analysis 4-feature calculation ……
	No. 1-24bit	24bit（frame/picture/request）No.： cyclic increase

Schedule 2: property description and use methods

Property	Description	Method	Applied XML data type
min	Minimum character length of character string, or minimum numerical value of figures	Case: min="0" min="19" min="-74"(only figure) min="1.6"	All data types remove：fixed predefine data type 1)
max	Maximum character length of character string, or maximum numerical value of figures	Case: max="4" max="37" max="8192" max="14.61"	All data types remove：fixed predefine data type 1)
range	It indicates the range of numerical value in the "minimum" and "maximum" property of elements. This property is used only when the possible values of XML elements do not include the whole range of numerical value between the "minimum" and "maximum" property.	The range is listed in number sequence, and separated by ","character. The form of range is"x~y", including x as the lower limit of range, and y as the upper limit of range. Single number may also be used. Case：if the XML element support value is 0, 487, 1674~2009, 2012, then the grammar is：range ="0, 487, 1674～2009, 2012".	All data types
opt	All data except for the fixed data types.	If all options are supported, the grammar is"all". Otherwise, the listed supported options are separated by the "," character. Case: opt="all" opt="1, 4, 6, 7"	All data types
def	It indicates the default value of the XML elements. If the elements do not have the default value, this property shall not be used.	Case: def="7416" def="ace"	All data types
reqReboot	It indicates whether the configuration of these XML elements can be effective only by restarting the equipments.	reqReboot="true"	All data types

Property	Description	Method	Applied XML data type
	If the elements do not need guidance, this property shall not be used.		
dynamic	It indicates whether the XML elements have the dynamic functions of relying on other XML configuration. For example, if the data range of some element changes according to the configuration value of another element, this property must be used. Under this condition, the function property of elements must always reflect the current equipment configuration.	dynamic="true"	All data types
size	It indicates the maximum item number in the XML list. This property only applies to the XML list elements. This property shall not be used for elements of any other type.	Case: in the equipment supporting 16 users, the case is <UserList size="16"> <User> … </UserList>	It only supports the list elements.

1) The fixed predefined data types do not require some function properties, because their format/data range has been defined.

1/ISAPI

1.1/ISAPI/System

1.1.1/ISAPI/System/TwoWayAudio/channels/<ID>

/ISAPI/System/TwoWayAudio/channels/<ID>	**General Resource v2.0**
GET	
Description	Obtain audio parameters
Query	None
Inbound Data	None
Success Return	**<TwoWayAudioChannel>**
PUT	
Description	Set audio parameters
Query	None
Inbound Data	**<TwoWayAudioChannel>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the query and setting of the audio parameters, and realize the query and setting of the client sides or IE for the equipment audio parameters through the CGI protocol, including the parameters such as audio input (volume/audio encoding mode/sampling rate/noise reduction), audio output (audio output type/output volume/echo suppression), etc. **Explanations on key parameters:** Note: in the URL of all CGI protocols, if the ID introduction has the decimal points, it will be treated as reshaping.	

```
<enabled> represents whether the audio is opened,  true: open, false: close
<audioCompressionType> represents audio encoding type,  including:  G.711A, G.711U, ADPCM_D, AAC_LC
<speakerVolume> represents volume value,  range 0-100
<noisereduce> represents audio noice reduction,  0: close, 1-9: scale range
<audioBitRate> represents audio sampling rate,    including 8, 32, 48
<audioInputType > represents audio control type
<audioOutputType> represents audio output type
<outputVolume> represents output volume value,  range 0-100
<echoRestrain> represents echo suppression,  true: open, false: close
<speaker1> represents loudspeaker type 1, true: open, false: close
<speaker2> represents loudspeaker type 2, true: open, false: close
```

TwoWayAudioChannelXML Block

```
<TwoWayAudioChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!-- req, xs:string;id --></id>
  <enabled><!-- req, xs:boolean --></enabled>
  <audioCompressionType opt=" G.711A, G.711U, ADPCM,AAC_LC"><!-- req, xs:string,
    "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPC"-->
  </audioCompressionType>
  <audioInboundCompressionType><!-- opt, xs:string,
    "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM"-->
  </audioInboundCompressionType>
  <speakerVolume><!-- opt, xs:integer--></speakerVolume>
  <microphoneVolume><!-- opt, xs:integer--></microphoneVolume>
  <noisereduce><!-- opt, xs: integer --></noisereduce>
  <audioBitRate opt="8, 16, 32,48"><!-- opt, xs:integer;kbs--></audioBitRate>//unit kbs 8 represents 8k
  <audioInputType ><!-- opt, xs:string, "MicIn, LineIn"--></audioInputType>
  <audioOutputType><!-- opt, xs:string, "innerspeaker, audiodevice, close"--></audioOutputType>
  <outputVolume><!-- opt, xs:integer--></outputVolume>
  <echoRestrain><!-- opt, xs:boolean "true, false" --></echoRestrain>
  <associateVideoInputs><!-- opt -->
  <enabled><!-- req, xs:Boolean --></enabled>
  <videoInputChannelList><!-- req -->
  <videoInputChannelID><!-- opt, xs:string; id --></videoInputChannelID>
  </videoInputChannelList>
  </associateVideoInputs>
  <audioSamplingRate><!-- opt, xs:float, in kHz --></audioSamplingRate>
  <speaker1><!-- opt, xs:boolean "true, false" --></speaker1>
  <speaker2><!-- opt, xs:boolean "true, false" --></speaker2>
  </TwoWayAudioChannel>
```

Test cases

GET /ISAPI/System/TwoWayAudio/channels/<ID>

Request XML: none

Response XML: <TwoWayAudioChannel>

PUT/ISAPI/System/TwoWayAudio/channels/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TwoWayAudioChannel>
<id>1</id>
<audioCompressionType>G.711U</audioCompressionType>
<audioBitRate>32</audioBitRate>
<audioInputType>MicIn</audioInputType>
<speakerVolume>67</speakerVolume>
<noisereduce>5</noisereduce>
```

```
<enabled>true</enabled>
<audioOutputType>innerspeaker</audioOutputType>
<outputVolume>30</outputVolume>
<echoRestrain>true</echoRestrain>
<speaker1> true </speaker1>
<speaker2> true </speaker2>
</TwoWayAudioChannel>
```

1.1.2/ISAPI/System/Network/interfaces/<ID>

/ISAPI/System/Network/interfaces/<ID>	**General Resource v2.0**
GET	
Description	Obtain wired network parameters
Query	None
Inbound Data	None
Success Return	**<NetworkInterface>**
PUT	
Description	Set wired network parameters
Query	None
Inbound Data	**<NetworkInterface>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the wired network parameters, and realize the query and setting of the client sides or IE for the equipment wired network parameters through the CGI protocol, including the parameters such as IPv4 address/IPv6 address/IPv6 subnet mask/ipv4 gateway/DNS/physical address/network card rate/MTU, etc.

Explanations on key parameters:

The <ipAddress> in <addressingType> represents IPv4 address, with format as: 10.30.30.30
<subnetMask> represents IPv4 subnet mask, with format as: 255.255.255.0
<ipv6Address> represents IPv6 address (only supporting get)
<bitMask> represents IPv6 subnet mask (only supporting get)
The <ipAddress> in <DefaultGateway> represents ipv4 gateway
The <ipAddress> in <PrimaryDNS> and <SecondaryDNS> represents DNS
<MACAddress> represents physical address (only supporting get)
<autoNegotiation> represents automatically obtaining the ip address, true: open, false: close
<manualSetDns> true: open, false: close
<speed> represents gateway rate (not used temporarily)
<MTU> represents MTU, range: 500-1500
<workmode> work mode, LoadBalance (load balance), MultiAddr (multi-address setting), NetFaultTolerant (network redundancy)

NetworkInterfaceXML Block

```
<NetworkInterface version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!--req, xs:string--></id>
<IPAddress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<ipVersion><!--req, xs:string, "v4,v6,dual" --></ipVersion>
<addressingType><!--req, xs:string, "static,dynamic,apipa" --></addressingType>
<ipAddress><!--dep, xs:string --></ipAddress>
<subnetMask><!--dep, xs:string, subnet mask for IPv4 address --></subnetMask>
<ipv6Address><!--dep, xs:string --></ipv6Address>
<bitMask><!--dep, xs:integer, bitmask IPv6 address --></bitMask>
<DefaultGateway><!--dep -->
<ipAddress><!--dep, xs:string --></ipAddress>
<ipv6Address><!--dep, xs:string --></ipv6Address>
</DefaultGateway>
<PrimaryDNS><!--dep -->
```

```
<ipAddress><!--dep, xs:string --></ipAddress>
<ipv6Address><!--dep, xs:string --></ipv6Address>
</PrimaryDNS>
<SecondaryDNS><!--dep -->
<ipAddress><!--dep, xs:string --></ipAddress>
<ipv6Address><!--dep, xs:string --></ipv6Address>
</SecondaryDNS>
<Ipv6Mode><!--opt -->
<ipV6AddressingType>
<--dep, xs:string,"ra,manual,dhcp>
</ipV6AddressingType>
<ipv6AddressList>
<v6Address>
<id><!--dep, xs:string;id --></id>
<type><--dep, xs:string,"ra,manual,dhcp></type>
<address><!--dep, xs:string --></address>
<bitMask><!--dep, xs:integer --></bitMask>
</v6Address>
</ipv6AddressList>
</Ipv6Mode>
</IPAddress>
<Wireless/><!--opt -->
<Discovery/><!--opt -->
<Link xmlns="http://www.isapi.org/ver20/XMLSchema">
<MACAddress><!--req, xs:string></MACAddress>
<autoNegotiation><!--req, xs:boolean></autoNegotiation>
< manualSetDns ><!--req, xs:boolean></manualSetDns >
<speed><!--req, xs:integer, "10, 100, 1000"--><speed>
<duplex><!--req, xs:string, "half, full"></duplex>
<MTU><!--req, xs:integer --></MTU>
<workmode><!--req, xs:string "LoadBalance, MultiAddr,
NetFaultTolerant"--></workmode>//work mode
</Link>
<defaultConnection><!--opt, xs:boolean--></defaultConnection>
</NetworkInterface>
```

Test cases

GET /ISAPI/System/Network/interfaces/<ID>

Request XML: none

Response XML: <NetworkInterface>

PUT/ISAPI/System/Network/interfaces/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<NetworkInterface>
<id>1</id>
<Link>
<autoNegotiation>false</autoNegotiation>
< manualSetDns >true</manualSetDns >
<MTU>1500</MTU>
<MACAddress>00:50:c2:28:1f:a1</MACAddress>
</Link>
<IPAddress>
<ipAddress>10.30.41.19</ipAddress>
<ipv6Address>fe80::250:c2ff:fe28:1fa1</ipv6Address>
<subnetMask>255.255.255.0</subnetMask>
<bitMask>64</bitMask>
```

```
<DefaultGateway>
<ipAddress>10.30.41.1</ipAddress>
</DefaultGateway>
<PrimaryDNS>
<ipAddress>192.168.1.1</ipAddress>
</PrimaryDNS>
</IPAddress>
<AdminAccessProtocolList>
<AdminAccessProtocol>
<protocol>HTTP</protocol>
<portNo>80</portNo>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>HTTPS</protocol>
<portNo>443</portNo>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>RTSP</protocol>
<portNo>554</portNo>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>DATA_PORT</protocol>
<portNo>3000</portNo>
</AdminAccessProtocol>
</AdminAccessProtocolList>
</NetworkInterface>
```

1.1.3/ISAPI/System/Network/DDNS

/ISAPI/System/Network/DDNS	**General Resource v2.0**
GET	
Description	Obtain DDNS parameters
Query	None
Inbound Data	None
Success Return	**<DDNS>**
PUT	
Description	Set DDNS parameters
Query	None
Inbound Data	**<DDNS>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the DDNS parameters, and realize the query and setting of the client sides or IE for the equipment DDNS parameters through the CGI protocol, including the parameters such as equipment domain name/server address/port/account number/password, etc.

Explanations on key parameters:

<enabled> represents start, true: start, false: not start
<hostName> represents equipment domain name, which is not in Chinese.
<ipAddress> represents server address
<portNo> represents port
<userName> represents account number, which is not in Chinese.
<password> represents password

DDNSXML Block

```
<DDNS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string -->
<enabled><!-- req, xs:boolean --></enabled>
<provider>
   <!-- req, xs:string, "IPServer, DynDNS, PeanutHall, HiDDNS …" -->
</provider>
<serverAddress>
<addressingFormatType>
   <!-- req, xs:string, "ipaddress,hostname"-->
</addressingFormatType>
<hostName><!-- dep, xs:string --></hostName>
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
</serverAddress>
<portNo><!-- opt, xs:integer--></portNo>
<deviceDomainName><!-- dep, xs:string --></deviceDomainName>
<userName><!-- dep, xs:string --></userName>
<password><!-- wo, dep, xs:string --></password>
</DDNS>
```

Test cases

GET /ISAPI/System/Network/DDNS

Request XML: none

Response XML: <DDNS>

PUT/ISAPI/System/Network/DDNS

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DDNS>
<enabled>true</enabled>
<serverAddress>
<ipAddress>www.3322.org</ipAddress>
</serverAddress>
<userName>nvs</userName>
<password>nvs</password>
<portNo>80</portNo>
<deviceDomainName>nvs.3322.org</deviceDomainName>
</DDNS>
```

1.1.4/ISAPI/System/Network/ftp

/ISAPI/System/Network/ftp	**General Resource v2.0**
GET	
Description	Obtain FTP server parameters
Query	None
Inbound Data	None
Success Return	**<FTPNotification>**
PUT	
Description	Set FTP server parameters
Query	None
Inbound Data	**<FTPNotification>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the query and setting of the FTP server parameters, and realize the query and setting of the client sides or IE for the equipment FTP server parameters through the CGI protocol, including the parameters such as server address/port/account number/password/path, etc.	

Explanations on key parameters:

<useSSL> represents purpose

NVR： download: selected download, upgrade: selected upgrading, IPC： ture filling, not using this parameter

<ipAddress> represents server address--supporting IPv6 address

<portNo> represents port, range：0-65535

<userName> represents account number

<password> represents password

<pathDepth> represents path

FTPNotificationXML Block

```
<FTPNotification version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string;id --></id>
<enabled><!--req, xs:string--></enabled>
<useSSL><!—opt, xs:boolean></useSSL>
<addressingFormatType>
<!-- req, xs:string, "ipaddress,hostname" -->
</addressingFormatType>
<hostName><!-- dep, xs:string --></hostName>
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
<portNo><!-- opt, xs:integer --></portNo>
<userName><!-- req, xs:string --></userName>
<password><!-- wo, xs:string --></password>
<passiveModeEnabled><!-- opt, xs:boolean --></passiveModeEnabled>
<annoyftp><!--opt, xs:boolean --></annoyftp>
<uploadPicture><!--opt, xs:boolean --></uploadPicture>
<uploadVideoClip><!-- opt, xs:Boolean --></uploadVideoClip>
<uploadPath><!—req -->
<pathDepth><!--req, xs:string --></pathDepth>
<topDirNameRule>
<!-- dep, xs:string, "devName, devId, devIp, customize" -->
</topDirNameRule>
<topDirName/><!-- dep, xs:string-->
<subDirNameRule>
<!-- dep, xs:string, "chanName, chanId, customize"
</subDirNameRule>
<subDirName/><!-- dep, xs:string-->
</uploadPath>
</FTPNotification>
```

Test cases

GET /ISAPI/System/Network/ftp

Request XML： none

Response XML： <FTPNotification>

PUT/ISAPI/System/Network/ftp

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<FTPNotification>
<useSSL>true</useSSL>
<ipAddress>10.30.41.51</ipAddress>
<userName>admin</userName>
<password>1111</password>
<portNo>21</portNo>
<uploadPath>
<pathDepth>user\20161213</pathDepth>
</uploadPath>
</FTPNotification>
```

1.1.5/ISAPI/System/Network/PPPoE

/ISAPI/System/Network/PPPoE	**General Resource v2.0**
GET	
Description	Obtain PPPoE parameters
Query	None
Inbound Data	None
Success Return	**<PPPoE>**
PUT	
Description	Set PPPoE parameters
Query	None
Inbound Data	**<PPPoE>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of thePPPoE parameters, and realize the query and setting of the client sides or IE for the PPPoE parameters through the CGI protocol, including the parameters such as account number/password, etc.
Explanations on key parameters:
<enabled> represents start, true: start, false: not start
<userName> represents account number
<password> represents password

PPPoEXML Block

```
<PPPoE xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!-- req, xs:string --></id>
  <enabled><!-- req, xs:boolean --></enabled>
  <ethernetIfId><!-- opt, xs:string; id --></ethernetIfId>
  <userName><!-- req, xs:string --></userName>
  <password><!-- wo, req, xs:string --></password>
</PPPoE>
```

Test cases
GET /ISAPI/System/Network/PPPoE
Request XML: none
Response XML: <PPPoE>
PUT/ISAPI/System/Network/PPPoE
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PPPoE>
<id>0</id>
<enabled>true</enabled>
<userName>12345678</userName>
<password>12345678</password>
</PPPoE>
```

1.1.6/ISAPI/System/Network/UPnP

/ISAPI/System/Network/UPnP	**General Resource v2.0**
GET	
Description	Obtain UPnP parameters
Query	None
Inbound Data	None
Success Return	**<UPnP>**
PUT	

Description	Set UPnP parameters
Query	None
Inbound Data	**<UPnP>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the UPnP parameters, and realize the query and setting of the client sides or IE for the UPnP parameters through the CGI protocol.
Explanations on key parameters:
<enabled> represents starting UPnP, true: start, false: not start
<natRouterLanAddr> represents external ip address
<internalPort> represents port type
<externalPort> represents external port No.

UPnPXML Block

```
<UPnP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req --></enabled>
<ports>
<enabled><!-- req --></enabled>
<mapmode><!-- req, xs:string, "auto,manual" --></mapmode>
<natRouterLanAddr><!-- opt -->
<ipVersion><!-- req, xs:string, "v4,v6,dual" --></ipVersion>
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
</natRouterLanAddr>
<portList><!-- req -->
<port>
<id><!—req, xs:integer --></id>
<enabled><!-- req --></enabled>
<internalPort><!-- req, xs:string, "http, admin, rtsp,https …"></internalPort>
<externalPort><!—req, xs:integer --></externalPort>
</port>
</portList>
<natType><!--req, xs:string, "manual, auto" --></natType>
</ports>
</UPnP>
```

Test cases
GET /ISAPI/System/Network/UPnP
Request XML: none
Answer XML: <UPnP>
PUT/ISAPI/System/Network/UPnP
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<UPnP>
<enabled>true</enabled>
<ports>
<mapmode>auto</mapmode>
<natRouterLanAddr>
<ipVersion>v4</ipVersion>
<ipAddress>0.0.0.0</ipAddress>
</natRouterLanAddr>
<portList>
<port>
<id>1</id>
<internalPort>HTTP</internalPort>
<externalPort>80</externalPort>
</port>
```

```
<port>
<id>2</id>
<internalPort>RTSP</internalPort>
<externalPort>554</externalPort>
</port>
<port>
<id>3</id>
<internalPort>HTTPS</internalPort>
<externalPort>443</externalPort>
</port>
<port>
<id>4</id>
<internalPort>DATA_PORT</internalPort>
<externalPort>3000</externalPort>
</port>
</portList>
</ports>
</UPnP>
```

1.1.7/ISAPI/System/Network/SNMP

/ISAPI/System/Network/SNMP	**General Resource v2.0**
GET	
Description	Obtain SNMP parameters
Query	None
Inbound Data	None
Success Return	**<SNMP>**
PUT	
Description	Set SNMP parameters
Query	None
Inbound Data	**<SNMP>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the SNMP parameters, and realize the query and setting of the client sides or IE for the SNMP parameters through the CGI protocol.
Explanations on key parameters:
<enabled> represents starting SNMP, true: start, false: not start

SNMPXML Block

```
<SNMP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<SNMPv1c/>
<!-- dep, choose one mode in <SNMPv1c><SNMPv2c><SNMPAdvanced> is required-->
<enabled><!--req, xs:boolean; --></enabled>
< SNMPv2c/><!-- dep -->
<SNMPAdvanced/><!-- dep -->
<listenPort><!--opt, xs:integer ,snmp port--><listenPort>
</SNMP>
<SNMPv1c version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<notificationEnabled><!-- req, xs:boolean --></notificationEnabled>
<SNMPTrapReceiverList/><!-- opt -->
<enabled><!--req, xs:boolean; is enabled snmpv2c--></enabled>
<writeCommunity><!--req, xs:string --></writeCommunity>
<readCommunity><!-- req, xs:string --></readCommunity>
</SNMPv1c>
<SNMPv2c version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<notificationEnabled><!-- req, xs:boolean --></notificationEnabled>
```

```
<SNMPTrapReceiverList/><!-- opt -->
<enabled><!--req, xs:boolean; is enabled snmpv2c--></enabled>
<writeCommunity><!--req, xs:string --></writeCommunity>
<readCommunity><!-- req, xs:string --></readCommunity>
</SNMPv2c>
<SNMPAdvanced    version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<localEngineID><!-- req, xs:hexBinary, see RFC2571 --></localEngineID>
<authenticationNotificationEnabled>
<!-- opt, xs:boolean -->
</authenticationNotificationEnabled>
<SNMPUserList/><!-- opt -->
<SNMPNotificationFilterList/><!-- opt -->
<notificationEnabled><!-- opt, xs:boolean --></notificationEnabled>
<SNMPNotificationReceiverList/><!-- opt -->
<enabled><!--req, xs:boolean --></enabled>
</SNMPAdvanced>
```

Test cases

GET /ISAPI/System/Network/SNMP

Request XML： none

Response XML： <SNMP>

PUT/ISAPI/System/Network/SNMP

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SNMP>
<enabled>false</enabled>
</SNMP>
```

1.1.8/ISAPI/System/Network/MUC

/ISAPI/System/Network/MUC	**General Resource v2.0**
GET	
Description	Obtain multicast parameters
Query	None
Inbound Data	None
Success Return	**<MUC>**
PUT	
Description	Set multicast parameters
Query	None
Inbound Data	**<MUC>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is to realize the query and setting of the multicast parameters， and realize the query and setting of the client sides or IE for the multicast parameters through the CGI protocol， including the parameters， including the parameters such as ip address/port, etc.

Note： this protocol is an IPC protocol， and temporarily does not support NVR.

Explanations on key parameters:

<enabled> represents multicast switch

<ip> represents ip address--supporting IPv6 address

<port> represents port， range： 70-65535

MUCXML Block

```
< MUC version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enable><!-- opt, xs: boolean --></enable>
<ip><!-- req, xs:string;id --></ ip >
<port><!--req, xs:integer --></ port>
</ MUC >
```

Test cases

GET /ISAPI/System/Network/MUC

Request XML: none

Response XML: <MUC>

PUT/ISAPI/System/Network/MUC

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<MUC>
<enable>true</enable>
<ip>224.255.255.255</ip>
<port>90</port>
</MUC>
```

11.9/ISAPI/System/Network/ipFilter

/ISAPI/System/Network/ipFilter	**General Resource v2.0**
GET	
Description	Obtain black and white list parameters
Query	None
Inbound Data	None
Success Return	**<IPFilter>**
PUT	
Description	Set black and white list parameters
Query	None
Inbound Data	**<IPFilter>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is to realize the query and setting of the black and white list parameters, and realize the query and setting of the client sides or IE for the equipment black and white list parameters through the CGI protocol, including the parameters such as black and white list type/ip No./ip permission/ip address, etc.

Explanations on key parameters:

<enabled> represents starting disabling, true: start black and white list, false: not start black and white list

<permissionType> represents black and white list type, deny: black list, allow: white list

<id> represents ip No., start from 1 as 1, 2, 3…

<permissionType> represents ip permission, deny: forbid, allow: permit

<ipAddress> represents ip address--supporting IPv6 address

IPFilterXML Block

```
<IPFilter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
<permissionType><!-- opt, xs:string, "deny,allow" --></permissionType>
<IPFilterAddressList/><!-- opt -->
</IPFilter>
<IPFilterAddressList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<IPFilterAddress/><!-- opt -->
</IPFilterAddressList>
<IPFilterAddress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string;id --></id>
```

```
<permissionType><!-- dep, xs:string, "deny,allow" --></permissionType>
<addressFilterType><!-- req, xs:string, "mask,range" --></addressFilterType>
<AddressRange><!-- dep, depends on <addressFilterType> -->
<startIPAddress><!-- dep, xs:string --></startIPAddress>
<endIPAddress><!-- dep, xs:string --></endIPAddress>
<startIPv6Address><!-- dep, xs:string --></startIPv6Address>
<endIPv6Address><!-- dep, xs:string --></endIPv6Address>
</AddressRange>
<AddressMask><!-- dep, depends on <addressFilterType> -->
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
<bitMask><!-- req, xs:string --></bitMask>
</AddressMask>
</IPFilterAddress>
```

Test cases

GET /ISAPI/System/Network/ipFilter

Request XML: none

Response XML: <IPFilter>

PUT/ISAPI/System/Network/ipFilter

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<IPFilter>
<enabled>true</enabled>
<permissionType>allow</permissionType>
<IPFilterAddressList>
<IPFilterAddress>
<id>0</id>
<permissionType>allow</permissionType>
<addressFilterType>mask</addressFilterType>
<AddressMask>
<ipAddress>192.168.1.51</ipAddress>
<bitMask>24</bitMask>
</AddressMask>
</IPFilterAddress>
<IPFilterAddress>
<id>1</id>
<permissionType>allow</permissionType>
<addressFilterType>mask</addressFilterType>
<AddressMask>
<ipAddress>10.30.41.51</ipAddress>
<bitMask>24</bitMask>
</AddressMask>
</IPFilterAddress>
</IPFilterAddressList>
</IPFilter>
```

1.1.10/ISAPI/System/Network/channels/<ID>/QoS

/ISAPI/System/Network/channels/<ID>/QoS **General Resource v2.0**	
GET	
Description	Obtain QoS parameters
Query	None
Inbound Data	None
Success Return	**<QoS>**
PUT	

Description	Set QoS parameters
Query	None
Inbound Data	**<QoS>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the QoS parameters, and realize the query and setting of the client sides or IE for the equipment QoS parameters through the CGI protocol, including the parameters such as code stream DSCP/signaling DSCP, etc.
Explanations on key parameters:
<streamDSCP> represents code stream DSCP
<cmdDSCP> represents signaling DSCP

QoSXML Block

```
<QoS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <enable><!-- opt, xs: boolean --><enable>
    <streamDSCP><!-- req, xs:integer; --></streamDSCP>
    <cmdDSCP><!--req, xs:integer --></cmdDSCP>
</QoS>
```

Test cases
GET /ISAPI/System/Network/channels/1/QoS
Request XML: none
Response XML: <QoS>
PUT /ISAPI/System/Network/channels/1/QoS
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<QoS>
<enable>true</enable>
<streamDSCP>2</streamDSCP>
<cmdDSCP>3</cmdDSCP>
</QoS>
```

1.1.11/ISAPI/System/Network/interfaces/IPandPort/<ID>

/ISAPI/System/Network/interfaces/IPandPort/<ID>	**General Resource v2.0**
GET	
Description	Obtain IP and port parameters
Query	None
Inbound Data	None
Success Return	**<NetworkInterface>**
PUT	
Description	Set IP and port parameters
Query	None
Inbound Data	**<NetworkInterface>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the IP and port parameters, and realize the query and setting of the client sides or IE for the equipment IP and port parameters through the CGI protocol.

NetworkInterfaceXML Block

```
<NetworkInterface>
<id><!-- req, xs:string --></id>
<IPAddress /><!-- req -->
<Link /><!-- opt -->
   <AdminAccessProtocolList/ ><!--Req-->
<defaultConnection><!-- opt, xs:boolean--></defaultConnection>
</NetworkInterface>

<IPAddress />:
<IPAddress>
<ipVersion><!-- req, xs:string, "v4,v6,dual" -->ipVersion>
<addressingType><!-- req, xs:string, "static,dynamic,apipa" --></addressingType>
<ipAddress><!-- dep, xs:string --></ipAddress>
<subnetMask><!-- dep, xs:string, subnet mask for IPv4 address --></subnetMask>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
<bitMask><!-- dep, xs:integer, bitmask IPv6 address --></bitMask>
<DefaultGateway><!-- dep -->
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
</DefaultGateway>
<PrimaryDNS><!-- dep -->
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
</PrimaryDNS>
<SecondaryDNS><!-- dep -->
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
</SecondaryDNS>
<Ipv6Mode><!-- opt -->
<ipV6AddressingType><!-- dep, xs:string,"ra,manual,dhcp"--></ipV6AddressingType>
<ipv6AddressList>
<v6Address>
<id><!-- dep, xs:string,id --></id>
<type><!-- dep, xs:string,"ra,manual,dhcp"--></type>
<address><!-- dep, xs:string --></address>
<bitMask><!-- dep, xs:integer --></bitMask>
</v6Address>
</ipv6AddressList>
</Ipv6Mode>
</IPAddress>

<Link />:
<Link>
<MACAddress><!-- req, xs:string--></MACAddress>
<autoNegotiation><!-- req, xs:boolean--></autoNegotiation>
<manualSetDns><!--req, xs:boolean></manualSetDns>
<speed><!-- req, xs:integer, "10, 100, 1000" --></speed>
<duplex><!-- req, xs:string, "half, full"--></duplex>
<MTU><!-- req, xs:integer --></MTU>
<workmode><!--req, xs:string "LoadBalance, MultiAddr, NetFaultTolerant"-->
   </workmode>//work mode：  LoadBalance (load balance), MultiAddr (multi-address setting),
NetFaultTolerant (network redundancy)
</Link>

< AdminAccessProtocolList />:
< AdminAccessProtocolList >
< AdminAccessProtocol />
```

```
</ AdminAccessProtocolList >

< AdminAccessProtocol /> :
<AdminAccessProtocol>
<id><!-- req, xs:string;id --></id>
<protocol><!--req, xs:string; "HTTP, HTTPS,RTSP,DEV_MANAGE,DATA_PORT"
--></protocol>
    <portNo><!-- req, xs:integer --></portNo>
</AdminAccessProtocol>
```

Test cases

GET /ISAPI/System/Network/interfaces/IPandPort/<ID>

Request XML： none

Response XML： <NetworkInterface>

PUT/ISAPI/System/Network/interfaces/IPandPort/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<NetworkInterface>
<id>1</id>
<Link>
<autoNegotiation>false</autoNegotiation>
<manualSetDns>true</manualSetDns>
<MTU>1500</MTU>
<MACAddress>00:50:c2:28:10:15</MACAddress>
</Link>
<IPAddress>
<ipAddress>10.30.41.21</ipAddress>
<ipv6Address>fe80::250:c2ff:fe28:1015</ipv6Address>
<subnetMask>255.255.255.0</subnetMask>
<bitMask>64</bitMask>
<DefaultGateway>
<ipAddress>10.30.41.1</ipAddress>
</DefaultGateway>
<PrimaryDNS>
<ipAddress>192.168.1.1</ipAddress>
</PrimaryDNS>
</IPAddress>
<AdminAccessProtocolList>
<AdminAccessProtocol>
<protocol>HTTP</protocol>
<portNo>80</portNo>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>HTTPS</protocol>
<portNo>443</portNo>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>RTSP</protocol>
<portNo>554</portNo>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>DATA_PORT</protocol>
<portNo>3000</portNo>
</AdminAccessProtocol>
</AdminAccessProtocolList>
</NetworkInterface>
```

1.1.12/ISAPI/System/Network/AlarmServer

/ISAPI/System/Network/AlarmServer	**General Resource v2.0**
GET	
Description	Obtain alarm server parameters
Query	None
Inbound Data	None
Success Return	**<AlarmServer>**
PUT	
Description	Set alarm server parameters
Query	None
Inbound Data	**<AlarmServer>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the alarm server parameters, and realize the query and setting of the client sides or IE for the equipment alarm server parameters through the CGI protocol, including the parameters such as alarm server/port, etc.
Explanations on key parameters:
< IP> represents alarm server, check whether IP is legal--supporting IPv6 address
<port> represents port, range prompt: 1-65535

AlarmServerXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
< AlarmServer version="2.0">
      <IP1><!-- opt, xs:string –"0.0.0.0"></IP1>
      <Port1><!-- opt, xs:integer,></ Port1>
</ AlarmServer >
```

Test cases
GET /ISAPI/System/Network/AlarmServer
Request XML: none
Response XML: <AlarmServer>
PUT/ISAPI/System/Network/AlarmServer
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AlarmServer>
<IP>255.255.255.255</IP>
<port>0</port>
</AlarmServer>
```

1.1.13/ISAPI/System/Network/mailing

/ISAPI/System/Network/mailing	**General Resource v2.0**
GET	
Description	Obtain email alarm parameters
Query	None
Inbound Data	None
Success Return	**<mailingList>**
PUT	
Description	Set email alarm parameters
Query	None
Inbound Data	**<mailingList>**

Success Return	<ResponseStatus>

Explanations on protocol:

This protocol is to realize the query and setting of the email alarm parameters, and realize the query and setting of the client sides or IE for the equipment email alarm parameters through the CGI protocol, including the parameters such as Email server address/port number/user name/password/main and carbon copy email address/login mode/encrypted mode/theme, etc.

Explanations on key parameters:

<enable> represents whether to start, true: start, false: not start

<hostName> represents Email server address, maximum 31 characters

<portNo> represents port number, range: 0-65535

<accountName> represents user name, solely inputting English or figures, maximum 31 characters

<password> represents password, solely inputting English or figures, maximum 31 characters

<emailAddress> represents main and carbon copy email address, maximum 31 characters

<emailMode> represents login mode, supporting mode: off, plain, cram-md5, digest-md5, gssapi, external, login, ntlm

<encryption> represents encryption mode, supporting encryption mode: NonePw, SSL, TLS

<emailSubject> represents theme, maximum 31 characters, and 15 Chinese characters

mailingListXML Block

```
<mailingList xmlns="http://www.isapi.org/ver20/XMLSchema">
<mailing xmlns="http://www.isapi.org/ver20/XMLSchema">
<id/><!-- req, xs:string, id -->
<enable><!-- req, xs:bool--></enable>
<sender><!--req-->
        <name><!--req, xs:string></name>
        <emailAddress><!--req, xs:string --></emailAddress>
        <smtp><!-- req -->
        <enableAuthorization><!--req, xs:boolean--></enableAuthorization>
        <enableSSL><!--opt, xs:boolean--></enableSSL>
<addressingFormatType>
<!-- req, xs:string, "ipaddress,hostname" -->
</addressingFormatType>
<hostName><!-- dep, xs:string --></hostName>
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
<portNo><!-- opt, xs:integer --></portNo>
<accountName><!-- dep, xs:string --></accountName>
<password><!-- dep, xs:string --></password>
</smtp>
</sender>
<receiverList><!-- req -->
<receiver>
<id><!--req, xs:string; id --></id>
<name><!--req, xs:string --></name>
<emailAddress><!-- req, xs:string --></emailAddress>
</receiver>
</receiverList>
<attachment><!--opt-->
<snapshot><!--opt-->
<enabled ><!--req, xs:boolean--></ enabled>
<interval><!--req, xs:integer, seconds></interval>
</snapshot>
</attachment>
<emailMode><!--req, xs:string --><emailMode>
<encryption><!--req, xs:string –SSL,TLS,NonePw><encryption>
<emailSubject><!--req, xs:string --><emailSubject>
</mailing>
```

```
</mailingList>
```

Test cases
GET /ISAPI/System/Network/mailing
Request XML: none
Response XML: <mailingList>
PUT/ISAPI/System/Network/mailing
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<mailingList>
<mailing>
<id>1</id>
<enable>true</enable>
<sender>
<smtp>
<hostName>smtp.163.com</hostName>
<accountName>test@163.com</accountName>
<portNo>25</portNo>
<password>test</password>
</smtp>
</sender>
<receiverList>
<receiver>
<emailAddress>test@163.com</emailAddress>
</receiver>
<receiver>
<emailAddress></emailAddress>
</receiver>
<receiver>
<emailAddress></emailAddress>
</receiver>
<receiver>
<emailAddress></emailAddress>
</receiver>
</receiverList>
<emailMode>login</emailMode>
<encryption>TLS</encryption>
<emailSubject>TEST</emailSubject>
</mailing>
</mailingList>
```

1.1.14/ISAPI/System/Network/mailing/test

/ISAPI/System/Network/mailing/test	**General Resource v2.0**
PUT	
Description	Set email test alarm
Query	None
Inbound Data	**<mailingTestDescription>**
Success Return	**<mailingTestResult>**

Explanations on protocol: This protocol is to realize the setting of the equipment email test alarm, and realize the setting of the client sides or IE for the equipment email test alarm through the CGI protocol.

mailingTestDescriptionXML Block

```
<mailingTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<sendName><!--opt, xs:string --></sendName>
<sendEmailAddress><!--req, xs:string --></sendEmailAddress>
<addressingFormatType>
<!-- req, xs:string, "ipaddress,hostname" -->
</addressingFormatType>
<hostName><!-- dep, xs:string --></hostName>
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
<portNo><!-- req, xs:integer --></portNo>
<enableSSL><!--opt, xs:boolean--></enableSSL>
<enableAuthorization><!--req, xs:boolean--></enableAuthorization>
<accountName><!-- dep, xs:string --></accountName>
<password><!-- dep, xs:string --></password>
<receiverList><!-- req -->
<receiver>
<id><!--req, xs:string; id --></id>
<name><!--req, xs:string --></name>
<emailAddress><!-- req, xs:string --></emailAddress>
</receiver>
</receiverList>
</mailingTestDescription>

<mailingTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<errorDescription><!-- req, xs:inter --></errorDescription>//test id,   -1 is error
</mailingTestResult>
```

Test cases

PUT/ISAPI/System/Network/mailing/test

Response XML: <ResponseStatus>

Request XML: None

1.1.15/ISAPI/System/Network/mailing/DelayTimeReset

/ISAPI/System/Network/mailing/DelayTimeReset	**General Resource v2.0**
PUT	
Description	Set the email alarm email sending delay zero
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the setting of the equipment email alarm email sending delay zero, and realize the setting of the client sides or IE for the equipment email alarm email sending delay zero through the CGI protocol.	

Test cases

PUT/ISAPI/System/Network/mailing/DelayTimeReset

Response XML: <ResponseStatus>

Request XML: None

1.1.16/ISAPI/System/Network/interfaces/<ID>/wireless

/ISAPI/System/Network/interfaces/<ID>/wireless	General Resource v2.0
GET	
Description	Obtain wireless parameters
Query	None
Inbound Data	None
Success Return	**<Wireless>**
PUT	
Description	Set wireless parameters
Query	None
Inbound Data	**<Wireless>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the wireless parameters, and realize the query and setting of the client sides or IE for the equipment wireless parameters through the CGI protocol, including the parameters such as wireless status/ESSID/safety type/secret key type/password/secret key format selection/IP obtaining mode/ip address/subnet mask, etc.

Explanations on key parameters:

<wireCard> represents wireless network card, true: have network card, false: have no network card
<wireStatus> represents wireless status, true: online, false: offline
<ssid> represents ESSID
<securityMode> represents safety type, supporting type: WEP, WPA-PSK, WPA2-PSK, AUTO
<algorithmType> represents secret key type, supporting type: TKIP、AES、AUTO
<sharedKey> represents password
<WPAFormat> represents secret key format selection, supporting format: HEX, ASCII, AUTO
<wpaKeyLength> represents password length
<ipVersion> represents IPV4 or IPV6
<addressingType> represents IP obtaining mode, supporting mode: static, dynamic
<ipAddress> represents IPV4 address
<subnetMask> represents IPV4 subnet mask
<ipAddress> represents IPV4 default gateway
<DefaultGateway> represents default gateway (currently only using IPV4)
<ipAddress> represents IPV4 DNS
<PrimaryDNS> represents DNS (currently only using IPV4)

WirelessXML Block

```
<Wireless version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
<wirelessNetworkMode><!-- opt, xs:string, "infrastructure,adhoc" -->
</wirelessNetworkMode>
<channel><!-- opt, xs:string, "1-14,auto" --></channel>
<wireCard><!-- opt, xs:bool--><wireCard>
<wireStatus><!-- opt, xs:bool--></wireStatus>
<ssid><!-- opt, xs:string --></ssid> //ESSID
<wmmEnabled><!-- opt, xs:boolean --></wmmEnabled>
<WirelessSecurity><!-- opt -->
<securityMode><!-- opt, xs:string,
"disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,
WPA-enterprise,WPA2-enterprise, AUTO, WPA-PSK, WPA2-PSK"-->
</securityMode>
<WEP><!-- dep, depends on <securityMode> -->
    <authenticationType><!-- req, xs:string, "open,sharedkey,auto" --></authenticationType>
<defaultTransmitKeyIndex><!-- req, xs:integer --></defaultTransmitKeyIndex>
```

```
<wepKeyLength><!-- opt, xs:integer "64,128" --></wepKeyLength>
<EncryptionKeyList>
<encryptionKey><!-- req, xs:hexBinary, WEP encryption key in hexadecimal format -->
</encryptionKey>
</EncryptionKeyList>
</WEP>
<WPA><!-- dep, depends on <securityMode> -->
<algorithmType><!-- req, xs:string, "TKIP,AES,TKIP/AES, AUTO"--></algorithmType>
<sharedKey><!-- req, xs:string, pre-shared key used in WPA --></sharedKey>
      <WPAFormat><!-- req, xs:string, "HEX,ASCII ,AUTO" --></WPAFormat>
<wpaKeyLength><!-- req, xs: integer, "8-63"--></wpaKeyLength>
</WPA>
</WirelessSecurity>
<ipVersion>   <!-- req, xs:string, "v4,v6,dual" --></ipVersion>
<addressingType>  <!-- req, xs:string, "static,dynamic,apipa" --></addressingType>
<ipAddress>   <!-- dep, xs:string --></ipAddress>
<subnetMask><!-- dep, xs:string, subnet mask for IPv4 address -->    </subnetMask>
<ipv6Address><!-- dep, xs:string -->    </ipv6Address>
<bitMask>      <!-- dep, xs:integer, bitmask IPv6 address --></bitMask>
<DefaultGateway><!-- dep -->
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!-- dep, xs:string --></ipv6Address>
</DefaultGateway>
<PrimaryDNS><!-- dep -->
<ipAddress><!-- dep, xs:string --></ipAddress>// IPV4 DNS
<ipv6Address><!-- dep, xs:string --></ipv6Address>
</PrimaryDNS>
<SecondaryDNS>  <!-- dep -->
<ipAddress>   <!-- dep, xs:string -->     </ipAddress>
<ipv6Address><!-- dep, xs:string -->    </ipv6Address>
</SecondaryDNS>
<Ipv6Mode><!-- opt -->
      <ipV6AddressingType>
      <-- dep, xs:string,"ra,manual,dhcp>
      </ipV6AddressingType>
      <ipv6AddressList>
      <v6Address>
      <id><!-- dep, xs:string;id --></id>
      <type><-- dep, xs:string,"ra,manual,dhcp>   </type>
      <address><!-- dep, xs:string -->     </address>
      <bitMask><!-- dep, xs:integer -->  </bitMask>
      </v6Address>
      </ipv6AddressList>
</Ipv6Mode>
</IPAddress>
</Wireless>
```

Test cases

GET /ISAPI/System/Network/interfaces/<ID>/wireless

Request XML: none

Response XML: <Wireless>

PUT/ISAPI/System/Network/interfaces/<ID>/wireless

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Wireless>
<enabled>true</enabled>
<channel>1</channel>
<wireCard>false</wireCard>
<wireStatus>false</wireStatus>
<ssid>0</ssid>
<WirelessSecurity>
<securityMode>
</securityMode>
<WEP>
<authenticationType>N/A</authenticationType>
<defaultTransmitKeyIndex>N/A</defaultTransmitKeyIndex>
<EncryptionKeyList>
<encryptionKey>
</encryptionKey>
</EncryptionKeyList>
</WEP>
<WPA>
<algorithmType>TKIP</algorithmType>
<sharedKey>123456</sharedKey>
<WPAFormat>ASCII</WPAFormat>
</WPA>
</WirelessSecurity>
<ipVersion>v4</ipVersion>
<addressingType>static</addressingType>
<ipAddress>192.168.0.2</ipAddress>
<subnetMask>255.255.255.0</subnetMask>
<ipv6Address>255.255.255.0</ipv6Address>
<bitMask>255.255.255.0</bitMask>
<DefaultGateway>
<ipAddress>192.168.0.1</ipAddress>
<ipv6Address>192.168.1.1</ipv6Address>
</DefaultGateway>
<PrimaryDNS>
<ipAddress>192.168.1.1</ipAddress>
<ipv6Address>192.168.1.1</ipv6Address>
</PrimaryDNS>
<SecondaryDNS>
<ipAddress>192.168.1.1</ipAddress>
<ipv6Address>192.168.1.1</ipv6Address>
</SecondaryDNS>
<Ipv6Mode>
<ipV6AddressingType>manual</ipV6AddressingType>
<ipv6AddressList>
<v6Address>
<id>0</id>
<type>manual</type>
<address>192.168.1.1</address>
<bitMask>255.255.255.0</bitMask>
</v6Address>
</ipv6AddressList>
</Ipv6Mode>
</Wireless>
```

1.1.17/ISAPI/System/Network/interfaces/<ID>/wireless/accessPointList

/ISAPI/System/Network/interfaces/<ID>/wireless/accessPointList General Resource v2.0	
GET	
Description	Obtain wireless hot spot list parameters
Query	None
Inbound Data	None
Success Return	**<accessPointList>**
PUT	
Description	Set wireless hot spot list parameters
Query	None
Inbound Data	**<accessPointList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the wireless hot spot list parameters, and realize the query and setting of the client sides or IE for the equipment wireless hot spot list parameters through the CGI protocol, including the parameters such as ESSID/safety type/whether safety setting is opened/, etc.

Explanations on key parameters:

<channel> represents communication channel (reserved)
<ssid> represents ESSID
<speed> represents rate (reserved)
<signalStrength> represents signal strength (reserved)
<securityMode> represents safety type (no shared memory, reserved)
<securityEnable> represents whether safety setting is opened

accessPointListXML Block

```
<accessPointList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<accessPoint/>
</accessPointList>
/ISAPI/System/Network/interfaces/ID/wireless/accessPointList/ID
<accessPoint version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:integer--></id>
<networkMode><!-- opt, xs:string, "infrastructure,adhoc" --></networkMode>
<channel><!-- opt, xs:string, "1-14,auto" --></channel>
<ssid><!-- req, xs:string --></ssid>
<speed><!-- opt, xs:Integer, in Mbps--></speed>
<signalStrength><!-- opt, xs:Integer,"0-100"><  /signalStrength>
<securityMode>
<!-- req, xs:string, "disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,
WPA-enterprise,WPA2-enterprise,  auto" -->
</securityMode>
<securityEnable><!-- opt, xs:bool--></securityEnable >
</accessPoint>
```

Test cases

GET/ISAPI/System/Network/interfaces/<ID>/wireless/accessPointList
Request XML: none
Response XML: <accessPointList>
PUT/ISAPI/System/Network/interfaces/<ID>/wireless/accessPointList
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<accessPointList>
<accessPoint>
<id>0</id>
<ssid>s6test</ssid>
<securityEnable>true</securityEnable>
</accessPoint>
<accessPoint>
<id>1</id>
<ssid>netipc</ssid>
<securityEnable>true</securityEnable>
</accessPoint>
<accessPoint>
<id>2</id>
<ssid>100000</ssid>
<securityEnable>true</securityEnable>
</accessPoint>
<accessPoint>
<id>3</id>
<ssid>tencent</ssid>
<securityEnable>true</securityEnable>
</accessPoint>
</accessPointList>
```

1.1.18/ISAPI/System/time

/ISAPI/System/time	**General Resource v2.0**
GET	
Description	Obtain time information parameters
Query	None
Inbound Data	None
Success Return	**<Time>**
PUT	
Description	Set time information parameters
Query	None
Inbound Data	**<Time>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the time information parameters, and realize the query and setting of the client sides or IE for the equipment time information parameters through the CGI protocol, including the parameters such as local time/time zone, etc.
Explanations on key parameters:
<localTime> represents local time
<timeZone> represents time zone

TimeXML Block

```
<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<timeMode><!-- req, xs:string, "NTP, manual" --></timeMode>
<localTime><!-- req, xs:datetime --></localTime>
<timeZone><!-- req, xs:string, POSIX time zone string --></timeZone>
</Time>
```

Test cases

GET /ISAPI/System/time
Request XML: none
Response XML: <Time>
PUT/ISAPI/System/time
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Time>
<timeMode>manual</timeMode>
<localTime>2016-12-14T09:24:19</localTime>
<timeZone>CST+8:00:00DST01:00:00,M2.1.3/08:00:00,M8.3.6/19:00:00</timeZone>
</Time>
```

1.1.19/ISAPI/System/time/ntpServers/test

/ISAPI/System/time/ntpServers/test	**General Resource v2.0**
POST	
Description	NTP timing test
Query	None
Inbound Data	**<NTPTestDescription>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the NTP timing test, and realize the NTP timing test of the client sides or IE for the equipments through the CGI protocol, including the parameters such as IP address/port number, etc. **Explanations on key parameters:** <hostName> represents hostname www.abc.com <ipAddress> represents ipaddress IP address <portNo> represents port number	

NTPTestDescriptionXML Block

```
<NTPTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<addressingFormatType>
<!--req, xs:string, "ipaddress,hostname"-->
</addressingFormatType>
<hostName><!--dep, xs:string --></hostName>
<ipAddress><!--dep, xs:string --></ipAddress>
<ipv6Address><!--dep, xs:string --></ipv6Address>
<portNo><!--req, xs:integer --></portNo>
</NTPTestDescription>
```

Test cases
POST /ISAPI/System/time/ntpServers/test
Response XML: <ResponseStatus>
Request XML: <NTPTestDescription> as below

```
<NTPTestDescription>
<addressingFormatType>ipaddress</addressingFormatType>
<hostName>
</hostName>
<ipAddress>10.30.41.51</ipAddress>
<ipv6Address>
</ipv6Address>
<portNo>123</portNo>
</NTPTestDescription>
```

1.1.20/ISAPI/System/factoryReset/type/<ID>

/ISAPI/System/factoryReset/type/<ID>	**General Resource v2.0**
PUT	
Description	Set recovery default
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the setting of the equipment recovery default, and realize the setting of the client sides or IE for the equipment recovery default through the CGI protocol. <type> represents type, IPC 0 –simple recovery, 1 –recovery to ex-factory setting NVR not parsing this field	

Test cases
PUT/ISAPI/System/factoryReset/type/<ID>
Response XML: <ResponseStatus>
Request XML: None

1.1.21/ISAPI/System/reboot

/ISAPI/System/reboot	**General Resource v2.0**
PUT	
Description	Set restart
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the setting of the equipment restart, and realize the setting of the client sides or IE for the equipments through the CGI protocol.	

Test cases
PUT/ISAPI/System/reboot
Response XML: <ResponseStatus>
Request XML: None

1.1.22/ISAPI/System/IO/inputs/<ID>

/ISAPI/System/IO/inputs/<ID>General Resource v2.0	
GET	
Description	Obtain alarm input parameters
Query	None
Inbound Data	None
Success Return	**<IOInputPort>**
PUT	
Description	Set alarm input parameters
Query	None
Inbound Data	**<IOInputPort>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the alarm input parameters, and realize the query and setting of the client sides or IE for the equipment alarm input parameters through the CGI protocol, including the parameters such as input port value/mode, etc.
Explanations on key parameters:
<id> represents the distinction of remote port and local port of the input port value: the ports within the channel number supported by NVR are the remote ports, and others are local ports; the No. starts from 1, and is arranged in sequence.
<enabled> represents enabling, true: start, false: not start
<triggering> represents mode setting, high: open-circuit alarm, low: closed-circuit alarm
<accessAlm> represents loop detection alarm, true: open, false: start

IOInputPort XML Block

```
<IOInputPort    version="2.0"       xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string;id --></id>
<enabled><!--req,Boolean,"true,false"--></enabled>
<triggering><!-- req, xs:string, "high,low" --><triggering>
<accessAlm><!--req,Boolean,"true,false"--><accessAlm>
</IOInputPort>
```

Test cases
GET /ISAPI/System/IO/inputs/<ID>
Request XML: none
Response XML: <IOInputPort>
PUT/ISAPI/System/IO/inputs/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<IOInputPort>
<id>1</id>
<enabled>true</enabled>
<triggering>low</triggering>
<accessAlm> true <accessAlm>
</IOInputPort>
```

1.1.23/ISAPI/System/IO/inputs/name

/ISAPI/System/IO/inputs/name General Resource v2.0	
GET	
Description	Obtain alarm input port alias
Query	None
Inbound Data	None
Success Return	**<IOInputPortNameList>**
PUT	
Description	Set alarm input port alias
Query	None
Inbound Data	**<IOInputPortNameList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to obtain/set alarm input port alias.
Explanations on key parameters:
<name> port alias, maximum support of 60 characters

IOInputPortNameList XML Block

```
<IOInputPortNameListversion="2.0"       xmlns="http://www.isapi.org/ver20/XMLSchema">
<IOInputPort>
<id><!-- req, xs: integer;id --></id>
<name><!-- req, xs:string --></name>
</IOInputPort>
</IOInputPortNameList>
```

Test cases

GET /ISAPI/System/IO/inputs/name

Request XML： none

Response XML：<IOInputPortList>

PUT/ISAPI/System/IO/inputs/name

Response XML： <ResponseStatus>

Request XML： as below

```
<IOInputPortNameListversion="2.0"       xmlns="http://www.isapi.org/ver20/XMLSchema">
<IOInputPort>
<id>1</id>
<name>Remote Alarm Input 1</name>
</IOInputPort>
</IOInputPortNameList>
```

1.1.24 /ISAPI/System/IO/outputs/<ID>

/ISAPI/System/IO/outputs/<ID>	**General Resource v2.0**
GET	
Description	Obtain alarm output parameters
Query	None
Inbound Data	None
Success Return	**<IOOutputPort>**
PUT	
Description	Set alarm output parameters
Query	None
Inbound Data	**<IOOutputPort>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is to realize the query and setting of the alarm output parameters, and realize the query and setting of the client sides or IE for the equipment alarm output parameters through the CGI protocol, including the parameters such as output port value/mode/delay time, etc.

Explanations on key parameters:

<id> represents output port value

<outputState> represents mode setting, high：open-circuit alarm, low： closed-circuit alarm

<delayTime> represents delay time, unit：second, range：0, 1, 2, 5, 10, 30

<clearType> represents alarm clearing mode：0, manual alarm clearing; 1, delayed alarm clearing

<pulseDuration> reserved, port output is trigger time of pulse signal time, unit：millisecond, the equipment does not support temporarily

IOOutputPortXML Block

```
<IOOutputPort version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string; id --></id>
<PowerOnState><!-- req -->
<defaultState><!—ro, req, xs:string, "high,low" --></defaultState>
<outputState><!—ro, req, xs:string, "high,low" --></outputState>
<clearType><!-- req, xs:integer; --></clearType>
<delayTime><!-- dep, xs:integer,seconds --></delayTime>
<pulseDuration><!-- dep, xs:integer, milliseconds --></pulseDuration>
</PowerOnState>
</IOOutputPort>
```

Test cases
GET /ISAPI/System/IO/outputs/1
Request XML: none
Response XML: <IOOutputPort>
PUT/ISAPI/System/IO/outputs/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<IOOutputPort>
<id>1</id>
<PowerOnState>
    <outputState>low</outputState>
    <clearType>1</clearType>
<delayTime>10</delayTime>
</PowerOnState>
</IOOutputPort>
```

1.1.25/ISAPI/System/IO/outputs/name

/ISAPI/System/IO/outputs/name	**General Resource v2.0**
GET	
Description	Obtain alarm output port alias
Query	None
Inbound Data	None
Success Return	**<IOOutputPortNameList>**
PUT	
Description	Set alarm output port alias
Query	None
Inbound Data	**<IOOutputPortNameList>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize obtaining/setting alarm output port alias. **Explanations on key parameters:** <id> represents output port value <name> port alias, maximum support of 60 characters	

IOOutputPortNameList XML Block

```
<IOOutputPortNameList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<IOOutputPort>
<id><!-- req, xs:integer; id --></id>
<name><!-- req, xs:string--></name>
</IOOutputPort>
</IOOutputPortNameList>
```

Test cases
GET /ISAPI/System/IO/outputs/name
Request XML: none
Response XML: <IOOutputPortNameList>
PUT/ISAPI/System/IO/outputs/name
Response XML: <ResponseStatus>
Request XML: as below

```
<IOOutputPortNameList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<IOOutputPort>
<id>1</id>
<name>Local Alarm Output 1</name>
</IOOutputPort>
```

```
</IOOutputPortNameList>
```

1.1.26 /ISAPI/System/Video/inputs/channels/<ID>/motionDetection

/ISAPI/System/Video/inputs/channels/<ID>/motionDetection **General Resource v2.0**	
GET	
Description	Obtain mobile alarm parameters
Query	None
Inbound Data	None
Success Return	**<MotionDetection>**
PUT	
Description	Set mobile alarm parameters
Query	None
Inbound Data	**<MotionDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the mobile alarm parameters, and realize the query and setting of the client sides or IE for the equipment mobile alarm parameters through the CGI protocol, including the parameters such as value assignment/sensibility level/coordinates, etc.

Explanations on key parameters:

<enabled> represents whether to start, true: start, false: not start

<regionType> represents setting detection region type: grid: grid shape

<rowGranularity> represents the height of the whole video screen is divided into fixed 18 rows.

<columnGranularity> represents the width of the whole video screen is divided into fixed 22 columns.

<sensitivityLevel> represents sensibility level, range: 0-100s

<gridMap> represents screen region coordinates.

fffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffc

It is totally divided into 18 groups corresponding 18 rows. Every three bytes are in one group, and treated by bits, and the high 22 bits correspond to 22 columns, for example, fffffc corresponds to one row full enabling, and the screen corresponds to each group bit24-bit2 from left to right.

MotionDetectionXML Block

```
<MotionDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!--req,Boolean,"true,false"--></enabled>
<regionType><!-- ro, req, xs:string, "grid" --></regionType>
<Grid>
<rowGranularity><!-- ro, req, xs:integer --></rowGranularity>
<columnGranularity><!-- ro, req, xs:integer --></columnGranularity>
</Grid>
<MotionDetectionLayout>
<sensitivityLevel><!-- ro, req, xs:integer --></sensitivityLevel>
<layout>
<gridMap><!--dep, xs:hexstring--></gridMap>
</layout>
</MotionDetectionLayout>
</MotionDetection>
```

Test cases

GET /ISAPI/System/Video/inputs/channels/1/motionDetection

Request XML: none

Response XML: <MotionDetection>

PUT/ISAPI/System/Video/inputs/channels/1/motionDetection

Response XML: <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<MotionDetection>
<enabled>true</enabled>
<regionType>grid</regionType>
<Grid>
<rowGranularity>18</rowGranularity>
<columnGranularity>22</columnGranularity>
</Grid>
<MotionDetectionLayout>
<sensitivityLevel>58</sensitivityLevel>
<layout>
<gridMap>fffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffc
fffffcfffffc</gridMap>
</layout>
</MotionDetectionLayout>
</MotionDetection>
```

1.1.27 /ISAPI/System/Video/inputs/channels/<ID>/tamperDetection

/ISAPI/System/Video/inputs/channels/<ID>/tamperDetection	**General Resource v2.0**
GET	
Description	Obtain shielding alarm parameters
Query	None
Inbound Data	None
Success Return	**<TamperDetection>**
PUT	
Description	Set shielding alarm parameters
Query	None
Inbound Data	**<TamperDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the shielding alarm parameters, and realize the query and setting of the client sides or IE for the equipment shielding alarm parameters through the CGI protocol, including the parameters such as sensibility level/defense region/coordinate point, etc.

Explanations on key parameters:
<enabled> represents whether to start, true: start, false: not start
<tampersensitivityLevel> represents sensibility level, range: 0-100

TamperDetectionXML Block

```
<TamperDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
< tampersensitivityLevel>
<!--req, xs:integer, 0..100, 0 is the least sensitive -->
</tampersensitivityLevel>
```

Test cases
GET /ISAPI/System/Video/inputs/channels/<ID>/tamperDetection
Request XML： none
Response XML： <TamperDetection>
PUT/ISAPI/System/Video/inputs/channels/<ID>/tamperDetection
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TamperDetection>
<enabled>true</enabled>
<tampersensitivityLevel>67</tampersensitivityLevel>
</TamperDetection>
```

1.1.28 /ISAPI/System/Video/inputs/channels/<ID>/LogoUpLoad

/ISAPI/System/Video/inputs/channels/<ID>/LogoUpLoad **General Resource v2.0**	
GET	
Description	LOGO upload
Query	None
Inbound Data	None
Success Return	**<TextOverlayLogo>**
PUT	
Description	Set LOGO upload
Query	None
Inbound Data	**<TextOverlayLogo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the data LOGO upload, and realize the setting of the client sides or IE for the equipment LOGO upload through the CGI protocol. **This protocol is not used temporarily.**	

1.1.29 /ISAPI/System/configData/import

/ISAPI/System/configData/import **General Resource v2.0**	
POST	
Description	Setting parameter import
Query	None
Inbound Data	File content
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the import of parameters other than IP and port, and realize the import of parameters other than IP and port of the client sides or IE for the equipments through the CGI protocol, which are realized in the url address. The import file comes from the box file exported from the equipment parameters. Pay attention to distinguishing the upgrading file.	

1.1.30 /ISAPI/System/updateFirmware

/ISAPI/System/updateFirmware **General Resource v2.0**	
PUT	
Description	Setting upgrading
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**

Explanations on protocol: This protocol is to realize the equipment upgrading, and realize the equipment upgrading of the client sides or IE through the CGI protocol.

Test cases

PUT/ISAPI/System/updateFirmware

Response XML: <ResponseStatus>

Request XML: None

1.1.31 /ISAPI/System/basic/capabilities

/ISAPI/System/basic/capabilities	**General Resource v2.0**
GET	
Description	Equipment basic capability set
Query	None
Inbound Data	None
Success Return	**<BasicCap>**
Explanations on protocol: This protocol is used to obtain the basic function capability set of equipments.	

BasicCap XML Block

```
<BasicCap>
    <iChannelNums><!--req, xs:integer --></ichannelNums>//channel number
    <iAlarmInNums><!--req, xs:integer --></iAlarmInNums>//alarm input number
    <iAlarmOutNums><!--req, xs:integer --></iAlarmOutNums>//alarm output number
    <iLanNums><!--req, xs:integer --></iLanNums>//network card number
    <iSataDiskNums><!--req, xs:integer --></iSataDiskNums>//hard disk number
    <iHDDNums><!--req, xs:integer --></iHDDNums>//disk pack number
    <iESATANums><!--req, xs:integer --></iESATANums>//eSATA number
    <iCOMNums><!--req, xs:integer --></iCOMNums>//serial port number
    <iDigitalChanNums><!--req, xs:integer --></iDigitalChanNums>//digital channel number
    <iPseChanNums><!-- req, xs:integer --></iPseChanNums >//Pse channel number
    <iPsePower><!-- req, xs:integer --></iPsePower>//Pse total output power, unit W, send
after multiplying 100
    <iIONums><!—opt, xs:integer --></iIONums>//traffic equipment IO number
    <iLaneNums><!—opt, xs:integer --></iLaneNums>//traffic equipment maximum lane
number
    <iLoopNums><!—opt, xs:integer --></iLoopNums>//traffic equipment coil number
    <iCOM232Nums><!—opt, xs:integer --></ iCOM232Nums >//traffic equipment 232
serial port number
    <iCOM485Nums ><!—opt, xs:integer --></iCOM485Nums >//traffic equipment 485
serial port number
    <iIOlinkIPCNums><!—opt, xs:integer --></iIOlinkIPCNums>//maximum support access
flow camera number by the traffic equipment IO converter
    <iFaceLibNums><!—opt, xs:integer --></iFaceLibNums>//maximum number of human
face bases
    <iFacePicNums><!—opt, xs:integer --></iFacePicNums>//maximum number of human
face pictures
    <iAnalogChnNums><!--opt, xs:integer --></iAnalogChnNums>//analogue channel
quantity
    <iMixtureChnNums><!--opt, xs:integer --></iMixtureChnNums>//synthetic channel
quantity 0= not support, larger than 0=synthetic channel quantity
</BasicCap>
```

Test cases

GET /ISAPI/System/basic/capabilities

Response XML: <ResponseStatus>

Response XML: <BasicCap>

```
<BasicCap>
    <iChannelNums>21</ichannelNums>//channel number
    <iAlarmInNums>4</iAlarmInNums>//alarm input number
    <iAlarmOutNums>16</iAlarmOutNums>//alarm output number
    <iLanNums>1</iLanNums>//network card number
    <iSataDiskNums>2</iSataDiskNums>//hard disk number
    <iHDDNums>2</iHDDNums>//disk pack number
    <iESATANums>0</iESATANums>//eSATA number
    <iCOMNums>1</iCOMNums>//serial port number
    <iDigitalChanNums>20</iDigitalChanNums>//digital channel number
    <iPseChanNums>0</iPseChanNums >//Pse channel number
    <iPsePower>0</iPsePower>//Pse total output power, unit W, send after multiplying 100
    <iIONums>8</iIONums>//traffic equipment IO number
    <iLaneNums>4</ iLaneNums>//traffic equipment maximum lane number
    <iLoopNums>3</iLoopNums>//traffic equipment coil number
    <iCOM232Nums>1</ iCOM232Nums >//traffic equipment 232 serial port number
    <iCOM485Nums >7</iCOM485Nums >//traffic equipment 485 serial port number
     <iIOlinkIPCNums>8</iIOlinkIPCNums>//maximum support access flow camera number
                                by the traffic equipment IO converter
    <iFaceLibNums>32</iFaceLibNums>//maximum number of human face bases
    <iFacePicNums>5000</iFacePicNums>//maximum number of human face pictures
    <iAnalogChnNums>4</iAnalogChnNums>//analogue channel quantity
    <iMixtureChnNums>1</iMixtureChnNums>//synthetic channel quantity
</BasicCap>
```

1.1.32 /ISAPI/System/Video/inputs/channels/<ID>/videoLoss

/ISAPI/System/Video/inputs/channels/<ID>/videoLoss **General Resource v2.0**	
GET	
Description	Obtain loss alarm parameters
Query	None
Inbound Data	None
Success Return	**<VideoLoss>**
PUT	
Description	Set loss alarm parameters
Query	None
Inbound Data	**<VideoLoss>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the query and setting of the loss alarm parameters, and realize the query and setting of the client sides or IE for the equipment loss alarm parameters through the CGI protocol, including the enabling. **Explanations on key parameters:** <enabled> represents whether to start, true: start, false: not start	

VideoLoss XML Block

```
<VideoLoss xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled>!-- req, xs:boolean --</enabled>
</VideoLoss>
```

Test cases

GET /ISAPI/System/Video/inputs/channels/<ID>/videoLoss

Request XML: none

Response XML: <VideoLoss>

PUT/ISAPI/System/Video/inputs/channels/<ID>/videoLoss

Response XML: <ResponseStatus>

Request XML: as below

VideoLoss XML Block

```
<VideoLoss xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled>true</enabled>
</VideoLoss>
```

1.1.33 /ISAPI/System/Holidays

/ISAPI/System/HolidaysGeneral Resource v2.0	
GET	
Description	Obtain holiday plan parameters
Query	None
Inbound Data	None
Success Return	**<HolidayList>**
PUT	
Description	Set holiday plan parameters
Query	None
Inbound Data	**<HolidayList>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the query and setting of the holiday plan parameters, and realize the query and setting of the client sides or IE for the equipment holiday plan parameters through the CGI protocol, including the parameters such as enabling, serial number, start time, end time, etc. **Explanations on key parameters:** None	

HolidayList XML Block

```
<HolidayList version="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
<holiday>
<id><!-- req, xs:string;id --></id>//holiday plan serial number 1,2,  …..
<enabled><!-- req, xs:boolean --></enabled>//start：true, not start：false
<holidayMode><!-- req, xs:string, "date, week, month" --></holidayMode>//type：by date：date, by week：week, by month：month
<holidayName><!--req, xs:string --></holidayName>//holiday name maximum support of 30 characters
//by date
<holidayDate><!-- dep -->
    <startDate><!-- req, xs:date --></startDate>//start date
    <endDate><!-- req, xs:date --></endDate>//end date
</holidayDate>
//by week
<holidayWeek><!-- dep -->
    <startWeek><!-- req -->
        <monthOfYear><!-- req --></monthOfYear>//month of year
        <sequence><!-- req, xs:integer, 1…5 --></sequence>//week of month
        <dayOfWeek><!-- req, ISO8601 weekday number, 1=Monday" --></dayOfWeek>//day of week
    </startWeek>
    <endWeek><!-- req -->
        <monthOfYear><!-- req --></monthOfYear>
       <sequence><!-- req, xs:integer, 1…5 --></sequence>
       <dayOfWeek><!-- req, ISO8601 weekday number, 1=Monday" --></dayOfWeek>
    </endWeek>
</holidayWeek>
//by month
<holidayMonth><!-- dep -->
   <startMonth><!-- req --><monthOfYear><!-- req, xs:integer, "1…12" --></monthOfYear>
        <monthOfYear><!-- req, xs:integer, "1…12" --></monthOfYear>//month of year
        <dayOfMonth><!-- req, xs:integer, "1…31" --></dayOfMonth>//day of month
   </startMonth>
   <endMonth><!-- req -->
        <monthOfYear><!-- req, xs:integer, "1…12" --></monthOfYear>
        <dayOfMonth><!-- req, xs:integer, "1…31" --><dayOfMonth>
   </endMonth>
</holidayMonth>
</holiday>
</HolidayList>
```

Test cases

GET /ISAPI/System/Holidays

Request XML： none

Response XML：<HolidayList>

PUT/ISAPI/System/Holidays

Response XML：<HolidayList>

Request XML： as below

```
<HolidayList version="1.0" >
<holiday version="1.0" >
    <id>1</id>
    <enabled>true</enabled>
    <holidayName>Holiday1</holidayName>
    <holidayMode opt="date,week,month">date</holidayMode>
    <holidayDate>
        <startDate>2017-07-04</startDate>
        <endDate>2017-07-04</endDate>
    </holidayDate>
```

```
</holiday>
<holiday version="1.0">
    <id>2</id>
    <enabled>true</enabled>
    <holidayName>Holiday2</holidayName>
    <holidayMode opt="date,week,month">week</holidayMode>
    <holidayWeek>
        <startWeek>
            <monthOfYear>1</monthOfYear>
            <sequence>2</sequence>
            <dayOfWeek>2</dayOfWeek>
        </startWeek>
        <endWeek>
            <monthOfYear>1</monthOfYear>
            <sequence>3</sequence>
            <dayOfWeek>0</dayOfWeek>
        </endWeek>
    </holidayWeek>
</holiday>
<holiday version="1.0" >
    <id>3</id>
    <enabled>false</enabled>
    <holidayName>Holiday3</holidayName>
    <holidayMode>month</holidayMode>
    <holidayMonth>
        <startMonth>
            <monthOfYear>1</monthOfYear>
            <dayOfMonth>1</dayOfMonth>
        </startMonth>
        <endMonth>
            <monthOfYear>1</monthOfYear>
            <dayOfMonth>1</dayOfMonth>
        </endMonth>
    </holidayMonth>
</holiday>
</HolidayList>
```

1.1.34/ISAPI/System/Network/mailing/<ID>/Status

/ISAPI/System/Network/mailing/<ID>/Status	**General Resource v2.0**
GET	
Description	Asynchronous obtaining of email test results
Query	None
Inbound Data	None
Success Return	**<MailingStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the time information parameters, and realize the query and setting of the client sides or IE for the equipment time information parameters through the CGI protocol, including the parameters such as local time/time zone, etc.

Explanations on key parameters:

<ID> represents test ID, non negative integer, reserved, temporarily no actual effects

<status> represents test status

<process> represents process, currently fixed to be 0, reserved

MailingStatus XML Block

```
<MailingStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<status><!-- req, xs:string: success, fail, testing --></status>
<process><!-- req, xs:integer, 0-100 --></process>
</MailingStatus>
```

Test cases
GET /ISAPI/System/Network/mailing/<ID>/Status
Request XML: none
Response XML: <MailingStatus>
Response XML: as below

```
<MailingStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<status>testing</status>
<process>0</process>
</MailingStatus>
```

1.1.35/ISAPI/System/Network/FTPAdvance

/ISAPI/System/Network/FTPAdvance	**General Resource v2.0**
GET	
Description	Obtain FTP upload picture stream server parameters
Query	None
Inbound Data	None
Success Return	**<FTPAdvanceList>**
PUT	
Description	Set FTP upload picture stream server parameters
Query	None
Inbound Data	**<FTPAdvanceList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the FTP upload picture stream server parameters, and realize the query and setting of the client sides or IE for the FTP upload picture stream server parameters through the CGI protocol, including the parameters such as server address/port/account number/password/path/upload picture naming rule, etc.

Explanations on key parameters:

<ftpEnable> represents the upload server enabling, true: enable, false: not enable
<ftpNum> represents ftp mark number, 0: keep, 1: ftp1, 2: ftp2
<ipAddress> represents server address, maximum not exceeds 63 bytes -- supporting IPv6 address
<portNo> represents port, range: 0-65535
<userName> represents account number, maximum not exceeds 16 bytes
<password> represents password, maximum not exceeds 16 bytes
<ftpType> represents ftp type, 0: keep, 1: bayonet, 2: violation of regulations (mutual exclusion between two ftp types), 3: human face
<listCount> represents catalogue level, 0: root directory, 1~n: represents the used catalogue level
<contentList> represents catalogue list, 0-blank, 1-equipment No., 2-equipment IP, 3-junction No., 4-junction name, 5-time (year and month), 6-time (year, month, and day), 7-illegal type, 8-lane direction, 9-lane No., 10-channel name, 11-channel No., 12 -human face property, 65535-self defined
<picNameCount> represents picture naming count
<picNameList> represents picture naming rules, 0-blank, 1-equipment No., 2-equipment IP, 3-junction No., 4-junction name, 5-snap time, 6-red light start time, 7-time after red light, 8-license plate number, 9-license plate color, 10-vehicle body color, 11-vehicle type, 12-vehicle brand, 13-safety belt, 14-lane No., 15-lane name, 16-lane direction, 17-vehicle speed, 18-speed restriction mark, 19-illegal code,

20-illegal type, 21-license plate coordinates, 22-sex, 23-age, 24-race, 25-eye, 26-breathing mask, 27-backpack, 28-wearing hat, 65535 self defined

<plateUpload> represents upload of license plate small picture, false: not upload, true: upload

<iniUpload> represents upload of ini file, false: not upload, true: upload (deault upload)

<filterEnable> represents filtering of unrecognized license plate, false: not filter, true: filter (unrecognized vehicles not uploading FTP)

<faceUpload> represents upload of human face big picture, false: not upload, true: upload

<contentType> parameter type definitions: 1: equipment No., 2: equipment IP, 3: junction No., 4: junction name, 5: time--year and month, 6: time--year, month, day, 7: illegal type, 8: lane direction, 9: lane number, 10: channel name, 11: channel number, 12-human face property, 65535-self defined

<contentDefine> corresponds to parameter contents defined by different parameter type

<smallFaceUpload> represents upload of human face small picture, which used by traffic equipments. false: not upload, true: upload

FTPAdvanceListXML Block

```
<FTPAdvanceList version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<FTPInfo>
<ftpEnable><!—opt, xs:boolean></ftpEnable>
<ftpNum><!-- opt, xs:integer --></ftpNum>
<ftpType><!-- opt, xs:integer --></ftpType>
<ipAddress><!-- dep, xs:string --></ipAddress>
<portNo><!-- opt, xs:integer --></portNo>
<userName><!-- req, xs:string --></userName>
<passWord><!-- wo, xs:string --></passWord>
<passiveModeEnabled><!-- opt, xs:boolean --></passiveModeEnabled>
<annoyftp><!--opt, xs:boolean --></annoyftp>
<listCount><!-- opt, xs:integer --></listCount>
<FTPContentList>
<FTPContent ><!-- req, -->
<contentType><!-- opt, xs:integer --></contentType>
<contentDefine><!-- req, xs:string --></contentDefine>
</FTPContent>
</FTPContentList>
<picNameCount><!-- opt, xs:integer --></picNameCount>
<PicNameList>
<PicName><!-- req, -->
<nameType><!-- opt, xs:integer --></nameType>
<nameDefine><!-- req, xs:string --></nameDefine>
</PicName>
</PicNameList>
<plateUpload><!--opt, xs:boolean --></plateUpload>
<iniUpload><!--opt, xs:boolean --></iniUpload>
<filterEnable><!--opt, xs:boolean --></filterEnable>
<faceUpload><!--opt, xs:boolean --></faceUpload>
< smallFaceUpload><!--opt, xs:boolean --></ smallFaceUpload>
</FTPInfo>
</FTPAdvanceList>
```

Test cases

GET /ISAPI/System/Network/FTPAdvance

Request XML: none

Response XML: <FTPAdvanceList>

PUT /ISAPI/System/Network/FTPAdvance

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<FTPAdvanceList>
```

```
<FTPInfo>
<ftpEnable>true</ftpEnable>
<ftpNum>2</ftpNum>
<ftpType>1</ftpType>
<ipAddress>10.30.41.51</ipAddress>
<userName>admin</userName>
<password>1111</password>
<portNo>21</portNo>
<listCount>4</listCount>
<FTPContentList>
<FTPContent>
<contentType>3</contentType>
<contentDefine> junction No. </contentDefine>
</FTPContent>
<FTPContent>
<contentType>2</contentType>
<contentDefine> equipment IP </contentDefine>
</FTPContent>
<FTPContent>
<contentType>12</contentType>
<contentDefine> channel name </contentDefine>
</FTPContent>
</FTPContentList>
<picNameCount>3</picNameCount>
<PicNameList>
<PicName>
<nameType>1</nameType>
<nameDefine> equipment No. </nameDefine>
</PicName>
<PicName>
<nameType>4</nameType>
<nameDefine> junction name </nameDefine>
</PicName>
<PicName>
<nameType>15</nameType>
<nameDefine> lane name </nameDefine>
</PicName>
<PicName>
<nameType>22</nameType>
<nameDefine> sex information </nameDefine>
</PicName>
<PicName>
<nameType>23</nameType>
<nameDefine> age information </nameDefine>
</PicName>
<PicName>
<nameType>24</nameType>
<nameDefine> race information </nameDefine>
</PicName>
</PicNameList>
<plateUpload>false</plateUpload>
<iniUpload>true</iniUpload>
<filterEnable>true</filterEnable>
<faceUpload>false</faceUpload>
< smallFaceUpload>false</ smallFaceUpload>
</FTPInfo>
</FTPAdvanceList>
```

1.1.36 /ISAPI/Streaming/channels/<ID>/dynamicCap

/ISAPI/Streaming/channels/<ID>/dynamicCap **General Resource v2.0**	
GET	
Description	Batch, different resolution corresponds to frame rate list
Query	None
Inbound Data	None
Success Return	**<ResolutionAvailableDscriptorList>**
Explanations on protocol: This protocol is to obtain the setting template of frame rate, and report the corresponding frame rate list according to different resolution. **Explanations on key parameters:** <ResolutionAvailableDscriptor> <np-Mode> represents standard <videoResolutionWidth> represents video resolution width <videoResolutionHeight> represents video resolution height <supportedFrameRate> represents supported frame rate	

ResolutionAvailableDscriptorList XML Block

```
<ResolutionAvailableDscriptorList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
<ResolutionAvailableDscriptor>
<np-Mode ><!-- opt, ro, xs:string, "NTSC,PAL"></ np-Mode >
<videoResolutionWidth><!-- req, xs:integer --></videoResolutionWidth>
<videoResolutionHeight><!-- req, xs:integer --></videoResolutionHeight>
<supportedFrameRate><!-- req, xs:string, in kbps --></supportedFrameRate>
</ResolutionAvailableDscriptor>
</ResolutionAvailableDscriptorList>
```

Test cases

GET /ISAPI/Streaming/channels/<ID>/dynamicCap

Request XML: none

Response XML: <ResolutionAvailableDscriptorList>

Response XML: as below

```
<ResolutionAvailableDscriptorList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
< ResolutionAvailableDscriptor >
<np-Mode>NTSC</np-Mode>
<videoResolutionWidth>1280</videoResolutionWidth>
<videoResolutionHeight>960</videoResolutionHeight>
<supportedFrameRate>30,25,20,15,10,5,1</ supportedFrameRate >
</ ResolutionAvailableDscriptor >
</ ResolutionAvailableDscriptorList >
```

1.1.37 /ISAPI/System/Network/interfaces/<ID>/dhcp

/ISAPI/System/Network/interface/<ID>dhcp **General Resource v2.0**	
GET	
Description	Obtain DHCP status
Query	None
Inbound Data	None
Success Return	**<DHCPStatus>**

Explanations on protocol:
This protocol is to obtain the DHCP status and IP address by the client sides through the CGI protocol。
explanations on important parameters：
ID：network card No.，start from 1
status：0: not obtained, 1: obtained
ipAddr：in case of being obtained, it is a new ip address，otherwise is blank.

DHCPStatus XML Block

```
<?xml version="1.0" encoding="UTF-8" ?>
<DHCPStatus>
    <lanNo><!--req, xs:integer --></lanNo>
    <status><!--req, xs:integer --></status>
    <ipAddr><!--req, xs:string --></ipAddr>
</DHCPStatus>
```

Test cases
GET /ISAPI/System/Network/interface/<ID>/dhcp
Request XML： none
Response XML：<DHCPStatus>

```
<DHCPStatus>
    <lanNo>1</lanNo>
    <status>1</status>
    <ipAddr>192.168.15.24</ipAddr>
</DHCPStatus>
```

1.1.38/ISAPI/System/Basic/Capabilities/channels/<ID>

/ISAPI/System/Basic/Capabilities/channels/<ID>	**General Resource v2.0**
GET	
Description	Equipment channel specific capability set
Query	None
Inbound Data	None
Success Return	**<BasicCap>**
Explanations on protocol: This protocol is used to obtain the specific capability set of some channel of equipment.	

BasicCap XML Block

```
<BasicCap>
    <iChannelNums><!--req, xs:integer --></ iChannelNums >//channel number
    <iAlarmOutNums><!--req, xs:integer --></iAlarmOutNums>//alarm output number
</BasicCap>
```

Test cases
GET /ISAPI/System/Basic/Capabilities/channels/<ID>
Request XML： none
Response XML：<BasicCap>

```
<BasicCap>
    <iChannelNums>21</ iChannelNums >//channel number
    <iAlarmOutNums>16</iAlarmOutNums>//alarm output number
</BasicCap>
```

1.1.39/ISAPI/System/Video/inputs/channels/<ID>/VCAResource

/ISAPI/System/Video/inputs/channels/<ID>/VCAResource **General Resource v2.0**

GET	
Description	Obtain structured algorithm mode
Query	None
Inbound Data	None
Success Return	**<VCAResource>**
PUT	
Description	Set structured algorithm mode
Query	None
Inbound Data	**<VCAResource>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the structured algorithm modes, and realize the query and setting of the client sides or IE for the equipment structured algorithm modes through the CGI protocol.
Explanations on key parameters:
<type> represents structured algorithm modes. faceDetect-human face, vehicleDetect-vehicle, MixedTargetDetect-mixed target detection

VCAResource XML Block

```
< VCAResource version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<type><!-- req, xs:string --></type>
</VCAResource>
```

Test cases
GET /ISAPI/System/Video/inputs/channels/1/VCAResource
Request XML: none
Response XML: <VCAResource>
PUT /ISAPI/System/Video/inputs/channels/1/VCAResource
Response XML: <ResponseStatus>
Request XML: as below

```
<VCAResource>
<type>faceDetect</type>
</VCAResource>
```

1.1.40 /ISAPI/System/Network/State/test

/CGI/System/Net/Test General Resource v2.0	
POST	
Description	Network test
Query	None
Inbound Data	**<netStateTestDescription>**
Success Return	**<netStateTestResult>**

Explanations on protocol:
Network test.
Explanations on key parameters:
<cardNum> network card No., 0: keep,
1, 2, 10 represents the PPPoE type external USB network card (PPPoE, the point-to-point protocol on the Ethernet, is a kind of network tunnel protocol encapsulating the point-to-point protocol (PPP) in the Ethernet framework).
11 represents the USB0 type external USB network card
<ipAddress> purpose IP address--supporting IPv6 address

<reachable>0 reachable, others not reachable
<delayTime> network delay, unit ms
<lostRate> lost rate 0-100, the value of 50 indicates that the lost rate is 50%.

netStateTestDescription XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<netStateTestDescription>
    <cardNum><!--req,xs: integer --></cardNum>
    <ipAddress><!--req,xs:string --></ipAddress>
</netStateTestDescription>
```

netTestRsp XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<netStateTestResult>
    <reachable><!--req,xs: integer --></reachable>
    <delayTime><!--req,xs: integer --></delayTime>
    <lostRate><!--req,xs: integer --></lostRate>
</netStateTestResult>
```

Test cases

POST /CGI/System/Net/Test

Request XML：<netStateTestDescription>

```
<netStateTestDescription>
    <cardNum>1</cardNum>
    <dstIp>192.168.1.1</dstIp>
</netStateTestDescription>
```

Response XML：<netStateTestResult>

```
<netStateTestResult>
    <reachable>0</reachable>
    <delayTime>10</delayTime>
    <lostRate>50</lostRate>
</netStateTestResult>
```

1.1.41/CGI/SmartAlarmArea/channels/<ID>

/CGI/SmartAlarmArea/channels/<ID>	**General Resource v2.0**
GET	
Description	Obtain intelligent alarm region parameters
Query	None
Inbound Data	None
Success Return	**<SmartAlarmArea>**
PUT	
Description	Set intelligent alarm region parameters
Query	None
Inbound Data	**<SmartAlarmArea>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the client sides or IE for the equipment intelligent configuration region through the CGI protocol.
Explanations on key parameters:
<RegionCoordinatesList> represents two coordinates, upper left corner and lower right corner

SmartAlarmArea XML Block

```
< SmartAlarmArea version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!—req:integer --></id>
<RegionCoordinatesList>//detection region coordinate list
<RegionCoordinates><!-- req, -->//detection region coordinates
<leftpositionX><!-- req, xs:integer;coordinate --></leftpositionX>//upper left corner x-point coordinate, per 10,000
<leftpositionY><!-- req, xs:integer;coordinate --></leftpositionY>//upper left corner y-point coordinate Per 10,000
<rightpositionX><!-- req, xs:integer;coordinate --></rightpositionX>//lower right corner
```

```
x-point coordinate, per 10,000
<rightpositionY><!-- req, xs:integer;coordinate --></rightpositionY>//lower right corner y-point coordinate, per 10,000
</RegionCoordinates>
</RegionCoordinatesList>
</SmartAlarmArea >
```

Test cases

GET /CGI/SmartAlarmArea/channels/<ID>

Request XML：None

Response XML：< SmartAlarmArea>

PUT/CGI/SmartAlarmArea/channels/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<SmartAlarmArea>
<id>1</id>
<RegionCoordinatesList>
<RegionCoordinates>
<leftpositionX><0></leftpositionX>
<leftpositionY><0></leftpositionY>
<rightpositionX><1></rightpositionX>
<rightpositionY><1></rightpositionY>
</RegionCoordinates>
</RegionCoordinatesList>
</SmartAlarmArea>
```

1.1.42/ISAPI/System/Network/ReTransInfo/SessionId/<ID>

/ISAPI/System/Network/ReTransInfo/SessionId/<ID>	**General Resource v2.0**
GET	
Description	Obtain continuous transmission center information
Query	None
Inbound Data	None
Success Return	<ReTransInfoList>
PUT	
Description	Set continuous transmission center information
Query	None
Inbound Data	**<ReTransInfoList>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the setting and obtaining of the continuous transmission center information. <sessionId> client side and equipment interaction ID, refer to Schedule 1 Explanations on specific parameters: id: continuous transmission center serial number, 0~3 ip: ip or domain name information corresponding to the continuous transmission center, maximum length 64 bytes, transmitting empty character string when cancelled	

ReTransInfoList XML Block

```
<ReTransInfoList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <InfoItem>
        <id><!-- req, xs:integer --></id>
        <ip><!-- req, xs:string --></ip>
    </InfoItem>
</ReTransInfoList>
```

Test cases

GET /ISAPI/System/Network/ReTransInfo/SessionId/0

Request XML：None

Response XML：<ReTransInfoList>
PUT /ISAPI/System/Network/ReTransInfo/SessionId/0
Request XML：<ReTransInfoList>
Response XML： <ResponseStatus>

```
< ReTransInfoList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <InfoItem>
        <id>0</id>
        <ip>192.168.1.68</ip>
    </InfoItem>
    <InfoItem>
        <id>1</id>
        <ip>192.168.1.78</ip>
    </InfoItem>
    <InfoItem>
        <id>2</id>
        <ip>192.168.1.78</ip>
    </InfoItem>
    <InfoItem>
        <id>3</id>
        <ip>192.168.1.88</ip>
    </InfoItem>
</ReTransInfoList>
```

1.1.43/ISAPI/System/ldc/channels/<ID>

/ISAPI/System/ldc/channels/<ID>	**General Resource v2.0**
PUT	
Description	Set distortion correction value
Query	None
Inbound Data	**<LdcData>**
Success Return	**<ResponseStatus>**
GET	
Description	Obtain distortion correction value
Query	None
Inbound Data	None
Success Return	**<LdcData>**
Explanations on protocol: This protocol is to set the distortion correction and obtain the current distortion correction strength value.	

LdcData XML Block

```
<LdcData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
< LdcStrength ><!-- req, xs:intger --></ LdcStrength >
</LdcData >
```

Test cases
PUT/ISAPI/System/ldc/channels/<ID>
Request XML：<LdcData>

```
<LdcData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<LdcStrength>20</ LdcStrength >
</LdcData>
```

Response XML： <ResponseStatus>

1.1.44 /ISAPI/System/Network/UPnP/ports/status

/ISAPI/System/Network/UPnP/ports/status	**General Resource v2.0**

GET	
Description	Port mapping status information
Query	None
Inbound Data	**None**
Success Return	**<portsStatus>**
Explanations on protocol: Obtain port mapping status information **Explanations on key parameters:**	

portsStatus XML Block

```
<portsStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<natRouterLanAddr> <!-- req -->
<ipVersion> <!-- req, xs:string, "v4,v6,dual" --> </ipVersion>
<ipAddress><!-- dep, xs:string --> </ipAddress>
<ipv6Address>      <!-- dep, xs:string --> </ipv6Address>
</natRouterLanAddr>
   <portStatusList> <!-- req -->
      <portStatus/>
            <id><!--req,xs: integer --></id>
            internalPort><!--req,xs:string,HTTP,RTSP,          HTTPS,          DATA_PORT,
RTMP"></internalPort>
            <externalPort><!--req,xs: integer --></externalPort>
            <internalePortNum><!--req,xs: integer --></internalePortNum>
            <status><!-- req, xs:string, "inactive, active, conflict"></status>
      </portsStatus>
   </portStatusList>
</portsStatus>
```

Test cases

GET /ISAPI/System/Network/UPnP/ports/status

Request XML: none

Response XML: <portsStatus>

```
<portsStatus>
<natRouterLanAddr>
<ipVersion>v4</ipVersion>
<ipAddress>10.30.41.1</ipAddress>
</natRouterLanAddr>
<portStatusList>
<portStatus>
<id>1</id>
<internalPort>HTTP</internalPort>
<externalPort>80</externalPort>
<internalePortNum>80</internalePortNum>
<status>inactive</status>
</portStatus>
<portStatus>
<id>2</id>
<internalPort>RTSP</internalPort>
<externalPort>554</externalPort>
<internalePortNum>554</internalePortNum>
<status>inactive</status>
</portStatus>
<portStatus>
<id>3</id>
<internalPort>DATA_PORT</internalPort>
<externalPort>3000</externalPort>
<internalePortNum>3000</internalePortNum>
<status>inactive</status>
```

```
</portStatus>
<portStatus>
<id>4</id>
<internalPort>HTTPS</internalPort>
<externalPort>443</externalPort>
<internalePortNum>443</internalePortNum>
<status>inactive</status>
</portStatus>
<portStatus>
<id>5</id>
<internalPort>RTMP</internalPort>
<externalPort>1935</externalPort>
<internalePortNum>1935</internalePortNum>
<status>inactive</status>
</portStatus>
</portStatusList>
</portsStatus>
```

1.2/ISAPI/Security

1.2.1/ISAPI/Security/adminAccesses

/ISAPI/Security/adminAccesses	**General Resource v2.0**
GET	
Description	Obtain port parameters
Query	None
Inbound Data	None
Success Return	**<AdminAccessProtocol>**
PUT	
Description	Set port parameters
Query	None
Inbound Data	**<AdminAccessProtocol>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the port parameters, and realize the query and setting of the client sides or IE for the equipment port parameters through the CGI protocol, including the parameters such as port type/port No., etc.
Explanations on key parameters:
<protocol> represents port type, HTTP, HTTPS, RTSP, DATA_PORT available
<portNo> represents port NO., range: 80-65535

AdminAccessProtocolXML Block

```
<AdminAccessProtocol version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <protocol><!-- req, xs:string; "HTTP, HTTPS,RTSP,DATA_PORT" --></protocol>
  <portNo><!-- req, xs:integer --></portNo>
</AdminAccessProtocol>
```

Test cases
GET/ISAPI/Security/adminAccesses
Request XML: none
Response XML: <AdminAccessProtocol>
PUT/ISAPI/Security/adminAccesses
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AdminAccessProtocolList>
<AdminAccessProtocol>
<protocol>HTTP</protocol>
<portNo>80</portNo>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>HTTPS</protocol>
<portNO>443</portNO>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>RTSP</protocol>
<portNO>554</portNO>
</AdminAccessProtocol>
<AdminAccessProtocol>
<protocol>DATA_PORT</protocol>
<portNO>3000</portNO>
</AdminAccessProtocol>
</AdminAccessProtocolList>
```

1.2.2/ISAPI/Security/users

/ISAPI/Security/users	**General Resource v2.0**
GET	
Description	Obtain user management information
Query	None
Inbound Data	None
Success Return	**<UserList>**
PUT	
Description	Set user management information
Query	None
Inbound Data	**<UserList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the user management information parameters, and realize the query and setting of the client sides or IE for the equipment user management information parameters through the CGI protocol, including the parameters such as user id/user name/password/permission, etc.

Explanations on key parameters:

<id> represents user id
<userName> represents user name, encrypted
<password> represents password, maximum 15 characters, encrypted
<userLevel> represents permission, Administrator: administrator, Viewer: view (NVR: ordinary users), ViewerControl: view+control (NVR: privilege user), Operator: view+control+setting (NVR: super user), Default(NVR: default user), encrypted
<access> represents random information, for correction

UserListXML Block

```
<UserList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<User/><!-- opt -->
< access ><!-- req, xs:string --></access>
</UserList>
<User version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:integer, "1-16" --></id>
<userName><!-- req, xs:string --></userName>
<password><!-- wo, req, xs:string --></password>
```

```
<bondIpAddressList>
<bondIpAddress>
<id><!-- req, xs:integer --></id>
<ipAddress><!-- dep, xs:string --></ipAddress>
<ipv6Address><!--dep, xs:string --></ipv6Address>
</ bondIpAddress>
</ bondIpAddressList>
<bondMacAddressList>
<bondMacAddress>
<id><!-- req, xs:integer --></id>
<macAddress><!-- opt, xs:string --></macAddress>
</ bondMacAddress>
</ bondMacAddressList>
<userLevel><!--opt,xs:string,"Administrator,Operator,Viewer,ViewerControl,Default"--></user
Level>
<attribute><!-- opt -->
<inherent><!--xs:boolean --></inherent>
</attribute>
</User>
```

Test cases

GET/ISAPI/Security/users

Request XML： none

Response XML： <UserList>

PUT/ISAPI/Security/users

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<UserList>
<access>94AAABB419A9820DC171B43240CEEF41</access>
<User>
<id>1</id>
<userName>O6kFrDKpCsk=</userName>
<password>T6g05arqzu4=</password>
<userLevel>BrLFMLPkEnIp4T8s3O+sUw==</userLevel>
</User>
<User>
<id>2</id>
<userName>J6kFrFKpCsk=</userName>
<password>U8g05arqil6=</password>
<userLevel>BrLFMLPkEnIp4T8s3O+sUw==</userLevel>
</User>
</UserList>
```

1.2.3/ISAPI/Security/userCheck

/ISAPI/Security/userCheck	**General Resource v2.0**
GET	
Description	Obtain user login information
Query	None
Inbound Data	None
Success Return	**<userCheck>**

Explanations on protocol:
This protocol is to realize the query of the user login information, and realize the query of the client sides or IE for the equipment user login information through the CGI protocol.
Explanations on key parameters:
< passwdLeftValue > represents the remaining number of times for tried login, decrease progressively

userCheckXML Block

```
<userCheck version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <statusValue><!--req, xs:integer, '200, 401' --></statusValue>
    <statusString><!--opt, xs:string, 'OK, Unauthorized--></statusString>
    <passwdLeftValue><!-- opt, xs:integer, '5' --></passwdLeftValue>
</userCheck>
```

Test cases
GET/ISAPI/Security/userCheck
Request XML: none
Response XML: <userCheck>

```
<?xml version="1.0" encoding="UTF-8"?>
<userCheck>
<statusValue>200</statusValue>
<statusString>OK</statusString>
<passwdLeftValue>5</passwdLeftValue>
</userCheck>
```

1.2.4/ISAPI/Security/logout

/ISAPI/Security/logout	**General Resource v2.0**
GET	
Description	Obtain user logout information
Query	None
Inbound Data	None
Success Return	**<logout>**

Explanations on protocol:
This protocol is to realize the query and setting of the user logout information parameters, and realize the query and setting of the client sides or IE for the equipment user logout information parameters through the CGI protocol.

logoutXML Block

```
<logout version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <statusValue><!--req, xs:integer, '200, 401' --></statusValue>
    <statusString><!--opt, xs:string, 'OK, Unauthorized--></statusString>
</logout>
```

Test cases
GET/ISAPI/Security/logout
Request XML: none
Response XML: <logout>

```
<?xml version="1.0" encoding="UTF-8"?>
<logout>
<statusValue>200</statusValue>
<statusString>OK</statusString>
</logout>
```

1.2.5/ISAPI/Security/onlineUser

/ISAPI/Security/onlineUser	**General Resource v2.0**
GET	
Description	Obtain online user information
Query	None
Inbound Data	None
Success Return	**<OnlineUserList>**

Explanations on protocol:
This protocol is to obtain the online user information, and realize the query of the client sides or IE for the equipment online user information through the CGI protocol.
Explanations on key parameters:
<name> represents user name.
<type> represents user type, administrator, super users, privilege users, ordinary users
<loginTime> represents user final operation time
<ipAddress> represents ip address used by the operation user -- supporting IPv6 address

OnlineUserList xml Block

```
< OnlineUserList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <OnlineUser>
        <id><!--req, xs:integer--></id>
        <name><!-- req, xs:string--></name>
        <type><!-- req, xs:string, "admin,super,common,privilege"--></type>
        <loginTime><!-- req, xs:string--></loginTime>
        <clientAddress>
            <ipAddress><!-- req, xs:string--></ipAddress>
        </clientAddress>
    </OnlineUser>
</OnlineUserList>
```

Test cases
GET/ISAPI/Security/userCheck
Request XML: none
Response XML: <OnlineUserList>

```
<OnlineUserList version="2.0">
    <OnlineUser>
        <id>1</id>
        <name>admin</name>
        <type>admin</type>
        <loginTime>2017-07-01T00:00:00Z</loginTime>
        <clientAddress>
            <ipAddress>10.30.31.44</ipAddress>
        </clientAddress>
    </OnlineUser>
</OnlineUserList>
```

1.2.6/ISAPI/Security/UserGroupPermission

/ISAPI/Security/UserGroupPermission	**General Resource v2.0**
GET	
Description	Obtain user group permission configuration
Query	None
Inbound Data	**None**
Success Return	**<UserGroupPermissionList>**

Explanations on protocol:
This protocol is to realize the query of user group permission, and realize the query of the client sides or IE for the equipment user group permission parameters through the CGI protocol, including the user local/remote/channel permission. This protocol is not used temporarily.
Explanations on key parameters:

<userType> represents user group, Administrator: administrator, Viewer: view (NVR: ordinary user), ViewerControl: view+control (NVR: privilege user), Operator: view+control+setting (NVR: super user), Default
<clearAlarm> manual alarm clearing
<restartOrShutdown> shutdown restart
<logOrStateCheck> log check
<manageChannel> channel management
<parameterConfig> parameter setting
<SetAlarm> alam setting
<SetSystem> system setting
<manageUser> user management
<talk> voice walkie-talkie
<playBack> playback video recording/picture
<record> manual video recording/snap picture
<preview> preview
<ptzControl> camera platform control

UserGroupPermissionXML Block

```
<UserGroupPermissionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
        < UserGroupPermission/><!--opt -->
</UserGroupPermissionList>

<UserGroupPermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
        <id><!—req, xs:string !--></id>
        <userType><!--req, xs:string,
"Administrator,Operator,Viewer,ViewerControl,Default"--></userType>
        <localPermission/><!--opt -->
        <remotePermission/><!--opt -->
</UserGroupPermission>

<localPermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
        <clearAlarm><!--opt, xs:boolean --></clearAlarm>
        <restartOrShutdown><!--opt, xs:boolean --></restartOrShutdown>
        <logOrStateCheck><!--opt, xs:boolean --></logOrStateCheck>
        <manageChannel><!--opt, xs:boolean --></manageChannel>
        <parameterConfig><!--opt, xs:boolean --></parameterConfig>
        <SetAlarm><!--opt, xs:boolean --></SetAlarm>
        <SetSystem><!--opt, xs:boolean --></SetSystem>
        <manageUser><!--opt, xs:boolean --></manageUser>
        <PreviewPermission><!--opt, xs:boolean --></videoChannelPermission>
        <PlaybackPermission><!--opt, xs:boolean --></videoChannelPermission>
        <ptzChannelPermission><!--opt, xs:boolean --></ptzChannelPermission>
</localPermission>

<remotePermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
        <clearAlarm><!--opt, xs:boolean --></clearAlarm>
        <restartOrShutdown><!--opt, xs:boolean --></restartOrShutdown>
        <logOrStateCheck><!--opt, xs:boolean --></logOrStateCheck>
        <manageChannel><!--opt, xs:boolean --></manageChannel>
        <parameterConfig><!--opt, xs:boolean --></parameterConfig>
        <SetAlarm><!--opt, xs:boolean --></SetAlarm>
        <SetSystem><!--opt, xs:boolean --></SetSystem>
```

```
        <manageUser><!--opt, xs:boolean --></manageUser>
        <talk><!--opt, xs:boolean --></talk>
        <PreviewPermission><!--opt, xs:boolean --></videoChannelPermission>
        <PlaybackPermission><!--opt, xs:boolean --></videoChannelPermission>
       <ptzChannelPermission><!--opt, xs:boolean --></ptzChannelPermission>
</remotePermission>
```

Test cases

GET/ISAPI/Security/UserGroupPermission

Request XML：None

Response XML：<UserGroupPermissionList>

<UserGroupPermissionList>XML： as below

```
<UserGroupPermissionList version="2.0" xmlns=" http://www.isapi.org/ver20/XMLSchema">
    <UserGroupPermission>
        <id>3</id>
        <userID>admin</userID>
        <userType>Administrator</userType>
        <localPermission>
            <clearAlarm>false</clearAlarm>
            <parameterConfig>false<</parameterConfig>
            <restartOrShutdown>false</restartOrShutdown>
            <logOrStateCheck>true</logOrStateCheck>
            <manageChannel>false</manageChannel>
            <SetAlarm>true</SetAlarm>
            <SetSystem>true</SetSystem>
            <manageUser>true</manageUser>
            <videoChannelPermission>true</videoChannelPermission>
            <ptzChannelPermission>true</ptzChannelPermission>
        </localPermission>
        <remotePermission>
            <clearAlarm>false</clearAlarm>
            <parameterConfig>false</parameterConfig>
            <restartOrShutdown>false</restartOrShutdown>
            <logOrStateCheck>true</logOrStateCheck>
            <manageChannel>false</manageChannel>
            <SetAlarm>true</SetAlarm>
            <SetSystem>true</SetSystem>
            <manageUser>true</manageUser>
            <talk>false</talk>
            <videoChannelPermission>true</videoChannelPermission>
            <ptzChannelPermission>true</ptzChannelPermission>
        </remotePermission>
    </ UserGroupPermission>
</ UserGroupPermissionList >
```

1.2.7/ISAPI/Security/UserPermission

/ISAPI/Security/UserPermission General Resource v2.0	
POST	
Description	Obtain user permission configuration
Query	None
Inbound Data	**<User>**
Success Return	**<UserPermission>**
PUT	
Description	Set user permission
Query	None
Inbound Data	**<UserPermission>**

Success Return	<ResponseStatus>

Explanations on protocol:

This protocol is to realize the query and setting of the user permission, and realize the query and setting of the client sides or IE for the equipment user permission parameters through the CGI protocol, including user local/remote/channel permission.

Explanations on key parameters:

<userID> represents user name

<userType> represents user group, Administrator: administrator, Viewer: view (NVR: ordinary user), ViewerControl: view+control (NVR: privilege user), Operator: view+control+setting (NVR: super user), Default

<clearAlarm> manual alarm clearing

<restartOrShutdown> shutdown restart

<logOrStateCheck> log check

<manageChannel> channel management

<parameterConfig> parameter setting

<SetAlarm> alam setting

<SetSystem> system setting

<manageUser> user management

<talk> voice walkie-talkie

<playBack> playback video recording/picture

<record> manual video recording/snap picture

<preview> preview

<ptzControl> camera platform control

User XML Block

```
<User>
    <userName><!—req, xs:string !--></userName>
</User>
```

UserPermissionXML Block

```
<UserPermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <id><!—req, xs:string !--></id>
    <userID><!--req, xs:string; id --></userID>
    <userType><!--req, xs:string,
"Administrator,Operator,Viewer,ViewerControl,Default"--></userType>
    <localPermission/><!--opt -->
    <remotePermission/><!--opt -->
</UserPermission>

<localPermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <clearAlarm><!--opt, xs:boolean --></clearAlarm>
    <restartOrShutdown><!--opt, xs:boolean --></restartOrShutdown>
    <logOrStateCheck><!--opt, xs:boolean --></logOrStateCheck>
    <manageChannel><!--opt, xs:boolean --></manageChannel>
    <parameterConfig><!--opt, xs:boolean --></parameterConfig>
    <SetAlarm><!--opt, xs:boolean --></SetAlarm>
    <SetSystem><!--opt, xs:boolean --></SetSystem>
    <manageUser><!--opt, xs:boolean --></manageUser>
    <videoChannelPermissionList><!--opt -->
        <videoChannelPermission><!--opt -->
            <id><!--req, must correspond to the video input channel id --></id>
            <playBack><!--opt, xs:boolean --></playBack>
            <record><!--opt, xs:boolean --></record>
            <preview><!--opt, xs:boolean --></preview>
        </videoChannelPermission>
    </videoChannelPermissionList>
    <ptzChannelPermissionList><!--opt -->
        <ptzChannelPermission><!--req -->
            <id><!--req, must correspond to ptz id, see /ISAPI/PTZCtrl/channels/ID--></id>
```

```
                <ptzControl><!--opt, xs:boolean --></ptzControl>
                </ptzChannelPermission>
            </ptzChannelPermissionList>
</localPermission>

<remotePermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
        <clearAlarm><!--opt, xs:boolean --></clearAlarm>
        <restartOrShutdown><!--opt, xs:boolean --></restartOrShutdown>
        <logOrStateCheck><!--opt, xs:boolean --></logOrStateCheck>
        <manageChannel><!--opt, xs:boolean --></manageChannel>
        <parameterConfig><!--opt, xs:boolean --></parameterConfig>
        <SetAlarm><!--opt, xs:boolean --></SetAlarm>
        <SetSystem><!--opt, xs:boolean --></SetSystem>
        <manageUser><!--opt, xs:boolean --></manageUser>
        <talk><!--opt, xs:boolean --></talk>
        <videoChannelPermissionList><!--opt -->
            <videoChannelPermission><!--opt -->
                <id><!--req, must correspond to the video input channel id --></id>
                <preview><!--opt, xs:boolean --></preview>
                <palyBack><!--opt, xs:boolean --></palyBack>
                <record><!--opt, xs:Boolean--></record>
            </videoChannelPermission>
        </videoChannelPermissionList>
        <ptzChannelPermissionList><!--opt -->
            <ptzChannelPermission><!--opt -->
                <id><!--req, must correspond to ptz id, see /ISAPI/PTZCtrl/channels/ID--></id>
                <ptzControl><!--opt, xs:boolean --></ptzControl>
            </ptzChannelPermission>
        </ptzChannelPermissionList>
</remotePermission>
```

Test cases

POST/ISAPI/Security/UserPermission

Request XML：<User>

Response XML：<UserPermission>

PUT/ISAPI/Security/UserPermission

Response XML： <ResponseStatus>

<User>XML： as below

```
<User>
    <userName>aaa</userName>
</User>
```

<UserPermission>XML： as below

```
    <UserPermission>
        <id>3</id>
        <userID>aaa</userID>
        <userType>Operator</userType>
        <localPermission>
            <clearAlarm>false</clearAlarm>
            <parameterConfig>false</parameterConfig>
            <restartOrShutdown>false</restartOrShutdown>
            <logOrStateCheck>true</logOrStateCheck>
            <manageChannel>false</manageChannel>
            <SetAlarm>true</SetAlarm>
            <SetSystem>true</SetSystem>
            <manageUser>true</manageUser>
            <videoChannelPermissionList>
                <videoChannelPermission>
```

```
                <id>1</id>
                <playBack>true</playBack>
                <record>true</record>
                <preview>true</preview>
            </videoChannelPermission>
            <videoChannelPermission>
                <id>2</id>
                <playBack>true</playBack>
                <record>true</record>
                <preview>true</preview>
            </videoChannelPermission>
            <videoChannelPermission>
                <id>3</id>
                <playBack>true</playBack>
                <record>true</record>
                <preview>true</preview>
            </videoChannelPermission>
            <videoChannelPermission>
                <id>4</id>
                <playBack>true</playBack>
                <record>true</record>
                <preview>true</preview>
            </videoChannelPermission>
        </videoChannelPermissionList>
        <ptzChannelPermissionList>
            <ptzChannelPermission>
                <id>1</id>
                <ptzControl>true</ptzControl>
            </ptzChannelPermission>
            <ptzChannelPermission>
                <id>2</id>
                <ptzControl>true</ptzControl>
            </ptzChannelPermission>
            <ptzChannelPermission>
                <id>3</id>
                <ptzControl>true</ptzControl>
            </ptzChannelPermission>
            <ptzChannelPermission>
                <id>4</id>
                <ptzControl>true</ptzControl>
            </ptzChannelPermission>
        </ptzChannelPermissionList>
    </localPermission>
    <remotePermission>
        <clearAlarm>false</clearAlarm>
        <parameterConfig>false</parameterConfig>
        <restartOrShutdown>false</restartOrShutdown>
        <logOrStateCheck>true</logOrStateCheck>
        <manageChannel>false</manageChannel>
        <SetAlarm>true</SetAlarm>
        <SetSystem>true</SetSystem>
        <manageUser>true</manageUser>
        <talk>false</talk>
        <videoChannelPermissionList>
            <videoChannelPermission>
                <id>1</id>
                <preview>true</preview>
                <record>true</record>
```

```
                <playBack>true</playBack>
            </videoChannelPermission>
            <videoChannelPermission>
                <id>2</id>
                <preview>true</preview>
                <record>true</record>
                <playBack>true</playBack>
            </videoChannelPermission>
            <videoChannelPermission>
                <id>3</id>
                <preview>true</preview>
                <record>true</record>
                <playBack>true</playBack>
            </videoChannelPermission>
            <videoChannelPermission>
                <id>4</id>
                <preview>true</preview>
                <record>true</record>
                <playBack>true</playBack>
            </videoChannelPermission>
        </videoChannelPermissionList>
        <ptzChannelPermissionList>
            <ptzChannelPermission>
                <id>1</id>
                <ptzControl>true</ptzControl>
            </ptzChannelPermission>
            <ptzChannelPermission>
                <id>2</id>
                <ptzControl>true</ptzControl>
            </ptzChannelPermission>
            <ptzChannelPermission>
                <id>3</id>
                <ptzControl>true</ptzControl>
            </ptzChannelPermission>
            <ptzChannelPermission>
                <id>4</id>
                <ptzControl>true</ptzControl>
            </ptzChannelPermission>
        </ptzChannelPermissionList>
    </remotePermission>
</UserPermission>
```


1.2.8/ISAPI/Security/users/active

/ISAPI/Security/users	**General Resource v2.0**
PUT	
Description	Activate user
Query	None
Inbound Data	**<ActiveInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the user activation. Although this protocol is very similar with the put protocol for user management, it can only be used for the activation of the non-activated equipments, but cannot be used for the user management of the activated equipments. All the user names, passwords and permission fields are sent by encryption.
Explanations on key parameters:
<userName> represents user name, which is fixed to be admin.
<password> represents password, which has the longest 15 characters.
<userLevel> represents permission, which is fixed to be Administrator: administrator.

UserListXML Block

```
<ActiveInfoversion="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<userName><!-- req, xs:string --></userName>
<password><!-- wo, req, xs:string --></password>
<userLevel><!--opt,xs:string --></userLevel>
</ActiveInfo>
```

Test cases
PUT/ISAPI/Security/users/active
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ActiveInfo>
<userName>O6kFrDKpCsk=</userName>
<password>T6g05arqzu4=</password>
<userLevel>BrLFMLPkEnIp4T8s3O+sUw==</userLevel>
</ActiveInfo>
```

1.3/ISAPI/ContentMgmt

1.3.1/ISAPI/ContentMgmt/search

/ISAPI/ContentMgmt/search	**General Resource v2.0**
POST	
Description	Obtain playback parameters
Query	None
Inbound Data	**<CMSearchDescription>**
Success Return	**<CMSearchResult>**

Explanations on protocol:
This protocol is to realize the query of the video recording or pictures, including the parameters such as start time/end time/file type/query number, etc. The parameters such as traffic equipment illegal type, vehicle type, lane No. are increased.
Explanations on key parameters:
Query xml:
<startTime> represents start time
<endTime> represents end time
<contentType> represents file type, video: video recording, picture: picture
<recType> represents video recording type, ALL: all, Manual: manual, Timer: timing, Alarm: alarm
(Note: if <contentType> is picture, this place only supports filling ALL query all types)
<streamType> code stream type, main: main code stream, sub: sub code stream
<maxResults> represents query number, range: <=40
<searchResultPostion> represents search result position, range: >=1
<queryType> query type, 0-basic query, 1-ATM query, 2-ITS query
<laneNo> lane No.: 1,2,3… 255-all
<illegalType> illegal type : 0--bayonet 1--run red light, 2--go in wrong direction,

3--overspeed, 4--forbid left driving, 5--forbid right driving, 6--press yellow line, 7--non-motor vehicle, 8--not drive according to the regulated lane (not drive according to the guidance), 9--forbid going straight, 10--bus lane, 11--press lane line, 12--run red light in the pending turning region, 13--illegal parking, 14--enabling of video snap overspeed function under mixed trigger, 15--back a vehicle, 16--turn around, 17--press lane line（riding line snap）, 18--run forbidden passing, 19--not wear safety belt, 20--answer or make call, 21--motor vehicle not avoid pedestrian, 22--left turning vehicle not avoid going straight vehicle, 23--zebra crossing, 255-all

<vehicleType> vehicle type, 0-unknown type, 1-passenger coach, 2-car, 3-truck（including big truck and small truck）, 4-van, 5-heavy and medium truck, 6-light and mini truck, 7-motorcycle, 8, pedestrian, 9-SUV, 10-medium passenger coach, 11-trailer, 12-hazardous chemical vehicle, 255-all

Reply xml：

<numOfMatches> represents number of matches

<chanNo> represents channel No.

<startTime> represents start time

<endTime> represents end time

<type> represents file type, ALL：all, Manual：manual, Timer：timing, Alarm：alarm

<streamType> code stream type, main： main code stream, sub： sub code stream

<fileName> represents file name

CMSearchDescriptionXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<CMSearchDescription version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<timeSpanList>
<timeSpan>
<startTime>2013-06-10T12:00:00Z</startTime>
<endTime>2013-06-10T13:30:00Z</endTime>
</timeSpan>
</timeSpanList>
<contentTypeList>
<contentType><!—req:string "video,picture"></contentType>
</contentTypeList>
<RecTypeList>
<recType><!—req:string ALL, Manual, Timer, Alarm--></recType>
</RecTypeList>
<streamType><!—req:string ,"main,sub"--></contentType>
<maxResults><!—req,sx:integer-- ></maxResults>
<searchResultPostion><!—req,sx:integer-- ></searchResultPostion>
<channelID><!—req,sx:integer-- ></channelID> //channel No. is consistent with ie, start from
0
<queryType><!—req,sx:integer--></queryType>
<laneNoList>
<laneNoItem>
<laneNo><!—req,sx:integer--></laneNo>
</laneNoItem>
</laneNoList>
<vehicleTypeList>
<vehicleTypeItem>
<vehicleType><!—req,sx:integer--></vehicleType>
</vehicleTypeItem>
</vehicleTypeList>
<illegalTypeList>
<illegalTypeItem>
<illegalType><!—req,sx:integer--></illegalType>
</illegalTypeItem>
</illegalTypeList>
```

```
</CMSearchDescription>
```

CMSearchResultXML Block

```
<CMSearchResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<numOfMatches><!—req:inter ></numOfMatches>
<matchList>
<matchElement>
<chanNo><!—req:inter ></chanNo >
<streamType><!—req:string ,"main,sub"--></contentType>
<timeSpan>
<startTime>2013-05-18T10:31:26Z</startTime>
<endTime>2013-05-18T10:32:54Z</endTime>
</timeSpan>
<type><!—opt:String ALL, Manual, Timer, Alarm--></type>
<fileName><!—req:string ></fileName>
</matchElement>
</matchList>
</CMSearchResult>
```

Test cases

POST/ISAPI/ContentMgmt/search

Request XML：<CMSearchDescription> as below

```
<CMSearchDescription>
<timeSpanList>
<timeSpan>
<startTime>2016-12-25T00:00:00Z</startTime>
<endTime>2016-12-26T23:59:59Z</endTime>
</timeSpan>
</timeSpanList>
<contentTypeList>
<contentType>video</contentType>
</contentTypeList>
<RecTypeList>
<recType>ALL</recType>
</RecTypeList>
<streamType>main</contentType>
<maxResults>20</maxResults>
<searchResultPostion>1</searchResultPostion>
<queryType>0</queryType>
<laneNoList>
<laneNoItem>
<laneNo>2</laneNo>
</laneNoItem>
</laneNoList>
<vehicleTypeList>
<vehicleTypeItem>
<vehicleType>5</vehicleType>
</vehicleTypeItem>
</vehicleTypeList>
<illegalTypeList>
<illegalTypeItem>
<illegalType>3</illegalType>
</illegalTypeItem>
<illegalTypeItem>
<illegalType>6</illegalType>
</illegalTypeItem>
</illegalTypeList>
</CMSearchDescription>
```

Response XML：<CMSearchResult>

```
<?xml version="1.0" encoding="UTF-8"?>
<CMSearchResult>
<numOfMatches>3</numOfMatches>
<matchList>
<matchElement>
<chanNo>1</chanNo>
<streamType>main</contentType>
<type>Timer</type>
<fileName>H600018B000499560000C00.dat</fileName>
<timeSpan>
<startTime>2017-07-07T00:05:55Z</startTime>
<endTime>2017-07-07T01:04:47Z</endTime>
</timeSpan>
</matchElement>
<matchElement>
<chanNo>1</chanNo>
<streamType>main</contentType>
<type>Timer</type>
<fileName>H60000F10001D3DD0000C00.dat</fileName>
<timeSpan>
<startTime>2017-07-07T01:04:47Z</startTime>
<endTime>2017-07-07T02:04:48Z</endTime>
</timeSpan>
</matchElement>
</matchList>
</CMSearchResult>
```


1.3.2/ISAPI/ContentMgmt/Storage/hdd/<ID>/formatStatus

/ISAPI/ContentMgmt/Storage/hdd/<ID>/formatStatus **General Resource v2.0**	
GET	
Description	Obtain formatted disk status
Query	None
Inbound Data	None
Success Return	**<formatStatus>**
Explanations on protocol: This protocol is to realize the query of the formatted disk status, and realize the query of the client sides or IE for the equipment formatted disk status through the CGI protocol. **Explanations on key parameters:** <formating> represents formatted status, FORMAT_ERROR: error, FORMAT_DOING: formatting is doing, FORMAT_DONE: formatting is done, NOT_FORMAT: unformatted	

formatStatusXML Block

```
<formatStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<formating><!-- ro, req, xs:string FORMAT_ERROR , FORMAT_DOING , FORMAT_DONE, NOT_FORMAT--></formating>
<percent><!-- ro, req, xs:integer "0-100" --></percent>
</formatStatus>
```

Test cases

GET/ISAPI/ContentMgmt/Storage/hdd/<ID>/formatStatus

Request XML: none

Response XML: <formatStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<formatStatus>
<formating>FORMAT_ERROR</formating>
<percent>-1</percent>
</formatStatus>
```

1.3.3/ISAPI/ContentMgmt/Storage/hdd/<ID>/format

/ISAPI/ContentMgmt/Storage/hdd/<ID>/format **General Resource v2.0**	
PUT	
Description	Set formatted disk
Query	None
Inbound Data	**<formatInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the setting of the formatted disk, and realize the setting of the client sides or IE for the disk formatting of equipments through the CGI protocol. <formatType> represents formatted target format, 0: ext3, 1: ext2, 2: fat32, 3: tdfs, 4: ntfs	

formatInfo XML Block

```
<formatInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<formatType><!-- req, xs:integer--></formatType>
</formatInfo>
```

Test cases

PUT/ISAPI/ContentMgmt/Storage/hdd/<ID>/format

Response XML: <ResponseStatus>

Request XML: <formatInfo>

```
<formatInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<formatType>0</formatType>
</formatInfo>
```

1.3.4/ISAPI/ContentMgmt/Storage/hdd/

/ISAPI/ContentMgmt/Storage/hdd/ General Resource v2.0	
GET	
Description	Obtain disk management information
Query	None
Inbound Data	None
Success Return	**<hddList>**
Explanations on protocol: This protocol is to realize the query of the disk management information, and realize the query of the client sides or IE for the equipment disk management information through the CGI protocol, including the parameters such as start time/end time/file type/query number, etc. **Explanations on key parameters:** <id> represents sole disk No. <hddName> represents disk name <status> represents disk status, unformatted: unformatted, formating: formatted, mount: mounted, readwrite: in reading and writing <capacity> represents capacity <usedSpace> represents used space	

<freeSpace> represents free space
<property> represents purpose， Record： video recording, backups： backup, Redund： redundant, readonly： read-only
<hddType> represents disk type, IPC only had SD, NVR type is classified as：USB, ESATA, RCD, NFS, VD, IPSAN, SATA

hddListXML Block

```
<hddList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<hdd><!-- opt --></hdd>
</hddList>
<hdd version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- ro, req, xs:string;id --></id>
<hddName><!-- ro, req, xs:string --></hddName>
<hddPath><!-- ro, opt, xs:string --></hddPath>
<hddType>
<!-- ro, req, xs:string, "SD,IDE,RCD ,SATA,ESATA, NFS,USB, iSCSI, VD,IPSAN,", etc -->
</hddType>
<status><!--ro, req, xs:string "unformatted, formating, mount, readwrite" --></status>
<capacity><!-- ro, req, xs:integer, in MB --></capacity>
<usedSpace><!—req,xs: integer --></usedSpace>
<freeSpace><!-- ro, req, xs: integer, in MB --></freeSpace>
<property><!--req, xs:string "RW, RO, Redund, Record, backups, readonly"--></property>
<group><!-- opt, xs:string; id --></group>
</hdd>
```

Test cases
GET/ISAPI/ContentMgmt/Storage/hdd/
Request XML： none
Response XML： <hddList>

```
<?xml version="1.0" encoding="UTF-8"?>
<hddList>
<hdd>
<id>10</id>
<hddName>USB1</hddName>
<hddType>USB</hddType>
<capacity>6144</capacity>
<usedSpace>4608</usedSpace>
<freeSpace>1536</freeSpace>
<status>mount</status>
<property>Record</property>
</hdd>
</hddList>
```

1.3.5/ISAPI/ContentMgmt/logSearch

/ISAPI/ContentMgmt/logSearch	**General Resource v2.0**
POST	
Description	Log query
Query	None
Inbound Data	**<CMSearchDescription>**
Success Return	**<CMSearchResult>**

Explanations on protocol:
This protocol is to realize the query of logs, and realize the query of the client sides or IE for the equipment logs through the CGI protocol, including the parameters such as language/channel No./start time/end time, etc.
Explanations on key parameters:
<languageID> represents language, 0: English; 1: Chinese; 2: traditional Chinese; 3: Korean; 4: Spanish; 5: Italian; 6: Russian; 7: Turkish; 8: Thai; 9: Polish; 10: Hebrew; 11: French; 12: German; 13: Slovenian; 14: Japanese
<channelID> represents channel No., 0 is acceptable
<logType> represents log type, ALL：all, System：system, Warning：warning, Alarm：alarm, Operation：operation, User：user, Other：other
<startTime> represents start time
<endTime> represents end time
<searchResultPostion> represents search result position. This field cannot be omitted, （when searching from the 1st log, the assigned value is 1, not 0）
<maxResults> represents query number （not exceeding 40）. This field cannot be omitted.
<numOfMatches> represents number of matches
<chanNo> represents channel No.
<type> represents type, log type, ALL：all, System：system, Warning：warning, Alarm：alarm, Operation：operation, User：user, Other：other
<user> represents user
<content> represents content
ID is not used temporarily, and has no actual meaning

CMSearchDescriptionXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<CMSearchDescription version="1.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<searchID><!—req,sx:string--></searchID>
<languageID><!—opt,sx:integer--></languageID>
<channelID><!—req,sx:integer-- ></channelID>
<LogTypeList>
<logType><!—req:String ALL,System,Warning,Alarm,Operation,User,Other --></logType>
</LogTypeList>
<timeSpanList>
<timeSpan>
<startTime>2013-05-18T10:31:26Z</startTime>
<endTime> 2013-05-18T10:31:26Z</endTime>
</timeSpan>
</timeSpanList>
<metaID><!—opt,sx:integer--></metaID>
<searchResultPostion><!—opt,sx:integer--></searchResultPostion>
<maxResults><!—opt,sx:integer--></maxResults>
</CMSearchDescription>
```

CMSearchResultXML Block

```
<CMSearchResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<numOfMatches><!—req:inter ></numOfMatches>
<matchList>
<matchElement>
    <chanNo><!—req: sx:string ></chanNo >
<Time>2013-05-18T10:31.26</Time>
    <type><!—opt:String ALL,System,Warning,Alarm,Operation,User,Other --></ type>
<user><!—req: sx:string ></user>
    <content><!—req: sx:string ></content>
</matchElement>
</matchList>
</CMSearchResult>
```

Test cases

POST/ISAPI/ContentMgmt/logSearch

Response XML：<CMSearchResult>

Request XML：<CMSearchDescription> as below

```
<CMSearchDescription>
<searchID>1</searchID>
<languageID>1</languageID>
<channelID>0</channelID>
<LogTypeList>
<logType>ALL</logType>
</LogTypeList>
<timeSpan>
<startTime>2016-12-14T00:00:00Z</startTime>
<endTime>2016-12-14T23:59:59Z</endTime>
</timeSpan>
<searchResultPostion>1</searchResultPostion>
<maxResults>18</maxResults>
</CMSearchDescription>
```

1.3.6/ISAPI/ContentMgmt/record/tracks/<ID>/type/<ID>/dailyDistribution

/ISAPI/ContentMgmt/record/tracks/<ID>/type/<ID>/dailyDistributionGeneral Resource v2.0	
POST	
Description	Obtain video recording file date information
Query	None
Inbound Data	**<trackDailyParam>**
Success Return	**<trackDailyDistribution>**
Explanations on protocol: This protocol is to realize the query function of the playback interface date information. Explanations of parameters: tracks/<ID>: represents channel No., start from 1 type/<ID>: code stream type, 1：main code stream, 2：sub code stream	

trackDailyParamXML Block

```
<?xml version:"1.0" encoding="utf-8"?>
<trackDailyParam>
<year><!-- req, xs:intger --></year>//year
<monthOfYear><!-- req, xs:intger --></monthOfYear>//month
</trackDailyParam>
```

trackDailyDistributionXML Block

```
<trackDailyDistribution version="2.0"    xmlns="http://www.isapi.org/ver20/XMLSchema">
<dayList>
<day>
<id><!-- req, xs:intger --></id>//serial number
<dayOfMonth><!-- req, xs:intger --></dayOfMonth>//day of month
<record><!—req,xs:boolean></record>//whether has video recording
</day>
<dayList>
</trackDailyDistribution>
```

Test cases

POST /ISAPI/ContentMgmt/record/tracks/1/dailyDistribution

Request XML：<trackDailyParam> as below

```
<?xml version:"1.0" encoding="utf-8"?>
<trackDailyParam>
<year>2017</year>//year
<monthOfYear>7</monthOfYear>//month
</trackDailyParam>
```

Response XML：<trackDailyDistribution>

Response XML：<trackDailyDistribution> as below

```
<?xml version="1.0" encoding="UTF-8"?>
<trackDailyDistribution>
<dayList>
<day>
<id>1</id>
<dayOfMonth>1</dayOfMonth>
<record>false</record>
</day>
<day>
<id>2</id>
<dayOfMonth>2</dayOfMonth>
<record>true</record>
</day>
......
<day>
<id>31</id>
<dayOfMonth>31</dayOfMonth>
<record>false</record>
</day>
</dayList>
</trackDailyDistribution>
```

1.3.7/ISAPI/ContentMgmt/InputProxy/search

/ISAPI/ContentMgmt/InputProxy/search **General Resource v2.0**	
POST	
Description	Search of front-end equipments through NVR
Query	None
Inbound Data	**<SearchParam>**
Success Return	**<VideoSourceList>**
GET	
Description	Obtain results for search of front-end equipments through NVR
Query	None
Inbound Data	**<SearchParam>**
Success Return	**<VideoSourceList>**

Explanations on protocol:

This protocol is to realize the functions of search of front-end equipments through NVR.

PUT time represents request

GET time represents obtaining result

Explanations of parameters：

Send：

SearchType(0：stop search, 1：search IPC, 2：search decoder)

SearchMode(0：IP, 1：domain name, 2：active mode)

Reply：

proxyProtocol(private (private), onvif)

addressingFormatType(ipaddress：IP, hostname： domain name, active：active mode)

SearchParam XML Block

```
<?xml version="1.0" encoding="UTF-8" ?>
<SearchParam>
<SearchType><!-- req, xs:integer '0： stop search， 1： search IPC， 2： search decoder' --></SearchType>
<SearchMode><!-- req, xs:integer 'ipaddress：IP， hostname：domain name， active：active mode' --></SearchMode>
</SearchParam>
```

VideoSourceList XML Block

```
<VideoSourceList>
<ending><!--req,xs:boolean--></ending>//search end status, true indicates that search is ended, false indicates that search is not ended.
<VideoSourceDescriptor>
<id><!-- req, xs:string --></id>//serial number
<proxyProtocol><!-- req, xs:string --></proxyProtocol> //protocol type， private (private), onvif
<addressingFormatType><!-- req, xs:string, "ipaddress,hostname,active"-->
</addressingFormatType>//address mode：IP, domain name, active mode
<ipAddress><!-- req, xs:string --></ipAddress>//ip address
<serialNumber><!-- req, xs:string --></serialNumber>//serial number
<macAddress><!-- req, xs:string --></macAddress>//physical address
<firmwareVersion><!-- req, xs:string --></firmwareVersion>//firmware core version
<managePortNo><!—req,xs:integer></managePortNo>//management port
<userName><!-- req, xs:string --></userName>//user name
<password><!-- req, xs:string --></password>//password
<srcInputPortNums><!—req,xs:integer></srcInputPortNums>//channel number
<deviceID><!-- req, xs:string --></deviceID>//ex-factory No.
<activated><!--req, xs: string,"active,inactive,unknown"--></activated>//activation status
<Mask><!--req, xs:string --></Mask>
<Gateway><!--req, xs:string --></Gateway>
<DNS><!--req, xs:string --></DNS>
<IPv6Address><!-- req, xs:string --></IPv6Address>//iPv6 address
<IPv6MaskLen><!—req,xs:integer></IPv6MaskLen> //iPv6 subnet mask prefix length
<IPv6Gateway><!--req, xs:string --></IPv6Gateway> //IPv6 gateway
<IPv6DNS><!--req, xs:string --></IPv6DNS> // IPv6 domain name parsing
<IPv6Support><!-- req, xs:boolean --></IPv6Support> //equipment supporting IPv6
</VideoSourceDescriptor>
</VideoSourceList>
```

Test cases

POST /ISAPI/ContentMgmt/InputProxy/search

Request XML：<SearchParam> as below

```
<?xml version="1.0" encoding="UTF-8" ?>
<SearchParam>
<SearchType>1</SearchType>
<SearchMode>0</SearchMode>
</SearchParam>
```

Response XML：<VideoSourceList>

```
<?xml version="1.0" encoding="UTF-8" ?>
<VideoSourceList>
<VideoSourceDescriptor>
<id>0</id>//serial number
<proxyProtocol>private</proxyProtocol> //protocol type， privat(private)s、onvif
<addressingFormatType>ipaddress</addressingFormatType>
<ipAddress>10.30.30.81</ipAddress>//ip address
<serialNumber></serialNumber>//serial number
<macAddress>0F: 0F: 0F: 0F: 0F: 0F</macAddress>//physical address
<firmwareVersion></firmwareVersion>//firmware core version
<managePortNo>3000</managePortNo>//management port
<userName></userName>//user name
```

```
<password></password>//password
<srcInputPortNums>16</srcInputPortNums>//channel number
<deviceID>ID12345678910</deviceID>//ex-factory No.
<activated>active</activated>//activation status
<Mask>255.255.255.0</Mask>
<Gateway>10.30.30.1</Gateway>
<DNS>192.168.1.3</DNS>
<IPv6Address>2001::202:116:160:42</IPv6Address>//iPv6 address
<IPv6MaskLen>64</IPv6MaskLen> //iPv6 subnet mask prefix length
<IPv6Gateway>2001::1</IPv6Gateway> //IPv6 gateway
<IPv6DNS>2001::202:116:160:42</IPv6DNS> // IPv6 domain name parsing
<IPv6Support>true</IPv6Support>
</VideoSourceDescriptor>
</VideoSourceList>
```

1.3.8/ISAPI/ContentMgmt/InputProxy/channels/<ID>

/ISAPI/ContentMgmt/InputProxy/channels/<ID> General Resource v2.0	
GET	
Description	Obtain digital channel information
Query	None
Inbound Data	None
Success Return	**<InputProxyChannel>**
PUT	
Description	Set digital channel information
Query	None
Inbound Data	**<InputProxyChannel>**
Success Return	**<ResponseStatus>**
DELETE	
Description	Delete digital channel
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the obtaining/adding/modification/deletion of front-end of digital channels.	

InputProxyChannel XML Block

```
<?xml version="1.0" encoding="UTF-8" ?>
<InputProxyChannel>
<id><!-- req, xs:string --></id>
<quickAdd><!--req, xs:boolean--></quickAdd> //whether to add quickly
<sourceInputPortDescriptor/><!--opt-->
</InputProxyChannel>

<sourceInputPortDescriptor>
<access><!--req, xs:string --></access>// for encryption check
<enable><--req,xs:boolean--></enable>//enabling
<channel><--req,xs:boolean--></channel>//channel No.
<channelName><!-- req, xs:string ></channelName>
<adminProtocol><!--req, xs:string "Private , ONVIF, RTSP…">
</adminProtocol>
<addressingFormatType>
<!-- req, xs:string, "ipaddress,hostname,active"-->
</addressingFormatType>//address mode：IP, domain name, active mode
<hostName><!-- dep, xs:string --></hostName>//domain name
```

```
<ipAddress><!-- dep, xs:string --></ipAddress>//IPV4 address
<ipv6Address><!-- dep, xs:string --></ipv6Address>//IPV6 address
<ipProxy><!-- dep: addressingFormatType, xs:string --></ipProxy>//proxy ip address
<serialnumber><!-- dep, xs:string --></serialnumber>//serial number
<deviceID><!-- dep, xs:string --></deviceID>//ex-factory No.,  used in active mode
<adminPortNo><!-- req, xs:integer --></adminPortNo>//management port No.
<srcInputPort><!-- req, xs:string; id --></srcInputPort>//front-end channel No.
<userName><!-- req, xs:string --></userName>//user name, needing encryption
<password><!--_req, xs:string --></password>//password,  needing encryption
<synchroToIpc><!-- req, xs:string --></synchroToIpc>//synchronization to front-end
<activated><--req,xs:string,"active,inactive,unknown"--></activated>//equipment  activation
status
<connMode><!-- opt, xs:string "plugplay, manual" --></connMode>//connection mode,  not
used temporarily
<streamType><!-- opt, xs:string; "auto, tcp, udp"--></streamType>//transmission protocol
<deciphering><!-- req, xs:string --></deciphering>//deciphering password
<mainstreamRtspURL><!—dep:streamtype, xs:string --></ mainstreamRtspURL >//main code
stream URL
<substreamRtspURL><!—dep:streamtype, xs:string --></ substreamRtspURL >//sub code
stream URL
<<MUCURL>><!—dep:streamtype, xs:string --></ <MUCURL>>//multicast address
<MUCport><!—dep:streamtype, xs:string --></MUCport>//multicast port No.
<Mac><!—dep, xs:string --><Mac>//equipment Mac address
<chnType><!-- req, xs: integer --></chnType>  //channel type 0=digital channel,  1=analogue
channel
</sourceInputPortDescriptor>
```

Test cases

GET/ISAPI/ContentMgmt/InputProxy/channels/0

Request XML：NONE

Response XML：<InputProxyChannel>

PUT /ISAPI/ContentMgmt/InputProxy/channels/0

Response XML：NONE

Request XML： as below

```
<InputProxyChannel>
  <id/>
  <quickAdd>false</quickAdd>
  <sourceInputPortDescriptor>
    <access>C533F72B20396DB9B08D106C538BB379</access>
    <enable>true</enable>
    <channel>1</channel>
    <channelName>[1] Channel 1</channelName>
    <adminProtocol>Private</adminProtocol>
    <addressingFormatType>ipaddress</addressingFormatType>
    <hostName/>
    <ipAddress>192.168.16.164</ipAddress>
    <ipv6Address/>
    <ipProxy/>
    <serialnumber/>
    <deviceID/>
    <adminPortNo>3000</adminPortNo>
    <srcInputPort>1</srcInputPort>
    <userName>+xtLQ1yiS+w=</userName>
    <password>2btNROVoH2Q=</password>
    <activated/>
    <synchroToIpc>true</synchroToIpc>
    <connMode/>
    <streamType>tcp</streamType>
```

```
    <deciphering/>
    <mainstreamRtspURL/>
    <substreamRtspURL/>
    <MUCURL/>
    <MUCport/>
    <Mac/>
  </sourceInputPortDescriptor>
</InputProxyChannel>
```

1.3.9/ISAPI/ContentMgmt/InputProxy/channels

/ISAPI/ContentMgmt/InputProxy/channels/<ID>	**General Resource v2.0**
GET	
Description	Batch obtain digital channel information
Query	None
Inbound Data	None
Success Return	**<InputProxyChannelList>**
PUT	
Description	Batch set digital channel information
Query	None
Inbound Data	**<InputProxyChannelList>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the batch obtaining/adding/modification of front-end of digital channels.	

InputProxyChannelList XML Block

```
<InputProxyChannelList version="1.0" encoding="UTF-8">
<InputProxyChannel/><!-- opt -->
</InputProxyChannelList>

<?xml version="1.0" encoding="UTF-8" ?>
<InputProxyChannel>
<id><!-- req, xs:string --></id>
<quickAdd><!--req, xs:boolean--></quickAdd> //whether to add quickly
<sourceInputPortDescriptor/><!--opt-->
</InputProxyChannel>
<sourceInputPortDescriptor>
<access><!--req, xs:string --></access>// for encryption check
<enable><--req,xs:boolean--></enable>//enabling
<channel><--req,xs:boolean--></channel>//channel No.
<channelName><!-- req, xs:string ></channelName>
<adminProtocol><!--req, xs:string "Private , ONVIF, RTSP…">
</adminProtocol>
<addressingFormatType>
<!-- req, xs:string, "ipaddress,hostname,active"-->
</addressingFormatType>//address mode：IP, domain name, active mode
<hostName><!-- dep, xs:string --></hostName>//domain name
<ipAddress><!-- dep, xs:string --></ipAddress>//IPV4 address
<ipv6Address><!-- dep, xs:string --></ipv6Address>//IPV6 address
<ipProxy><!-- dep: addressingFormatType, xs:string --></ipProxy >//proxy ip address
<serialnumber><!-- dep, xs:string --></serialnumber>//serial number
<deviceID><!-- dep, xs:string --></deviceID>//ex-factory No.,     used in active mode
<adminPortNo><!-- req, xs:integer --></adminPortNo>//management port No.
<srcInputPort><!-- req, xs:string; id --></srcInputPort>//front-end channel No.
<userName><!-- req, xs:string --></userName>//user name, needing encryption
```

```
<password><!--_req,wo, xs:string --></password>//password,  needing encryption
<activated><--req,xs:string,"active,inactive,unknown"--></activated>//equipment  activation status
<connMode><!-- opt, xs:string "plugplay, manual" --></connMode>//connection mode,  not used temporarily
<streamType><!-- opt, xs:string; "auto, tcp, udp"--></streamType>//transmission protocol
<deciphering><!-- req, xs:string --></deciphering>//deciphering password
<mainstreamRtspURL><!—dep:streamtype, xs:string --></ mainstreamRtspURL >//main code stream URL
<substreamRtspURL><!—dep:streamtype, xs:string --></ substreamRtspURL >//sub code stream URL
<MUCURL><!—dep:streamtype, xs:string --></MUCURL>//multicast address
<MUCport><!—dep:streamtype, xs:string --></MUCport>//multicast port No.
<Mac><!—dep, xs:string --><Mac>//equipment Mac address
<chnType><!-- req, xs: integer --></chnType> //channel type：0=digital channel，1=analogue channel
</sourceInputPortDescriptor>
```

Test cases

GET /ISAPI/ContentMgmt/InputProxy/channels

Request XML：NONE

Response XML：<InputProxyChannelList>

PUT /ISAPI/ContentMgmt/InputProxy/channels

Request XML：<InputProxyChannelList>

Response XML： <ResponseStatus>

<InputProxyChannelList> as below：

```
<?xml version="1.0" encoding="UTF-8" ?>
<InputProxyChannelList>
<InputProxyChannel>
<id>0</id>
<quickAdd>false</quickAdd> //whether to add quickly
<sourceInputPortDescriptor>
<access>94AAABB419A9820DC171B43240CEEF41</access>
<enable>true</enable>//enabling
<channel>0</channel>//channel No.
<channelName>channel 1</channelName>
<adminProtocol>Private</adminProtocol>
<addressingFormatType>ipaddress</addressingFormatType>//address mode：IP, domain name, active mode
<hostName></hostName>//domain name
<ipAddress>10.30.30.80</ipAddress>//IPV4 address
<ipv6Address></ipv6Address>//IPV6 address
<serialNumber></serialNumber>//serial number
<deviceID></deviceID>//ex-factory No.,  used in active mode
<adminPortNo>3000</adminPortNo>//management port No.
<srcInputPort>0</srcInputPort>//front-end channel No.
<userName></userName>//user name,  needing encryption
<password></password>//password,  needing encryption
<activated>active</activated>
<connMode>manual</connMode>//connection mode,  not used temporarily
<streamType>tcp</streamType>//transmission protocol
<deciphering></deciphering>//deciphering password
<mainstreamRtspURL></mainstreamRtspURL >//main code stream URL
<substreamRtspURL></substreamRtspURL >//sub code stream URL
<MUCURL></MUCURL>//multicast address
<MUCport></MUCport>//multicast port No.
<Mac>00:50:c2:28:1f:bf<Mac>//equipment Mac address
</sourceInputPortDescriptor>
```

```
</InputProxyChannel>
//…obtain above fields
</InputProxyChannelList>
```

1.3.10/ISAPI/ContentMgmt/InputProxy/channels/<ID>/status

/ISAPI/ContentMgmt/InputProxy/channels/<ID>/status General Resource v2.0	
GET	
Description	Obtain digital channel status
Query	None
Inbound Data	None
Success Return	**<InputProxyChannelStatus>**
Explanations on protocol: This protocol is to realize the obtaining of the digital channel status information, such as online, going offline and reason for going offline, etc.	

InputProxyChannelStatus XML Block

```
<InputProxyChannelStatus version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string; id --></id>
<sourceInputPortDescriptor/><!--opt-->
<online><!-- req, xs:boolean --></online>//online status
<supportCreateStream/><!-- opt, xs:boolean -->
<streamingProxyChannelIdList><!-- req -->
<streamingProxyChannelId><!-- req, xs:string; id --></streamingProxyChannelId>
</streamingProxyChannelIdList>
<relatedIOProxy><!-- opt -->
<inputProxyPortIdList><!--opt-->
<inputProxyPortId/><!-- opt -->
</inputProxyPortIdList>
<outputProxyPortIdList><!-- opt-->
<outputProxyPortId/><!-- opt -->
</outputProxyPortIdList>
</relatedIOProxy>
<chanDetectResult><!-- opt, xs:string, "connect, overSysBandwidth, domainError,
ipcStreamFail, connecting, chanNoError, ipAddrConflictWithDev, ipAddrConflicWithIpc,
errorUserNameOrPasswd, netUnreachable, unknownError, notExist,
ipcStreamTypeNotSupport, ipcResolutionNotSupport" -->
</chanDetectResult>//reply to reason of not being online, connect (connected),
overSysBandwidth (access bandwidth reaches the upper limit), domainError (domain name
error), ipcStreamFail (IPC code stream connection fails), connecting (being connected),
chanNoError (channel No. error), ipAddrConflictWithDev (IP conflicts with NVR),
ipAddrConflicWithIpc (IP conflicts with IPC), errorUserNameOrPasswd (user or password
error), netUnreachable (net unreachable), unknownError (unknown error), notExist (front-end
not exist), ipcStreamTypeNotSupport (IPC not support this code stream type),
ipcResolutionNotSupport (not support IPC resolution), ipMask (IP is shielded),
accountBlocked (account is blocked), maxConnection (reach the maximum connection
number), coderNotSupport (not supported encoding mode), videoEncrypt (video encrypted),
NVRPropertyReachUpperLimit (NVR property reaches upper limit)
</InputProxyChannelStatus>

<sourceInputPortDescriptor>
<access><--req,xs:string></access>
<enable><--req,xs:boolean--></enable>//enabling
```

```
<channel><--req,xs:boolean--></channel>//channel No.
<channelName><!-- req, xs:string ></channelName>
<adminProtocol><!--req, xs:string "Private , ONVIF, RTSP…">
</adminProtocol>
<addressingFormatType>
<!-- req, xs:string, "ipaddress,hostname,active"-->
</addressingFormatType>//address mode：IP, domain name, active mode
<hostName><!-- dep, xs:string --></hostName>//domain name
<ipAddress><!-- dep, xs:string --></ipAddress>//IPV4 address
<ipv6Address><!-- dep, xs:string --></ipv6Address>//IPV6 address
<serialnumber><!-- dep, xs:string --></serialnumber>//serial number
<deviceID><!-- dep, xs:string --></deviceID>//ex-factory No.,     used in active mode
<adminPortNo><!-- req, xs:integer --></adminPortNo>//management port No.
<srcInputPort><!-- req, xs:string; id --></srcInputPort>//front-end channel No.
<userName><!-- req, xs:string --></userName>//user name, needing encryption
<password><!--_req,wo, xs:string --></password>//password,     needing encryption
<activated><--req,xs:string,"active,inactive,unknown"--></activated>//equipment        activation
status
<connMode><!-- opt, xs:string "plugplay, manual" --></connMode>//connection mode ,   not
used temporarily
<streamType><!-- opt, xs:string; "auto, tcp, udp"--></streamType>//transmission protocol
<deciphering><!-- req, xs:string --></deciphering>//deciphering password
<mainstreamRtspURL><!—dep:streamtype, xs:string --></ mainstreamRtspURL >//main code
stream URL
<substreamRtspURL><!—dep:streamtype,  xs:string  --></  substreamRtspURL  >//sub  code
stream URL
<<MUCURL>><!—dep:streamtype, xs:string --></ <MUCURL>>//multicast address
<MUCport><!—dep:streamtype, xs:string --></MUCport>//multicast port No.
<Mac><!—dep, xs:string --><Mac>//equipment Mac address
</sourceInputPortDescriptor>
```

Test cases

GET /ISAPI/ContentMgmt/InputProxy/channels/0/status

Request XML： none

Response XML：<InputProxyChannelStatus>

```
<InputProxyChannelStatus version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id>0</id>
<sourceInputPortDescriptor>
<access>94AAABB419A9820DC171B43240CEEF41</access>
<enable>true</enable>//enabling
<channel>0</channel>//channel No.
<channelName>channel 1</channelName>
<adminProtocol>Private</adminProtocol>
<addressingFormatType>ipaddress</addressingFormatType>//address mode：IP, domain name,
active mode
<hostName></hostName>//domain name
<ipAddress>10.30.30.80</ipAddress>//IPV4 address
<ipv6Address></ipv6Address>//IPV6 address
<serialNumber></serialNumber>//serial number
<deviceID></deviceID>//ex-factory No.,     used in active mode
<adminPortNo>3000</adminPortNo>//management port No.
<srcInputPort>0</srcInputPort>//front-end channel No.
<userName></userName>//user name,     needing encryption
<password></password>//password,     needing encryption
<connMode>manual</connMode>//connection mode,     not used temporarily
<streamType>tcp</streamType>//transmission protocol
<deciphering></deciphering>//deciphering password
<mainstreamRtspURL></mainstreamRtspURL >//main code stream URL
```

```
<substreamRtspURL></substreamRtspURL >//sub code stream URL
<<MUCURL>></ <MUCURL>>//multicast address
<MUCport></MUCport>//multicast port No.
<Mac>00:50:c2:28:1f:bf<Mac>//equipment Mac address
</sourceInputPortDescriptor>
<online>true</online>//online status
<chanDetectResult>connect</chanDetectResult>//reply to reason of not being online
</InputProxyChannelStatus>
```

1.3.11/ISAPI/ContentMgmt/InputProxy/channels/status

/ISAPI/ContentMgmt/InputProxy/channels/<ID>/status General Resource v2.0	
GET	
Description	Obtain all digital channel status
Query	None
Inbound Data	None
Success Return	**<InputProxyChannelStatusList>**
Explanations on protocol: This protocol is to realize the obtaining of the digital channel status information, such as online, going offline and reason for going offline, etc.	

InputProxyChannelStatusList XML Block

```
<InputProxyChannelStatusList>
<InputProxyChannelStatus/><!-- opt -->
</InputProxyChannelStatusList>

<InputProxyChannelStatus version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string; id --></id>
<sourceInputPortDescriptor/><!--opt-->
<online><!-- req, xs:boolean --></online>//online status
<supportCreateStream/><!-- opt, xs:boolean -->
<streamingProxyChannelIdList><!-- req -->
<streamingProxyChannelId><!-- req, xs:string; id --></streamingProxyChannelId>
</streamingProxyChannelIdList>
<relatedIOProxy><!-- opt -->
<inputProxyPortIdList><!--opt-->
<inputProxyPortId/><!-- opt -->
</inputProxyPortIdList>
<outputProxyPortIdList><!-- opt-->
<outputProxyPortId/><!-- opt -->
</outputProxyPortIdList>
</relatedIOProxy>
<chanDetectResult><!-- opt, xs:string, "connect, overSysBandwidth, domainError,
ipcStreamFail, connecting, chanNoError, ipAddrConflictWithDev, ipAddrConflicWithIpc,
errorUserNameOrPasswd, netUnreachable, unknownError,     notExist,
ipcStreamTypeNotSupport, ipcResolutionNotSupport" -->
</chanDetectResult>//reply to reason of not being online , connect (connected) ,
overSysBandwidth (access bandwidth reaches the upper limit) , domainError (domain name
error) ,ipcStreamFail (IPC code stream connection fails) , connecting (being connected) ,
chanNoError (channel No. error) , ipAddrConflictWithDev (IP conflicts with NVR) ,
ipAddrConflicWithIpc (IP conflicts with IPC) , errorUserNameOrPasswd (user or password
error) , netUnreachable (net unreachable) , unknownError (unknown error) , notExist (front-end
not exis ) , ipcStreamTypeNotSupport (IPC not support this code stream type) ,
ipcResolutionNotSupport (not support IPC resolution) , ipMask (IP is shielded) ,
```

accountBlocked （account is blocked）， maxConnection （reach the maximum connection number）， coderNotSupport (not supported encoding mode)，videoEncrypt (video encrypted)，NVRPropertyReachUpperLimit （NVR property reaches upper limit)
</InputProxyChannelStatus>

<sourceInputPortDescriptor>
<access>**<--req,xs:string -->**</access>
<enable><--req,xs:boolean--></enable>//enabling
<channel><--req,xs:boolean--></channel>//channel No.
<channelName><!-- req, xs:string ></channelName>
<adminProtocol><!--req, xs:string "Private , ONVIF, RTSP…">
</adminProtocol>
<addressingFormatType>
<!-- req, xs:string, "ipaddress,hostname,active"-->
</addressingFormatType>//address mode：IP, domain name, active mode
<hostName><!-- dep, xs:string --></hostName>//domain name
<ipAddress><!-- dep, xs:string --></ipAddress>//IPV4 address
<ipv6Address><!-- dep, xs:string --></ipv6Address>//IPV6 address
<serialnumber><!-- dep, xs:string --></serialnumber>//serial number
<deviceID><!-- dep, xs:string --></deviceID>//ex-factory No., used in active mode
<adminPortNo><!-- req, xs:integer --></adminPortNo>//management port No.
<srcInputPort><!-- req, xs:string; id --></srcInputPort>//front-end channel No.
<userName><!-- req, xs:string --></userName>//user name, needing encryption
<password><!--_req,wo, xs:string --></password>//password, needing encryption
<activated><--req,xs:string,"active,inactive,unknown"--></activated>//equipment activation status
<connMode><!-- opt, xs:string "plugplay, manual" --></connMode>//connection mode， not used temporarily
<streamType><!-- opt, xs:string; "auto, tcp, udp"--></streamType>//transmission protocol
<deciphering><!-- req, xs:string --></deciphering>//deciphering password
<ipcCloudUpGradeEnable><--req,xs:boolean--></ipcCloudUpGradeEnable>//ipc cloud upgrading enabling， true: support， false: not support
<mainstreamRtspURL><!—dep:streamtype, xs:string --></ mainstreamRtspURL >//main code stream URL
<substreamRtspURL><!—dep:streamtype, xs:string --></ substreamRtspURL >//sub code stream URL
<<MUCURL>><!—dep:streamtype, xs:string --></ <MUCURL>>//multicast address
<MUCport><!—dep:streamtype, xs:string --></MUCport>//multicast port No.
<Mac><!—dep, xs:string --><Mac>//equipment Mac address
</sourceInputPortDescriptor>

Test cases
GET /ISAPI/ContentMgmt/InputProxy/channels/status
Request XML： none
Response XML：<InputProxyChannelStatusList>

<InputProxyChannelStatusList>
<InputProxyChannelStatus>
<id>0</id>
<sourceInputPortDescriptor>
<access>**94AAABB419A9820DC171B43240CEEF41**</access>
<enable>ture</enable>//enabling
<channel>0</channel>//channel No.
<channelName>channel 1</channelName>
<adminProtocol>Private</adminProtocol>
<addressingFormatType>ipaddress</addressingFormatType>//address mode：IP, domain name, active mode
<hostName></hostName>//domain name
<ipAddress>10.30.30.80</ipAddress>//IPV4 address

```
<ipv6Address></ipv6Address>//IPV6 address
<serialNumber></serialNumber>//serial number
<deviceID></deviceID>//ex-factory No.,     used in active mode
<adminPortNo>3000</adminPortNo>//management port No.
<srcInputPort>0</srcInputPort>//front-end channel No.
<userName></userName>//user name,     needing encryption
<password></password>//password,     needing encryption
<activated>active</activated>
<connMode>manual</connMode>//connection mode,     not used temporarily
<streamType>tcp</streamType>//transmission protocol
<deciphering></deciphering>//deciphering password
<ipcCloudUpGradeEnable>true</ipcCloudUpGradeEnable>//ipc  cloud  upgrading  enabling ,
true: support,   false: not support
<mainstreamRtspURL></mainstreamRtspURL >//main code stream URL
<substreamRtspURL></substreamRtspURL >//sub code stream URL
<<MUCURL>></ <MUCURL>>//multicast address
<MUCport></MUCport>//multicast port No.
<Mac>00:50:c2:28:1f:bf<Mac>//equipment Mac address
</sourceInputPortDescriptor>
<online>true</online>//online status
<chanDetectResult>connect</chanDetectResult>//reply to reason of not being online
</InputProxyChannelStatus>
//…obtain above fields
</InputProxyChannelStatusList>
```

1.3.12/ISAPI/ContentMgmt/InputProxy/channels/basic/status

/ISAPI/ContentMgmt/InputProxy/channels/basic/status General Resource v2.0	
GET	
Description	Obtain all digital channel status (lightweight information)
Query	None
Inbound Data	None
Success Return	**<InputProxyChnBasicStatusList>**
Explanations on protocol: This protocol is to realize the obtaining of the digital channel status information, only including the channel No., channel alias, channel enabling, link status information.	

InputProxyChnBasicStatusList XML Block

```
<InputProxyChannelStatusList>
<InputProxyChnBasicStatus>
<id><!-- req, xs:string; id --></id>
<sourceInputBasicDescriptor>
<enable><--req,xs:boolean--></enable>//enabling
<channel><--req,xs:boolean--></channel>//channel No.
<channelName><!-- req, xs:string ></channelName>
<adminProtocol><!--req, xs:string "Private , ONVIF, RTSP…"></adminProtocol>
</sourceInputBasicDescriptor>
<online><!-- req, xs:boolean --></online>//online status
</ InputProxyChnBasicStatus>
</InputProxyChannelStatusList>
```

Test cases

GET /ISAPI/ContentMgmt/InputProxy/channels/basic/status

Request XML: none

Response XML: <InputProxyChnBasicStatusList>

```
<InputProxyChnBasicStatusList>
<InputProxyChnBasicStatus>
<id>1</id>
<sourceInputBasicDescriptor>
<enable>true</enable>
<channel>1</channel>
<channelName>channel 1</channelName>
<adminProtocol>Private</adminProtocol>
</sourceInputBasicDescriptor>
<online>true</online>
</InputProxyChnBasicStatus>
```

1.3.13/ISAPI/ContentMgmt/InputProxy/ipcConfig

/ISAPI/ContentMgmt/InputProxy/ipcConfig General Resource v2.0	
PUT	
Description	Modify IP of front-end through NVR
Query	None
Inbound Data	**<ipcInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the function of modify IP of front-end through NVR.	

ipcInfoXML Block

```
<ipcInfo>
    <access><!--req, xs:string --></access>// for encryption check
    <MAC><!--req, xs:string --><!—req,xs:integer></MAC>// MAC address
    <userName><!--req, xs:string --><!—req,xs:integer></userName>//user name
    <userPass><!--req, xs:string --></userPass>//password
    <adminProtocol><!--req, xs:string --></adminProtocol>//connection protocol
    <IP><!--req, xs:string --></IP>
    <Mask><!--req, xs:string --></Mask>
    <Gateway><!--req, xs:string --></Gateway>
    <DNS><!--req, xs:string --></DNS>
    <CheckCode><!--req, xs:string --></CheckCode>//check code,    fixed to be 20160113
    <ipVersion> <!-- req, xs:string, “v4,v6,dual” --> </ipVersion>
</ipcInfo>
```

Test cases

PUT/ISAPI/ContentMgmt/InputProxy/ipcConfig

Request XML：<ipcInfo>

```
<ipcInfo>
    <access>94AAABB419A9820DC171B43240CEEF41</access>
    <MAC>0F: 0F: 0F: 0F: 0F: 0F<!—req,xs:integer></MAC>// MAC address
    <userName>admin</userName>//user name
    <userPass>1111</userPass>//password
    <adminProtocol>Private</adminProtocol>//connection protocol
    <IP>10.30.30.79</IP>
    <Mask>255.255.255.0</Mask>
    <Gateway>10.30.30.1</Gateway>
    <DNS>8.8.8.8</DNS>
    <CheckCode>20160113</CheckCode>//check code,    fixed to be 20160113
    <ipVersion> v4 </ipVersion>
</ipcInfo>
```

Response XML： <ResponseStatus>

1.3.14/ISAPI/ContentMgmt/InputProxy/ChnEnable/channels/<ID>

/ISAPI/ContentMgmt/InputProxy/ChnEnable/channels/<ID>	**General Resource v2.0**
GET	
Description	Obtain digital channel enabling status
Query	None
Inbound Data	None
Success Return	**<InputProxyChnEnable>**
PUT	
Description	Set digital channel enabling status
Query	None
Inbound Data	**<InputProxyChnEnable>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the obtaining/modification of digital channel status.	

InputProxyChnEnable XML Block

```
<?xml version="1.0" encoding="UTF-8" ?>
<InputProxyChnEnable>
<id><!-- req, xs:string --></id>
<channel><--req,xs:boolean--></channel>//channel No.
<enable><--req,xs:boolean--></enable>//enabling
</InputProxyChnEnable>
```

Test cases

GET /ISAPI/ContentMgmt/InputProxy/ChnEnable/channels/1

Request XML：NONE

Response XML：<InputProxyChnEnable>

PUT /ISAPI/ContentMgmt/InputProxy/ChnEnable/channels/1

Request XML：InputProxyChnEnable

Response XML：as below

```
<?xml version="1.0" encoding="UTF-8" ?>
<InputProxyChnEnable>
<id>0</id>
<channel>1</channel>//channel No.
<enable>true</enable>//enabling
</InputProxyChnEnable>
```

1.3.15/ISAPI/ContentMgmt/InputProxy/ChnEnable/channels

/ISAPI/ContentMgmt/InputProxy/ChnEnable/channels	**General Resource v2.0**
GET	
Description	Batch obtain digital channel enabling status
Query	None
Inbound Data	None
Success Return	**<InputProxyChnEnableList>**
PUT	
Description	Batch set digital channel enabling status
Query	None
Inbound Data	**<InputProxyChnEnableList>**
Success Return	**<ResponseStatus>**

Explanations on protocol: This protocol is to realize the batch obtaining/modification of digital channel status.

InputProxyChnEnableList XML Block

```
<InputProxyChnEnableList version="1.0" encoding="UTF-8">
<InputProxyChnEnable/><!-- opt -->
</InputProxyChnEnableList>

<?xml version="1.0" encoding="UTF-8" ?>
<InputProxyChnEnable>
<id><!-- req, xs:string --></id>
<channel><--req,xs:boolean--></channel>//channel No.
<enable><--req,xs:boolean--></enable>//enabling
</InputProxyChnEnable>
```

Test cases

GET /ISAPI/ContentMgmt/InputProxy/ChnEnable/channels

Request XML：NONE

Response XML：<InputProxyChnEnableList>

PUT /ISAPI/ContentMgmt/InputProxy/ChnEnable/channels

Response XML： <ResponseStatus>

Request XML： as below

```
<InputProxyChnEnableList version="1.0" encoding="UTF-8">
<InputProxyChnEnable>
<id>0</id>
<channel>1</channel>//channel No.
<enable>true</enable>//enabling
</InputProxyChnEnable>
//…obtain above fields
</InputProxyChnEnableList>
```

1.3.16/ISAPI/ContentMgmt/Storage/hdd/<ID>/SMARTTest/config

/ISAPI/ContentMgmt/Storage/hdd/<ID>/SMARTTest/configGeneral Resource v2.0	
GET	
Description	Obtain Smart detection verification enabling
Query	None
Inbound Data	**None**
Success Return	**<SMARTTestConfig>**
PUT	
Description	Set Smart detection verification enabling
Query	None
Inbound Data	**<SMARTTestConfig>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to obtain and set the Smart detection verification enabling parameters. If the setting is false, the measurement of hard disk not passing smart detection can still be used, otherwise not be used.	

SMARTTestConfig XML Block

```
<SMARTTestConfig version="1.0" >
  <enabled><!-- req, xs:Boolean"true,false"--></enabled>
</SMARTTestConfig>
```

Test cases

GET/ISAPI/ContentMgmt/Storage/hdd/1/SMARTTest/config

Response XML：<SMARTTestConfig>

Request XML：None

PUT/ISAPI/ContentMgmt/Storage/hdd/1/SMARTTest/config

Response XML： <ResponseStatus>

request XML：<SMARTTestConfig> as below

```
<SMARTTestConfig version="1.0">
  <enabled>false</enabled>
</SMARTTestConfig>
```

1.3.17/ISAPI/ContentMgmt/Storage/hdd/<ID>/SMARTTest/status

/ISAPI/ContentMgmt/Storage/hdd/<ID>/SMARTTest/statusGeneralResourcev2.0	
GET	
Description	Obtain Smart detection status
Query	None
Inbound Data	**None**
Success Return	**<SmartTestStatus>**
Explanations on protocol: This protocol is to obtain the Smart detection status.	

SmartTestStatus XML Block

```
<SmartTestStatus version="1.0" >
<id><!-- req, xs:integer --></id>
<temprature><!-- req, xs:integer --></temprature>
<powerOnDay><!-- req, xs:integer --></powerOnDay>
<selfEvaluaingStatus><!-- req, xs:string "ok,fail", self-evaluation status--></selfEvaluaingStatus>
<allEvaluaingStatus><!-- req, xs:string "functional,fail", overall evaluation status--></allEvaluaingStatus>
<devModel><!-- req, xs:string, hard disk model--></devModel>
<serialNum><!-- req, xs:string, hard disk serial number--></serialNum>
<TestResultList>
<TestResult>
<attributeID><!-- req, xs:integer --></attributeID>
<status><!-- req, xs:string "OK,FAILING_NOW,In_the_past....."--></status>
<flags><!-- req, xs:integer --></flags>
<thresholds><!-- req, xs:integer --></thresholds>
<value><!-- req, xs:integer --></value>
<worst><!-- req, xs:integer --></worst>
<rawValue><!-- req, xs:integer --></rawValue>
</TestResult>
</TestResultList>
</SmartTestStatus>
```

Test cases

GET/ISAPI/ContentMgmt/Storage/hdd/0/SMARTTest/status

Request XML：None

Response XML：<SmartTestStatus>

```
<SmartTestStatus version="1.0" >
<id>7</id>
<temprature>36</temprature>
<powerOnDay>465</powerOnDay>
<selfEvaluaingStatus>ok</selfEvaluaingStatus>
<allEvaluaingStatus>functional</allEvaluaingStatus>
```

```
<devModel>WD</devModel>
<serialNum>123456789</serialNum>
<TestResultList>
<TestResult>
<attributeID>1</attributeID>
<status>ok</status>
<flags>15</flags>
<thresholds>44</thresholds>
<value>79</value>
<worst>63</worst>
<rawValue>84702424</rawValue>
</TestResult>
<TestResult>
<attributeID>3</attributeID>
<status>ok</status>
<flags>3</flags>
<thresholds>0</thresholds>
<value>95</value>
<worst>93</worst>
<rawValue>0</rawValue>
</TestResult>
…
<attributeID>0</attributeID>
<status>ok</status>
<flags>0</flags>
<thresholds>0</thresholds>
<value>0</value>
<worst>0</worst>
<rawValue>0</rawValue>
</TestResult>
</TestResultList>
</SmartTestStatus>
```

1.3.18/ISAPI/ContentMgmt/Storage/hdd/<ID>/SMARTTest/enable

/ISAPI/ContentMgmt/Storage/hdd/<ID>/SMARTTest/startGeneral Resource v2.0	
GET	
Description	Start smart detection order
Query	None
Inbound Data	**None**
Success Return	**<SMARTTestEnable>**
PUT	
Description	Start smart detection order
Query	None
Inbound Data	**<SMARTTestEnable>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is used to start the smart detection.	

SMARTTestEnableXML Block

```
<SMARTTestEnable version="1.0" >
   <enabled><!-- req, xs:Boolean"true,false"--></enabled>
</SMARTTestEnable>
```

Test cases

PUT /ISAPI/ContentMgmt/Storage/hdd/7/SMARTTest/enable

Response XML：<SMARTTestEnable>

Request XML：<ResponseStatus>

```
<SMARTTestEnable version="1.0" >
  <enabled>true</enabled>
</SMARTTestEnable>
```

GET /ISAPI/ContentMgmt/Storage/hdd/7/SMARTTest/enable

Request XML：None

Response XML：as below

```
<SMARTTestEnable version="1.0" >
  <enabled>true</enabled>
</SMARTTestEnable>
```

1.3.19/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/status

/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/status **General Resource v2.0**	
GET	
Description	Obtain bad track detection status
Query	None
Inbound Data	**None**
Success Return	**<BadSectorsTestStatus>**
Explanations on protocol: This protocol is to obtain bad track detection status. Block volume is calculated, and each block has one No..	

BadSectorsTestStatusXML Block

```
<BadSectorsTestStatus version="1.0">
<diskID><!-- req, xs:integer --></diskID>
<MaskAreaList>
<BlockNo><!-- req, xs:integer --></BlockNo> //shielded block No. of bad block
</MaskAreaList>
<BlockAreaTestStatus>
<testType><!-- req, xs:string "full: full, keyblock: key region"--></testType>
<testStatus><!-- req, xs:string "none, pause, abort, running, finish"--></testStatus>
<fistBlock><!-- req, xs:integer --></fistBlock>//first block No.
<lastBlock><!-- req, xs:integer --></lastBlock>//last block No., maximum 64*64
<currentBlock><!-- req, xs:integer --></currentBlock>//currently detected block No.
<BadSectorsList>
<BadSectors>
<BlockNo><!-- req, xs:integer --></BlockNo> //bad block No.
</BadSectors>
</BadSectorsList>
</BlockAreaTestStatus>
</BadSectorsTestStatus>
```

Test cases

GET/ISAPI/ContentMgmt/Storage/hdd/0/SMARTTest/status

Response XML：<BadSectorsTestStatus>

Request XML：None

```
<BadSectorsTestStatus version="1.0">
<diskID>7</diskID>
<MaskAreaList>
</MaskAreaList>
<BlockAreaTestStatus>
<testType>full</testType>
<testStatus>none</testStatus>
<fistBlock>0</fistBlock>
<lastBlock>0</lastBlock>
<currentBlock>0</currentBlock>
<BadSectorsList>
<BadSectors>
<num>10</num>//the 10th block is a bad block.
</BadSectors>
</BadSectorsList>
</BlockAreaTestStatus>
</BadSectorsTestStatus>
```

1.3.20/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/start

/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/start **General Resource v2.0**	
POST	
Description	Start bad track detection command
Query	None
Inbound Data	**<BadSectorsTest>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to start the bad track detection process, the follow-up process needs to call /ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/status for obtaining detection progress.	

BadSectorsTest XML Block

```
<BadSectorsTest version="1.0">
<testType><!-- req, xs:string "full: full, keyblock: key region"--></testType>
</BadSectorsTest>
```

Test cases

PUT/ISAPI/ContentMgmt/Storage/hdd/7/BadSectorsTest/start

Response XML: <ResponseStatus>

Request XML: as below

```
<BadSectorsTest version="1.0">
<testType>full</testType>
</BadSectorsTest>
```

1.3.21/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/pause

/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/pause **General Resource v2.0**	
PUT	
Description	Pause bad track detection command
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**

Explanations on protocol: This protocol is to pause the bad track detection process. ID range：1-8

Test cases
PUT/ISAPI/ContentMgmt/Storage/hdd/7/BadSectorsTest/pause
Response XML： <ResponseStatus>
Request XML：None

1.3.22/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/stop

/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/stop General Resource v2.0	
PUT	
Description	Stop bad track detection command
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to stop the bad track detection process.	

Test cases
POST/ISAPI/ContentMgmt/Storage/hdd/7/BadSectorsTest/stop
Response XML： <ResponseStatus>
Request XML：None

1.3.23/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/resume

/ISAPI/ContentMgmt/Storage/hdd/<ID>/BadSectorsTest/resume General Resource v2.0	
PUT	
Description	Restart bad track detection command
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to restart the bad track detection process.	

Test cases
PUT /ISAPI/ContentMgmt/Storage/hdd/7/BadSectorsTest/resume
Response XML： <ResponseStatus>
Request XML：None

1.3.24/ISAPI/ContentMgmt/record/control/locks

/ISAPI/ContentMgmt/record/control/locks General Resource v2.0	
POST	
Description	Obtain file blocking status
Query	None
Inbound Data	**<RecordingFileNameList>**
Success Return	**<RecordingLockList>**
PUT	
Description	Set file blocking and unblocking
Query	None
Inbound Data	**<RecordingLockList>**

Success Return	<ResponseStatus>

Explanations on protocol:
This protocol is to realize the obtaining of the file blocking status and the setting of the file blocking and unblocking, and realize the use and operation of the client sides or IE for the equipment files through the CGI protocol.
Explanations on key parameters:
<filename> represents file name of the file to be obtained or to be set
< status> represents file blocking and unblocking status, true: blocking; false: unblocking

RecordingFileNameListXML Block

```
<RecordingFileNameListxmlns="http://www.isapi.org/ver20/XMLSchema">
    <RecordingFileName>
        <id><!-- opt, xs:integer--></id>
        <filename><!-- req, xs:string --></filename>
    </RecordingFileName>
</RecordingFileNameList>
```

RecordingLockList XML Block

```
<RecordingLockList xmlns="http://www.isapi.org/ver20/XMLSchema">
    <RecordingLock>
        <id><!-- opt, xs:integer--></id>
        <filename><!-- req, xs:string --></filename>
        <status><!-- req, xs:boolean "true, false" --></status>
    </RecordingLock>
</RecordingLockList>
```

Test cases
POST /ISAPI/ContentMgmt/record/control/locks
Request XML: <RecordingFileNameList>
Response XML: <RecordingLockList>
<RecordingFileNameList>XML: as below

```
<RecordingFileNameList mlns="http://www.isapi.org/ver20/XMLSchema">
    <RecordingFileName>
        <id>1</id>
        <filename>H1000125000474490000C00.sdv</filename>
    </RecordingFileName>
</RecordingFileNameList
```

PUT /ISAPI/ContentMgmt/record/control/locks
Request XML: <RecordingLockList>
Response XML: <ResponseStatus>
<RecordingLockList>XML: as below

```
<RecordingLockList xmlns="http://www.isapi.org/ver20/XMLSchema">
    <RecordingLock>
        <id>1</id>
        <filename>H1000125000474490000C00.sdv</filename>
        <status>false</status>
    </RecordingLock>
</RecordingLockList>
```

1.3.25/ISAPI/ContentMgmt/dailySearch

/ISAPI/ContentMgmt/dailySearch Resource v2.0	
POST	
Description	Obtain the date information
Query	None
Inbound Data	**<CDailySearchDescription>**
Success Return	**<CDailySearchResult>**

Explanations on protocol:
This protocol is to realize the date query functions of video recording or pictures. The replied fields only include the time periods of video recording files in current day, and video recording type information. Multiple files of same type in original time periods will be combined the time periods to raise the speed of querying and displaying the video recording information.
Explanations on key parameters:
Query xml：
< day> represents query date
<contentType> represents file type, video： video recording, picture： picture
<recType> represents video recording type, ALL： all, Manual： manual, Timer： timing, Alarm： alarm
(Note: if <contentType> is picture, this place only supports filling ALL query all types)
<streamType> code stream type, main： main code stream, sub： sub code stream
Reply xml：
<numOfMatches> represents number of matches
<chanNo> represents channel No., starting from 0
<startTime> represents start time
<endTime> represents end time
<type> represents file type, ALL： all, Manual： manual, Timer： timing, Alarm： alarm
<streamType> code stream type, main： main code stream, sub： sub code stream
<maxResults> is not used temporarily
<searchResultPostion> is not used temporarily

CDailySearchDescriptionXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<CDailySearchDescription version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<day>2013-06-10</day>
<contentTypeList>
<contentType><!—req:string "video,picture"></contentType>
</contentTypeList>
<RecTypeList>
<recType><!—req:string ALL, Manual, Timer, Alarm--></recType>
</RecTypeList>
<chanNo><!—req,sx:integer-- ></chanNo>
<streamType><!—req:string ,"main,sub"--></streamType>
<maxResults><!—req,sx:integer-- ></maxResults>
<searchResultPostion><!—req,sx:integer-- ></searchResultPostion>
</CDailySearchDescription>
```

CDailySearchResult XML Block

```
<CDailySearchResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<numOfMatches><!—req:inter ></numOfMatches>
<matchList>
<matchElement>
<chanNo><!—req:inter ></chanNo >
<streamType><!—req:string ,"main,sub"--></contentType>
<timeSpan>
<startTime>2013-05-18T10:31:26Z</startTime>
<endTime>2013-05-18T10:32:54Z</endTime>
</timeSpan>
<type><!—opt:String ALL, Manual, Timer, Alarm--></type>
</matchElement>
</matchList>
</CDailySearchResult>
```

Test cases
POST/ISAPI/ContentMgmt/search
Request XML：<CDailySearchDescription> as below

```
<CDailySearchDescription version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<day>2013-06-10</day>
<contentTypeList>
<contentType>video</contentType>
</contentTypeList>
<RecTypeList>
<recType>ALL</recType>
</RecTypeList>
<chanNo>1</chanNo>
<streamType>main</contentType>
<maxResults>300</maxResults>
<searchResultPostion>1</searchResultPostion>
</CDailySearchDescription>
```

Response XML: <CDailySearchResult>

```
<?xml version="1.0" encoding="UTF-8"?>
<CDailySearchResult>
<numOfMatches>2</numOfMatches>
<matchList>
<matchElement>
<chanNo>1</chanNo>
<streamType>main</contentType>
<type>Timer</type>
<timeSpan>
<startTime>2017-07-07T00:05:55Z</startTime>
<endTime>2017-07-07T01:04:47Z</endTime>
</timeSpan>
</matchElement>
<matchElement>
<chanNo>1</chanNo>
<streamType>main</contentType>
<type>Timer</type>
<timeSpan>
<startTime>2017-07-07T01:04:47Z</startTime>
<endTime>2017-07-07T02:04:48Z</endTime>
</timeSpan>
</matchElement>
</matchList>
</CDailySearchResult>
```

1.4/ISAPI/Record

1.4.1/ISAPI/Record/Ftpupload

/ISAPI/Record/Ftpupload	**General Resource v2.0**
PUT	
Description	Set FTP download
Query	None
Inbound Data	**<Ftpupload>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the setting of the FTP download, and realize the setting of the client sides or IE for the equipment FTP download through the CGI protocol, including the parameters such as file name, etc. **Explanations on key parameters:** <fileName> represents file name	

FtpuploadXML Block

```
< Ftpupload version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
        <FileName ><!—req:string ></ FileName >
        < FilePath ><!—req:string ></ FilePath >
        <Port ><!—req:string ></ Port >
        <UserName ><!—req:string ></ UserName >
        <PassWord ><!—req:string ></ PassWord >
</ Ftpupload >
```

Test cases

PUT/ISAPI/Record/Ftpupload

Response XML: <ResponseStatus>

Request XML:

```
<Ftpupload version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
        <FileName></FileName>
        <FilePath></FilePath>
        <Port>21</Port>
        <UserName>admin</UserName>
        <PassWord>1111</PassWord>
</Ftpupload>
```

1.4.2 /CGI/Customize/SmartDbdeviceParam

/CGI/Customize/SmartDbdeviceParam	**General Resource v2.0**
GET	
Description	Obtain intelligent integration data service equipment configuration parameters
Query	**None**
Inbound Data	**None**
Success Return	**<SmartDbdeviceParam>**
PUT	
Description	Set intelligent integration data service equipment configuration parameters
Query	**None**
Inbound Data	**<SmartDbdeviceParam>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

Obtain or set intelligent integration data service equipment configuration parameters

Explanations on key parameters:

<ID> equipment ID
<httpurl>HTTP_URL
<httpkey>HTTP_KEY
<mqttTopic> topic
<mqttIp> server IP
<mqttPort> port No.
<mqttUser> user name
<access> represents random information, for correction
<mqttPassword> password

ComStrParam Block

```
<SmartDbdeviceParam>
   <ID><!--req, xs:string--></ID>
   <httpurl><!--req, xs:string--></httpurl>
   <httpkey><!--req, xs:string--></httpkey>
   <mqttTopic><!--req, xs:string--></mqttTopic>
   <mqttIp><!--req, xs:string--></mqttIp>
   <mqttPort><!--req, xs:string--></mqttPort>
   <mqttUser><!--req, xs:string--></mqttUser>
```

```
  <access><!--req, xs:string--></access>
  <mqttPassword><!--req, xs:string--></mqttPassword>
</SmartDbdeviceParam>
```

Test cases

GET /CGI/Customize/SmartDbdeviceParam

Request XML: None

Response XML: <SmartDbdeviceParam>

PUT /CGI/Customize/SmartDbdeviceParam

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Customize>
<SmartDbdeviceParam>
  <ID>AAAA123456</ID>
  <httpurl>http://192.168.1.140/agbox/device</httpurl>
  <httpkey>db504129-85e0-49ca-8626-f639b8d098</httpkey>
  <mqttTopic>person/#</mqttTopic>
  <mqttIp>192.168.1.140</mqttIp>
  <mqttPort>1883</mqttPort>
  <mqttUser>guest</mqttUser>
  <access> f639b8d098</access>
  <mqttPassword>1111</mqttPassword>
</SmartDbdeviceParam>
</Customize>
```

1.5/ISAPI/Smart

1.5.1/ISAPI/Smart/SmartEnable/Channels/<ID>/Scene/<ID>

/ISAPI/Smart/SmartEnable/Channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Obtain intelligent analysis algorithm start parameters
Query	None
Inbound Data	None
Success Return	**<SmartEnable>**
PUT	
Description	Set intelligent analysis algorithm start parameters
Query	None
Inbound Data	**<SmartEnable>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is to realize the query and setting of the intelligent analysis algorithm start parameters, and realize the query and setting of the client sides or IE for the equipment intelligent analysis algorithm start parameters through the CGI protocol, including the parameters such as intelligent analysis enabling/intelligent analysis type, etc.

Explanations on key parameters:

<enabled> represents intelligent analysis enabling,

IPC: true/disable: open, false/local: close

NVR: disable non-enabling, local intelligent analysis enabling, remoteIPC intelligent analysis enabling

<SmartTypeEnable> represents starting algorithm (note: only one type can be started when the behavior analysis is started)

<type> represents intelligent analysis type, Behavior: behavior analysis, Face: human face

identification, Audio： audio diagnosis, Video： video diagnosis, Group： group gathering, OnDuty： on-duty detection, Demographics：demographics, PlatLicense：license plate identification, ParkGuard: parking space guard, IllegalPark： illegal parking, Follow： intelligent tracking, Helmet: safety helmet, Human：human shape detection, Pept： oilfield monitoring, PeopleNumAlarm: number of people exception alarm, Prctduty： single interrogation/unattended, Sleep：sleeping post, NewFight：new fight, GetUp：personnel stand up, HeightLimit： height limit, NewDuty：new off-duty, Stranded：stranded, Alone：single stay alone, Delivergoods：deliver goods through window、FaceMosaic： human face mosaic, ColorTrack：color tracking, Loitering ： loitering , AttendedBaggage ： loss of attended baggage, UnattendedBaggage：unattended baggage

<sceneName> scene name, maximum 31 characters

SmartEnableXML Block

```
< SmartEnable    version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
      <enabled><!-- opt, xs:Boolean"true,false" --></enabled>
      < sceneName ><!-- req, xs:string--></sceneName>
< SmartTypeEnableList>
      <SmartTypeEnable>
            <type><!-- opt, xs: string" Behavior,Face, Audio,Video,Group,OnDuty, PlatLicense,
Demographics,ParkGuard,IllegalPark,Follow,Human,Pept,PeopleNumAlarm,Prctduty,Sleep,Ne
wFight,GetUp,HeightLimit,NewDuty,Stranded,Alone,Delivergoods,FaceMosaic,
ColorTrack,Loitering,AttendedBaggage, UnattendedBaggage " -->
</type>
<enabled><!-- opt, xs:Boolean"true,false" --></enabled >
</SmartTypeEnable>
< /SmartTypeEnableList>
   </ SmartEnable >
```

Test cases

GET /ISAPI/Smart/SmartEnable/Channels/<ID>/Scene/<ID>

Request XML： none

Response XML：<SmartEnable>

PUT/ISAPI/Smart/SmartEnable/Channels/<ID>/Scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SmartEnable>
<enabled>true</enabled>
<sceneName>scene1</sceneName>
<SmartTypeEnableList>
<SmartTypeEnable>
<type>Behavior</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>Follow</type>
<enabled>false</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>Face</type>
<enabled>false</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>Human</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
```

<type>**Demographics**</type>
<enabled>**false**</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>**Video**</type>
<enabled>**false**</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>**PlatLicense**</type>
<enabled>**false**</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>**Audio**</type>
<enabled>**false**</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>**OnDuty**</type>
<enabled>**false**</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>**Pept**</type>
<enabled>**true**</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>**Group**</type>
<enabled>**false**</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>PeopleNumAlarm</type>
<enabled>**true**</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>Prctduty</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>Sleep</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>NewFight</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>GetUp</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>HeightLimit</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>NewDuty</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>Stranded</type>
<enabled>true</enabled>

```
</SmartTypeEnable>
<SmartTypeEnable>
<type>Alone</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>Delivergoods</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>FaceMosaic</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>ColorTrack</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>Loitering</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>AttendedBaggage</type>
<enabled>true</enabled>
</SmartTypeEnable>
<SmartTypeEnable>
<type>UnattendedBaggage</type>
<enabled>true</enabled>
</SmartTypeEnable>
</SmartTypeEnableList>
</SmartEnable>
```

1.5.2/ISAPI/Smart/DoubleLineDetection/<ID>/channels/<ID>/Scene/<ID>

/ISAPI/Smart/DoubleLineDetection/<ID>/channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Obtain double trip-line parameters
Query	None
Inbound Data	None
Success Return	**<DoubleLineDetection>**
PUT	
Description	Set double trip-line parameters
Query	None
Inbound Data	**<DoubleLineDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the double trip-line, and realize the query and setting of the client sides or IE for the double trip-line parameters through the CGI protocol, including the parameters such as rule No./rule enabling/trip-line No./rule name/proportion/arrow direction/coordinate point/statistics type/alarm counting, etc.

Explanations on key parameters:

<DoubleLineDetection>/ID: rule No., range 1-8
<Channels>/ID: channel No., IPC value is 1
<Scene>/ID: scene No., range 0-15
<id> represents rule No., range: 1-0038

<SceneID> represents scene No.
<enabled> represents whether it is effective, true：start, false：not start
<id> represents trip-line No., note： the current trip-line only supports one double trip-line, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> represents proportion range 0-100
<directionSensitivity> represents arrow direction value assignment is 0
<CoordinatesList> represents trip-line coordinate, per 10,000, 0-10000
<alarmColor> represents alarm color default is red
<noAlarmColor> represents no alarm color default is green
< tripwireMaxTimeInterval > represents maximum time x = 1-2000 seconds
<tripwireMinTimeInterval > represents minimum time 0-x seconds
<identifyType > represents statistics type, people, car, all, people and car
<displayStat > represents alarm counting, true：start, false：not start
<alarmRule> represents alarm rules, true：start, false：not start
<twoWayAlarm> represents two-way alarm, true：start, false：not start
<displyTarget> represents display target, true：start, false：not start
<minObjectSize> represents minimum object size, [0-100]
<maxObjectSize> represents maximum object size, [0-100]

DoubleLineDetectionXML Block

```
<DoubleLineDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
   <SceneID><!-- opt, xs:string --><SceneID>
<enabled><!-- req, xs:boolean --></enabled>
<startTriggerTime><!-- req, xs:integer, milliseconds --></startTriggerTime>
<endTriggerTime><!-- req, xs:integer, milliseconds --></endTriggerTime>
<normalizedScreenSize>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<DoubleLineItemList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<DoubleLineItem version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<ruleName><!-- req, xs:string --></ruleName>
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel>
<!--req, xs:integer-->
</sensitivityLevel>
<directionSensitivity>
<!-- opt,integer, 0-360 -->
</directionSensitivity>
<CoordinatesList>
<Coordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate      --></positionY>
</Coordinates>
</CoordinatesList>
<CoordinatesExList>
<CoordinatesEx><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate      --></positionY>
</CoordinatesEx>
```

```
</CoordinatesExList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
< tripwireMaxTimeInterval ><!-- req, xs:integer --></tripwireMaxTimeInterval>
<tripwireMaxTimeInterval ><!-- req, xs:integer --></ tripwireMaxTimeInterval >
<identifyType ><!-- req, xs: string --></identifyType>
<displayStat ><!-- req, xs:boolean --></displayStat>
<alarmRule><!-- req, xs:boolean --></alarmRule>
<twoWayAlarm><!-- req, xs:boolean --></twoWayAlarm>
<displyTarget><!-- req, xs:boolean --></displyTarget >
</DoubleLineItem>
</DoubleLineItemList>
</ DoubleLineDetection >
```

Test cases

GET /ISAPI/Smart/DoubleLineDetection/<ID>/channels/<ID>/Scene/<ID>

Request XML: none

Response XML: <DoubleLineDetection>

PUT/ISAPI/Smart/DoubleLineDetection/<ID>/channels/<ID>/Scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DoubleLineDetection>
<id>1</id>
<enabled>true</enabled>
<DoubleLineItemList>
<DoubleLineItem>
<id>1</id>
<ruleName>Rule1</ruleName>
<enabled>true</enabled>
<sensitivityLevel>20</sensitivityLevel>
<directionSensitivity>0</directionSensitivity>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<tripwireMaxTimeInterval>30</tripwireMaxTimeInterval>
<tripwireMinTimeInterval>10</tripwireMinTimeInterval>
<identifyType>all</identifyType>
<displayStat>true</displayStat>
<alarmRule>true</alarmRule>
<twoWayAlarm>true</twoWayAlarm>
<displayTarget>true</displayTarget>
<CoordinatesList>
<Coordinates>
<positionX>1250</positionX>
<positionY>5243</positionY>
</Coordinates>
<Coordinates>
<positionX>7500</positionX>
<positionY>2100</positionY>
</Coordinates>
<Coordinates>
<positionX>7528</positionX>
<positionY>2013</positionY>
</Coordinates>
</CoordinatesList>
<CoordinatesExList>
<CoordinatesEx>
<positionX>2272</positionX>
```

```
<positionY>7413</positionY>
</CoordinatesEx>
<CoordinatesEx>
<positionX>8380</positionX>
<positionY>5538</positionY>
</CoordinatesEx>
</CoordinatesExList>
</DoubleLineItem>
</DoubleLineItemList>
</DoubleLineDetection>
```

1.5.3/ISAPI/Smart/FieldDetection/<ID>/Channels/<ID>/Scene/<ID>

/ISAPI/Smart/FieldDetection/<ID>/Channels/<ID>/Scene/<ID>General Resource v2.0	
GET	
Description	Obtain invasion parameters
Query	None
Inbound Data	None
Success Return	**<FieldDetection>**
PUT	
Description	Set invasion parameters
Query	None
Inbound Data	**<FieldDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the invasion, and realize the query and setting of the client sides or IE for the invasion parameters through the CGI protocol, including the parameters such as rule No./rule enabling/area No./rule name/sensibility level detection region coordinate/alarm counting, etc.

Explanations on key parameters:

< FieldDetection >/ID: rule No., range 1-8
<Channels>/ID: channel No., IPC value is 1
<Scene>/ID: scene No., range 0-15
<id> represents rule No., range: 1-8
<enabled> represents whether it is effective, true: start, false: not start
<FieldDetectionRegion> represents invasion detection implementation region
<id> represents region No., note: currently the perimeter only supports one region, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> represents sensibility level
<RegionCoordinatesList> represents detection region coordinate list
<RegionCoordinates> represents detection region coordinate
<positionX> represents detection region abscissa, per 10,000, 0-10000
<positionY> represents detection region ordinate, per 10,000, 0-10000
<alarmColor> represents alarm color default is red
<noAlarmColor> represents no alarm color default is green
<invasionTime> represents invasion time 1-10 seconds
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start

FieldDetectionXML Block

```
<FieldDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<intelliBackSearch><!-- opt, xs:boolean --></intelliBackSearch>
<startTriggerTime><!-- req, xs:integer, milliseconds --></startTriggerTime>
<endTriggerTime><!-- req, xs:integer, milliseconds --></endTriggerTime>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<FieldDetectionRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<FieldDetectionRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<ruleName><!-- req, xs:string --></ruleName>
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel><!--req, xs:integer--></sensitivityLevel>
<timeThreshold><!--req, xs:integer --></timeThreshold>
<objectOccupation><!--req, xs:integer--></objectOccupation>
<RegionCoordinatesList>
<RegionCoordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
<identifyType><!-- req, xs:string "all"--></identifyType>
<invasionTime><!-- req, xs:integer --></invasionTime>
< displayStat ><!-- req, xs:boolean --></displayStat>
<alarmRule><!-- req, xs:boolean --></alarmRule>
<displyTarget><!-- req, xs:boolean -->< /displyTarget >
</FieldDetectionRegion>
</FieldDetectionRegionList>
</FieldDetection>
```

Test cases

GET /ISAPI/Smart/FieldDetection/<ID>/Channels/<ID>/Scene/<ID>

Request XML: none

Response XML: <FieldDetection>

PUT/ISAPI/Smart/FieldDetection/<ID>/Channels/<ID>/Scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<FieldDetection>
<id>1</id>
<enabled>true</enabled>
<FieldDetectionRegionList>
<FieldDetectionRegion>
<id>1</id>
<ruleName>Rule1</ruleName>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
```

```
<displayStat>true</displayStat>
<displayTarget>true</displayTarget>
<identifyType>all</identifyType>
<alarmRule>true</alarmRule>
<invasionTime>3</invasionTime>
<sensitivityLevel>20</sensitivityLevel>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2656</positionX>
<positionY>1302</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>951</positionX>
<positionY>5468</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>752</positionX>
<positionY>8906</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3806</positionX>
<positionY>9548</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7357</positionX>
<positionY>9548</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>8940</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>5381</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8480</positionX>
<positionY>2013</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</FieldDetectionRegion>
</FieldDetectionRegionList>
</FieldDetection>
```


1.5.4/ISAPI/Smart/regionEntrance/<ID>/Channels/<ID>/Scene/<ID>

/ISAPI/Smart/regionEntrance/<ID>/Channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Obtain entrance parameters
Query	None
Inbound Data	None
Success Return	**<RegionEntrance>**
PUT	
Description	Set entrance parameters
Query	None

Inbound Data	<RegionEntrance>
Success Return	<ResponseStatus>

Explanations on protocol:

This protocol is to realize the query and setting of the entrance, and realize the query and setting of the client sides or IE for the entrance parameters through the CGI protocol, including the parameters such as rule No./rule enabling/region No./rule name/sensibility level detection region coordinate/alarm counting, etc.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents whether it is effective, true: start, false: not start
<RegionEntranceRegion> represents entering detection implementation region
<id> represents region No., note: currently the perimeter only supports one region, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> represents sensibility level
<RegionCoordinatesList> represents detection region coordinate list
<RegionCoordinates> represents detection region coordinate
<positionX> represents detection region abscissa
<positionY> represents detection region ordinate
<alarmColor> represents alarm color
<noAlarmColor> represents no alarm color
<identifyType> represents alarm type
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start

RegionEntranceXML Block

```
<RegionEntrance version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<RegionEntranceRegionList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<RegionEntranceRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<ruleName><!-- req, xs:string --></ruleName>
<sensitivityLevel><!--req, xs:integer, 1..100, 0 is the least sensitive --></sensitivityLevel>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
<identifyType><!-- req, xs:string "all"--></identifyType>
<displayStat ><!-- req, xs:boolean --></displayStat>
<alarmRule><!-- req, xs:boolean --></alarmRule>
<displyTarget><!-- req, xs:boolean -->< /displyTarget>
</RegionEntranceRegion>
</RegionEntranceRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene><!-- opt, xs:boolen --></isSupportMultiScene>
</RegionEntrance>
```

Test cases

GET /ISAPI/Smart/regionEntrance/<ID>/Channels/<ID>/Scene/<ID>
Request XML： none
Response XML： <RegionEntrance>
PUT/ISAPI/Smart/regionEntrance/<ID>/Channels/<ID>/Scene/<ID>
Response XML： <ResponseStatus>
Request XML： as below


```
<?xml version="1.0" encoding="UTF-8"?>
<RegionEntrance>
<id>1</id>
<enabled>true</enabled>
<RegionEntranceRegionList>
<RegionEntranceRegion>
<id>1</id>
<ruleName>Rule1</ruleName>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<displayStat>true</displayStat>
<displayTarget>true</displayTarget>
<identifyType>all</identifyType>
<alarmRule>true</alarmRule>
<sensitivityLevel>20</sensitivityLevel>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2627</positionX>
<positionY>1267</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>923</positionX>
<positionY>5434</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>724</positionX>
<positionY>8871</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3778</positionX>
<positionY>9513</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7329</positionX>
<positionY>9513</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>8906</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>5347</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8451</positionX>
<positionY>1979</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</RegionEntranceRegion>
</RegionEntranceRegionList>
</RegionEntrance>
```

1.5.5/ISAPI/Smart/regionExiting/<ID>/Channels/<ID>/Scene/<ID>

/ISAPI/Smart/regionExiting/<ID>/Channels/<ID>/Scene/<ID> General Resource v2.0	
GET	
Description	Obtain exiting parameters
Query	None
Inbound Data	None
Success Return	**<RegionExiting>**
PUT	
Description	Set exiting parameters
Query	None
Inbound Data	**<RegionExiting>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is to realize the query and setting of the exiting, and realize the query and setting of the client sides or IE for the exiting parameters through the CGI protocol, including the parameters such as rule No./rule enabling/region No./rule name/sensibility level detection area coordinate/alarm counting, etc.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents rule enabling, true: start, false: not start
<RegionExitingRegion> represents exiting detection implementation region
<id> represents region No., note: currently the perimeter only supports one region, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> represents sensibility level
<RegionCoordinatesList> represents detection region coordinate list
<RegionCoordinates> represents detection region coordinate
<positionX> represents detection region abscissa
<positionY> represents detection region ordinate
<alarmColor> represents alarm color, 0: default, 1: red. 2: green. 3: yellow. 4: blue. 5: purple. 6: cyan. 7: black. 8: white
<noAlarmColor> represents no alarm color, 0: default, 1: red, 2: green, 3: yellow, 4: blue, 5: purple, 6: cyan, 7: black, 8: white
<identifyType> represents alarm type
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start

RegionExitingXML Block

```
<RegionExiting version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<RegionExitingRegionList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<RegionExitingRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<ruleName><!-- req, xs:string --></ruleName>
<sensitivityLevel><!--req, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
```

```
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
<identifyType><!-- req, xs:string "all"--></identifyType>
<displayStat ><!-- req, xs:boolean --></displayStat>
<alarmRule><!-- req, xs:boolean --></alarmRule>
<displyTarget><!-- req, xs:boolean -->< /displyTarget>
< /RegionExitingRegion >
</RegionExitingRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene><!-- opt, xs:boolen --></isSupportMultiScene>
</RegionExiting>
```

Test cases

GET /ISAPI/Smart/regionExiting/<ID>/Channels/<ID>/Scene/<ID>

Request XML: none

Response XML: <RegionExiting>

PUT/ISAPI/Smart/regionExiting/<ID>/Channels/<ID>/Scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<RegionExiting>
<id>1</id>
<enabled>true</enabled>
<RegionExitingRegionList>
<RegionExitingRegion>
<id>1</id>
<ruleName>Rule1</ruleName>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<displayStat>true</displayStat>
<displayTarget>true</displayTarget>
<identifyType>all</identifyType>
<alarmRule>true</alarmRule>
<sensitivityLevel>20</sensitivityLevel>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2599</positionX>
<positionY>1250</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>880</positionX>
<positionY>5399</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>681</positionX>
<positionY>8836</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3750</positionX>
<positionY>9479</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7301</positionX>
<positionY>9479</positionY>
</RegionCoordinates>
```

```
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>8871</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>5312</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8423</positionX>
<positionY>1944</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</RegionExitingRegion>
</RegionExitingRegionList>
</RegionExiting>
```

1.5.6/ISAPI/Smart/unattendedBaggage/<ID>/Channels/<ID>/Scene/<ID>

/ISAPI/Smart/unattendedBaggage/<ID>/Channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Obtain unattended baggage parameters
Query	None
Inbound Data	None
Success Return	**<UnattendedBaggage>**
PUT	
Description	Set unattended baggage parameters
Query	None
Inbound Data	**<UnattendedBaggage>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the unattended baggage, and realize the query and setting of the client sides or IE for the unattended baggage parameters through the CGI protocol, including the parameters such as rule No./rule name/alarm counting/alarm rules/display target/proportion, etc.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents rule enabling, true: start, false: not start
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<alarmColor> represents alarm color, 1: red, 2: green, 3: yellow, 4: blue, 5: purple, 6: cyan, 7: black, 8: white
<noAlarmColor> represents no alarm color, 1: red, 2: green, 3: yellow, 4: blue, 5: purple, 6: cyan, 7: black, 8: white
< alarmTime > represents alarm time
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start
<id> represents region No., note: currently it only supports one region, the value of which is 1.
<sensitivityLevel> represents proportion 0-100 (sensibility level)
<IgnoreRegionList> corresponding ignored regions (maximum three)

UnattendedBaggageXML Block

```
<UnattendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<ruleName><!-- req, xs:string --></ruleName>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
< alarmTime ><!-- req, xs:integer --></alarmTime >
<displayStat ><!-- req, xs:boolean --></displayStat >
<alarmRule><!-- req, xs:boolean --></alarmRule>
<displyTarget><!-- req, xs:boolean -->< /displyTarget >
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<UnattendedBaggageRegionList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<UnattendedBaggageRegion    version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<sensitivityLevel><!--req, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>
<timeThreshold><!--opt, xs:integer--></timeThreshold>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<IgnoreRegionList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<IgnoreRegion>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IgnoreRegion>
</IgnoreRegionList>
</UnattendedBaggageRegion>
</UnattendedBaggageRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene><!-- opt, xs:boolen --></isSupportMultiScene>
</UnattendedBaggage>
```

Test cases

GET /ISAPI/Smart/unattendedBaggage/<ID>/Channels/<ID>/Scene/<ID>

Request XML: none

Response XML: <UnattendedBaggage>

PUT/ISAPI/Smart/unattendedBaggage/<ID>/Channels/<ID>/Scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<UnattendedBaggage>
<id>2</id>
<enabled>true</enabled>
<ruleName>Rule2</ruleName>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
```

<alarmTime>**5**</alarmTime>
<displayStat>**true**</displayStat>
<alarmRule>**true**</alarmRule>
<displayTarget>**true**</displayTarget>
<UnattendedBaggageRegionList>
<UnattendedBaggageRegion>
<id>**1**</id>
<sensitivityLevel>**15**</sensitivityLevel>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>**1377**</positionX>
<positionY>**677**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**752**</positionX>
<positionY>**5208**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**823**</positionX>
<positionY>**9236**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**4701**</positionX>
<positionY>**9201**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**9048**</positionX>
<positionY>**9045**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**9801**</positionX>
<positionY>**3576**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**8423**</positionX>
<positionY>**625**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**5326**</positionX>
<positionY>**468**</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<IgnoreRegionList>
<IgnoreRegion>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>**2357**</positionX>
<positionY>**1666**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**2073**</positionX>
<positionY>**2812**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**2755**</positionX>
<positionY>**4270**</positionY>
</RegionCoordinates>
<RegionCoordinates>

<positionX>**4957**</positionX>
<positionY>**4305**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**4659**</positionX>
<positionY>**2534**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**4403**</positionX>
<positionY>**1475**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**3210**</positionX>
<positionY>**1267**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**2698**</positionX>
<positionY>**1614**</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IgnoreRegion>
<IgnoreRegion>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>**6633**</positionX>
<positionY>**1267**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**5710**</positionX>
<positionY>**2170**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**6122**</positionX>
<positionY>**3940**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**7826**</positionX>
<positionY>**4079**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**8551**</positionX>
<positionY>**2604**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**8210**</positionX>
<positionY>**1336**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**7684**</positionX>
<positionY>**972**</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>**7230**</positionX>
<positionY>**1145**</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IgnoreRegion>
<IgnoreRegion>

```
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>5227</positionX>
<positionY>5312</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3948</positionX>
<positionY>6631</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>4375</positionX>
<positionY>8281</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>6548</positionX>
<positionY>8541</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8025</positionX>
<positionY>7638</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7500</positionX>
<positionY>5173</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>6079</positionX>
<positionY>5000</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>5198</positionX>
<positionY>5000</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IgnoreRegion>
</IgnoreRegionList>
</UnattendedBaggageRegion>
</UnattendedBaggageRegionList>
</UnattendedBaggage>
```

1.5.7/ISAPI/Smart/rapidMove/<ID>/Channels/<ID>/Scene/<ID>

/ISAPI/Smart/rapidMove/<ID>/Channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Obtain rapid move parameters
Query	None
Inbound Data	None
Success Return	**<RapidMove>**
PUT	
Description	Set rapid move parameters
Query	None
Inbound Data	**<RapidMove>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the rapid move, and realize the query and setting of the client sides or IE for the rapid move parameters through the CGI protocol, including the parameters such as rule No./region No./alarm counting/alarm rule/display target, etc.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents rule enabling, true: start, false: not start
<id> represents region No., note: currently it only supports one region, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> represents sensibility level 0-100
<alarmColor> represents alarm color, 1: red, 2: green, 3: yellow, 4: blue, 5: purple, 6: cyan, 7: black, 8: white
<noAlarmColor> represents no alarm color, 1: red, 2: green, 3: yellow, 4: blue, 5: purple, 6: cyan, 7: black, 8: white
< minimumArea> represents minimum movement area per second
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start
<identifyType> represents statistics type, all, people, car, people and car

RapidMoveXML Block

```
<RapidMove version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<RapidMoveRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<RapidMoveRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<ruleName><!-- req, xs:string --></ruleName>
<sensitivityLevel><!--req, xs:integer, 1..100, 0 is the least sensitive --></sensitivityLevel>
<identifyType><!-- req, xs:string --><identifyType>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate      --></positionY>
</RegionCoordinates>
</RegionCoordinatesList><!-- opt -->
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
< minimumArea><!-- req, xs:integer --></ minimumArea >
<displayStat ><!-- req, xs:boolean --></displayStat >
<alarmRule><!-- req, xs:boolean --></alarmRule>
<displyTarget><!-- req, xs:boolean -->< /displyTarget >
</RapidMoveRegion>
</RapidMoveRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene><!-- opt, xs:boolen --></isSupportMultiScene>
</RapidMove>
```

Test cases

GET /ISAPI/Smart/rapidMove/<ID>/Channels/<ID>/Scene/<ID>

Request XML: none

Response XML: <RapidMove>

PUT/ISAPI/Smart/rapidMove/<ID>/Channels/<ID>/Scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below


```
<?xml version="1.0" encoding="UTF-8"?>
<RapidMove>
<id>1</id>
<enabled>true</enabled>
<RapidMoveRegionList>
<RapidMoveRegion>
<id>1</id>
<ruleName>Rule1</ruleName>
<sensitivityLevel>10</sensitivityLevel>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>3025</positionX>
<positionY>1111</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1122</positionX>
<positionY>3767</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>781</positionX>
<positionY>8437</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3607</positionX>
<positionY>8871</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7073</positionX>
<positionY>9079</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8750</positionX>
<positionY>8871</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9005</positionX>
<positionY>3472</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8252</positionX>
<positionY>972</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<minimumArea>5</minimumArea>
<displayStat>true</displayStat>
<alarmRule>true</alarmRule>
<displayTarget>true</displayTarget>
<identifyType>people<identifyType>
</RapidMoveRegion>
</RapidMoveRegionList>
</RapidMove>
```

1.5.8/ISAPI/Smart/parking/<ID>/Channels/<ID>/Scene/<ID>

/ISAPI/Smart/parking/<ID>/Channels/<ID>/Scene/<ID>General Resource v2.0	
GET	
Description	Obtain parking parameters
Query	None
Inbound Data	None
Success Return	**<Parking>**
PUT	
Description	Set parking parameters
Query	None
Inbound Data	**<Parking>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the parking, and realize the query and setting of the client sides or IE for the parking parameters through the CGI protocol, including the parameters such as rule No./region No./alarm counting/alarm rule/display target, etc.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents whether it is effective, true: start, false: not start
<id> represents region No., note: currently it only supports one region, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> represents sensibility level 0-100
<alarmColor> represents alarm color, 1: red, 2: green, 3: yellow, 4: blue, 5: purple, 6: cyan, 7: black, 8: white
<noAlarmColor> represents no alarm color, 1: red, 2: green, 3: yellow, 4: blue, 5: purple, 6: cyan, 7: black, 8: white
< alarmTime > represents alarm time
< speedThreshold> represents speed threshold
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start

ParkingXML Block

```
<Parking version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<ParkingRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<ParkingRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<ruleName><!-- req, xs:string --></ruleName>
<sensitivityLevel><!--req, xs:integer, 1..100, 0 is the least sensitive --></sensitivityLevel>
<timeThreshold><!--opt, xs:integer--></timeThreshold>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
< alarmTime ><!-- req, xs:integer --></ alarmTime >
```

```
< speedThreshold><!-- req, xs:integer --></ speedThreshold >
<displayStat ><!-- req, xs:boolean --></displayStat >
<alarmRule><!-- req, xs:boolean --></alarmRule>
<displayTarget><!-- req, xs:boolean --></ displayTarget >
</ParkingRegion>
</ParkingRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene><!-- opt, xs:boolen --></isSupportMultiScene>
</Parking>
```

Test cases

GET /ISAPI/Smart/parking/<ID>/Channels/<ID>/Scene/<ID>

Request XML： none

Response XML： <Parking>

PUT/ISAPI/Smart/parking/<ID>/Channels/<ID>/Scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<Parking>
<id>1</id>
<enabled>true</enabled>
<ParkingRegionList>
<ParkingRegion>
<id>1</id>
<ruleName>Rule1</ruleName>
<speedThreshold>2</speedThreshold>
<sensitivityLevel>10</sensitivityLevel>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<alarmTime>5</alarmTime>
<displayStat>true</displayStat>
<displayTarget>true</displayTarget>
<alarmRule>true</alarmRule>
<dispalyTarget>true</dispalyTarget>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1700</positionX>
<positionY>1300</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>800</positionX>
<positionY>4733</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>775</positionX>
<positionY>8233</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>2775</positionX>
<positionY>9100</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7325</positionX>
<positionY>9000</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9275</positionX>
<positionY>6266</positionY>
</RegionCoordinates>
```

```
<RegionCoordinates>
<positionX>9200</positionX>
<positionY>2600</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7175</positionX>
<positionY>700</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</ParkingRegion>
</ParkingRegionList>
</Parking>
```

1.5.9/ISAPI/Smart/AudioDetection/channels/<ID>/status

/ISAPI/Smart/AudioDetection/channels/<ID>/status General Resource v2.0	
GET	
Description	Obtain audio exception detection real-time volume parameters
Query	None
Inbound Data	None
Success Return	**<AudioStrengthStatus>**
PUT	
Description	Set audio exception detection real-time volume parameters
Query	None
Inbound Data	**<AudioStrengthStatus>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the audio exception detection real-time volume, and realize the query and setting of the client sides or IE for the audio exception detection real-time volume parameters through the CGI protocol. At present, the equipments temporarily do not support, and the protocol is kept for the follow-up extension.
Explanations on key parameters:
<audioStrength> represents audio exception detection real-time volume

AudioStrengthStatusXML Block

```
<AudioStrengthStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<audioStrength><!—ro, req, xs:integer--></audioStrength>
</AudioStrengthStatus>
```

Test cases
GET /ISAPI/Smart/AudioDetection/channels/<ID>/status
Request XML: none
Response XML: <AudioStrengthStatus>
Response XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AudioStrengthStatus>
<id>1</id>
<audioStrength>-1</audioStrength>
</AudioStrengthStatus>
```

1.5.10/ISAPI/Smart/AudioDetection/<ID>/channels/<ID>/Scene/<ID>

/ISAPI/Smart/AudioDetection/<ID>/channels/<ID>/Scene/<ID> General Resource v2.0	
GET	
Description	Obtain audio exception detection parameters
Query	None
Inbound Data	None
Success Return	**<AudioDetectionList>**
PUT	
Description	Set audio exception detection parameters
Query	None
Inbound Data	**<AudioDetectionList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is to realize the query and setting of the audio exception detection, and realize the query and setting of the client sides or IE for the audio exception detection parameters through the CGI protocol, including the parameters such as audio exception detection id/signal loss detection/sensibility level/real-time volume threshold, etc.

Explanations on key parameters:

<id> represents audio exception detection id, the value of which is 1.
<SignalLossDetection> represents signal loss detection
<enabled> represents whether to start, true: start, false: not start
<sensitivityLevel> represents sensibility level, range: 0-5
<mutationThreshold> represents real-time volume threshold
<ignalAbnormalDetection> represents signal exception detection
<audioInputException > audio input exception enabling

AudioDetectionListXML Block

```
<AudioDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<AudioDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string;id --></id>
<audioInputException>
<enabled><!-- req, xs:boolean --></enabled>
</audioInputException>
<soundIntensityMutation><!-- opt -->
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel>
<!--req, xs:integer-->
</sensitivityLevel>
<mutationThreshold>
<!--req, xs:integer -->
</mutationThreshold>
</soundIntensityMutation>
<SteepFall><!-- opt -->
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel>
<!--req, xs:integer-->
</sensitivityLevel>
</SteepFall>
<SignalLossDetection><!-- req -->
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel>
<!--req, xs:integer-->
</sensitivityLevel>
</SignalLossDetection>
<SignalAbnormalDetection><!-- req -->
```

```
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel>
<!--req, xs:integer-->
</sensitivityLevel>
</SignalAbnormalDetection>
</AudioDetection>
</AudioDetectionList>
```

Test cases

GET /ISAPI/Smart/AudioDetection/<ID>/channels/<ID>/Scene/<ID>

Request XML： none

Response XML：<AudioDetectionList>

PUT/ISAPI/Smart/AudioDetection/<ID>/channels/<ID>/Scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AudioDetection>
<SignalLossDetection>
<enabled>true</enabled>
<sensitivityLevel>3</sensitivityLevel>
</SignalLossDetection>
<SignalAbnormalDetection>
<enabled>true</enabled>
<sensitivityLevel>4</sensitivityLevel>
</SignalAbnormalDetection>
</AudioDetection>
```

1.5.11/ISAPI/Smart/VideoDetection/<ID>/channels/<ID>/Scene/<ID>

/ISAPI/Smart/VideoDetection/<ID>/channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Obtain video exception detection parameters
Query	None
Inbound Data	None
Success Return	**<VedioDetection>**
PUT	
Description	Set video exception detection parameters
Query	None
Inbound Data	**<VedioDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is to realize the query and setting of the video exception detection, and realize the query and setting of the client sides or IE for the video exception detection parameters through the CGI protocol, including the parameters such as video exception detection id/lens diagnosis/sensibility level/scene switch diagnosis, etc.

Explanations on key parameters:

<id> represents video exception detection id, the value of which is 1.

<LensDignose> represents lens diagnosis.

<enabled> represents whether to start, true：start, false：not start

<sensitivityLevel> represents sensibility level, range：0-5

< SceenSwitchDignose> represents scene switch diagnosis

VedioDetectionListXML Block

```
<VideoDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string;id --></id>
<LensDignose><!-- req -->
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel>
<!--req, xs:integer-->
</sensitivityLevel>
</ LensDignose >
< SceenSwitchDignose><!-- req -->
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel>
<!--req, xs:integer-->
</sensitivityLevel>
</ SceenSwitchDignose >
</VideoDetection>
```

Test cases

GET /ISAPI/Smart/VideoDetection/<ID>/channels/<ID>/Scene/<ID>

Request XML： none

Response XML：<VedioDetection>

PUT/ISAPI/Smart/VideoDetection/<ID>/channels/<ID>/Scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<VideoDetection>
<id>1</id>
<VedioInputException />
<LensDignose>
<enabled>true</enabled>
<sensitivityLevel>3</sensitivityLevel>
</LensDignose>
<SceenSwitchDignose>
<enabled>true</enabled>
<sensitivityLevel>4</sensitivityLevel>
</SceenSwitchDignose>
</VideoDetection>
```

1.5.12/ISAPI/Smart/channels/<ID>/capabilities

/ISAPI/Smart/channels/<ID>/ capabilities General Resource v2.0	
GET	
Description	Obtain intelligent analysis algorithm capability set
Query	None
Inbound Data	None
Success Return	**<SmartCapList>**

Explanations on protocol:

This protocol is to query the intelligent analysis support algorithm capability set.

Explanations on key parameters:

<Type> represents intelligent analysis type, Behavior： behavior analysis, Face： human face identification, Human： human shape detection, Pept： oilfield monitoring, PeopleNumAlarm: number of people abnormal alarm, Audio：audio diagnosis, Video：video diagnosis, Group: group gathering, OnDuty： on-duty detection, Demographics：demographics, PlatLicense： license plate identification, ParkGuard: parking space guard, IllegalPark：illegal parking, IntelliTrace： intelligent tracking, structurization: structurization, Helmet: safety helmet, Prctduty： single interrogation/unattended, Sleep： sleeping post, NewFight： new fight, GetUp： personnel stand up, HeightLimit：height limit, NewDuty： new off-duty, Stranded：stranded, Alone：single

stay alone, Delivergoods：deliver goods through window, FaceMosaic：human face mosaic, ColorTrack：color tracking, Loitering：loitering, AttendedBaggage：loss of attended baggage, UnattendedBaggage：unattended baggage

Behavior analysis type：

LineDetection：trip-line, DoubleLineDetection：double trip-line, FieldDetection：perimeter detection, Loitering：loitering, Parking：parking, RapidMove：rapid move, AttendedBaggage：loss of attended baggage, UnattendedBaggage：unattended baggage, Alert：alert, HeatMap: heat map

Note: Loitering：loitering, AttendedBaggage：loss of attended baggage, UnattendedBaggage：unattended baggage, such three algorithms can not only serve as the algorithm large type, but only serve as behavior analysis sub-type.

Demographics：

Vertical：vertical, Horizontal：horizontal

Video diagnosis type：

Noise：noise diagnosis, Clarity：clarity diagnosis, Brightness：brightness diagnosis, ColourCast：colorcast diagnosis, Frezze：screen freezing diagnosis, VideoLost：video lost diagnosis, SceneChange：scene change detection, Jamming：jamming diagnosis

PTZ runaway diagnosis：PTZRunAway

Video diagnosis type：

AudioLost：audo lost, Abnormal：audio abnormal, NoiseSupr：noise suppression, EchoSupr：echo suppression, FeedbackSupr：audio signal feedback abnormal

Human face detection type：

Tiandy：Tiandy algorithm, ST：ST algorithm, FacePlusPlus：FACE++ algorithm, NewTiandy：new Tiandy human face algorithm

Behavior analysis supports obtaining rule quantity

periAlert：perimeter alert tripAlert：trip-line alert

Structured algorithm type：

faceDetect: human face detection mode; pedestrianDetect: pedestrian detection mode, licensePlate: license plate detection mode, VehicleDetect: motor vehicle detection mode; Non-Motor: non-motor vehicle, plateShade: plate shade

SmartCap XML Block

```
<SmartCapList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < SmartTypeCap>
    <MainType>
      <Type>
        <!--req,xs:string"Behavior,Face,Human,Pept,
        Prctduty,Sleep,NewFight,GetUp,HeightLimit,NewDuty,Stranded,Alone,Delivergoods
        ,FaceMosaic,ColorTrack,Loitering,AttendedBaggage,UnattendedBaggage,PeopleNu
        mAlarm,Audio,Video,Group,OnDuty,PlatLicense,          Demographics,ParkGuard,
        IllegalPark, IntelliTrace" -->
        </Type>//when the type is behavior analysis,    the rule quantity shall be added.
      <IsSupport><!-- req, xs: boolean -->< /IsSupport >
    </MainType>
    < SubTypeList>
     <subtype>
      < Type><!--req,xs:string></ Type>
      < IsSupport ><!-- req, xs: boolean -->< IsSupport >
      </subtype>
    </SubTypeList>
  < / SmartTypeCap >

< /SmartTypeCapList>
```

Test cases

GET /ISAPI/Smart/channels/<ID>/ capabilities

Request XML：none

Response XML：<SmartCap >

```
<SmartTypeCapList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < SmartTypeCap>
    <MainType>
      <Type>Behavior</Type>
      <IsSupport>True< /IsSupport >
      <IsSupportRuleNum >8</IsSupportRuleNum>
    </MainType>
    < SubTypeList>
     <subtype>
      < Type>LineDetection</ Type>
      < IsSupport > True< IsSupport >
      </subtype>
      <subtype>
      < Type>DoubleLineDetection</ Type>
      < IsSupport > True< IsSupport >
      </subtype>
      <subtype>
      < Type>Alert</ Type>
      < IsSupport >False< IsSupport >
      </subtype>
      <subtype>
      < Type>Loitering</ Type>
      < IsSupport > True< IsSupport >
      </subtype>
      <subtype>
      < Type>HeatMap</ Type>
      < IsSupport >False< IsSupport >
      </subtype>
    </SubTypeList>
  < / SmartTypeCap >
  < SmartTypeCap>
    <MainType>
      <Type>Face</Type>
      <IsSupport>True< /IsSupport >
    </MainType>
    < SubTypeList>
     <subtype>
      < Type>Tiandy</ Type>
      < IsSupport >False< IsSupport >
      </subtype>
      <subtype>
      < Type>ST</ Type>
      < IsSupport >False< IsSupport >
      </subtype>
      <subtype>
      < Type>FacePlusPlus</ Type>
      < IsSupport > True< IsSupport >
      </subtype>
      <subtype>
      < Type>NewTiandy</ Type>
      < IsSupport > True< IsSupport >
      </subtype>
    </SubTypeList>
  < / SmartTypeCap >
  <SmartTypeCap>
     <MainType>
        <Type>Human</Type>
        <IsSupport>true</IsSupport>
```

```
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>Pept</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>PeopleNumAlarm</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>Prctduty</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>Sleep</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>NewFight</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>GetUp</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>HeightLimit</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>NewDuty</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
            <Type>Stranded</Type>
            <IsSupport>true</IsSupport>
        </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
        <MainType>
```

```
        <Type>Alone</Type>
        <IsSupport>true</IsSupport>
      </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
      <MainType>
        <Type>Delivergoods</Type>
        <IsSupport>true</IsSupport>
      </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
      <MainType>
        <Type>FaceMosaic</Type>
        <IsSupport>true</IsSupport>
      </MainType>
    </SmartTypeCap>
    <SmartTypeCap>
      <MainType>
        <Type>ColorTrack</Type>
        <IsSupport>true</IsSupport>
      </MainType>
    </SmartTypeCap>
    <smartTypeCap>
    < /smartTypeCap>
< /SmartTypeCapList>
```

1.5.13/ISAPI/Smart/IntelliTrace/<ID>/channels//<ID>/Scene/<ID>

/ISAPI/Smart/IntelliTrace /<ID>/channels/**<ID>/Scene/<ID>** **General Resource v2.0**	
GET	
Description	Obtain intelligent tracking parameters
Query	None
Inbound Data	None
Success Return	**<IntelliTrace>**
PUT	
Description	Set intelligent tracking parameters
Query	None
Inbound Data	**<IntelliTrace>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the setting and obtaining of the intelligent tracking senior parameters. Both the full scene tracking and interaction tracking use this protocol. **Explanations on key parameters:** <tracktime> //tracking time 0-300 unit second <identifyType > represents statistics type, people, car, all, people_car	

IntelliTrace XML Block

```
<IntelliTrace version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!-- req, xs:string --><id>//support 1
  <enabled><!-- req, xs:boolean "true,false"--></enabled>
  <tracktime><!-- req, xs:integer, "0—300"--></tracktime>//tracking time unit second
  <zoomRate><!-- opt, xs:integer, "10—360"--></ zoomRate>//tracking zoom rate (1~36 times,
precise to 0.1)
  <height><!-- opt, xs:integer, "1-30"--></ height>//dome camera height unit m
```

```
<desStopTime><!-- opt, xs:integer, "2-600"--></desStopTime>//target stop tracking time unit second
<minSize><!-- opt, xs:integer,"0-100"-->
</minSize >//minimum size default 20 (the interface display is the sensibility level,  and the full scene tracking has this parameter)
<maxSize><!-- opt, xs:integer, "0-100"--></maxSize >//maximum size
<detectFaceRet><!-- opt, xs:string"true,false"--></detectFaceRet> //detect whether the human face is returned
<antiOcclusions><!-- opt, xs:string"true,false"--></antiOcclusions>//whether to start the anti-occlusion function
< displyTarget><!-- opt, xs:string"true,false"--></displyTarget> //whether to display tracking frame
<limit><!-- opt, xs:string"true,false"--></limit> //whether to start position limit
<limitType opt = "upLimit, downLimit, liftLimit,rightLimit">
<!-- opt, xs: string," upLimit, downLimit, liftLimit,rightLimit"-->
</limitType>//the position limit type can only be selected one
<identifyType ><!-- req, xs: string --></identifyType>
</IntelliTrace>
```

Test cases

GET /ISAPI/Smart/IntelliTrace/1/channels/**1/Scene/1**

Request XML: none

Response XML: <IntelliTrace >

PUT/ISAPI/Smart/IntelliTrace/1/channels/**1/Scene/1**

Response XML: <ResponseStatus>

Request XML: as below

```
<IntelliTrace version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id>1</id>
<enabled>true</enabled>
<tracktime>120</tracktime>
<zoomRate>30</zoomRate>
<height>2</height>
<desStopTime>110</desStopTime>
<minSize>20</minSize>
<maxSize>0</maxSize>
<detectFaceRet>false</detectFaceRet>
<antiOcclusions>true</antiOcclusions>
<displyTarget>true</displyTarget>
<limit>true</limit>
<limitType>upLimit</limitType>
<identifyType>people and car</identifyType>
</IntelliTrace>
```

1.6/ISAPI/Event

1.6.1/ISAPI/Event/triggers/<ID>/channels/<ID>/scenes /<ID> (extend protocol)

Port input-port 1: /ISAPI/Event/triggers/IO-1
Mobile alarm: /ISAPI/Event/triggers/VMD/channels/<ID>
Shade alarm: /ISAPI/Event/triggers/tamperdetection/channels/<ID> /tamperdetection
Loss alarm: /ISAPI/Event/triggers/videoLoss/channels/<ID>
Trip-line: /ISAPI/Event/triggers/linedetection-1/channels/[1-]/scenes/[0-]
Double trip-line: /ISAPI/Event/triggers/doubleLineDetection-1/channels/[1-]/scenes/[0-]
Perimeter invasion 侵: /ISAPI/Event/triggers/fieldDetection-1/channels/[1-]/scenes/[0-]
Perimeter entrance: /ISAPI/Event/triggers/regionEntrance-1/channels/[1-]/scenes/[0-]
Perimeter exiting: /ISAPI/Event/triggers/regionExiting-1/channels/[1-]/scenes/[0-]
Unattended baggage: /ISAPI/Event/triggers/unattendedBaggage-1/channels/[1-]/scenes/[0-]
Loss of attended baggage: /ISAPI/Event/triggers/attendedBaggage-1/channels/[1-]/scenes/[0-]

Loitering：/ISAPI/Event/triggers/loitering-1/channels/[1-]/scenes/[0-]
Rapid move：/ISAPI/Event/triggers/rapidMove-1/channels/[1-]/scenes/[0-]
Parking：/ISAPI/Event/triggers/parking-1/channels/[1-]/scenes/[0-]
Alert：/ISAPI/Event/triggers/alert -1/channels/[1-]/scenes/[0-]
Note：XM20180037-the items behind the alter gun do not use this protocol.
Heat map：/ISAPI/Event/triggers/heatMap-1/channels/[1-]/scenes/[0-]
Human face detection：/ISAPI/Event/triggers/faceDetect/channels/[1-]/scenes/[0-]/Model/[ID]
Human face identification：
/ISAPI/Event/triggers/FaceDiscern/channels/[1-]/scenes/[0-]/Model/[ID]/Type/[ID]/Key/[ID]
Model：0 nvr 1 ipc
Type：alarm type，1: human face detection，2: comparison alarm，3: stranger alarm，4: frequency alarm，5: stranded alarm
Key：human face base key value， comparison alarm key value，other key value is 0
Oilfield monitoring：/ISAPI/Event/triggers/Pept/channels/[1-]/scenes/[0-]
License plate identification：/ISAPI/Event/triggers/platLicenseRecog/channels/[1-]/scenes/[0-]
License plate identification-white list：
/ISAPI/Event/triggers/whitePlatLicenseRecog/channels/[1-]/scenes/[0-]
License plate identification-black list：
/ISAPI/Event/triggers/blackPlatLicenseRecog/channels/[1-]/scenes/[0-]
Audio detection：/ISAPI/Event/triggers/audioDetection/channels/[1-]/scenes/[0-]
Video diagnosis：/ISAPI/Event/triggers/videoDetection/channels/[1-]/scenes/[0-]
Group gathering：/ISAPI/Event/triggers/group/channels/[1-]/scenes/[0-]
On-duty detection：/ISAPI/Event/triggers/onDutyDetection/channels/[1-]/scenes/[0-]
Demographics：/ISAPI/Event/triggers/demographics/channels/[1-]/scenes/[0-]
Alert contingency plan：/ISAPI/Event/triggers/alertTemplate-10/channels/<ID>/scenes /31
Parking space guard：/ISAPI/Event/triggers/guardPark/channels/[1-]/scenes/[0-]
Illegal parking：/ISAPI/Event/triggers/illegalPark/channels/[1-]/scenes/[0-]
Intelligent tracking：/ISAPI/Event/triggers/intelliTrace/channels/[1-]/scenes/[0-]
Safety helmet： /ISAPI/Event/triggers/helmet/channels/[1-]/scenes/[0-]
Local port alarm（decoder use）：/ISAPI/Event/triggers/localPortWarning/channels/[1-]/scenes/[0-]
Featured alert：/ISAPI/Event/triggers/ItemAlert/channels/<ID>/scenes/<ID>/type/<ID> Note：type is perimeter type or trip-line type.
Vehicle detection：/ISAPI/Event/triggers/vehicledetection/channels/[1-]/scenes/[0-]
Mixed target detection：/ISAPI/Event/triggers/mixedTargetDetect/channels/[1-]/scenes/[0-]
License plate shade：/CGI/Event/triggers/plateShade/channels/[1-]/scenes/[0-]
Exception alarm：
Disk full：/ISAPI/Event/triggers/diskfull
Disk error：/ISAPI/Event/triggers/diskerror
No disk：/ISAPI/Event/triggers/noDisk
No redundant disk：/ISAPI/Event/triggers/noMirrorHDD
Array exception：/ISAPI/Event/triggers/arrayError
Hot standby exception：/ISAPI/Event/triggers/spareexpcetion
Network cable broken：/ISAPI/Event/triggers/nicbroken
IP conflict：/ISAPI/Event/triggers/ipconflict
Illegal visit：/ISAPI/Event/triggers/illaccess
Video recording failure：/ISAPI/Event/triggers/recordingfailure
Smart detection exception：/ISAPI/Event/triggers/smartdetection
Disk overflow：/ISAPI/Event/triggers/diskoverflow
MAC address conflict：/ISAPI/Event/triggers/macconflict
PSE power overload：/ISAPI/Event/triggers/psepoweroverload tamperdetection
Disk temperature error: /ISAPI/Event/triggers/disktemperatureerror
FTP server error: /ISAPI/Event/triggers/ftpException
SHM disk health status error: /ISAPI/Event/triggers/shmException
Temperature & humidity alarm: /ISAPI/Event/triggers/temhum/channels/<ID>
People number alarm: /ISAPI/Event/triggers/peopleNumAlarm/channels/[1-]/scenes/[0-]
Single interrogation/unattended: /ISAPI/Event/triggers/Prctduty/channels/[1-]/scenes/[0-]
Sleep: /ISAPI/Event/triggers/Sleep/channels/[1-]/scenes/[0-]
New fight: /ISAPI/Event/triggers/NewFight/channels/[1-]/scenes/[0-]

Getup: /ISAPI/Event/triggers/GetUp/channels/[1-]/scenes/[0-]
Height limit: /ISAPI/Event/triggers/HeightLimit/channels/[1-]/scenes/[0-]
New duty: /ISAPI/Event/triggers/NewDuty/channels/[1-]/scenes/[0-]
Stranded: /ISAPI/Event/triggers/Stranded/channels/[1-]/scenes/[0-]
Alone: /ISAPI/Event/triggers/Alone/channels/[1-]/scenes/[0-]
Deliver goods: /ISAPI/Event/triggers/Delivergoods/channels/[1-]/scenes/[0-]

/ISAPI/Event/triggers/<ID>	**General Resource v2.0**
GET	
Description	Acquire alarm linkage parameters
Query	None
Inbound Data	None
Success Return	**<EventTrigger>**
PUT	
Description	Set alarm linkage parameters
Query	None
Inbound Data	**<EventTrigger>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of alarm linkage parameters, helping client or IE query and set device alarm linkage parameters via CGI protocol, including input port/linkage type/linkage output port No./PTZ linkage channel/linkage PTZ type/number/linkage dual light.
Explanations on key parameters:
Port alarm has no channel No., screen No.; motion and shielding alarm has no screen No.; other alarms are provided with channel No. and screen No.
<id> means input port: IO-1
<notificationMethod> means linkae type, IO: Linkage output, record: Linkage recording, snapshot: Linkage snapshot, ptz: Linkage ptz, activateDualLight: Linkage dual light, ftp: Linkage FTP, whitelight: White light, guardsound: Alarm sound, laser: Laser, talk: Talk, upload: Upload center ROI: ROI, exposure: exposureBright, voiceMsg: Voice broadcast " ipcIO: Linkage frontend alarm output, guardLight: Linkage alarm light, trafficTouch: Linkage traffic trigger
<outputIOPortID> means linkage output port No.
<videoInputID> means channel No. (ipc is 1)
<ptzChannelID> means PTZ linkage channel
<actionName> means linkage PTZ type, preset: Preset position, pattern: Mode path, patrol: Patrol path
<actionNum> means corresponding numbers
<activateDualLight> means linkage dual light, day: Color mode, night: Black and white mode
<trafficWarnType> means traffic violation type Bayonet: Bayonet, retrograde: Retrogradation, redlightrunning: Red light running, telephone: Making and receiving calls, notdirected: Undirected driving, vehicle: Vehicle occupies bicycle lane, turnaround: Illegal turnaround, lanechange: Illegal lane change, safetybelt: Fail to belt up, forbiddenmarking: Violation of marking line, reversing: Reversing, overspeed: Overspeed, speciallane: Enter special lane, Illegalparking: Illegal parking, prohibitionsign: Violation of prohibition signs
<voiceMsg> Voice broadcast

EventTriggerXML Block

```
<EventTrigger opt="audioshow, screenshow, snapshot, record, IO, ptz, singlepicture, email,plan, guardsound, laser, whitelight, activateDualLight, talk, upload,ftp,ROI,exposureBright">tamperdetection
<id><!-- req, xs:string;id --></id>
<enabled><!—req,xs:Boolean--></enabled>
<eventType>
<!-- req, xs:string,
```

"IO,VMD,videoloss,raidfailure,recordingfailure, localport,port,
badvideo,POS,analytics,fanfailure,overheat, tamperdetection, diskfull, diskerror,
nicbroken, ipconflict, illaccess, videomismatch, resolutionmismatch,
radifailure,PIR, WLSensor, spareException, poePowerException,heatmap,
counting,linedetection,fielddetection,regionEntrance,regionExiting,loitering,group
,rapidMove,parking,unattendedBaggage,attendedBaggage,nodisk,noredundancydisk,macconfl
ict,diskoverflow,SmartDetection,spareexception,
arrayError,alertTemplate,localportwarning,bayonet" -->
</eventType>
<localPortWarningInfoList><!-- opt -->
<localPortWarningData>
<trafficWarnType>
<!-- req, xs:string,
"bayonet,retrograde,redlightrunning,telephone,notdirected,vehicle,turnaround,lanechange,safe
tybelt,forbiddenmarking,reversing,overspeed,speciallane,Illegalparking,prohibitionsign" -->
</trafficWarnType>
<warnEnable><!-- req, xs:boolean --></warnEnable>
</localPortWarningData>
</localPortWarningInfoList>
<eventDescription><!-- opt, xs:string --></eventDescription>
<inputIOPortID><!-- dep, xs:string; id --> /inputIOPortID>
<dynInputIOPortID><!-- dep, xs:string; id --></dynInputPortID>
<videoInputChannelID>
<!-- dep, xs:string; id, if <eventType> is "VMD,videoloss,
tamperdetection,regionEntrance,regionExiting,loitering,group,rapidMove,parking,unattend
edBaggage,attendedBaggage" -->
</videoInputChannelID>
<dynVideoInputChannelID><!-- dep, xs:string; id --></dynVideoInputChannelID>
<intervalBetweenEvents><!-- opt, xs:integer, seconds --></intervalBetweenEvents>
<WLSensorID><!-- dep, xs:string; id --></WLSensorID>
<EventTriggerNotificationList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
<EventTriggerNotification><!-- opt -->
<id><!-- req, xs:string;id --></id>
<notificationMethod>
<!-- req, xs:string,"email,IO,ptz,record,snapshot,activateDualLight,ftp,screenshow,audioshow,
singlepicture,plan,guardsound, laser, whitelight, talk,
upload,ROI,exposureBright ,level ,ipcIO, guardLight, trafficTouch "-->
</notificationMethod>
<notificationRecurrence>
<!-- opt, xs:string, "beginning,beginningandend,recurring" -->
</notificationRecurrence>
<notificationInterval><!-- dep, xs:integer, milliseconds --></notificationInterval>
<outputIOPortID><!-- dep, xs:string;id --></outputIOPortID>
<dynOutputIOPortID><!-- dep, xs:string;id --></dynOutputIOPortID>
<videoInputID><!-- dep, xs:string;id --></videoInputID>
<dynVideoInputID><!-- dep, xs:string;id --></dynVideoInputID>
<ptzAction><!-- dep -->
<ptzChannelID><!--req, xs:string; id --></ptzChannelID>
<actionName><!-- req, xs:string, "preset, pattern, patrol" --></actionName>
<actionNum><!-- dep, xs:integer></actionNum>
</ptzAction>
<activateDualLight><!-- dep, xs:string;"day,night," --></ activateDualLight >
<planID><!-- dep, xs:string --></ planID> // Linkage plan No.
<emailsendpic><!-- dep, xs:boolean --></emailsendpic>// Whether linkage E-mail has
attachment
<SoundID><!-- req, xs:integer;--></SoundID>// Alarm sound No.
<ROILevel><!-- dep, xs: integer;--></ ROILevel> // Level

```
<exposureBrightTime><!-- dep, xs: integer;--></exposureBrightLevel > Exposure time 0-3600
<alarmLevel><!-- dep, xs:integer;id --></alarmLevel>// Alarm level of special warning linkage
<levelTime><!-- dep, xs:integer;id --></levelTime>// Detention time under special warning
<nextLevelEnable><!-- dep,xs:boolean;id --></nextLevelEnable>// Whether enable the next level under special warning
<voiceMsgList>
<voiceMsg>
<type><!-- req, xs: integer --></type> //0 frontend, 1NVR
<enable><!-- dep, xs: boolean --></enable>
<id><!-- req, xs: integer --></id> // Voice broadcast No., starts from 0, nvr has one default 0 only
<msg><!-- req, xs: string--> </msg> // Voice contents
<voiceMsg>
</voiceMsgList>
<ipcAlarmOutPortID><!-- dep, xs:string; id --> </ipcAlarmOutPortID>
// Linkage frontend port alarm output – NVR control frontend port alarm (introduction of bit: bit0 means frontend port 1, bit1 means frontend port 2…)
</EventTriggerNotification>
</EventTriggerNotificationList>
</EventTrigger>
```

Test cases

GET /ISAPI/Event/triggers/<ID>

Request XML: none

Response XML: <EventTrigger>

PUT/ISAPI/Event/triggers/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<EventTrigger>
<guardSoundCap>
<isSupprotGuardSound>true</isSupprotGuardSound>
<supportSoundTotalNum>5</ supportSoundTotalNum>
<supportSoundSampleNum>3</ supportSoundSampleNum>
<supportSoundCustomNum>2</supportSoundCustomNum>
< /guardSoundCap >
<id>tamperdetection</id>
<enabled>true</enabled>
<eventType>tamperdetection</eventType>
<EventTriggerNotificationList>
    // Linkage sound
    <EventTriggerNotification>
        <id>audioshow</id>
        <notificationMethod>audioshow</notificationMethod>
    </EventTriggerNotification>
    // Linkage screen display
    <EventTriggerNotification>
        <id>screenshow</id>
        <notificationMethod>screenshow</notificationMethod>
    </EventTriggerNotification>
    // Linkage recording channel 1
    <EventTriggerNotification>
        <id>record-1</id>
        <notificationMethod>record</notificationMethod>
        <videoInputID>1</videoInputID>
    </EventTriggerNotification>
```

```
// Linkage recording channel 2
<EventTriggerNotification>
    <id>record-2</id>
    <notificationMethod>record</notificationMethod>
    <videoInputID>2</videoInputID>
</EventTriggerNotification>
// Linkage snapshot channel 1
<EventTriggerNotification>
    <id>snapshot-1</id>
    <notificationMethod>snapshot</notificationMethod>
    <videoInputID>1</videoInputID>
</EventTriggerNotification>
// Linkage snapshot channel 2
<EventTriggerNotification>
    <id>snapshot-2</id>
    <notificationMethod>snapshot</notificationMethod>
    <videoInputID>2</videoInputID>
</EventTriggerNotification>
// Linkage output port 1
<EventTriggerNotification>
    <id>IO-1</id>
    <notificationMethod>IO</notificationMethod>
    <outputIOPortID>1</outputIOPortID>
</EventTriggerNotification>
// Linkage output port 2
<EventTriggerNotification>
    <id>IO-2</id>
    <notificationMethod>IO</notificationMethod>
    <outputIOPortID>2</outputIOPortID>
</EventTriggerNotification>
// Linkage single picture
<EventTriggerNotification>
    <id>singlepicture</id>
    <notificationMethod>singlepicture</notificationMethod>
    <videoInputID>1</videoInputID>
</EventTriggerNotification>
// Linkage E-mail
<EventTriggerNotification>
    <id>email</id>
    <notificationMethod>email</notificationMethod>
    <emailsendpic>true</emailsendpic>
</EventTriggerNotification>
// Linkage PTZ linkage 4-channel preset position 8
<EventTriggerNotification>
    <id>ptz4-preset8</id>
    <notificationMethod>ptz</notificationMethod>
    <ptzAction>
        <ptzChannelID>4</ptzChannelID>
        <actionName>preset</actionName>
        <actionNum>8</actionNum>
    </ptzAction>
</EventTriggerNotification>
// Linkage PTZ linkage 6-channel mode path 5
<EventTriggerNotification>
    <id>ptz6-pattern5</id>
    <notificationMethod>ptz</notificationMethod>
    <ptzAction>
        <ptzChannelID>6</ptzChannelID>
```

```
                <actionName>pattern</actionName>
                <actionNum>5</actionNum>
            </ptzAction>
        </EventTriggerNotification>
        // Linkage laser
        <EventTriggerNotification>
            <id>laser</id>
            <notificationMethod>laser</notificationMethod>
        </EventTriggerNotification>
        // Linkage white light
        <EventTriggerNotification>
            <id>whitelight</id>
            <notificationMethod>whitelight</notificationMethod>
            <whiteLightNum>666</whiteLightNum>// This field exists only if white light linkage is enabled under special alarm; 0-10 means flash times; 666 means normally on; 667 means strobing

        </EventTriggerNotification>
        // Linkage traction
        <EventTriggerNotification>
            <id>linkFollow</id>
            <notificationMethod>linkFollow</notificationMethod>
        </EventTriggerNotification>

        // Linkage call
        <EventTriggerNotification>
            <id>talk</id>
            <notificationMethod>talk</notificationMethod>
        </EventTriggerNotification>
        // Linkage upload center
        <EventTriggerNotification>
            <id>upload</id>
            <notificationMethod>upload</notificationMethod>
        </EventTriggerNotification>
        // Linkage dual light
        <EventTriggerNotification>
            <id>activateDualLight</id>
            <notificationMethod>activateDualLight</notificationMethod>
            <activateDualLight>day</ activateDualLight >
        </EventTriggerNotification>
        // Linkage alarm sound
        <EventTriggerNotification>
            <id>guardsound-3</id>
            <notificationMethod>guardsound</notificationMethod>
            <SoundID>3</ SoundID>
        </EventTriggerNotification>
        // Linkage level
        <EventTriggerNotification>
            <id>level</id>
            <notificationMethod>level</notificationMethod>
            <alarmLevel>2</alarmLevel>
            <levelTime>60</levelTime>
            <nextLevelEnable>true</nextLevelEnable>
        </EventTriggerNotification>

        // Linkage plan
        <EventTriggerNotification>
        <id>plan-3</id>
```

```
<notificationMethod>plan</notificationMethod>
<planID>3</ planID>
// Linkage ROI
</EventTriggerNotification>
<EventTriggerNotification>
<id>ROI</id>
<notificationMethod>ROI</notificationMethod>
<ROILevel>1</ ROILevel > // Level
// Linkage exposure
</EventTriggerNotification>
<EventTriggerNotification>
<id>exposureBright</id>
<notificationMethod> exposureBright</notificationMethod>
<exposureBrightTime>1000</exposureBrightTime>
<voiceMsgList>
<voiceMsg>
<type>0</type>
<enable>true</enable>
<id>0</id>
<msg> Hello, Zhang San</msg>
</voiceMsg>
<voiceMsg>
<type>0</type>
<enable>true</enable>
<id>1</id>
<msg> Hello, Li Si</msg>
</voiceMsg>
<voiceMsg>
<type>1</type>
<enable>true</enable>
<id>0</id>
<msg> Hello </msg>
</voiceMsg>
</voiceMsgList>
</EventTriggerNotification>
// Linkage frontend alarm output port 1
<EventTriggerNotification>
    <id>ipcIO-1</id>
    <notificationMethod>ipcIO</notificationMethod>
    <ipcAlarmOutPortID >1</ ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 2
<EventTriggerNotification>
    <id> ipcIO-2</id>
    <notificationMethod> ipcIO </notificationMethod>
    <ipcAlarmOutPortID>2</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 3
<EventTriggerNotification>
    <id>ipcIO-3</id>
    <notificationMethod>ipcIO</notificationMethod>
    <ipcAlarmOutPortID >3</ipcAlarmOutPortID >
</EventTriggerNotification>
// Linkage frontend alarm output port 4
<EventTriggerNotification>
    <id> ipcIO-4</id>
    <notificationMethod> ipcIO </notificationMethod>
    <ipcAlarmOutPortID>4</ipcAlarmOutPortID>
```

```
</EventTriggerNotification>
// Linkage frontend alarm output port 5
<EventTriggerNotification>
    <id>ipcIO-5</id>
    <notificationMethod>ipcIO</notificationMethod>
    <ipcAlarmOutPortID>5</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 6
<EventTriggerNotification>
    <id> ipcIO-6</id>
    <notificationMethod> ipcIO </notificationMethod>
    <ipcAlarmOutPortID>6</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 7
<EventTriggerNotification>
    <id>ipcIO-7</id>
    <notificationMethod>ipcIO</notificationMethod>
    <ipcAlarmOutPortID>7</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 8
<EventTriggerNotification>
    <id> ipcIO-8</id>
    <notificationMethod> ipcIO </notificationMethod>
    <ipcAlarmOutPortID>8</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 9
<EventTriggerNotification>
    <id>ipcIO-9</id>
    <notificationMethod>ipcIO</notificationMethod>
    <ipcAlarmOutPortID>9</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 10
<EventTriggerNotification>
    <id> ipcIO-10</id>
    <notificationMethod> ipcIO </notificationMethod>
    <ipcAlarmOutPortID>10</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 11
<EventTriggerNotification>
    <id>ipcIO-11</id>
    <notificationMethod>ipcIO</notificationMethod>
    <ipcAlarmOutPortID>11</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 12
<EventTriggerNotification>
    <id> ipcIO-12</id>
    <notificationMethod> ipcIO </notificationMethod>
    <ipcAlarmOutPortID>12</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 13
<EventTriggerNotification>
    <id>ipcIO-13</id>
    <notificationMethod>ipcIO</notificationMethod>
    <ipcAlarmOutPortID>13</ipcAlarmOutPortID>
</EventTriggerNotification>
// Linkage frontend alarm output port 14
<EventTriggerNotification>
    <id> ipcIO-14</id>
```

```
            <notificationMethod> ipcIO </notificationMethod>
            <ipcAlarmOutPortID>14</ipcAlarmOutPortID>
        </EventTriggerNotification>
        // Linkage frontend alarm output port 15
        <EventTriggerNotification>
            <id>ipcIO-15</id>
            <notificationMethod>ipcIO</notificationMethod>
            <ipcAlarmOutPortID>15</ipcAlarmOutPortID>
        </EventTriggerNotification>
        // Linkage frontend alarm output port 16
        <EventTriggerNotification>
            <id> ipcIO-16</id>
            <notificationMethod> ipcIO </notificationMethod>
            <ipcAlarmOutPortID>16</ipcAlarmOutPortID>
        </EventTriggerNotification>
        // Linkage alarm light
        <EventTriggerNotification>
        <id>guardLight</id>
        <notificationMethod>guardLight</notificationMethod>
        </EventTriggerNotification>
        // Linkage traffic trigger
        <EventTriggerNotification>
        <id>trafficTouch</id>
        <notificationMethod>trafficTouch</notificationMethod>
        </EventTriggerNotification>
</EventTriggerNotificationList>
</EventTrigger>
```

1.6.2/ISAPI/Event/schedules/<type>/<ID>/channels/<ID>/Scene/<ID>

Input port: /ISAPI/Event/schedules/inputs/channels/<ID>
Alarm output: /ISAPI/Event/schedules/outputs/<ID>
Motion alarm: /ISAPI/Event/schedules/motionDetections/channels/<ID>
Shielding alarm: /ISAPI/Event/schedules/tamperDetections/channels/<ID>
Loss alarm: /ISAPI/Event/schedules/videoLoss/channels/<ID>
Line: /ISAPI/Event/schedules/lineDetections/<ID>/channels/<ID>/Scene/<ID>
Double line: /ISAPI/Event/schedules/doubleLineDetections/<ID>/channels/<ID>/Scene/<ID>
Intrusion: /ISAPI/Event/schedules/fieldDetections/<ID>/channels/<ID>/Scene/<ID>
Entrances: /ISAPI/Event/schedules/regionEntrances/<ID>/channels/<ID>/Scene/<ID>
Exiting: /ISAPI/Event/schedules/regionExitings/<ID>/channels/<ID>/Scene/<ID>
Unattended baggage: /ISAPI/Event/schedules/unattendedBaggages/<ID>/channels/<ID>/Scene/<ID>
Lost items: /ISAPI/Event/schedules/attendedBaggages/<ID>/channels/<ID>/Scene/<ID>
Loiterings: /ISAPI/Event/schedules/loiterings/<ID>/channels/<ID>/Scene/<ID>
Running: /ISAPI/Event/schedules/rapidMoves/<ID>/channels/<ID>/Scene/<ID>
Parking: /ISAPI/Event/schedules/parkings/<ID>/channels/<ID>/Scene/<ID>
Alert: /ISAPI/Event/schedules/alerts/<ID>/channels/<ID>/Scene/<ID>
Heat map: /ISAPI/Event/schedules/heatMaps/<ID>/channels/<ID>/Scene/<ID>
Face detection: /ISAPI/Event/schedules/faceDetects/<ID>/channels/<ID>/Scene/<ID>/Model/[ID]
Human face identification：
/ISAPI/Event/schedules/FaceDiscern/<ID>/channels/<ID>/Scene/<ID>/Model/[ID]/Type/[ID]/Key/[ID]
Model：0 nvr 1 ipc
Type: Alarm type; 1. Face detection (disabled); 2. Contrast alarm; 3. Stranger alarm; 4. Frequency alarm; 5. Retention alarm
Key: Face database key value, contrast key value, no key value for stranger, frequency and retention is 0
Oil field monitoring: /CGI/Event/schedules/Pept/<ID>/channels/<ID>/Scene/<ID>
License plate recognition: /ISAPI/Event/schedules/platLicenseRecogs/<ID>/channels/<ID>/Scene/<ID>
License plate recognition – whitelist:

/ISAPI/Event/schedules/whitePlatLicenseRecogs/<ID>/channels/<ID>/Scene/<ID>
License plate recognition – blacklist: /ISAPI/Event/schedules/blackPlatLicenseRecogs/<ID>/channels/<ID>/Scene/<ID>
Audio error detection: /ISAPI/Event/schedules/audioDetections/<ID>/channels/<ID>/Scene/<ID>
Video error detection: /ISAPI/Event/schedules/videoDetections/<ID>/channels/<ID>/Scene/<ID>
Group: /ISAPI/Event/schedules/groups/<ID>/channels/<ID>/Scene/<ID>
On-duty detection: /ISAPI/Event/schedules/onDutyDetections/<ID>/channels/<ID>/Scene/<ID>
People counting: /ISAPI/Event/schedules/demographics/<ID>/channels/<ID>/Scene/<ID>
Alert template: /ISAPI/Event/schedules/alertTemplates/10/channels/<ID>/Scene/31
Illegal parking: /ISAPI/Event/schedules/illegalParks/<ID>/channels/<ID>/Scene/<ID>
Park guard: /ISAPI/Event/schedules/guardParks/<ID>/channels/<ID>/Scene/<ID>
Special alert: /ISAPI/Event/schedules/itemAlert/<ID>/channels/<ID>/Scene/<ID>/type/<ID>
Vehicle detection: /ISAPI/Event/schedules/vehicledetects/<ID>/channels/<ID>/Scene/<ID>
Mixed target detection: /ISAPI/Event/schedules/mixedTargetDetection/<ID>/channels/<ID>/Scene/<ID>
Plate shading: /CGI/Event/schedules/plateShade/<ID>/channels/<ID>/Scene/<ID>
Helmet: /CGI/Event/schedules/helmet/<ID>/channels/<ID>/Scene/<ID>
Temperature & humidity alarm: /CGI/Event/schedules/temhum/channels/<ID>
People number alarm monitoring: /CGI/Event/schedules/peopleNumAlarm/<ID>/channels/<ID>/Scene/<ID>
Single interrogation/unattended: /CGI/Event/schedules/Prctduty/<ID>/channels/<ID>/Scene/<ID>
Sleep: /CGI/Event/schedules/Sleep/<ID>/channels/<ID>/Scene/<ID>
New fight: /CGI/Event/schedules/NewFight/<ID>/channels/<ID>/Scene/<ID>
Get up: /CGI/Event/schedules/GetUp/<ID>/channels/<ID>/Scene/<ID>
Height limit: /CGI/Event/schedules/HeightLimit/<ID>/channels/<ID>/Scene/<ID>
New duty: /CGI/Event/schedules/NewDuty/<ID>/channels/<ID>/Scene/<ID>
Stranded: /CGI/Event/schedules/Stranded/<ID>/channels/<ID>/Scene/<ID>
Alone: /CGI/Event/schedules/Alone/<ID>/channels/<ID>/Scene/<ID>
Deliver goods: /CGI/Event/schedules/Delivergoods/<ID>/channels/<ID>/Scene/<ID>
Color traction: /CGI/Event/schedules/ColorTrack/<ID>/channels/<ID>/Scene/<ID>

/ISAPI/Event/schedules/inputs/<ID>	**General Resource v2.0**
GET	
Description	Acquire parameters of deployment time
Query	None
Inbound Data	None
Success Return	**<Schedule>**
PUT	
Description	Set parameters of deployment time
Query	None
Inbound Data	**<Schedule>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of deployment time parameters, helping client or IE query and set deployment time parameters via CGI protocol, including input port/week/time.
Explanations on key parameters:
Port alarm has no channel No., screen No.; motion and shielding alarm, temperature & humidity alarm has no screen No.; other alarms are provided with channel No. and screen No.
<id> means input port
<dayOfWeek> means week
<TimeRange> means time frame; format: 19:35:00 (hour; minute; second, second assignment 00)

ScheduleXML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string; id --></id>
<eventType><!-- opt, xs:string --></eventType>
<inputIOPortID><!-- ro, dep, xs:string; id --></inputIOPortID>
<outputIOPortID><!--      ro, dep, xs:string; id --></outputIOPortID>
<videoInputChannelID><!--      ro, dep, xs:string; id --></videoInputChannelID>
<TimeBlockList>
<TimeBlock>
<dayOfWeek><!-- rsp, xs:integer; --></dayOfWeek>
<ItemEnable><!-- rsp, xs:boolean; --></ItemEnable>
</TimeBlock>
</TimeBlockList>
<TimeBlockList><!-- req -->
<TimeBlock>
<dayOfWeek>
<!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, … -->
</dayOfWeek>
<TimeRange><!-- req -->
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
<endTime><!-- req, xs:time, ISO8601 time --></endTime>
</TimeRange>
</TimeBlock>
</TimeBlockList>
<HolidayBlockList><!-- opt -->
<TimeBlock>
<TimeRange><!-- req -->
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
<endTime><!-- req, xs:time, ISO8601 time --></endTime>
</TimeRange>
</TimeBlock>
</HolidayBlockList>
</Schedule>
```

Test cases

GET /ISAPI/Event/schedules/inputs/1

Request XML： none

Response XML: <Schedule>

PUT/ISAPI/Event/schedules/inputs/1

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Schedule>
<id>1</id>
<TimeBlockList>
<TimeBlock>
<dayOfWeek>1</dayOfWeek>
<TimeRange>
<enabledTimeRange >true</enabledTimeRange >
<beginTime>00:00:00</beginTime>
<endTime>07:59:00</endTime>
</TimeRange>
</TimeBlock>
</TimeBlockList>
</Schedule>
```

1.6.3 /CGI/SmartSetting/channels/<ID>

/CGI/SmartSetting/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire intelligent code and intelligent image status
Query	**None**
Inbound Data	**None**
Success Return	**<SmartEnable>**
PUT	
Description	Set intelligent code and intelligent image status
Query	**None**
Inbound Data	**<SmartEnable>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Acquire or set intelligent code and intelligent image status of channel **Explanations on key parameters:** <smartCode> Intelligent code status <smartImage> Intelligent image status	

SmartEnable Block

```
<SmartEnable>
  <smartCode><!--req, xs:boolean--></smartCode>
  <smartImage><!--req, xs:boolean--></smartImage>
</SmartEnable>
```

Test cases

GET /CGI/SmartSetting/channels/1

Request XML: None

Response XML: <SmartEnable>

PUT /CGI/SmartSetting/channels/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SmartEnable>
  <smartCode>true</smartCode>
  <smartImage>true</smartImage>
</SmartEnable>
```

1.7/ISAPI/Image

1.7.1/ISAPI/Image/channels/<ID>/ircutFilter (not developed)

/ISAPI/Image/channels/<ID>/ircutFilter	**General Resource v2.0**
GET	
Description	Acquire parameters of day and night mode
Query	None
Inbound Data	None
Success Return	**<IrcutFilter>**
PUT	
Description	Set parameters of day and night mode
Query	None
Inbound Data	**<IrcutFilter>**
Success Return	**<ResponseStatus>**

Explanations on protocol: This protocol is prepared for query and setting of day and night mode parameters, helping client or IE query and set day and night mode parameters via CGI protocol.

IrcutFilterXML Block

```
<IrcutFilter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<IrcutFilterType>
<!-- opt, xs:string, " auto, day, night,schedule,eventTrigger"-->
</IrcutFilterType>
<dayToNightFilterLevel>
<!--opt, xs:string, "low, normal, high" -->
</dayToNightFilterLevel>
<dayToNightFilterTime><!--opt xs:integer --></dayToNightFilterTime>
<nightToDayFilterLevel>
<!--opt,xs:string, "low, normal, high" -->
</nightToDayFilterLevel>
<nightToDayFilterTime><!--opt xs:integer --></nightToDayFilterTime>
<Schedule><!--dep-->
<scheduleType><!—req,xs:string,"day,night"></scheduleType>
<TimeRange><!-- req -->
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
<endTime><!-- req, xs:time, ISO8601 time --></endTime>
</TimeRange>
</Schedule>
<EventTrigger><!--dep-->
<eventType><!--req,xs:string,"IO,VMD"></eventType>
<IrcutFilterAction><!--req,xs:string,"day,night"></ IrcutFilterAction >
</EventTrigger>
</IrcutFilter>
```

1.7.2/CGI/Image/channels/<ID>/irLight

/CGI/Image/channels/<ID>/irLight	**General Resource v2.0**
GET	
Description	Acquire color-to-black parameters
Query	None
Inbound Data	None
Success Return	**<IrLight>**
PUT	
Description	Set color-to-black parameters
Query	None
Inbound Data	**<IrLight>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of color-to-black parameters, helping client or IE query and set color-to-black parameters via CGI protocol.

Explanations on key parameters:

<mode> means color-to-black type, inside: Internal synchronization, outside: External synchronization, gray: Black and white, color: Color, schedule: Timing, self-adaptive: Self-adaptive, fillLight: Fill light mode

<brightnessLevel> means daytime brightness, range: 0-100

<nightBrightnessLevel> means nighttime brightness, range: 0-100 (Daytime brightness should be higher than nighttime brightness)

<grayToColorDelay> means black-to-color delay, range: 0-100

<colorToGrayDelay> means color-to-black delay, range: 0-100

<infraredLampMode> Infrared lamp mode: 1-Manual, 2-Auto, 3- Near-infrared, 4-This value

should be sent under auto near-infrared mode, it is invalid value
<infraredLampPower> means infrared lamp brightness, range: 0-100
<sunRiseTime> means sunrise time: format: 10:31:00 (hour; minute; second, second assignment 00)
<sunSetTime> means sunset time; format: 10:31:00 (hour; minute; second, second assignment 00)
<sensitivityLevel> means sensibility: 1: Low; 2: Intermediate; 3: High
< FarinfraredLampPower > means far infrared lamp brightness, range: 0-100

IrLightXML Block

```
<IrLight version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<mode opt=" auto,manual,inside,outside,gray,color,timer,schedule,self-adaptive,day,night,
fillLight">
<!--req, xs:string,"auto,manual,inside,outside,gray,color,timer,schedule,self-adaptive,day,night,
fillLight" -->
</mode>
<brightnessLevel><!--dep, xs:integer--></brightnessLevel>
<nightBrightnessLevel><!--dep, xs:integer--></nightBrightnessLevel>
<grayToColorDelay><!--dep, xs:integer--></grayToColorDelay>
<colorToGrayDelay><!--dep, xs:integer--><colorToGrayDelay>
<infraredLampMode "opt = 1,2 ,3,4"><!--opt, xs:integer--></infraredLampMode>
<infraredLampPower><!--dep, xs:integer--></infraredLampPower>
<sunRiseTime><!--dep, xs:string--><sunRiseTime>
<sunSetTime><!--dep, xs:string --><sunSetTime>
<sensitivityLevel><!--dep, xs:integer--><sensitivityLevel>
<brightnessLimit><!--dep,opt, xs:integer,--></brightnessLimit>
<triggerMode><!--dep,opt, xs:string, "camera,photosensitive" --></triggerMode>
<FarinfraredLampPower><!--dep, xs:integer--></FarinfraredLampPower>

</IrLight>
```

Test cases

GET /CGI/Image/channels/1/irLight

Request XML: none

Response XML: <IrcutFilter>

PUT/CGI/Image/channels/1/irLight

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<IrLight>
<brightnessLevel>38</brightnessLevel>
<nightBrightnessLevel>5</nightBrightnessLevel>
<grayToColorDelay>10</grayToColorDelay>
<colorToGrayDelay>10</colorToGrayDelay>
<mode>self-adaptive</mode>
<sunRiseTime>06:00:00</sunRiseTime>
<sunSetTime>18:00:00</sunSetTime>
<infraredLampMode>1</infraredLampMode>
<infraredLampPower>100</infraredLampPower>
<sensitivityLevel>1</sensitivityLevel>
<FarinfraredLampPower>80</FarinfraredLampPower>
</IrLight>
```

1.7.3/ISAPI/Image/channels/<ID>/WhiteLight

/ISAPI/Image/channels/<ID>/ WhiteLight	**General Resource v2.0**
GET	

Description	Acquire white light control parameters
Query	None
Inbound Data	None
Success Return	**< WhiteLight >**
PUT	
Description	Set white light control parameters
Query	None
Inbound Data	**< WhiteLight >**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of white light control parameters in color-to-black parameter page, helping client or IE query and set white light control parameters via CGI protocol.

Explanations on key parameters:

<contrltype> means white light control type: 0-Auto; 1-Manual opening; 2-Manual closing; 3-Timing

<sunRiseTime> means sunrise time, i.e. white light turning off time; format: 10:31:00 (hour; minute; second, second assignment 00) Control type: Valid under timing mode

<sunSetTime> means sunset time, i.e. white light turning on time; format: 10:31:00 (hour; minute; second, second assignment 00) Control type: Valid under timing mode

<infraredLampPower> means white light brightness, range: 0-100. Control type: Valid under manual control.

WhiteLight XML Block

```
< WhiteLight    version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
< contrltype ><!--req, xs:integer--></ contrltype >
<sunRiseTime><!--req, xs:string--><sunRiseTime>
<sunSetTime><!—req, xs:string --><sunSetTime>
<infraredLampPower><!--req, xs:integer--></infraredLampPower>
</ WhiteLight >
```

Test cases

GET /ISAPI/Image/channels/1/ WhiteLight

Request XML: none

Response XML: < WightLight >

PUT/ISAPI/Image/channels/1/ WhiteLight

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<WhiteLight>
<contrltype>0</contrltype>
<sunRiseTime>07:00:00</sunRiseTime>
<sunSetTime>17:00:00</sunSetTime>
<infraredLampPower>100</infraredLampPower>
</ WhiteLight >
```

1.8/ISAPI/PTZCtrl

1.8.1/ISAPI/PTZCtrl/channels/<ID>

/ISAPI/PTZCtrl/channels/<ID> **General Resource v2.0**	
GET	
Description	Acquire set parameters of PTZ protocol
Query	None
Inbound Data	None
Success Return	**<PTZChannel>**
PUT	

Description	Set parameters of PTZ protocol
Query	None
Inbound Data	**<PTZChannel>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of PTZ protocol; acquisition by channel is supported.
Note: The field of PTZRs485Para and WorkMode is abandoned and known as opt item; it can be sent by client or not if it is realized in the old device. 1.8.2 protocol is enabled for setting of serial port parameters.

PTZChannel XML Block

```
<PTZChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<portID><!-- req, xs:integer --></portID>      // Serial port 1: Com1    2: Com2
<id><!-- req, xs:integer --></id>
<WorkMode><!-- opt, xs:integer --></WorkMode> // Working mode    1: Protocol mode 2: Transparent channel
<enabled><!—ro,req, xs:boolean --></enabled>
<videoInputID><!-- req, xs:integer --></videoInputID>
<panMaxSpeed><!—ro,opt, xs:integer, degrees/sec --></panMaxSpeed>
<tiltMaxSpeed><!—ro,opt, xs:integer, degrees/sec --></tiltMaxSpeed>
<presetSpeed><!—opt, xs:integer 1..8 –></presetSpeed>
<autoPatrolSpeed><!-- opt, xs:integer, 0..100 --></autoPatrolSpeed>
<keyBoardControlSpeed><!-- opt, xs:integer, 0..100 --></keyBoardControlSpeed>
<controlProtocol><!-- opt, xs:string, "DOME_PELCO_P, DOME_PELCO_, DOME_PLUS"--></controlProtocol>// ptz protocol value is consistent with IE interface
<controlAddress>
<enabled><!-- req, xs:boolean --></enabled>
<Address><!—opt, xs:string 1-255 --></Address> // Address value is consistent with IE interface
</controlAddress>
<defaultPresetID><!-- opt, xs:string;id --></defaultPresetID>
<PTZRs485Para>
<baudRate><!--opt, xs:integer--></baudRate> // Baud rate value is consistent with IE interface, range: 1200-115200
<dataBits><!--opt, xs:integer --></dataBits> // Data bit value is consistent with IE interface; range: 7-8
<parityType><!--opt, xs:string, "none,even,odd" --></parityType> //Check bit none: No check even: Even parity check odd: Odd parity check
<stopBits><!--opt, xs:string, --></stopBits> // Stop bit is consistent with IE interface, range 1-2
<flowCtrl><!--opt, xs:string, "none, software, hardware" --></flowCtrl>
</PTZRs485Para>
</PTZChannel>
```

Test cases

GET /ISAPI/PTZCtrl/channels/1

Request XML: none

Response XML: <PTZChannel>

PUT /ISAPI/PTZCtrl/channels/1

Request XML: <PTZChannel>

Response XML: <ResponseStatus>

```
<PTZChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<portID>1</portID>      // Serial port No.: 1: Com1    2: Com2
<id>1</id>
<WorkMode>1</WorkMode> //Working mode    1: Protocol mode 2: Transparent channel
<enabled>ture</enabled>
<videoInputID>0</videoInputID>
<panMaxSpeed>0</panMaxSpeed>
<tiltMaxSpeed>0</tiltMaxSpeed>
```

```
<presetSpeed>0</presetSpeed>
<autoPatrolSpeed>0</autoPatrolSpeed>
<keyBoardControlSpeed>0</keyBoardControlSpeed>
<controlProtocol>DOME_PLUS</controlProtocol>// ptz protocol value is consistent with IE interface
<controlAddress>
<enabled>ture</enabled>
<Address>256</Address> // Address value is consistent with IE interface
</controlAddress>
<defaultPresetID>0</defaultPresetID>
<PTZRs485Para>
<baudRate>115200</baudRate> // Baud rate value is consistent with IE interface, range: 1200-115200
<dataBits>8</dataBits> // Data bit value is consistent with IE interface; range: 7-8
<parityType>even</parityType> // Check digit none: No check even: Even parity check odd: Odd parity check
<stopBits>1</stopBits> // Stop bit is consistent with IE interface, range 1-2
<flowCtrl>none</flowCtrl>
</PTZRs485Para>
</PTZChannel>
```

1.8.2/ISAPI/PTZCtrl/ComPara/ComID/<ID>

/ISAPI/PTZCtrl/ComPara/ComID/<ID>	**General Resource v2.0**
GET	
Description	Acquire set parameters of PTZ protocol
Query	None
Inbound Data	None
Success Return	**<ComPara>**
PUT	
Description	Set parameters of PTZ protocol
Query	None
Inbound Data	**<ComPara>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of PTZ protocol; acquisition by channel is supported.
Note: The field of PTZRs485Para and WorkMode is abandoned and known as opt item; it can be sent by client or not if it is realized in the old device. It is enabled
Explanations on key parameters:
<WorkMode> Working mode 1: Protocol mode 2: Transparent channel 3: Peripheral mode
<baudRate> Baud rate value is consistent with IE interface, range: 1200-115200
<dataBits> Data bit value is consistent with IE interface; range: 7-8
<parityType> Check digit none: No check even: Even parity check odd: Odd parity check
<stopBits> Stop bit is consistent with IE interface, range 1-2

PTZChannel XML Block

```
<ComPara version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:integer --></id>
<portID><!-- req, xs:integer --></portID>      //Serial port No. 1: Com1    2: Com2, the rest can be analogized in the same way
<PTZRs485Para>
<WorkMode><!-- req, xs:integer --></ WorkMode> // Working mode    1: Protocol mode 2: Transparent channel 3: Peripheral mode
<baudRate><!-- req, xs:integer --></baudRate> // Baud rate value is consistent with IE interface, range: 1200-115200
<dataBits><!-- req, xs:integer --></dataBits> // Data bit value is consistent with IE interface;
```

```
range: 7-8
<parityType><!-- req, xs:string, "none,even,odd" --></parityType> // Check digit none: No check even: Even parity check odd: Odd parity check
<stopBits><!-- req, xs:string, --></stopBits> // Stop bit is consistent with IE interface, range 1-2
<flowCtrl><!-- req, xs:string, "none, software, hardware" --></flowCtrl>
</PTZRs485Para>
</ComPara>
```

Test cases

GET /ISAPI/PTZCtrl/ComPara/ComID/1

Request XML: none

Response XML: <ComPara>

PUT /ISAPI/PTZCtrl/ComPara/ComID/1

Request XML: <ComPara>

Response XML: <ResponseStatus>

```
<ComPara version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<PTZRs485Para>
<WorkMode>1</WorkMode>
<baudRate>115200</baudRate>
<dataBits>8</dataBits>
<parityType>even</parityType>
<stopBits>1</stopBits>
<flowCtrl>none</flowCtrl>
</PTZRs485Para>
</ComPara>
```

1.8.3/ISAPI/PTZCtrl/channels/<ID>/patrols

/ISAPI/PTZCtrl/channels/<ID>/patrols	**General Resource v2.0**
GET	
Description	Acquire PTZ patrol path configuration
Query	None
Inbound Data	None
Success Return	**<PTZPatrolList>**
Explanations on protocol: This protocol is prepared for acquiring PTZ patrol path configuration; acquisition by channel is supported. **Explanations on key parameters:** None	

PTZPatrolList XML Block

```
< PTZPatrolList version="2.0" >
<PTZPatrol version="2.0">
    <id>!-- req, xs:string;id --></id>
    <patrolName>!-- req, xs:string --</patrolName>
    <PatrolSequenceList></PatrolSequenceList>
</PTZPatrol>
</PTZPatrolList>
```

Test cases

GET /ISAPI/PTZCtrl/channels/1/patrols

Request XML: none

Response XML: <PTZPatrolList >

```
<PTZPatrolList version="2.0" >
<PTZPatrol version="2.0" >
    <id>1</id>
    <patrolName>Patrol401</patrolName>
    <PatrolSequenceList></PatrolSequenceList>
</PTZPatrol>
```

```
<PTZPatrol version="2.0">
    <id>2</id>
    <patrolName>Patrol402</patrolName>
    <PatrolSequenceList></PatrolSequenceList>
</PTZPatrol>
</PTZPatrolList>
```

1.8.4/ISAPI/PTZCtrl/channels/<ID>/patrols/<ID>/start

/ISAPI/PTZCtrl/channels/<ID>/patrols/< ID>/start **General Resource v2.0**	
PUT	
Description	Enable PTZ patrol path
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for enabling the designated PTZ patrol path configuration; acquisition by channel is supported. **Explanations on key parameters:** None	

Test cases
PUT /ISAPI/PTZCtrl/channels/1/patrols/1/start
Request XML: none
Response XML: <ResponseStatus>

1.8.5/ISAPI/PTZCtrl/channels/<ID>/patrols/<ID>/stop

/ISAPI/PTZCtrl/channels/<ID>/patrols/< ID>/stop **General Resource v2.0**	
PUT	
Description	Disable PTZ patrol path
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for disabling the designated PTZ patrol path configuration; acquisition by channel is supported. **Explanations on key parameters:** None	

Test cases
PUT /ISAPI/PTZCtrl/channels/1/patrols/1/stop
Request XML: none
Response XML: <ResponseStatus>

1.8.6/ISAPI/PTZCtrl/channels/<ID>/patterns/<ID>/start

/ISAPI/PTZCtrl/channels/<ID>/patterns/<ID>/start **General Resource v2.0**	
PUT	
Description	Start PTZ path
Query	None
InboundData	None
SuccessReturn	**<ResponseStatus>**

Explanations on protocol: This protocol is prepared for starting the designated PTZ patrol path configuration; acquisition by channel is supported.

Test cases
PUT /ISAPI/PTZCtrl/channels/1/patterns/1/start
Request XML: none
Response XML: <ResponseStatus>

1.8.7/ISAPI/PTZCtrl/channels/<ID>/patterns/<ID>/stop

/ISAPI/PTZCtrl/channels/<ID>/patterns/<ID>/stop **General Resource v2.0**	
PUT	
Description	Stop PTZ path
Query	None
None	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for stopping the designated PTZ patrol path configuration; acquisition by channel is supported.	

Test cases
PUT /ISAPI/PTZCtrl/channels/1/patterns/1/stop
Request XML: none
Response XML: <ResponseStatus>

1.8.8/ISAPI/PTZCtrl/channels/<ID>/patterns/<ID>

/ISAPI/PTZCtrl/channels/<ID>/patterns/<ID>	**General Resource v2.0**
DELETE	
Description	Delete mode path
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for deleting the mode path through CGI and shared memory protocol. **Explanations on key parameters:** None	

patrols XML Block
None
Test cases
DELETE /ISAPI/PTZCtrl/channels/<ID>/patterns/<ID>
Request XML: none
Response XML: <ResponseStatus>

1.8.9/ISAPI/PTZCtrl/channels/<ID>/auxcontrols/<ID>

/ISAPI/PTZCtrl/channels/<ID>/auxcontrols/<ID> **General Resource v2.0**	
PUT	
Description	Control over windshield wiper
Query	None
Inbound Data	< PTZAux >

Success Return	<ResponseStatus>
Explanations on protocol: This protocol is prepared for controlling windshield wiper. **Explanations on key parameters:** POWER: Power supply, WIPER: Windshield wiper	

PTZAux XML Block

```
<PTZAux version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id>        <!-- req, xs:string; id -->        </id>
<type>        <!--req, ro, xs:string, "LIGHT, WIPER,POWER, DEFOG,
LIGHTSUPPRESSION,WIDEDYNAMIC" --> </type>// LIGHT: Light POWER: Power supply,
WIPER: Windshield wiper
(Not support DEFOG: Defog, LIGHTSUPPRESSION: Light suppression, WIDEDYNAMIC:
```

Test cases

PUT /ISAPI/PTZCtrl/channels/<ID>/auxcontrols/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<PTZAux version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id>1</id>
<type>WIPER</type>
<status>on</status>
</PTZAux>
```

1.8.10/ISAPI/ITS/ComPara/Coms/channels/<ID>

/ISAPI/ITS/ComPara/Coms/channels/<ID> General Resource v2.0	
GET	
Description	Acquire parameters of peripheral serial port parameters
Query	None
Inbound Data	None
Success Return	**<ComParaList>**
PUT	
Description	Set parameters of peripheral serial port parameters
Query	None
Inbound Data	**<ComParaList>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting and acquiring all serial port protocols. **explanations on important parameters:** <ComPara> <portID> Serial port No. <deviceNo> Peripheral agreement name 0, None 1, T704/T708 2,T324/328V20/324ES 3 ,CSR_IK16 4 ,CSR68ND 5,T550L/T550G 6, CSR_AD 7,LED-EB01 8, SMARTCOM 10, LVD_600X 13, LED-GK-JCY01 14, LED-GK-ZX01 15 LED-GK-EB01 16, STJ1 17, weighing instrument SH 18, LED-ZX-B1045-Z-KT <comType> // Serial port type 0, 485; 1, 232; 2, 422 </ComPara>	

ComIDs XML Block

```
<ComParaList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<ComPara>
<portID><!-- req, xs:integer --></portID>
<deviceNo><!-- opt, xs:integer --></deviceNo>
<comType><!-- opt, xs:integer --></comType>
</ComPara>
</ComParaList>
```

Test cases

GET /ISAPI/ITS/ComPara/Coms/channels/1

Request XML： none

Response XML: <ComParaList>

PUT /ISAPI/ITS/ComPara/Coms/channels/1

Response XML： <ResponseStatus>

Request XML： as below

```
<ComParaList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<ComPara>
<portID>1</portID>
<deviceNo>16</deviceNo>
<comType>0</comType>
</ComPara>
</ComParaList>
```

1.8.11 /ISAPI/PTZCtrl/channels/<ID>/clearcfg

/ISAPI/PTZCtrl/channels/<ID>/clearcfg	**General Resource v2.0**
PUT	
Description	Clear setting
Query	None
Inbound Data	<ClearCfgList>
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for clearing setting. param "No., No., No.…" No.: 0-Preset bit, 1-Patrol path, 2-Pattern scanning, 3-Limit setting, 4-Guard, 5-Mode path, 6-Regional indication	

ClearCfgList **XML Block**

```
<ClearCfgList version="2.0">
        <param><!-- req, xs:string --></param>
</ClearCfgList >
```

Test cases

PUT /ISAPI/PTZCtrl/channels/1/cancelcfg

Request XML: <ClearCfgList>

Response XML： <ResponseStatus>

```
<ClearCfgList version="2.0">
        <param>2</param>
</ClearCfgList>
```

1.8.12 /ISAPI/PTZCtrl/channels/<ID>/clearcfg/capabilities

/ISAPI/PTZCtrl/channels/<ID>/clearcfg/capabilities	**General Resource v2.0**
GET	
Description	Acquire configuration items supporting clearing
Query	None
Inbound Data	None
Success Return	<ClearCfgList>

Explanations on protocol: This protocol is prepared for clearing reporting of ability level. param "No., No., No.…" No.: 0-Preset bit, 1-Patrol path, 2-Pattern scanning, 3-Limit setting, 4-Guard, 5-Mode path, 6-Regional indication

ClearCfgList **XML Block**

```
<ClearCfgList version="2.0">
        <param><!-- req, xs:string --></param>
</ClearCfgList >
```

Test cases

GET /ISAPI/PTZCtrl/channels/1/clearcfg/capabilities

Request XML：None

Response XML: <ClearCfgList>

```
<ClearCfgList version="2.0">
      <param>2</param>
</ClearCfgList>
```

1.8.13 /ISAPI/PTZCtrl/channels/<ID>/asensorcorrect

/ISAPI/PTZCtrl/channels/<ID>/asensorcorrect	**General Resource v2.0**
PUT	
Description	Set calibration of acceleration sensor
Query	None
Inbound Data	<AsensorCorrect>
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for realizing calibration of acceleration sensor. **Explanations on key parameters:** <sceneId> Screen No. 0-31 <rulesNo> Rule No. 0-15	

AsensorCorrect **XML Block**

```
< AsensorCorrect version="2.0">
      <sceneId><!-- req, xs:integer --></sceneId>
      <rulesNo><!-- req, xs:integer --></rulesNo>
</AsensorCorrect >
```

Test cases

PUT /ISAPI/PTZCtrl/channels/1/asensorcorrect

Request XML: <AsensorCorrect>

Response XML： <ResponseStatus>

```
<AsensorCorrect version="2.0">
      <sceneId>1</sceneId>
      <rulesNo>1</rulesNo>
</AsensorCorrect>
```

1.8.14 /ISAPI/PTZCtrl/channels/<ID>/peripherallist

/ISAPI/PTZCtrl/channels/<ID>/peripherallist	**General Resource v2.0**
GET	
Description	Acquire list of peripheral type
Query	None
Inbound Data	None
Success Return	< PeripheralList >

Explanations on protocol: This protocol is prepared for acquiring list of peripheral types. **Explanations on key parameters:** Type "No., No., No.…" No.: 1: Temperature & humidity 2: Differential pressure 3: Laser rain gauge 4: Radar level gauge 5: Battery sensor 6: Current meter 7: LED 8: Beidou module 9:GPS

AsensorCorrect **XML Block**

```
<PeripheralList version="2.0">
    <type><!-- req, xs:string --></type>
</PeripheralList>
```

Test cases

GET /ISAPI/PTZCtrl/channels/1/peripherallist

Request XML: none

Response XML: <PeripheralList>

```
< PeripheralList version="2.0">
    <type>1,3,5,7</type>
</PeripheralList>
```

1.8.15 /ISAPI/PTZCtrl/peripheral/channels/<ID>/com/<ID>/type/<ID>

/ISAPI/PTZCtrl/peripheral/channels/<ID>/com/<ID>/type/<ID> General Resource v2.0	
GET	
Description	Acquire parameters of peripheral types
Query	None
Inbound Data	None
Success Return	<Peripheral>
PUT	
Description	Set parameters of peripheral types
Query	None
Inbound Data	<Peripheral>
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for realizing parameters of peripheral types. type 0-Reserved, 1- Temperature & humidity instrument 2: Differential pressure gauge 3: Laser rain gauge 4: Radar level gauge 5: Battery sensor 6: Current meter 7: LED 8: Beidou module 9:GPS enable: Enable Address (0~255)	

Peripheral **XML Block**

```
< Peripheral version="2.0">
    <enable><!-- req, xs:string--></enable>
    < addressList>
        <address><!-- req, xs:integer--><address>
    </addressList>
</Peripheral>
```

Test cases

GET /ISAPI/PTZCtrl/peripheral/channels/1/com/1/type/1

Request XML: none

Response XML: <Peripheral>

PUT /ISAPI/PTZCtrl/peripheral/channels/1/com/1/type/1

Request XML: <Peripheral>

Response XML: <ResponseStatus>

```
<Peripheral version="2.0">
    <enable>1</enable>
    <addressList>
        <address>1<address>
    </addressList>
</Peripheral>
```

1.8.16 /ISAPI/PTZCtrl/DomeTitle/channels/<ID>/type/<ID>/number/<id>

/ISAPI/PTZCtrl/DomeTitle/channels/<ID>/type/<ID>/number/<id> General Resource v2.0	
GET	
Description	Acquire title name of dome camera
Query	None
Inbound Data	None
Success Return	**<DomeTitle>**
PUT	
Description	Set title name of dome camera
Query	None
Inbound Data	**< DomeTitle >**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for realizing acquisition of title name of ballhead camera type 0-Reserved 1-Preset bit 2-Scanning 3-Patrol 4-Mode path 5-Regional indication number : Type number name: 32 bits at most	

DomeTitle XML Block

```
<DomeTitle version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <type><!-- req, xs:integer --></ type >
    <number size="maxnum"><!-- opt, xs:integer --></number>
    <name><!-- req, xs:string --></name>
</DomeTitle>
```

Test cases

GET /ISAPI/PTZCtrl/DomeTitle/channels/1/type/1/number/1

Request XML: none

Response XML: <DomeTitle>

PUT /ISAPI/PTZCtrl/DomeTitle/channels/1/type/1/number/1

Request XML: <DomeTitle>

Response XML: <ResponseStatus>

```
<DomeTitle version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <type>1</type>
    <number opt="32">1</number>
    <name>hello1</name>
</DomeTitle>
```

1.8.17 /ISAPI/PTZCtrl/DomePara/channels/<ID>

/ISAPI/PTZCtrl/DomePara/channels/<ID> General Resource v2.0	
POST	
Description	Acquire menu parameters of dome camera
Query	<DomeParaTypeList>

Inbound Data	None
Success Return	<DomeParaList>
PUT	
Description	Set menu parameters of dome camera
Query	None
Inbound Data	<DomeParaList>
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting menu parameters of dome camera.
The detailed parameters are shown in table below
domeParaQuery param: type is 20--Preset bit param: Preset bit No.
type is 21--Scanning/22--Mode path/23-- Current status of mode path/24-- param means preset bit No. in regional indication

type	param1	Param2	Param3	Param4
1-- Display time of preset bit title	0-Disabled 0x7FFFFFFF-Continuous The rest is second; unit: second			
2-- Display time of auto function title	0-Disabled 0x7FFFFFFF-Continuous The rest is second; unit: second			
3-- Display time of regional title	0-Disabled 0x7FFFFFFF-Continuous The rest is second; unit: second			
4-- Display time of coordinate direction	0-Disabled 0x7FFFFFFF-Continuous The rest is second; unit: second			
5-- Display time of traction point title	0-Disabled 0x7FFFFFFF-Continuous The rest is second; unit: second			
6-- Title background	0-Disabled 1-Enabled			
7-- Auto stop time	Unit: Second			
8-- Menu closing time	Unit: Minute			
9-- Vertical angle adjustment	Software value is reduced by 1000-11° (-11 + 1000 = 989), network sends 989	Max. vertical angle (Max): Software value is reduced by 1000-11° (-11 + 1000 = 989), network sends 989		
10-- Control speed level	0-Low speed 1-Intermediate speed 2-High speed			
11-- Preset bit speed level	0-Low speed 1-Intermediate speed 2-High speed			
12-- Temperature	0-Disabled 1-Air cooling			

control mode	2-Auto 3-Defog 4-Heating			
13--485 Address setting	0 ~ 255			
14-- Zero point setting	0-Setting			
15-- North arrow setting	0-Set 1-Delete	0-Manual 1-Auto	0-Reserved 1-Pointed to north	
16-- Infrared control mode	0-Auto 1-Camera following 2-Timing enabling 3-Manual enabling 4-Manual disabling	When iPara1 is timing enabling: Start time is HH:MM	When iPara1 is timing enabling: End time is HH:MM	
17-- Sensitization threshold	0-Ultralow 1-Low 2-Standard 3-Intermediate 4-High			
18-- Delay time	0-Low 1-Intermediate 2-High			
19-- Zoom matching	0-Disabled 1-Enabled	When iPara1 is disabled: “Brightness of high beam group 1; brightness of high beam group 2 (0~10)”	When iPara1 is disabled: “Brightness of low beam group 1: brightness of low beam group 2 (0~10)”	
20-- Preset bit	Focus mode (0-Auto, 1-Fixed)	Preset bit No. (0~499)	Operation: 0-Setting, 1-Delete, 2-Call	
21--Scanning	Group No. (0~7)	Mode: 0-Left/right scanning, 1-Auto scan, 2-Frame scan, 3-Random scan, 4-Vertical scan, 5-Panoramic scan, 6-Set helical scan speed, 7-Set helical scan step	Speed (1~30) When mode is 6 (set helical scanning speed), it means speed; when mode is 7 (set vertical step of helical scanning), it means disposal step (1~15)	Operation: 0-Left boundary, 1-Right boundary, 2-Call
22--Mode path	Group No. (0~7)	Operation: 0-Start, 1-End, 2-Delete, 3-Call		
23-- Current status of mode path	Group No. (0~7)	Memory use (percentage): 0~100	Remaining time (countdown): 0-180 (unit: Second)	

24--Regional indication	Group No. (0~7)	Operation: 0-Left boundary, 1-Right boundary, 2-Delete		
25-- Zoom speed	0-Low 1-Intermediate 2-High (Hikvision and control speed are configured simultaneously)			
26-- Digital zoom	0-Disabled 1-Enabled			
27-- Preset bit freezing	0-Disabled 1-Enabled			
28-- Laser brightness threshold	0-Min. value 1- Max. value			
29-- Laser coaxial setting	Speed (0~10)	Direction: 0-Stop, 1-Left, 2-Upper left, 3-Top, 4-Upper right, 5-Right, 5-Lower right, 7-Low, 8-Lower left		
30-- Set enabling time of visible light	0-Manual enabling 1-Manual disabling 2-Time frame 3-Timing	When iPARA1=2: Start time HH:MM When iPARA1=3, it means enabling time	When iPARA1=2: End time HH:MM	
31-- Set key limit	0-Set limit 1 - Clear limit		0- Unlimited 1- Limited	
32-- Power-off memory mode	0-Disabled, 30, 60, 300, 600 The rest is detailed value: (unit: second)			
33-- PTZ first	0-Network 1-RS485	Delay: 0--200 second	Delay: 0--200 second	
34-- Enable key limit	0 -Disabled 1- Enable limit			
35- Light control mode	0-Infrared, 1-Full spectrum, 2-White light, 3-Laser			
36 White light control mode	0-Auto 1-Manual enabling 2-Manual disabling 3-Timing enabling	If iPara1 is timing enabling: Start time HH:MM	If iPara1 is timing enabling: End time HH:MM	
37- Laser control mode	0-Auto 1-Camera following 2-Timing enabling 3-Manual enabling 4-Manual disabling	If iPara1 is timing enabling: Start time HH:MM	If iPara1 is timing enabling: End time HH:MM	

38- Timing enabling/disabling of infrared light	0-Disabled 1-Enabled	Infrared light enabling time; unit: Second (30min as default) Range: 60s-24h	Infrared light disabling time; unit: Second (30min as default) Range: 60s-24h	

DomeParaQuery**List XML Block**

```
<DomeParaQueryList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <domeParaQuery>
        <type><!-- req, xs: integer --></type>
        <param><!-- dep, xs: integer --></param>
    </domeParaQuery>
</DomeParaQueryList>
```

DomeParaList XML Block

```
<DomeParaList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <DomePara>
        <type><!-- req, xs:integer --></type >
        <param1><!-- req, xs:integer --></param1>
        <param2><!-- req, xs: integer --></param2>
        <param3><!-- req, xs: integer --></param3>
        <param4><!-- req, xs: integer --></param4>
    </DomePara>
</DomeParaList>
```

Test cases

POST /ISAPI/PTZCtrl/DomePara/channels/1

Request XML: <DomeParaTypeList>

Response XML: < DomeParaList>

PUT /ISAPI/PTZCtrl/DomePara/channels/1

Request XML: <DomeParaList>

Response XML: <ResponseStatus>

```
<DomeParaQueryList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <domeParaQuery>
        <type>1</type>
        <param>1</param>
    </domeParaQuery>
</DomeParaQueryList>


<DomeParaList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <DomePara>
        <type>1</type>
        <param1>1</param1>
        <param2>0</param2>
        <param3>0</param3>
        <param4>0</param4>
    </DomePara>
</DomeParaList>
```

1.8. 18 /ISAPI/PTZCtrl/DomePTZ/channels/<ID>

/ISAPI/PTZCtrl/DomePTZ/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire PTZ parameters of dome camera

Query	<DomePTZTypeList>
Inbound Data	None
Success Return	**<DomePTZList>**
PUT	
Description	Set PTZ parameters of dome camera
Query	None
Inbound Data	<DomePTZList>
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting PTZ parameters of dome camera. The detailed parameters are shown in table below Param reserved	

domeParaType	param1	param2
1-- Enable freezing of preset bit	Disabled	Disabled
2-- Enable auto rotation	Disabled	Disabled
3-- Preset bit speed level	0--Low, 1--Intermediate, 2--High	Disabled
4-- Manual control speed level	0--Low, 1--Intermediate, 2--High	Disabled
5-- Enable standby action	Detailed values: 30, 60, 300, 600, 1800 (unit: Second)	0--Preset bit, 1--Scanning, 2--Patrol, 3—Mode path
6-- Infrared light mode	0--Manual, 1--Auto	0--When manual mode is enabled, it means infrared light brightness, detailed value is: [0,10]; 1--When auto mode is enabled, it means infrared sensitivity, detailed value is: 0-Minimum,1-Low, 2-Standard, 3-High, 4-Maximum
7—Proportion zoom	Disabled	Disabled
8—Function enabling/disabling	"Preset bit snapshot: Scan recording: Mode path recording" 0: No operation 1: Operation	Disabled
9-- PTZ anti-shaking	0-Reserved 1-Disabled 2-Enabled	Disabled

DomePTZTypeList XML Block

```
<DomePTZQueryList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <domePTZQuery>
        <type><!-- req, xs: integer --></type>
        <param><!-- dep, xs: integer --></param>
    </domePTZQuery>
</DomePTZQueryList>
```

DomeParaList XML Block

```
<DomePTZList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <DomePTZ>
        <domePTZType ><!-- req, xs:integer --></domePTZType>
        <autoEnable><!-- req, xs:integer --></autoEnable>
        <param1><!-- dep, xs: integer --></param1>
        <param2> <!-- dep, xs: integer --></param2>
```

```
    </DomePTZ>
</DomePTZList>
```

Test cases

GET /ISAPI/PTZCtrl/DomePTZ/channels/1

Request XML: <DomePTZQueryList>

Response XML: < DomePTZList >

PUT /ISAPI/PTZCtrl/DomePTZ/channels/1

Request XML: <DomePTZList>

Response XML: <ResponseStatus>

```
<DomePTZQueryList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <domePTZQuery>
        <type>1</type>
        <param>1</param>
    </domePTZQuery>
</DomePTZQueryList>
<DomePTZList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
   <DomePTZ>
        <type>1</type>
        <autoEnable>1</autoEnable>
        <param1>1</param1>
        <param2>1</param2>
    </DomePTZ>
</DomePTZList>
```

1.8.19/CGI/Image/channels/<ID>/FocusMode/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/ FocusMode /template/<ID> General Resource v2.0	
GET	
Description	Acquire focus mode parameters
Query	None
Inbound Data	None
Success Return	< FocusMode >
PUT	
Description	Set focus mode parameters
Query	None
Inbound Data	< FocusMode >
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of focus mode parameters, helping client or IE query and set focus mode parameters of device via CGI protocol.
Explanations on key parameters:
<Template> Template No.: 0~7
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<mode> means focus mode, auto: Automatic manual: Manual onepush: Semi-auto trigger: Zoom trigger

FocusMode**XML Block**

```
< FocusMode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<currentTemplate><!-- req,xs:string, --><currentTemplate>
<mode><!--req, xs:string,"manual,auto,onepush,trigger"--></mode>
</ FocusMode>
```

Test cases

GET /CGI/Image/channels/1/ FocusMode /template/1/type/1

Request XML: none

Response XML: < FocusMode >

PUT/CGI/Image/channels/1/ FocusMode /template/1/type/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<FocusMode>
<mode>auto</mode>
</FocusMode>
```

1.8.20/CGI/Image/channels/<ID>/MinFocusDistance/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/MinFocusDistance/template/<ID> General Resource v2.0	
GET	
Description	Acquire the parameters of the minimum focus distance
Query	None
Inbound Data	None
Success Return	<MinFocusDistance>
PUT	
Description	Set the parameters of the minimum focus distance
Query	None
Inbound Data	<MinFocusDistance>
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of focus distance parameters, helping client or IE query and set focus distance parameters of device via CGI protocol.
Explanations on key parameters:
<Template> Template No.: 0~7
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<FocusVal> means distance, 1, 10, 30, 100, 150, 300, 600, 1000, 10000; unit: cm; among which, 10000 means infinity

MinFocusDistanceXML Block

```
< MinFocusDistance version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<currentTemplate><!-- req,xs:string, --><currentTemplate>
<FocusVal opt="1,10"><!--req, xs:integer--></FocusVal>
</MinFocusDistance>
```

Test cases

GET /CGI/Image/channels/1/MinFocusDistance/template/1/type/1

Request XML: none

Resposne XML: <MinFocusDistance>

PUT/CGI/Image/channels/1/MinFocusDistance/template/1/type/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<MinFocusDistance>
<FocusVal>600</FocusVal>
</MinFocusDistance>
```

1.8.21/CGI/Image/channels/<ID>/ZoneAf/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/ZoneAf/template/<ID>/type/<ID> General Resource v2.0	
GET	
Description	Acquire regional focus parameters

Query	None
Inbound Data	None
Success Return	**<ZoneAf>**
PUT	
Description	Set regional focus parameters
Query	None
Inbound Data	**<ZoneAf>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting of regional focus parameters, helping client or IE set regional focus parameters of device via CGI protocol.
Explanations on key parameters:
<Template> Template No.: 0~7
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<enabled> means enabled; true: Enabled, false: Disabled
<ZoneAfRegionList> means regional focus area
<leftpositionX> means X-coordinate of upper left corner
<leftpositionY> means Y-coordinate of upper left corner
<rightpositionX> means X-coordinate of lower right corner
<rightpositionY> means Y-coordinate of lower right corner

ZoneAfXML Block

```
<ZoneAf version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<enabled/><!-- req, xs:boolean -->
<currentTemplate><!-- req,xs:string, --><currentTemplate>
<ZoneAfRegionList><!--req-->
<ZoneAfRegion>
<id><!--req,integer--></id>// Only 1 region is supported temporarily, this field is disabled temporarily
<RegionCoordinatesList>//detection region coordinate list
<RegionCoordinates><!-- req, -->//detection region coordinates
<leftpositionX><!-- req, xs:integer;coordinate --></leftpositionX>// X coordinate of upper left corner
<leftpositionY><!-- req, xs:integer;coordinate --></leftpositionY>//upper left corner y-point coordinate
<rightpositionX><!-- req, xs:integer;coordinate --></rightpositionX>// X coordinates of lower right corner
<rightpositionY><!-- req, xs:integer;coordinate --></rightpositionY>// Y coordinates of lower right corner
</RegionCoordinates>
</RegionCoordinatesList>
</ZoneAfRegion>
</ZoneAfRegionList>
</ZoneAf>
```

Test cases
GET /CGI/Image/channels/1/ZoneAf/template/1/type/1
Request XML: none
Response XML: <ZoneAf>
PUT/CGI/Image/channels/1/ZoneAf/template/1/type/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ZoneAf>
<enabled>true</enabled>
<ZoneAfRegionList>
<ZoneAfRegion>
<id>1</id>
```

```
<RegionCoordinatesList>
<RegionCoordinates>
<leftpositionX>3636</leftpositionX>
<leftpositionY>2187</leftpositionY>
<rightpositionX>8940</rightpositionX>
<rightpositionY>7951</rightpositionY>
</RegionCoordinates>
</RegionCoordinatesList>
</ZoneAfRegion>
</ZoneAfRegionList>
</ZoneAf>
```

1.9/ISAPI/ITC

1.9.1/ISAPI/ITC/illegalDictionary

/ISAPI/ITC/illegalDictionary	**General Resource v2.0**
GET	
Description	Acquire illegal dictionary parameters
Query	None
Inbound Data	None
Success Return	**<IllegalDictionary>**
PUT	
Description	Set illegal dictionary parameters
Query	None
Inbound Data	**<IllegalDictionary>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query of illegal dictionary. <id> --Means illegal type number, range 0-100; ID means the illegal action number from 0 to the end and its order is fixed <illegalCode>-- Means user input of type code <illegalName>-- Means illegal type name, with character string not exceeding 4*64 bits <illegalPRI> -- Means illegal priority range: 0-100	

IllegalDictionary XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<IllegalDictionary version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<illegalCodeList>
<illegalCodeItem>
<!-- Illegal type No.-->
<id><!-- req, xs:integer --></id>
<!-- Type code-->
<illegalCode><!-- req, xs:string--></illegalCode>
<!-- Illegal type name-->
<illegalName><!-- req, xs:string --></illegalName>
<!-- Illegal priority-->
<illegalPRI><!-- req, xs:integer --></illegalPRI>
</illegalCodeItem>
</illegalCodeList>
</IllegalDictionary>
```

Test cases

GET /ISAPI/ITC/illegalDictionary

Request XML: none

Response XML: <illegalDictionary>

PUT /ISAPI/ITC/illegalDictionary

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<IllegalDictionary version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<illegalCodeList>
<illegalCodeItem>
<id>1</id>
<illegalCode>0</illegalCode>
<illegalName> Bayonet </illegalName>
<illegalPRI>0</illegalPRI>
</illegalCodeItem>
</illegalCodeList>
</IllegalDictionary>
```

1.9.2/ISAPI/ITC/TrafficParam/channels/<ID>/lanes/<ID>

/ISAPI/ITC/trafficParam/channels/<ID>/lanes/<ID> General Resource v2.0	
GET	
Description	Acquire flow statistics parameters
Query	None
Inbound Data	None
Success Return	**<TrafficParamList>**
PUT	
Description	Set flow statistics parameters
Query	None
Inbound Data	**<TrafficParamList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of flow statistics parameters of single lane.
Explanations on key parameters:
<type> means statistics types; 0: Reserved; 1: Flow statistics (only statistics by flow is supported presently)
<enable> Whether enabled; false - Disabled; true - Enabled
<statisticsMinute> Interval of statistics by minute; range: 1~1440; unit: min; if statistics time interval is second, this field is 0
<statisticsSecond> Statistics time interval; range: 30~3600; unit: Second

TrafficParamList XML Block

```
<TrafficParamList  version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<trafficParam>
<type><!-- req, xs: integer --></type>
<enable><!-- dep, xs:Boolean --></enable>
<statisticsMinute><!-- dep, xs: integer,seconds --></statisticsMinute>
<statisticsSecond><!-- dep, xs: integer --></statisticsSecond>
</trafficParam>
</TrafficParamList>
```

Test cases
GET /ISAPI/ITC/TrafficParam/channels/1/lanes/1
Request XML: none
Response XML: <TrafficParamList>
PUT /ISAPI/ITC/TrafficParam/channels/1/lanes/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TrafficParamList  version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<trafficParam>
<type>1</type>
<enable>true</enable>
<statisticsMinute>0</statisticsMinute>
<statisticsSecond>42</statisticsSecond>
```

```
</trafficParam>
</TrafficParamList></trafficParam>
```

1.9.3/ISAPI/ITC/TrafficParam/channels/<ID>/lanes

/ISAPI/ITC/trafficParam/channels/<ID>/lanes General Resource v2.0	
GET	
Description	Acquire flow statistics parameters in batch
Query	None
Inbound Data	None
Success Return	**<TrafficParamList>**
PUT	
Description	Set flow statistics parameters in batch
Query	None
Inbound Data	**<TrafficParamList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of flow statistics parameters of multiple lanes.
Explanations on key parameters:
<laneID> means lane No. (1~5)
<type> means statistics type; 0: Reserved; 1: Flow statistics
<enable> Whether enabled; false - Disabled; true - Enabled
<statisticsMinute> Interval of statistics by minute; range: 1~1440; unit: min; if statistics time interval is second, this field is 0
<statisticsSecond> Interval of statistics by second; range: 30~3600; unit: Second

TrafficParamList XML Block

```
<TrafficParamList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneParamItem>
<laneID></laneID>
<laneParamList>
<trafficParam>
<type><!-- req, xs: integer --></type>
<enable><!-- dep, xs:Boolean --></enable>
<statisticsMinute><!-- dep, xs: integer,seconds --></statisticsMinute>
<statisticsSecond><!-- dep, xs: integer --></statisticsSecond>
</trafficParam>
</laneParamList>
</laneParamItem>
</TrafficParamList>
```

Test cases
GET /ISAPI/ITC/TrafficParam/channels/1/lanes
Request XML: none
Response XML: <TrafficParamList>
PUT /ISAPI/ITC/TrafficParam/channels/1/lanes
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TrafficParamList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneParamItem>
<laneID></laneID>
<laneParamList>
<trafficParam>
<type>1</type>
<enable>true</enable>
<statisticsMinute>42</statisticsMinute>
<statisticsSecond>50</statisticsSecond>
```

```
</trafficParam>
</laneParamList>
</laneParamItem>
</TrafficParamList>
```

1.9.4/ISAPI/ITC/syncSignalOutput/channels/<ID>/ports/<ID>

/ISAPI/ITC/syncSignalOutput/channels/<ID>/ports/<ID> General Resource v2.0	
GET	
Description	Acquire parameters of fill light
Query	None
Inbound Data	None
Success Return	**<SyncSignalOutput>**
PUT	
Description	Set parameters of fill light
Query	None
Inbound Data	**<SyncSignalOutput>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of fill light configuration, helping client or IE query and set fill light parameters of device via CGI protocol, including IO No., device type, default status and working state.
Explanations on key parameters:
<id> means IO port No.; range: 1~10
<IOWorkMode> means device linkage type; 0-Flashlight; 1-Strobe light; 2-Polarizer; 3-Continuous light; 4- Strobe flash; 64-Alarm output modify
<defaultStatus> means default status; 0: Pulse width; 1: Electrical level (0 as default)
<outputStatus> means working state; 0: Low level; 1: High level (0 as default)
<dutyRate> means duty ratio; range: (0,40)
<timeDelay> means duration; unit: μs; range: 0~10000
<aheadTime> means ahead time; unit: μs; range: 0-4000
<freqMultiply> means frequency multiplication; range (1,15)
<autoControlType> means auto control type; 0-Nighttime enable (default); 1 - Daytime enable

SyncSignalOutput XML Block

```
<SyncSignalOutput t version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<id><!-- req, xs:integer --></id>
<IOWorkMode><!-- dep, xs:integer --></IOWorkMode>
<defaultStatus><!-- dep, xs:integer --></defaultStatus>
<outputStatus><!-- dep, xs:integer --></outputStatus>
<aheadTime><!-- dep, xs:integer, milliseconds --></aheadTime>
<timeDelay><!-- dep, xs:integer, milliseconds --></timeDelay>
<freqMultiply><!-- dep, xs:integer --></freqMultiply>
<dutyRate><!-- dep, xs:integer --></dutyRate>
<autoControlType><!-- dep, xs:integer --></autoControlType>
</SyncSignalOutput>
```

Test cases
GET /ISAPI/ITC/syncSignalOutput/channels/1/ports/1
Request XML: none
Response XML: <SyncSignalOutput>
PUT /ISAPI/ITC/syncSignalOutput/channels/1/ports/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SyncSignalOutput>
<id>1</id>
<IOWorkMode>0</IOWorkMode>
<defaultStatus>1</defaultStatus>
<outputStatus>0</outputStatus>
<aheadTime>10</aheadTime>
<timeDelay>1600</timeDelay>
<freqMultiply>3</freqMultiply>
<dutyRate>15</dutyRate>
<autoControlType>0</autoControlType>
</SyncSignalOutput>
```

1.9.5/ISAPI/ITC/syncSignalOutput/channels/<ID>/ports

/ISAPI/ITC/syncSignalOutput/channels/<ID>/ports General Resource v2.0	
GET	
Description	Acquire fill light parameters in batch
Query	None
Inbound Data	None
Success Return	**<SyncSignalOutputList>**
PUT	
Description	Set fill light parameters in batch
Query	None
Inbound Data	**<SyncSignalOutputList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of fill light configuration, helping client or IE query and set fill light parameters of device via CGI protocol, including IO No., device type, default status and working state.
Explanations on key parameters:
<id> means IO port No.; range: 1~10
<IOWorkMode> means device linkage type; 0-Flashlight; 1-Strobe light; 2-Polarizer; 3-Continuous light; 4- Strobe flash; 64-Alarm output modify
<defaultStatus> means default status; 0: Pulse width; 1: Electrical level (0 as default)
<outputStatus> means working state; 0: Low level; 1: High level (0 as default)
<dutyRate> means duty ratio; range: (0,40)
<timeDelay> means duration; unit: μs; range: 0~10000
<aheadTime> means ahead time; unit: μs; range: 0-4000
<freqMultiply> means frequency multiplication; range (1,15)
<autoControlType> means auto control type; 0-Nighttime enable (default); 1 - Daytime enable

SyncSignalOutputList XML Block

```
<SyncSignalOutputList t version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<syncSignalOutput>
<id><!-- req, xs:integer --></id>
<IOWorkMode><!-- dep, xs:integer --></IOWorkMode>
<defaultStatus><!-- dep, xs:integer --></defaultStatus>
<outputStatus><!-- dep, xs:integer --></outputStatus>
<aheadTime><!-- dep, xs:integer, milliseconds --></aheadTime>
<timeDelay><!-- dep, xs:integer, milliseconds --></timeDelay>
<freqMultiply><!-- dep, xs:integer --></freqMultiply>
<dutyRate><!-- dep, xs:integer --></dutyRate>
<autoControlType><!-- dep, xs:integer --></autoControlType>
<syncSignalOutput>
</SyncSignalOutputList>
```

Test cases

GET /ISAPI/ITC/syncSignalOutput/channels/1/ports

Request XML: none
Response XML: <SyncSignalOutputList>
PUT /ISAPI/ITC/syncSignalOutput/channels/1/ports
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SyncSignalOutputList>
<syncSignalOutput>
<id>1</id>
<IOWorkMode>0</IOWorkMode>
<defaultStatus>1</defaultStatus>
<outputStatus>0</outputStatus>
<aheadTime>10</aheadTime>
<timeDelay>1600</timeDelay>
<freqMultiply>3</freqMultiply>
<dutyRate>15</dutyRate>
<autoControlType>0</autoControlType>
</syncSignalOutput>
</SyncSignalOutputList>
```

2/CGI

2.1/CGI/Streaming

2.1.1/CGI/Streaming/channels/<ID>/type/<ID>

/CGI/Streaming/channels/<ID>/type/<ID>	**General Resource v2.0**
GET	
Description	Acquire video parameters
Query	None
Inbound Data	None
Success Return	**<StreamingChannel>**
PUT	
Description	Set video parameters
Query	None
Inbound Data	**<StreamingChannel>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of video parameters, helping client or IE query and set device audio/video parameters of device via CGI protocol, including stream type, resolution, video code type, code rate, system, compression mode, video quality, corridor pattern, channel type and encryption type.
Explanations on key parameters:
type <id> means code stream types, including: 1: Main code stream; 2: Auxiliary code stream; 3: Third code streams; 4: Ordinary main code stream; 5: Main code stream alarm; 6: Customization 1; 7: Customization 2
channels<id> means channel No.
<eventTemplateEnable>: Enable event template parameters. True: Enable; false: Disable
<channelName> means code stream name: MainStream, SubStream, ThirdStream, MainStream(Normal), MainStream(Alarm), SelfDef1 and SelfDef2
<videoCodecType> means video code type, including: H.264B, H.264M, H.264H, H.265 and MotionJPEG
<videoResolutionWidth> represents video resolution width
<videoResolutionHeight> represents video resolution height
<videoQualityControlType> means compression mode, CBR: Constant bit rate, VBR:

Variable bit rate
<constantBitRate max=""> means constant bit rate, bit rate range: 32-16384; max. property bit rate range: 32- max
<fixedQuality> means video quality, including: Best, better, good, normal and poor
<vbrUpperCap max=""> means variable bit rate: Upper limit of bit rate; max. property bit rate range: 32- max
<vbrLowerCap> means variable bit rate: Lower limit of bit rate: 128 fields; invalid temporarily
<maxFrameRate> means frame rate
<H264Profile> Baseline,Main,High Means extending code, including: Baseline, Main, High
<GovLength> means I frame rate; range: 10-100
<SVC> means SVC; true: Enabled; false: Disabled; auto: Automatic
<smoothing> means bit stream smoothing; range: 0-100
<np-Mode> means system, including NTSC and PAL
<priorityMode> means priority mode, including: FramRate: Frame rate priority; Quality: Quality priority
<corridorMode> means corridor mode, ON: Enabled; OFF: Disabled
<channelType> means channel type, LocalChannel: Local channel
<enctypeType> means encryption type, including: AES:AES, NoEnctype: No encryption
<password> means encryption password, not above 16 characters
<electronicImageStab> means electronic anti-shaking; ON: Enabled; OFF: Disabled
<electronicImageLevel> means electronic anti-shaking level; range: 1-100
<SPlus265> means S+265 enabling/disabling

StreamingChannelXML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:integer;id --></id>
<eventTemplateEnable><!-- req, xs:sboolean --></eventTemplateEnable>
<channelName><!-- req, xs:string --></channelName>
<enabled><!-- req, xs:boolean --></enabled>
<Transport><!-- req -->
<maxPacketSize><!-- opt, xs:integer --></maxPacketSize>
<audioPacketLength><!-- opt, xs:integer --></audioPacketLength>
<audioInboundPacketLength><!-- opt, xs:integer --></audioInboundPacketLength>
<audioInboundPortNo><!-- opt, xs:integer --></audioInboundPortNo>
<videoSourcePortNo><!-- opt, xs:integer --></videoSourcePortNo>
<audioSourcePortNo><!-- opt, xs:integer --></audioSourcePortNo>
<ControlProtocolList><!-- req -->
<ControlProtocol><!-- req -->
<streamingTransport><!--req,xs:string, "HTTP,RTSP,SHTTP" --></streamingTransport>
</ControlProtocol>
</ControlProtocolList>
<Unicast><!-- opt -->
<enabled><!-- req, xs:boolean --></enabled>
<interfaceID><!-- opt, xs:string --></interfaceID>
<rtpTransportType><!-- opt, xs:string, "RTP/UDP,RTP/TCP" --></rtpTransportType>
</Unicast>
<Multicast><!-- opt -->
<enabled><!-- req, xs:boolean --></enabled>
<userTriggerThreshold><!-- opt, xs:integer --></userTriggerThreshold>
<destIPAddress><!-- dep, xs:string --></destIPAddress>
<videoDestPortNo><!-- opt, xs:integer --></videoDestPortNo>
<audioDestPortNo><!-- opt, xs:integer --></audioDestPortNo>
<destIPv6Address><!-- dep, xs:string --></destIPv6Address>
<ttl><!-- opt, xs:integer --></ttl>
</Multicast>
<Security><!-- opt -->
<enabled><!-- req, xs:boolean --></enabled>
</Security>
```

```
</Transport>
<Video><!-- opt -->
<enabled><!-- req, xs:boolean --></enabled>
<videoInputChannelID><!-- req, xs:string;id --></videoInputChannelID>
        <videoCodecTypeopt="">
<!-- req, xs:string, "MPEG4, MotionJPEG,3GP,H.264,MPNG, H.265、H.264(baseline、main profile、high profile)、MotionJPEG" -->
        </videoCodecType>
        <videoScanType><!-- opt, xs:string, "progressive, interlaced" -->
        </videoScanType>
<videoResolutionWidthopt=""><!-- req, xs:integer --></videoResolutionWidth>
<videoResolutionHeightopt=""><!-- req, xs:integer --></videoResolutionHeight>
<videoPositionX><!-- opt, xs:integer --></videoPositionX>
<videoPositionY><!-- opt, xs:integer --></videoPositionY>
        <videoQualityControlType><!-- opt, xs:string, "CBR,VBR" --></videoQualityControlType>
<constantBitRate><!-- dep, xs:integer, in kbps --></constantBitRate>
        <fixedQuality><!-- opt, xs:integer, percentage,"best,better,good,normal,poor" -->
        </fixedQuality>
<vbrUpperCap><!-- max, xs:integer --><!-- dep, xs:integer, in kbps --></vbrUpperCap>
<vbrLowerCap><!-- dep, xs:integer, in kbps --></vbrLowerCap>
<constantBitRate><!-- max, xs:integer --><!-- dep, xs:integer, in kbps --></ constantBitRate >
        <maxFrameRate opt=""><!--req, xs:integer,"1-25" --></maxFrameRate>
<keyFrameInterval><!-- opt, xs:integer, milliseconds --></keyFrameInterval>
<rotationDegree><!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
<mirrorEnabled><!-- opt, xs:boolean --></mirrorEnabled>
        <snapShotImageType><!-- opt, xs:string, "JPEG,GIF,PNG" --></snapShotImageType>
<Mpeg4Profile><!--dep, xs:string, "SP,ASP"--></Mpeg4Profile>
        <H264Profile> <!-- dep, xs:string, "Baseline,Main,High, Extended" --></H264Profile>
        <GovLength><!--opt, xs:integer --></GovLength>
        <SVC><!-- req, xs:boolean --> </SVC>
        <smoothing><!-- opt, xs:integer--></smoothing>
        <np-Mode ><!-- opt, ro, xs:string, "NTSC, PAL" --></ np-Mode >
        <priorityMode><!-- opt, ro, xs:string, "FramRate, Quality" --></priorityMode>
        <corridorMode><!-- opt, ro, xs:string, "ON, OFF" --></corridorMode>
        <channelType><!-- opt, ro, xs:string, "LocalChannel" --></channelType >
        <enctypeType><!-- opt, ro, xs:string, "AES, NoEnctype" --></enctypeType>
        <password ><!-- opt, ro, xs:string, --></password>
        <electronicImageStab><!-- opt, ro, xs:string, "ON, OFF" --></electronicImageStab>
        < electronicImageLevel ><!-- opt, xs:integer--></ electronicImageLevel >
        <SPlus265><!—dep(videoCodecType), xs:boolean --></SPlus265>
</Video>
<Audio>
        <!-- opt -->
        <enabled><!-- req, xs:boolean --></enabled>
</Audio>
    <enableCABAC><!-- opt, xs: boolean --><enableCABAC>
    <subStreamRecStatus><!-- opt, xs: boolean --></subStreamRecStatus>
</StreamingChannel>
```

Test cases

GET/CGI/Streaming/channels/<ID>/type/<ID>

Request XML: none

Response XML: <StreamingChannel>

PUT/CGI/Streaming/channels/<ID>/type/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<StreamingChannel>
<id>1</id>
<channelName>MainStream</channelName>
<Video>
<eventTemplateEnable>true</eventTemplateEnable>
<videoCodecType>H.264M</videoCodecType>
<videoResolutionWidth>960</videoResolutionWidth>
<videoResolutionHeight>1280</videoResolutionHeight>
<videoQualityControlType>VBR</videoQualityControlType>
<vbrUpperCap max="6144">4096</vbrUpperCap>
<vbrLowerCap>128</vbrLowerCap>
<constantBitRate max="6144">4096</ constantBitRate >
<fixedQuality>good</fixedQuality>
<maxFrameRate>10</maxFrameRate>
<H264Profile>Main</H264Profile>
<GovLength>30</GovLength>
<SVC>true</SVC>
<np-Mode>NTSC</np-Mode>
<priorityMode>Quality</priorityMode>
<corridorMode>ON</corridorMode>
<channelType>LocalChannel</channelType>
<enctypeType>AES</enctypeType>
<password>123</password>
<electronicImageStab>ON</electronicImageStab>
< electronicImageLevel >50</ electronicImageLevel >
<smoothing>29</smoothing>
<SPlus265>true</SPlus265>
</Video>
<Audio>
    <enabled>true</enabled>
</Audio>
</StreamingChannel>
```

2.1.2/CGI/Streaming/KeyRegion/channels/<ID>/type/<ID>

/CGI/Streaming/KeyRegion/channels/<ID>/type/<ID>	**General Resource v2.0**
GET	
Description	Acquire key regional parameters
Query	None
Inbound Data	None
Success Return	**<KeyRegion>**
PUT	
Description	Set key regions
Query	None
Inbound Data	**<KeyRegion>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of key regions, helping client or IE query and set key regions of device via CGI protocol, including parameters such as stream type/promotion level.

Explanations on key parameters:

<id> means code stream types, including: Main code stream, auxiliary code stream and third code streams;

<upgradeLevel> means promotion level, including: Best, better, good, fair and poor

<dynamicEnable> means whether enabling dynamic traction: true: Enable; false: Disable

<regionCoordinatesList> means regional coordinates: 4 coordinates at least; listed clockwise from the upper left corner

KeyRegionXML Block

```
<KeyRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!—req:integer --></id>
<upgradeLevel>
<!--req, ro, xs:string, best,beter,good,fair,poor-->
</upgradeLevel>
< dynamicEnable >
<!--req, ro, xs:string, true,flase-->
</ dynamicEnable >
< regionList size="7">
<region>
<id><!—req:integer --><id>
<regionCoordinatesList>
    <regionCoordinates>
        <positionX><!—req:integer --></positionX>
        <positionY><!—req:integer --></positionY>
    </regionCoordinates>
</regionCoordinatesList>
</region>
</regionList >
</KeyRegion>
```

Test cases

GET /CGI/Streaming/KeyRegion/channels/<ID>/type/<ID>

Request XML: none

Response: XML: <KeyRegion>

PUT/CGI/Streaming/KeyRegion/channels/<ID>/type/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<KeyRegion>
<id>1</id>
<upgradeLevel>better</upgradeLevel>
<dynamicEnable>true</dynamicEnable>
<regionList size="7">
<region>
<id>1</id>
<regionCoordinatesList>
<regionCoordinates>
<positionX>1950</positionX>
<positionY>2866</positionY>
</regionCoordinates>
<regionCoordinates>
<positionX>4975</positionX>
<positionY>2866</positionY>
</regionCoordinates>
<regionCoordinates>
<positionX>4975</positionX>
<positionY>7033</positionY>
</regionCoordinates>
<regionCoordinates>
<positionX>1950</positionX>
<positionY>7033</positionY>
</regionCoordinates>
</regionCoordinatesList>
</region>
```

```
</regionList>
</KeyRegion>
```

2.1.3/CGI/Streaming/VencSlice/channels/<ID>

/CGI/Streaming/VencSlice/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire multi-slice setting
Query	None
Inbound Data	None
Success Return	**<vencSlice>**
PUT	
Description	Set multi-slice
Query	None
Inbound Data	**<vencSlice>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for multi-slice setting, helping client or IE set multi-slice of device via CGI protocol, including parameters such as type/size. **Explanations on key parameters:** <type> means type, 0: Disabled; 1: By bit; 2: By macro block number <size> means size by bit; min. value: 128; max. value: 0xFFFF or (WxHx3/2)/2 By macro block; min. value: 1; max. value (image height+15)/16	

vencSliceXML Block

```
<vencSlice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <type><!--req, xs:integer--></type>
    <size><!--req, xs:integer--></size>
</vencSlice>
```

Test cases

GET /CGI/Streaming/VencSlice/channels/<ID>

Request XML: none

Response: XML: <KeyRegion>

PUT/CGI/Streaming/VencSlice/channels/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<vencSlice>
<type>0</type>
<size>0</size>
</vencSlice>
```

2.1.4/CGI/Streaming/channel/<ID>/Splus

/CGI/Streaming/channel/<ID>/Splus	**General Resource v2.0**
PUT	
Description	Set S+265 enabling/disabling
Query	**None**
Inbound Data	**<SplusParameter>**
Success Return	**<ResponseStatus>**

Explanations on protocol: This protocol is prepared for helping IE enable/disable S+265 function of certain channel via CGI protocol. **Explanations on key parameters:** <enable> S+265 enabling/disabling; true: Enable; false: Disabled

SplusParameter Block

```
<SplusParameter>
    <enable><!--req, xs:boolean--></enable>
</SplusParameter>
```

Test cases

PUT /CGI/Streaming/channel/<ID>/Splus

Response XML: <ResponseStatus>

Request: XML: <SplusParameter> as follows

```
<SplusParameter>
    <enable>true</enable>
</SplusParameter>
```

2.1.5 /CGI/Streaming/SplusTemplate/channels/<ID>

/CGI/Streaming/SplusPara/channels/<ID> **General Resource v2.0**	
GET	
Description	Bit rate parameter table corresponding to batch S + enabling/disabling
Query	None
Inbound Data	None
Success Return	**<SplusParameterList>**
Explanations on protocol: This protocol is prepared for acquiring bit rate template and setting bit rate based on the present code mode, resolution and whether S+ is enabled. **Explanations on key parameters:** <SplusParameter > S+265 enabling/disabling; true: Enable; false: Disabled <videoType> means video code type, including: H.264 and H.265 <videoResolutionWidth> represents video resolution width <videoResolutionHeight> represents video resolution height <vbrBitRate> means variable bit rate: Bit rate	

SplusParameterList XML Block

```
<SplusParameterList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<SplusParameter>
<enable><!--req, xs:boolean--></enable>
<videoType ><!-- req, xs:integer--></videoType >
<videoResolutionWidth><!-- req, xs:integer --></videoResolutionWidth>
<videoResolutionHeight><!-- req, xs:integer --></videoResolutionHeight>
<vbrBitRat ><!-- req, xs:integer, in kbps --></vbrBitRate>
</SplusParameter>
</SplusParameterList>
```

Test cases

GET /CGI/Streaming/SplusTemplate**/channels/<ID>**

Request XML: none

Response XML: <RadarParameterList>

Response XML: as below

```
<SplusParameterList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<SplusParameter>
<enable>0</enable>
<videoType >H.264</videoType>
<videoResolutionWidth>960</videoResolutionWidth>
<videoResolutionHeight>1280</videoResolutionHeight>
<vbrBitRate>4096</vbrBitRate>
</SplusParameter>
</SplusParameterList>
```

2.1.6/CGI/Streaming/OneKeyToSplus

/CGI/Streaming/OneKeyToSplus	**General Resource v2.0**
GET	
Description	Acquire one-key S+265 enabling/disabling
Query	None
Inbound Data	None
Success Return	**<OneKeyToSplus>**
PUT	
Description	Set one-key S+265 enabling/disabling
Query	**None**
Inbound Data	**<OneKeyToSplus>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for helping IE acquire or set the one-key enabling/disabling S+265 status via CGI protocol. **Explanations on key parameters:** <enable> true: Enabled false: Disabled	

OneKeyToSplus Block

```
<OneKeyToSplus>
    <enable><!--req, xs:boolean--></enable>
</OneKeyToSplus>
```

Test cases

GET /CGI/Streaming/OneKeyToSplus

Request XML: none

Response XML: <OneKeyToSplus>

PUT /CGI/Streaming/OneKeyToSplus

Response XML: <ResponseStatus>

Request XML: <OneKeyToSplus> as follows

```
<OneKeyToSplus>
    <enable>true</enable>
</OneKeyToSplus>
```

2.1.7/CGI/Streaming/Refresh/channels/<ID>

/CGI/Streaming/Refresh/channels/<ID>	**General Resource v2.0**
PUT	
Description	Refresh the resolution and bit rate of current channel
Query	**None**
Inbound Data	**None**
Success Return	**<ResponseStatus>**

Explanations on protocol: This protocol is prepared for helping IE refresh the resolution and bit rate of current channel via CGI protocol.

Test cases
PUT /CGI/Streaming/Refresh/channels/<ID>
Request XML： none
Response XML： <ResponseStatus>

2.1.8/CGI/Streaming/GetVideoParaResult/channels/<ID>

/CGI/Streaming/GetVideoParaResult/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire the refreshing result of resolution and bit rate of current channel
Query	None
Inbound Data	None
Success Return	**<GetResultInfo>**
Explanations on protocol: This protocol is prepared for helping client acquire the refreshing result of resolution and bit rate of current channel via CGI protocol. **Explanations on key parameters:** <updateFlag> Result 0: No update 1: Update completed	

GetResultInfo XML Block

```
<GetResultInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<updateFlag><!-- req, xs:integer--></updateFlag>
</GetResultInfo>
```

Test cases
GET /CGI/Streaming/GetVideoParaResult/channels/<ID>
Request XML： none
Response XML: <GetResultInfo> As follows

```
<GetResultInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<updateFlag>1</updateFlag>
</GetResultInfo>
```

2.1.9/CGI/Streaming/AudioPonticello/Channels/<ID>/Model/<ID>

/CGI/Streaming/AudioPonticello/Channels/<ID>/Model/<ID>	**General Resource v2.0**
GET	
Description	Acquire the audio change parameters
Query	None
Inbound Data	None
Success Return	**<AudioPonticello>**
PUT	
Description	Set the audio change parameters
Query	None
Inbound Data	**<AudioPonticello>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for realizing intelligent analysis and query of audio change parameters. Model mode is 0 nvr 1 ipc. **Explanations on key parameters:** <enabled> represents whether it is effective， true： start, false： not start	

<touchType> means audio change type; 0-No audio change; 1-Continuous audio change; 2-Motivating audio change
<touchParam> means audio change condition and parameters, depending on the parameter iTouchType.
<pitchLevel> means variable amplitude parameters, 6 levels in total: 0~5; among which, Level 0~2 belongs to female voice level, while Level 3~5 belongs to male voice level

AudioPonticello XML Block

```
<AudioPonticello version="2.0" >
  <enabled><!-- req, xs:boolean --></enabled>
  <touchType><!-- req, xs: integer --></touchType>
  <touchParam><!-- req, xs: integer --></touchParam>
  <pitchLevel><!-- req, xs: integer --></pitchLevel>
</AudioPonticello>
```

Test cases

GET /CGI/Streaming/AudioPonticello/channels/<ID>/Model/<ID>

Request XML: none

Response XML: <AudioPonticello >

PUT /CGI/Streaming/AudioPonticello/channels/<ID>/Model/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<AudioPonticello version="2.0">
  <enabled>true</enabled>
  <touchType>1</touchType>
  <touchParam>1</touchParam>
  <pitchLevel>3</pitchLevel>
</AudioPonticello>
```

2.2/CGI/Image

2.2.1/CGI/Image/Channels/<ID>/VideoTurn/<ID>

/CGI/Image/Channels/<ID>/VideoTurn/<ID>	**General Resource v2.0**
PUT	
Description	Set video turning
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting video turning of device, helping client or IE set video turning of device via CGI protocol. **Explanations on key parameters:** < VideoTurn > means turning mode; 1-Horizontal turn; 2-Vertical turn; 3-Inverted turn	

Test cases

PUT/CGI/Image/Channels/<ID>/VideoTurn/<ID>

Response XML: <ResponseStatus>

Request XML: None

2.2.2/CGI/Image/Channels/<ID>/OnePushFocus

/CGI/Image/Channels/<ID>/OnePushFocus	**General Resource v2.0**
PUT	
Description	Set one-key focus

Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting one-key focus of device, helping client or IE set one-key focus of device via CGI protocol.	

Test cases
PUT/CGI/Image/Channels/<ID>/OnePushFocus
Response XML: <ResponseStatus>
Request XML: None

2.2.3/CGI/Image/Channels/<ID>/SnapShot

/CGI/Image/Channels/<ID>/SnapShot General Resource v2.0	
PUT	
Description	Set frontend snapshot
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting frontend snapshot of device, helping client or IE set frontend snapshot of device via CGI protocol.	

Test cases
PUT/CGI/Image/Channels/<ID>/SnapShot
Response XML: <ResponseStatus>
Request XML: None

2.2.4/CGI/Image/channels/<ID>/SnapShotResolution

/CGI/Image/channels/<ID>/SnapShotResolution General Resource v2.0	
GET	
Description	Acquire snapshot resolution
Query	None
Inbound Data	None
Success Return	**<SnapShotResolution>**
PUT	
Description	Set snapshot resolution
Query	None
Inbound Data	**<SnapShotResolution>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of snapshot resolution, helping client or IE query and set snapshot resolution of device via CGI protocol.	

SnapShotResolutionXML Block

```
<SnapShotResolution version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <ResolutionWide><!-- opt, xs:integer --><!--req, xs:integer--></ResolutionWide>// Note: opt="" if otp content is null, snapshot resolution setting is not supported
    <ResolutionHigh><!-- opt, xs:integer --><!--req, xs:integer--></ResolutionHigh>// Note: opt="" if otp content is null, snapshot resolution setting is not supported
<SnapShotResolution>
```

Test cases
GET /CGI/Image/channels/<ID>/SnapShotResolution
Request XML： none
Response XML: <SnapShotResolution>
PUT/CGI/Image/channels/<ID>/SnapShotResolution
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SnapShotResolution>
<ResolutionWide opt="1280,1280,1920">1280</ResolutionWide>
<ResolutionHigh opt="720,960,1080">720</ResolutionHigh>
</SnapShotResolution>
```

2.2.5/CGI/Image/channels/<ID>/ImageSchedule

/CGI/Image/channels/<ID>/ImageSchedule	**General Resource v2.0**
GET	
Description	Acquire HD template parameters
Query	None
Inbound Data	None
Success Return	**<ImageSchedule>**
PUT	
Description	Set HD template parameters
Query	None
Inbound Data	**<ImageSchedule>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of HD template parameters, helping client or IE query and set HD template parameters via CGI protocol, including template switching mode/Schedule quantity/enable/start time/end time/template ID/status type.
Explanations on key parameters:
<mode> means template switching mode, including: Auto (day/night status), manual (time frame)
<scheduleNumber> means Schedule quantity
<id> means corresponding serial number of Schedule
<enable> means enabling enabling/disabling, true: Enable, false: Disable
<startTime> means start time; format: 10:31 (hour: minute)
<endTime> means end time; format: 10:32 (hour: minute)
<scheduleID> means template ID
<mode> means day/night status type
<scheduleID> means template ID

ImageScheduleXML Block

```
< ImageSchedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<mode><!--req, xs:string,"auto,manual" --></mode>
<ImageSchedulelist>
    <scheduleNumber><!--req,xs:integer,min:0,max:8--></scheduleNumber>
    <ImageSettingSchedule>
        <id><!--req,xs:integer--></id >
        <enable><!-- req, xs:boolean --></enable>
        <startTime><!--req, xs:string, --></startTime>
        <endTime><!--req, xs:string, --></endTime>
        <scheduleID><!--req,xs:integer--><scheduleID>
</ImageSettingSchedule>
</ImageSchedulelist>
<AutoScheduleList>
```

```
<AutoSchedule>
<mode><!--req, xs:string,"day, night" --></mode>
<scheduleID><!--req,xs:integer--><scheduleID>
</AutoSchedule>
</AutoScheduleList>
< /ImageSchedule>
```

Test cases

GET /CGI/Image/channels/<ID>/ImageSchedule

Request XML： none

Response XML: <ImageSchedule>

PUT/CGI/Image/channels/<ID>/ImageSchedule

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ImageSchedule>
<mode>manual</mode>
<ImageSchedulelist>
<scheduleNumber>4</scheduleNumber>
<ImageSettingSchedule>
<id>0</id>
<enable>true</enable>
<startTime>00:00</startTime>
<endTime>01:35</endTime>
<scheduleID>0</scheduleID>
</ImageSettingSchedule>
<ImageSettingSchedule>
<id>1</id>
<enable>true</enable>
<startTime>01:35</startTime>
<endTime>05:00</endTime>
<scheduleID>1</scheduleID>
</ImageSettingSchedule>
<ImageSettingSchedule>
<id>2</id>
<enable>true</enable>
<startTime>05:00</startTime>
<endTime>06:20</endTime>
<scheduleID>2</scheduleID>
</ImageSettingSchedule>
<ImageSettingSchedule>
<id>3</id>
<enable>true</enable>
<startTime>06:20</startTime>
<endTime>08:15</endTime>
<scheduleID>3</scheduleID>
</ImageSettingSchedule>
</ImageSchedulelist>
<AutoScheduleList>
<AutoSchedule>
<mode>day</mode>
<scheduleID>0</scheduleID>
</AutoSchedule>
<AutoSchedule>
<mode>night</mode>
<scheduleID>0</scheduleID>
</AutoSchedule>
</AutoScheduleList>
```

```
</ImageSchedule>
```

2.2.6/CGI/Image/channels/<ID>/currentTemplate

/CGI/Image/channels/<ID>/currentTemplate	**General Resource v2.0**
GET	
Description	Acquire information of current template
Query	None
Inbound Data	None
Success Return	**<CurrentTemplate>**
Explanations on protocol: This protocol is prepared for query and setting of information of current template, helping client or IE query and set the current template information of device via CGI protocol. **Explanations on key parameters:** <scheduleType> means template ID	

CurrentTemplateXML Block

```
<CurrentTemplate version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<scheduleType><!--req,xs:integer--><scheduleType>
</CurrentTemplate>
```

Test cases

GET /CGI/Image/channels/<ID>/currentTemplate

Request XML： none

Response XML: <CurrentTemplate>

```
<?xml version="1.0" encoding="UTF-8"?>
<CurrentTemplate>
<scheduleType>255</scheduleType>
</CurrentTemplate>
```

2.2.7/CGI/Image/channels/<ID>/default

/CGI/Image/channels/<ID>/default	**General Resource v2.0**
PUT	
Description	Set recovery default
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for recovering the default setting of device HD parameters, helping client or IE recover the default setting of device via CGI protocol.	

Test cases

PUT/CGI/Image/channels/<ID>/default

Response XML： <ResponseStatus>

Request XML： None

2.2.8/CGI/Image/channels/<ID>/templateName/template/<ID>

/CGI/Image/channels/<ID>/templateName/template/<ID>	**General Resource v2.0**
GET	

Description	Acquire template name
Query	None
Inbound Data	None
Success Return	**<TemplateName>**
PUT	
Description	Set template name
Query	None
Inbound Data	**<TemplateName>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of template name, helping client or IE query and set the template name of device via CGI protocol. **Explanations on key parameters:** <name> means template name, with 31 characters at most <template> Value range: 0-7; if other values are adopted, the device will return to the user-defined template	

TemplateNameXML Block

```
<TemplateName version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<name><!--req,xs:string--></name>
</TemplateName >
```

Test cases

GET /CGI/Image/channels/<ID>/templateName/template/<ID>

Request XML： none

Response XML: <TemplateName>

PUT/CGI/Image/channels/<ID>/templateName/template/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<templateName>
<name>outdoor</name>
</templateName>
```

2.2.9/CGI/Image/channels/<ID>/color/template/<ID>

/CGI/Image/channels/<ID>/color/template/<ID> General Resource v2.0	
GET	
Description	Acquire image adjustment parameters
Query	None
Inbound Data	None
Success Return	**<Color>**
PUT	
Description	Set image adjustment parameters
Query	None
Inbound Data	**<Color>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of image adjustment parameters, helping client or IE query and set image adjustment parameters of device via CGI protocol, including brightness/contrast/saturation/chromaticity.
Explanations on key parameters:
<brightnessLevel> means brightness, range: 0-100
<contrastLevel> means contrast, range: 0-100
<saturationLevel> means saturation, range: 0-100
<hueLevel> means chromaticity, range: 0-100

ColorXML Block

```
<Color version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<brightnessLevel><!--opt, xs:integer --></brightnessLevel>
<contrastLevel><!--opt, xs:integer --></contrastLevel>
<saturationLevel><!--opt, xs:integer --></saturationLevel>
<hueLevel><!--opt, xs:integer --></hueLevel >
<grayScale>
<grayScaleMode><!--opt,xs:string,"indoor,outdoor"--><grayScaleMode>
<grayScale>
</Color>
```

Test cases
GET /CGI/Image/channels/<ID>/color/template/<ID>
Request XML: none
Response XML: <Color>
PUT/CGI/Image/channels/<ID>/color/template/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Color>
<brightnessLevel>41</brightnessLevel>
<contrastLevel>60</contrastLevel>
<saturationLevel>33</saturationLevel>
<hueLevel>63</hueLevel>
</Color>
```

2.2.10/CGI/Image/channels/<ID>/sharpness/template/<ID>

/CGI/Image/channels/<ID>/sharpness/template/<ID> General Resource v2.0	
GET	
Description	Acquire sharpness level adjustment parameters
Query	None
Inbound Data	None
Success Return	**<Sharpness>**
PUT	
Description	Set sharpness level adjustment parameters
Query	None
Inbound Data	**<Sharpness>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of sharpness level adjustment parameters, helping client or IE query and set sharpness level adjustment parameters of device via CGI protocol.
Explanations on key parameters:
<sharpnessLevel> means sharpness level, range: 0-100

SharpnessXML Block

```
<Sharpness version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<sharpnessLevel><!--req, xs:integer--></sharpnessLevel/>
</Sharpness>
```

Test cases
GET /CGI/Image/channels/<ID>/sharpness/template/<ID>
Request XML: none
Response XML: <Sharpness>
PUT/CGI/Image/channels/<ID>/sharpness/template/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Sharpness>
<sharpnessLevel>34</sharpnessLevel>
</Sharpness>
```

2.2.11/CGI/Image/channels/<ID>/shutter/template/<ID>

/CGI/Image/channels/<ID>/shutter/template/<ID>	**General Resource v2.0**
GET	
Description	Acquire exposure parameters
Query	None
Inbound Data	None
Success Return	**<Shutter>**
PUT	
Description	Set exposure parameters
Query	None
Inbound Data	**<Shutter>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of exposure parameters, helping client or IE query and set device exposure parameters of device via CGI protocol, including shutter speed. **Explanations on key parameters:** <ShutterLevel> means shutter speed	

ShutterXML Block

```
<Shutter version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<ShutterLevel><!--dep,dependson <ExposureType>,xs:string, "
1,1/2,1/3,1/4,1/5,1/6,1/8,1/10,1/12,1/15,1/25,1/30,1/50,1/60,1/80,1/100,1/120,1/125,1/150,1/180
,1/200,1/250,1/500,1/1k,1/2k,1/4k,1/10k,1/100k"--><ShutterLevel>
</Shutter>
```

Test cases
GET /CGI/Image/channels/<ID>/shutter/template/<ID>
Request XML: none
Response XML: <Shutter>
PUT/CGI/Image/channels/<ID>/shutter/template/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Shutter>
<ShutterLevel>1/25</ShutterLevel>
</Shutter>
```

2.2.12/CGI/Image/channels/<ID>/gain/template/<ID>

/CGI/Image/channels/<ID>/gain/template/<ID> General Resource v2.0	
GET	
Description	Acquire auto gain parameters
Query	None
Inbound Data	None
Success Return	**<Gain>**
PUT	
Description	Set auto gain parameters
Query	None
Inbound Data	**<Gain>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of auto gain parameters, helping client or IE query and set auto gain parameters of device via CGI protocol. **Explanations on key parameters:** <GainLevel> means auto gain, range: 0-100	

GainXML Block

```
<Gain version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<GainLevel/><!-- dep,depends on <ExposureType>, xs:integer---->
</Gain>
```

Test cases

GET /CGI/Image/channels/<ID>/gain/template/<ID>

Request XML： none

Response XML: <Gain>

PUT/CGI/Image/channels/<ID>/gain/template/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Gain>
<GainLevel>100</GainLevel>
</Gain>
```

2.2.13/CGI/Image/channels/<ID>/brightness/template/<ID>

/CGI/Image/channels/<ID>/brightness/template/<ID> General Resource v2.0	
GET	
Description	Acquire brightness adjustment parameters
Query	None
Inbound Data	None
Success Return	**<Brightness>**
PUT	
Description	Set brightness adjustment parameters
Query	None
Inbound Data	**<Brightness>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of brightness adjustment parameters, helping client or IE query and set brightness adjustment parameters of device via CGI protocol. **Explanations on key parameters:** <brightLevel> means brightness adjustment, range: 0-100	

BrightnessXML Block

```
<Brightness version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <brightLevel><!--req, xs:integer --></brightLevel>
</Brightness>
```

Test cases
GET /CGI/Image/channels/<ID>/brightness/template/<ID>
Request XML: none
Response XML: <Brightness>
PUT/CGI/Image/channels/<ID>/brightness/template/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Brightness>
<brightLevel>41</brightLevel>
</Brightness>
```

2.2.14/CGI/Image/channels/<ID>/AEspeed/template/<ID>

/CGI/Image/channels/<ID>/AEspeed/template/<ID>	**General Resource v2.0**
GET	
Description	Acquire AE adjustment parameters
Query	None
Inbound Data	None
Success Return	**<AEspeed>**
PUT	
Description	Set AE adjustment parameters
Query	None
Inbound Data	**<AEspeed>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of AE adjustment parameters, helping client or IE query and set AE adjustment parameters of device via CGI protocol.
Explanations on key parameters:
<aespeedLevel> means AE adjustment, range: 0-100

AEspeedXML Block

```
<AEspeed version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <aespeedLevel><!--req, xs:integer --></aespeedLevel>
</AEspeed>
```

Test cases
GET /CGI/Image/channels/<ID>/AEspeed/template/<ID>
Request XML: none
Response XML: <AEspeed>
PUT/CGI/Image/channels/<ID>/AEspeed/template/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AEspeed>
<aespeedLevel>25</aespeedLevel>
</AEspeed>
```

2.2.15/CGI/Image/channels/<ID>/Iris/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/Iris/template/<ID>/type/<ID>	**General Resource v2.0**

GET	
Description	Acquire aperture parameters
Query	None
Inbound Data	None
Success Return	**<Irisversion>**
PUT	
Description	Set aperture parameters
Query	None
Inbound Data	**<Irisversion>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of aperture parameters, helping client or IE query and set aperture parameters of device via CGI protocol.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<enabled> means auto aperture enabling/disabling; true: Enable, false: Disable
<maxIrisLevelLimit> means the max. aperture; aperture size is as follows:
<minIrisLevelLimit> means the min. aperture; aperture size is as follows:
Under manual mode: 0-Disabled, 1-F1.6, 2-F2.0, 3-F3.4, 4-F4.4, 5-F6.0, 6-F8.0, 7-F11;8-F2.2, 9-F2.3, 10-F2.4, 11-F2.8, 12-F3.2, 13-F4.0, 14-F4.5, 15-F4.8, 16-F5.6, 17-F6.4, 18-F6.8, 19-F9.0, 20-F9.1, 21-F9.6, 22-F12.8, 23-F14.0, 24-F18.1, 25-F25.6, 26-F36.2
LNM3020: 0-255 Continuous

IrisversionXML Block

```
<Irisversion="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<currentTemplate><!-- req,xs:string, --><currentTemplate>
<enabled><!-- opt, xs:boolean --></enabled>
<mode><!-- opt, xs:string,"DC,P-iris" --><mode>// Aperture mode, DC, P-iris (this field is unused temporarily)
<IrisLevel/><!--opt, xs:integer -->
<irisSpeed><!--opt, xs:integer --></irisSpeed>
<maxIrisLevelLimit><!--opt, xs:integer --></maxIrisLevelLimit>
<minIrisLevelLimit><!--opt, xs:integer --></minIrisLevelLimit>
</Iris>
```

Test cases
GET /CGI/Image/channels/<ID>/Iris/template/<ID>/type/<ID>
Request XML: none
Response XML: <Irisversion>
PUT/CGI/Image/channels/<ID>/Iris/template/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Iris>
<enabled>true</enabled>
<maxIrisLevelLimit>10</maxIrisLevelLimit>
<minIrisLevelLimit>0</minIrisLevelLimit>
</Iris>
```

2.2.16/CGI/Image/channels/<ID>/smartIR/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/smartIR/template/<ID>/type/<ID> General Resource v2.0	
GET	
Description	Acquire smart IR parameters
Query	None
Inbound Data	None

Success Return	**<SmartIR>**
PUT	
Description	Set smart IR parameters
Query	None
Inbound Data	**<SmartIR>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of smart IR parameters, helping client or IE query and set smart IR parameters of device via CGI protocol. **Explanations on key parameters:** <type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image <enabled> means smart IR enabling/disabling, true: Enabled, false: Disabled	

SmartIRXML Block

```
<SmartIR version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!--req, xs:boolean --><enabled>
<SmartIR>
```

Test cases

GET /CGI/Image/channels/<ID>/smartIR/template/<ID>/type/<ID>

Request XML: none

Response XML: <SmartIR>

PUT/CGI/Image/channels/<ID>/smartIR/template/<ID>/type/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SmartIR>
<enabled>true</enabled>
</SmartIR>
```

2.2.17/CGI/Image/channels/<ID>/BLC/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/BLC/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire BLC parameters
Query	None
Inbound Data	None
Success Return	**<BLC>**
PUT	
Description	Set BLC parameters
Query	None
Inbound Data	**<BLC>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of BLC parameters, helping client or IE query and set BLC parameters of device via CGI protocol, including backlight compensation region/coordinates. **Explanations on key parameters:** type means different image parameter types; 0-Monitoring image; 1-Snapshot image; 2-Analysis image <enabled> means enabled; true: Enabled, false: Disabled <BLCRegionList> means backlight compensation region <positionX> means X coordinates, ten-thousandth, value range 0-10000 <positionY> means Y coordinates, ten-thousandth, value range 0-10000	

BLCXML Block

```
<BLC version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<enabled/><!-- req, xs:boolean -->
<BLCMode/><!--opt, xs:string, "UP, DOWN, LEFT, RIGHT, CENTER , MULTI-AREA,Region" -->
<BLCLevel><!-- opt,xs:integer--></BLCLevel>
<BLCRegionList><!--dep-->
<BLCRegion>
<id><!--req,integer--></id>// Only 1 region is supported temporarily, this field is disabled temporarily
<RegionCoordinatesList>
        <RegionCoordinates><!--opt-->
            <positionX><!--req,xs:integer;coordinate--></positionX>
            <positionY><!--req,xs:integer;coordinate--></positionY>
        </RegionCoordinates>
    </RegionCoordinatesList>
</BLCRegion>
</BLCRegionList>
</BLC>
```

Test cases

GET /CGI/Image/channels/<ID>/BLC/template/<ID>/type/<ID>

Request XML： none

Response XML: <BLC>

PUT/CGI/Image/channels/<ID>/BLC/template/<ID>/type/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<BLC>
<enabled>true</enabled>
<BLCRegionList>
<BLCRegion>
<id>1</id>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>3636</positionX>
<positionY>2187</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8940</positionX>
<positionY>7951</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</BLCRegion>
</BLCRegionList>
</BLC>
```

2.2.18/CGI/Image/channels/<ID>/lightSuppression/template/<ID>

/CGI/Image/channels/<ID>/lightSuppression/template/<ID> General Resource v2.0	
GET	
Description	Acquire strong light suppression parameters
Query	None
Inbound Data	None
Success Return	**<LightSuppression>**
PUT	
Description	Set strong light suppression parameters

Query	None
Inbound Data	**<LightSuppression>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of strong light suppression parameters, helping client or IE query and set strong light suppression parameters of device via CGI protocol.
Explanations on key parameters:
<enabled> means strong light suppression enabling/disabling; true: Enabled; false: Disabled
<lightSuppressionStrength> means strong light suppression strength; range: 1-100

LightSuppressionXML Block

```
< LightSuppression>
<enabled><!-- req, xs:boolean --></enabled>
<lightSuppressionStrength><!-- opt,xs:integer--></lightSuppressionStrength>
</LightSuppression>
```

Test cases
GET /CGI/Image/channels/<ID>/lightSuppression/template/<ID>
Request XML: none
Response XML: <LightSuppression>
PUT/CGI/Image/channels/<ID>/lightSuppression/template/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<LightSuppression>
<enabled>true</enabled>
<lightSuppressionStrength>50</lightSuppressionStrength>
</LightSuppression>
```

2.2.19/CGI/Image/channels/<ID>/WDR/template/<ID>

/CGI/Image/channels/<ID>/WDR/template/<ID> General Resource v2.0	
GET	
Description	Acquire ultra-wide dynamic parameters
Query	None
Inbound Data	None
Success Return	**<WDR>**
PUT	
Description	Set ultra-wide dynamic parameters
Query	None
Inbound Data	**<WDR>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of ultra-wide dynamic parameters, helping client or IE query and set ultra-wide dynamic parameters of device via CGI protocol.
Explanations on key parameters:
<mode> means ultra-wide dynamic strategy, increase backlight compensation item; open: Manual control of ultra-wide dynamics, close: Disable; auto: Auto control of ultra-wide dynamics; blc: Backlight compensation
<WDRLevel> means ultra-wide dynamic level; range: 1-100

WDRXML Block

```
<WDR version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<mode><!--req, xs:string,"open,close,auto,blc"--></mode>
<WDRLevel><!--opt,xs:integer--></WDRLevel>
<WDRContrastLevel><!--opt, xs:integer --></WDRContrastLevel>
<WDRLevel1><!--opt,xs:integer--></WDRLevel1>
</WDR >
```

Test cases

GET /CGI/Image/channels/<ID>/WDR/template/<ID>

Request XML： none

Response XML: <WDR>

PUT/CGI/Image/channels/<ID>/WDR/template/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<WDR>
<mode>blc</mode>
<WDRLevel>50</WDRLevel>
</WDR>
```

2.2.20/CGI/Image/channels/<ID>/whiteBalance/template/<ID>

/CGI/Image/channels/<ID>/whiteBalance/template/<ID> General Resource v2.0	
GET	
Description	Acquire white balance adjustment parameters
Query	None
Inbound Data	None
Success Return	**<WhiteBalance>**
PUT	
Description	Set white balance adjustment parameters
Query	None
Inbound Data	**<WhiteBalance>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of white balance adjustment parameters, helping client or IE query and set white balance adjustment parameters of device via CGI protocol, including type/scope.

Explanations on key parameters:

<WhiteBalanceStyle/> means white balance adjustment, auto: Auto; manual-auto: Semi-auto; sunny: Sunny; fluorescent_lamp: Fluorescent light; warm_light: Warm light; filament_lamp: Incandescent filament lamp; natural_light: Natural light; lock_wb: Lock white balance; manual: Manual

<WhiteBalanceRed/> means R, range: 0-100

<WhiteBalanceBlue/> means B, range: 0-100

WhiteBalanceXML Block

```
<WhiteBalance version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<WhiteBalanceStyle/><!--req,xs:string"auto,manual_auto,sunny,fluorescent_lamp,warm_light,f
ilament_lamp,natural_light,lock_wb"-->
<WhiteBalanceRed/><!--dep, depends on <WhiteBlanceStyle>manual_auto 、 manual,
xs:integer, -->
<WhiteBalanceBlue/><!--dep, depends on <WhiteBlanceStyle> manual_auto 、
manual,xs:integer -->
</WhiteBalance>
```

Test cases

GET /CGI/Image/channels/<ID>/whiteBalance/template/<ID>

Request XML： none

Response XML: <WhiteBalance>
PUT/CGI/Image/channels/<ID>/whiteBalance/template/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<WhiteBalance>
<WhiteBalanceStyle>sunny</WhiteBalanceStyle>
<WhiteBalanceRed>50</WhiteBalanceRed>
<WhiteBalanceBlue>50</WhiteBalanceBlue>
</WhiteBalance>
```

2.2.21/CGI/Image/channels/<ID>/noiseReduce/template/<ID>

/CGI/Image/channels/<ID>/noiseReduce/template/<ID> General Resource v2.0	
GET	
Description	Acquire digital noise reduction parameters
Query	None
Inbound Data	None
Success Return	**<NoiseReduce>**
PUT	
Description	Set digital noise reduction parameters
Query	None
Inbound Data	**<NoiseReduce>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of digital noise reduction parameters, helping client or IE query and set digital noise reduction parameters of device via CGI protocol, including noise reduction level/spatial domain noise reduction/time domain noise reduction.
Explanations on key parameters:
<mode> means digital noise reduction, close: Disable; general: General mode, advanced: Expert mode
<generalLevel> means noise reduction level; range: 1-100
<FrameNoiseReduceLevel> means spatial domain noise reduction; range: 1-100
<InterFrameNoiseReduceLevel> means time domain noise reduction; range: 1-100

NoiseReduceXML Block

```
<NoiseReduce version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<mode><!--req,xs:string,"close, general, advanced"--></mode>
<GeneralMode><!--dep,depends on <mode> -->
<generalLevel><!--req,depends on <mode> general,xs:integer--></generalLevel>
</GeneralMode>
<AdvancedMode><!--dep -->
<FrameNoiseReduceLevel>
<!--req,depends on <mode> advanced,xs:integer--></FrameNoiseReduceLevel>
<InterFrameNoiseReduceLevel>
<!--req,depends on <mode> advanced,xs:integer--></InterFrameNoiseReduceLevel>
</AdvancedMode>
</NoiseReduce>
```

Test cases
GET /CGI/Image/channels/<ID>/noiseReduce/template/<ID>
Request XML: none
Response XML: <NoiseReduce>
PUT/CGI/Image/channels/<ID>/noiseReduce/template/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<NoiseReduce>
<mode>general</mode>
<GeneralMode>
<generalLevel>25</generalLevel>
</GeneralMode>
<AdvancedMode>
<FrameNoiseReduceLevel>25</FrameNoiseReduceLevel>
<InterFrameNoiseReduceLevel>0</InterFrameNoiseReduceLevel>
</AdvancedMode>
</NoiseReduce>
```

2.2.22/CGI/Image/channels/<ID>/ImageStyle/template/<ID>

/CGI/Image/channels/<ID>/ImageStyle/template/<ID> **General Resource v2.0**	
GET	
Description	Acquire image style parameters
Query	None
Inbound Data	None
Success Return	**<ImageStyle>**
PUT	
Description	Set image style parameters
Query	None
Inbound Data	**<ImageStyle>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of image style parameters, helping client or IE query and set image style parameters of device via CGI protocol. **Explanations on key parameters:** <style> means image style; Self-adaption: Self-adaption; Natural: Natural; Bright: Bright; Gentle: Gentle; Bright-coloured: Bright	

ImageStyleXML Block

```
<ImageStyle version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<style><!--req,xs:string,"Self-adaption,Natural,Bright,Gentle,Bright-coloured"--></style>
</ImageStyle>
```

Test cases

GET /CGI/Image/channels/<ID>/ImageStyle/template/<ID>

Request XML: none

Response XML: <ImageStyle>

PUT/CGI/Image/channels/<ID>/ImageStyle/template/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ImageStyle>
<style>Self-adaption</style>
</ImageStyle>
```

2.2.23/CGI/Image/channels/<ID>/SceneMode/template/<ID>

/CGI/Image/channels/<ID>/SceneMode/template/<ID> **General Resource v2.0**	
GET	
Description	Acquire indoor/outdoor mode

Query	None
Inbound Data	None
Success Return	**<DoorMode>**
PUT	
Description	Set indoor/outdoor mode
Query	None
Inbound Data	**<DoorMode>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of indoor/outdoor mode, helping client or IE query and set indoor/outdoor mode of device via CGI protocol. **Explanations on key parameters:** <mode> means indoor/outdoor mode, indoor: Indoor; outdoor: Outdoor	

DoorModeXML Block

```
<DoorMode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <mode><!--req,xs:string,"indoor,outdoor"--></mode>
<DoorMode >
```

Test cases

GET /CGI/Image/channels/<ID>/SceneMode/template/<ID>

Request XML： none

Response XML: <DoorMode>

PUT/CGI/Image/channels/<ID>/SceneMode/template/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DoorMode>
<mode>outdoor</mode>
</DoorMode>
```

2.2.24/CGI/Image/channels/<ID>/Defog/template/<ID>

/CGI/Image/channels/<ID>/Defog/template/<ID> **General Resource v2.0**	
GET	
Description	Acquire defog mode parameters
Query	None
Inbound Data	None
Success Return	**<Defog>**
PUT	
Description	Set defog mode parameters
Query	None
Inbound Data	**<Defog>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of defog mode, helping client or IE query and set defog mode of device via CGI protocol. **Explanations on key parameters:** <enbaled> means defog; true: Enable; false: Disable <defogStrength> means defog strength; range: 1-100	

DefogXML Block

```
<Defog version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
    <enbaled><!-- req, xs:boolean --><enabled>
    <defogStrength><!--dep,xs:integer--></defogStrength>
</Defog>
```

Test cases

GET /CGI/Image/channels/<ID>/Defog/template/<ID>
Request XML： none
Response XML: <Defog>
PUT/CGI/Image/channels/<ID>/Defog/template/<ID>
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Defog>
<enbaled>true</enbaled>
<defogStrength>50</defogStrength>
</Defog>
```

2.2.25/CGI/Image/channels/<ID>/recover/template/<ID>

/CGI/Image/channels/<ID>/recover/template/<ID> **General Resource v2.0**	
PUT	
Description	Set recovery of original template
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for recovering original template of device, helping client or IE query and set original template of device via CGI protocol.	

Test cases
PUT/CGI/Image/channels/<ID>/recover/template/<ID>
Response XML： <ResponseStatus>
Request XML： None

2.2.26/CGI/Image/channels/<ID>/default/type/<ID>

/CGI/Image/channels/<ID>/default/type/<ID> **General Resource v2.0**	
PUT	
Description	Set recovery default
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for recovering default setting of device, helping client or IE recover the default setting of device via CGI protocol. <type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image	

Test cases
PUT/CGI/Image/channels/<ID>/default/type/<ID>
Response XML： <ResponseStatus>
Request XML： None

2.2.27/CGI/Image/channels/<ID>/brightness/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/brightness/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire brightness adjustment parameters
Query	None

Inbound Data	None
Success Return	**<Brightness>**
PUT	
Description	Set brightness adjustment parameters
Query	None
Inbound Data	**<Brightness>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of brightness adjustment parameters, helping client or IE query and set brightness adjustment parameters of device via CGI protocol. **Explanations on key parameters:** <type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image <brightLevel> means brightness adjustment, range: 0-100	

BrightnessXML Block

```
<Brightness version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <brightLevel><!--req, xs:integer --></brightLevel>
</Brightness>
```

Test cases

GET /CGI/Image/channels/<ID>/brightness/template/<ID>/type/<ID>

Request XML: none

Response XML: <Brightness>

PUT/CGI/Image/channels/<ID>/brightness/template/<ID>/type/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Brightness>
<brightLevel>41</brightLevel>
</Brightness>
```

2.2.28/CGI/Image/channels/<ID>/ExposalMode/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/ExposalMode/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire exposure mode
Query	None
Inbound Data	None
Success Return	**<ExposalMode>**
PUT	
Description	Set exposure mode
Query	None
Inbound Data	**<ExposalMode>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of exposure mode, helping client or IE query and set exposure mode of device via CGI protocol. **Explanations on key parameters:** <type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image <exposalType> means exposure mode type; 0-Auto; 1-Manual; 3-Shutter priority; 3-Aperture priority	

WhiteBalanceXML Block

```
<ExposalMode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<exposalType opt=""><!—opt, xs:integer ="0,1,2…"></exposalType>
</ExposalMode>
```

Test cases

GET /CGI/Image/channels/<ID>/ExposalMode/template/<ID>/type/<ID>

Request XML： none

Response XML: <ExposalMode>

PUT/CGI/Image/channels/<ID>/ExposalMode/template/<ID>/type/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ExposalMode>
<exposalType opt="0,1,2,3">0</exposalType>
</ExposalMode>
```

2.2.29/CGI/Image/channels/<ID>/shutter/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/shutter/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire exposure parameters
Query	None
Inbound Data	None
Success Return	**<Shutter>**
PUT	
Description	Set exposure parameters
Query	None
Inbound Data	**<Shutter>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of exposure parameters, helping client or IE query and set device exposure parameters of device via CGI protocol, including shutter speed.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<ShutterLevel> means shutter speed

ShutterXML Block

```
<Shutter version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<ShutterLevel><!--dep,dependson <ExposureType>,xs:string, "
1,1/2,1/3,1/4,1/5,1/6,1/8,1/10,1/12,1/15,1/25,1/30,1/50,1/60,1/80,1/100,1/120,1/125,1/150,1/180
,1/200,1/250,1/500,1/1k,1/2k,1/4k,1/10k,1/100k"--><ShutterLevel>
</Shutter>
```

Test cases

GET /CGI/Image/channels/<ID>/shutter/template/<ID>/type/<ID>

Request XML： none

Response XML: <Shutter>

PUT/CGI/Image/channels/<ID>/shutter/template/<ID>/type/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Shutter>
<ShutterLevel>1/25</ShutterLevel>
</Shutter>
```

2.2.30/CGI/Image/channels/<ID>/AEspeed/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/AEspeed/template/<ID>/type/<ID> General Resource v2.0	
GET	
Description	Acquire AE adjustment parameters
Query	None
Inbound Data	None
Success Return	**<AEspeed>**
PUT	
Description	Set AE adjustment parameters
Query	None
Inbound Data	**<AEspeed>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of AE adjustment parameters, helping client or IE query and set AE adjustment parameters of device via CGI protocol.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<aespeedLevel> means AE adjustment, range: 0-100

AEspeedXML Block

```
<AEspeed version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <aespeedLevel><!--req, xs:integer --></aespeedLevel>
</AEspeed>
```

Test cases
GET /CGI/Image/channels/<ID>/AEspeed/template/<ID>/type/<ID>
Request XML: none
Response XML: <AEspeed>
PUT/CGI/Image/channels/<ID>/AEspeed/template/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AEspeed>
<aespeedLevel>25</aespeedLevel>
</AEspeed>
```

2.2.31/CGI/Image/channels/<ID>/color/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/color/template/<ID>/type/<ID> General Resource v2.0	
GET	
Description	Acquire image adjustment parameters
Query	None
Inbound Data	None
Success Return	**<Color>**
PUT	
Description	Set image adjustment parameters
Query	None
Inbound Data	**<Color>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of image adjustment parameters, helping client or IE query and set image adjustment parameters of device via CGI protocol, including brightness/contrast/saturation/chromaticity.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<brightnessLevel> means brightness, range: 0-100
<contrastLevel> means contrast, range: 0-100
<saturationLevel> means saturation, range: 0-100
<hueLevel> means chromaticity, range: 0-100

ColorXML Block

```
<Color version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<brightnessLevel><!--opt, xs:integer --></brightnessLevel>
<contrastLevel><!--opt, xs:integer --></contrastLevel>
<saturationLevel><!--opt, xs:integer --></saturationLevel>
<hueLevel><!--opt, xs:integer --></hueLevel >
<grayScale>
<grayScaleMode><!--opt,xs:string,"indoor,outdoor"--><grayScaleMode>
<grayScale>
</Color>
```

Test cases
GET /CGI/Image/channels/<ID>/color/template/<ID>/type/<ID>
Request XML: none
Response XML: <Color>
PUT/CGI/Image/channels/<ID>/color/template/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Color>
<brightnessLevel>41</brightnessLevel>
<contrastLevel>60</contrastLevel>
<saturationLevel>33</saturationLevel>
<hueLevel>63</hueLevel>
</Color>
```

2.2.32/CGI/Image/channels/<ID>/ImageStyle/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/ImageStyle/template/<ID>/type/<ID> **GeneralResource v2.0**	
GET	
Description	Acquire image style parameters
Query	None
Inbound Data	None
Success Return	**<ImageStyle>**
PUT	
Description	Set image style parameters
Query	None
Inbound Data	**<ImageStyle>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of image style parameters, helping client or IE query and set image style parameters of device via CGI protocol.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<style> means image style; Self-adaption: Self-adaption; Natural: Natural; Bright: Bright; Gentle: Gentle; Bright-coloured: Bright

ImageStyleXML Block

```
<ImageStyle version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<style><!--req,xs:string,"Self-adaption,Natural,Bright,Gentle,Bright-coloured"--></style>
</ImageStyle>
```

Test cases
GET /CGI/Image/channels/<ID>/ImageStyle/template/<ID>/type/<ID>
Request XML: none
Response XML: <ImageStyle>
PUT/CGI/Image/channels/<ID>/ImageStyle/template/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ImageStyle>
<style>Self-adaption</style>
</ImageStyle>
```

2.2.33/CGI/Image/channels/<ID>/Defog/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/Defog/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire defog mode parameters
Query	None
Inbound Data	None
Success Return	**<Defog>**
PUT	
Description	Set defog mode parameters
Query	None
Inbound Data	**<Defog>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of defog mode, helping client or IE query and set defog mode of device via CGI protocol.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<enbaled> means defog; true: Enable; false: Disable
<defogStrength> means defog strength; range: 1-100

DefogXML Block

```
<Defog version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
    <enbaled><!-- req, xs:boolean --><enabled>
    <defogStrength><!--dep,xs:integer--></defogStrength>
</Defog>
```

Test cases
GET /CGI/Image/channels/1/Defog/template/1/type/1

Request XML: none
Response XML: <Defog>
PUT/CGI/Image/channels/1/Defog/template/1/type/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Defog>
<enbaled>true</enbaled>
<defogStrength>50</defogStrength>
</Defog>
```

2.2.34/CGI/Image/channels/<ID>/noiseReduce/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/noiseReduce/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire digital noise reduction parameters
Query	None
Inbound Data	None
Success Return	**<NoiseReduce>**
PUT	
Description	Set digital noise reduction parameters
Query	None
Inbound Data	**<NoiseReduce>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of digital noise reduction parameters, helping client or IE query and set digital noise reduction parameters of device via CGI protocol, including noise reduction level/spatial domain noise reduction/time domain noise reduction.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<mode> means digital noise reduction, close: Disable; general: General mode, advanced: Expert mode
<generalLevel> means noise reduction level; range: 1-100
<FrameNoiseReduceLevel> means spatial domain noise reduction; range: 1-100
<InterFrameNoiseReduceLevel> means time domain noise reduction; range: 1-100

NoiseReduceXML Block

```
<NoiseReduce version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<mode><!--req,xs:string,"close, general, advanced"--></mode>
<GeneralMode><!--dep,depends on <mode> -->
<generalLevel><!--req,depends on <mode> general,xs:integer--></generalLevel>
</GeneralMode>
<AdvancedMode><!--dep -->
<FrameNoiseReduceLevel>
<!--req,depends on <mode> advanced,xs:integer--></FrameNoiseReduceLevel>
<InterFrameNoiseReduceLevel>
<!--req,depends on <mode> advanced,xs:integer--></InterFrameNoiseReduceLevel>
</AdvancedMode>
</NoiseReduce>
```

Test cases
GET /CGI/Image/channels/<ID>/noiseReduce/template/<ID>/type/<ID>
Request XML: none
Response XML: <NoiseReduce>
PUT/CGI/Image/channels/<ID>/noiseReduce/template/<ID>/type/<ID>
Response XML: <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<NoiseReduce>
<mode>general</mode>
<GeneralMode>
<generalLevel>25</generalLevel>
</GeneralMode>
<AdvancedMode>
<FrameNoiseReduceLevel>25</FrameNoiseReduceLevel>
<InterFrameNoiseReduceLevel>0</InterFrameNoiseReduceLevel>
</AdvancedMode>
</NoiseReduce>
```

2.2.35/CGI/Image/channels/<ID>/SceneMode/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/SceneMode/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire indoor/outdoor mode
Query	None
Inbound Data	None
Success Return	**<DoorMode>**
PUT	
Description	Set indoor/outdoor mode
Query	None
Inbound Data	**<DoorMode>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of indoor/outdoor mode, helping client or IE query and set indoor/outdoor mode of device via CGI protocol. **Explanations on key parameters:** <type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image <mode> means indoor/outdoor mode, indoor: Indoor; outdoor: Outdoor	

DoorModeXML Block

```
<DoorMode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<mode><!--req,xs:string,"indoor,outdoor"--></mode>
<DoorMode >
```

Test cases

GET /CGI/Image/channels/<ID>/SceneMode/template/<ID>/type/<ID>

Request XML： none

Response XML: <DoorMode>

PUT/CGI/Image/channels/<ID>/SceneMode/template/<ID>/type/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DoorMode>
<mode>outdoor</mode>
</DoorMode>
```

2.2.36/CGI/Image/channels/<ID>/sharpness/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/sharpness/template/<ID>/type/<ID> **General Resource v2.0**
GET

Description	Acquire sharpness level adjustment parameters
Query	None
Inbound Data	None
Success Return	**<Sharpness>**
PUT	
Description	Set sharpness level adjustment parameters
Query	None
Inbound Data	**<Sharpness>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of sharpness level adjustment parameters, helping client or IE query and set sharpness level adjustment parameters of device via CGI protocol, including brightness/contrast/saturation/chromaticity. **Explanations on key parameters:** <type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image <sharpnessLevel> means sharpness level, range: 0-100	

SharpnessXML Block

```
<Sharpness version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<sharpnessMode><!--opt, xs:string,"manual,auto"--></ sharpnessMode>
<sharpnessLevel><!--req, xs:integer--></sharpnessLevel/>
</Sharpness>
```

Test cases

GET /CGI/Image/channels/<ID>/sharpness/template/<ID>/type/<ID>

Request XML： none

Response XML: <Sharpness>

PUT/CGI/Image/channels/<ID>/sharpness/template/<ID>/type/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Sharpness>
<sharpnessLevel>34</sharpnessLevel>
</Sharpness>
```

2.2.37/CGI/Image/channels/<ID>/lightSuppression/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/lightSuppression/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire strong light suppression parameters
Query	None
Inbound Data	None
Success Return	**<LightSuppression>**
PUT	
Description	Set strong light suppression parameters
Query	None
Inbound Data	**<LightSuppression>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of strong light suppression parameters, helping client or IE query and set strong light suppression parameters of device via CGI protocol.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<enabled> means strong light suppression enabling/disabling; true: Enabled; false: Disabled
<lightSuppressionStrength> means strong light suppression strength; range: 1-100

LightSuppressionXML Block

```
< LightSuppression>
<enabled><!-- req, xs:boolean --></enabled>
<lightSuppressionStrength><!-- opt,xs:integer--></lightSuppressionStrength>
</LightSuppression>
```

Test cases
GET /CGI/Image/channels/<ID>/lightSuppression/template/<ID>/type/<ID>
Request XML: none
Response XML: <LightSuppression>
PUT/CGI/Image/channels/<ID>/lightSuppression/template/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<LightSuppression>
<enabled>true</enabled>
<lightSuppressionStrength>50</lightSuppressionStrength>
</LightSuppression>
```

2.2.38/CGI/Image/channels/<ID>/templateName/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/templateName/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire template name
Query	None
Inbound Data	None
Success Return	**<TemplateName>**
PUT	
Description	Set template name
Query	None
Inbound Data	**<TemplateName>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of template name, helping client or IE query and set the template name of device via CGI protocol.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<name> means template name, with 31 characters at most

TemplateNameXML Block

```
<TemplateName version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<name><!--req,xs:string--></name>
</TemplateName >
```

Test cases
GET /CGI/Image/channels/<ID>/templateName/template/<ID>/type/<ID>

Request XML: none
Response XML: <TemplateName>
PUT/CGI/Image/channels/<ID>/templateName/template/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<templateName>
<name>outdoor</name>
</templateName>
```

2.2.39/CGI/Image/channels/<ID>/whiteBalance/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/whiteBalance/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire white balance adjustment parameters
Query	None
Inbound Data	None
Success Return	**<WhiteBalance>**
PUT	
Description	Set white balance adjustment parameters
Query	None
Inbound Data	**<WhiteBalance>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of white balance adjustment parameters, helping client or IE query and set white balance adjustment parameters of device via CGI protocol, including type/scope.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<WhiteBalanceStyle/> means white balance adjustment, auto: Auto; manual-auto: Semi-auto; sunny: Sunny; fluorescent_lamp: Fluorescent light; warm_light: Warm light; filament_lamp: Incandescent filament lamp; natural_light: Natural light; lock_wb: Lock white balance; manual: Manual
<WhiteBalanceRed/> means R, range: 0-100
<WhiteBalanceBlue/> means B, range: 0-100

WhiteBalanceXML Block

```
<WhiteBalance version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<currentTemplate><!-- req,xs:string, --><currentTemplate>
<WhiteBalanceStyle/><!--req,xs:string"auto,manual_auto,sunny,fluorescent_lamp,warm_light,f
ilament_lamp,natural_light,lock_wb"-->
<WhiteBalanceRed/><!--dep, depends on <WhiteBlanceStyle>manual_auto 、 manual,
xs:integer, -->
<WhiteBalanceBlue/><!--dep, depends on <WhiteBlanceStyle> manual_auto 、
manual,xs:integer -->
</WhiteBalance>
```

Test cases
GET /CGI/Image/channels/1/whiteBalance/template/1/type/1
Request XML: none
Response XML: <WhiteBalance>
PUT/CGI/Image/channels/1/whiteBalance/template/1/type/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<WhiteBalance>
<WhiteBalanceStyle>sunny</WhiteBalanceStyle>
<WhiteBalanceRed>50</WhiteBalanceRed>
<WhiteBalanceBlue>50</WhiteBalanceBlue>
</WhiteBalance>
```

2.2.40/CGI/Image/channels/<ID>/WDR/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/WDR/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire ultra-wide dynamic parameters
Query	None
Inbound Data	None
Success Return	**<WDR>**
PUT	
Description	Set ultra-wide dynamic parameters
Query	None
Inbound Data	**<WDR>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of ultra-wide dynamic parameters, helping client or IE query and set ultra-wide dynamic parameters of device via CGI protocol.
Explanations on key parameters:
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
<mode> means ultra-wide dynamic strategy, increase backlight compensation item; open: Manual control of ultra-wide dynamics, close: Disable; auto: Auto control of ultra-wide dynamics; blc: Backlight compensation
<WDRLevel> means ultra-wide dynamic level; range: 1-100

WDRXML Block

```
<WDR version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<mode><!--req, xs:string,"open,close,auto,blc"--></mode>
<WDRLevel><!--opt,xs:integer--></WDRLevel>
</WDR >
```

Test cases
GET /CGI/Image/channels/<ID>/WDR/template/<ID>/type/<ID>
Request XML: none
Response XML: <WDR>
PUT/CGI/Image/channels/<ID>/WDR/template/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<WDR>
<mode>blc</mode>
<WDRLevel>50</WDRLevel>
</WDR>
```

2.2.41/CGI/Image/channels/<ID>/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/template/<ID>/type/<ID> General Resource v2.0	
GET	
Description	Acquire all image parameters supported by device

Query	None
Inbound Data	None
Success Return	**<Color>**
PUT	
Description	Set all image parameters supported by device
Query	None
Inbound Data	**<Color>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol, as the summary of Protocol 2.2.7~2.2.25, is prepared for improving the efficiency of acquiring and setting image parameters. The detailed parameters are consistent with the meaning of relevant protocols.
This protocol should be used in cooperation with capability set protocol of image parameters. The main procedures of device may send one or more parameters of ImageParam based on the judgment of capability set; client may display or hide interfaces based on capability set
Explanations on key parameters:
Be consistent with Protocol 2.2.7~2.2.25

ImageParam XML Block

```
<ImageParam version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<!--opt-->
<Color>
<brightnessLevel><!--opt, xs:integer --></brightnessLevel>
<contrastLevel><!--opt, xs:integer --></contrastLevel>
<saturationLevel><!--opt, xs:integer --></saturationLevel>
<hueLevel><!--opt, xs:integer --></hueLevel >
<grayScale>
<grayScaleMode><!--opt,xs:string,"indoor,outdoor"--></grayScaleMode>
<grayScale>
</Color>
<!--opt-->
<Sharpness>
<sharpnessMode><!--opt, xs:string,"manual,auto"--></sharpnessMode>
<sharpnessLevel><!--req, xs:integer--></sharpnessLevel/>
</Sharpness>
<Shutter>
<ShutterLevel><!--dep,dependson <ExposureType>,xs:string,
"1,1/2,1/3,1/4,1/5,1/6,1/8,1/10,1/12,1/15,1/25,1/30,1/50,1/60,1/80,1/100,1/120,1/125,1/150,1/18
0,1/200,1/250,1/500,1/1k,1/2k,1/4k,1/10k,1/100k"--><ShutterLevel>
</Shutter>
<!--opt-->
<Gain>
<GainLevel/><!-- dep,depends on <ExposureType>, xs:integer---->
<GainWindow><!--opt -->
<RegionCoordinatesList><!--opt -->
<RegionCoordinates><!--opt -->
<positionX><!--req, xs:integer;coordinate --></positionX>
<positionY><!--req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</GainWindow>
</Gain>
<!--opt-->
<Brightness>
<brightLevel><!--req, xs:integer --></brightLevel>
</Brightness>
<!--opt-->
<AEspeed>
```

```
<aespeedLevel><!--req, xs:integer --></aespeedLevel>
</AEspeed>
<!--opt-->
<Iris>
<enabled><!-- opt, xs:boolean --></enabled>
<mode><!-- opt, xs:string,"DC,P-iris" --><mode>// Aperture mode, DC, P-iris (this field is unused temporarily)
<IrisLevel/><!--opt, xs:integer -->
<irisSpeed><!--opt, xs:integer --></irisSpeed>
</Iris>
<!--opt-->
<SmartIR>
<enabled><!--req, xs:boolean --><enabled>
<SmartIR>
<!--opt-->
<BLC>
<enabled/><!-- req, xs:boolean -->
<BLCMode/><!--opt, xs:string, "UP, DOWN, LEFT, RIGHT, CENTER , MULTI-AREA,Region" -->
<BLCLevel><!-- opt,xs:integer--></BLCLevel>
<BLCRegionList><!--dep-->
<BLCRegion>
<id><!--req,integer--></id>// Only 1 region is supported temporarily, this field is disabled temporarily
<RegionCoordinatesList>
<RegionCoordinates><!--opt-->
<positionX><!--req,xs:integer;coordinate--></positionX>
<positionY><!--req,xs:integer;coordinate--></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</BLCRegion>
</BLCRegionList>
</BLC>
<!--opt-->
<LightSuppression>
<enabled><!-- req, xs:boolean --></enabled>
<lightSuppressionStrength><!-- opt,xs:integer--></lightSuppressionStrength>
</LightSuppression>
<!--opt-->
<WDR>
<mode><!--req, xs:string,"open,close,auto,blc"--></mode>
<WDRLevel><!--opt,xs:integer--></WDRLevel>
<WDRContrastLevel><!--opt, xs:integer --></WDRContrastLevel>
<WDRLevel1><!--opt,xs:integer--></WDRLevel1>
</WDR>
<!--opt-->
<WhiteBalance>
<WhiteBalanceStyle/><!--req,xs:string"auto,manual_auto,sunny,fluorescent_lamp,warm_light,filament_lamp,natural_light,lock_wb"-->
<WhiteBalanceRed/><!--dep, depends on <WhiteBlanceStyle>manual_auto 、 manual, xs:integer, -->
<WhiteBalanceBlue/><!--dep, depends on <WhiteBlanceStyle> manual_auto 、 manual,xs:integer -->
</WhiteBalance>
<!--opt-->
<NoiseReduce>
<mode><!--req,xs:string,"close, general, advanced"--></mode>
<GeneralMode><!--dep,depends on <mode> -->
```

```
<generalLevel><!--req,depends on <mode> general,xs:integer--></generalLevel>
</GeneralMode>
<AdvancedMode><!--dep -->
<FrameNoiseReduceLevel>
<!--req,depends on <mode> advanced,xs:integer--></FrameNoiseReduceLevel>
<InterFrameNoiseReduceLevel>
<!--req,depends on <mode> advanced,xs:integer--></InterFrameNoiseReduceLevel>
</AdvancedMode>
</NoiseReduce>
<!--opt-->
<ImageStyle>
<style><!--req,xs:string,"Self-adaption,Natural,Bright,Gentle,Bright-coloured"--></style>
</ImageStyle>
<!--opt-->
<DoorMode>
<mode><!--req,xs:string,"indoor,outdoor"--></mode>
<DoorMode>
<!--opt-->
<Defog>
<enbaled><!-- req, xs:boolean --><enabled>
<defogStrength><!--dep,xs:integer--></defogStrength>
</Defog>
</ImageParam>
```

Test cases

GET /CGI/Image/channels/1/template/1

Request XML： none

Response XML: <Color>

PUT/CGI/Image/channels/1/template/1

Response XML： <ResponseStatus>

Request XML： as below

```
<ImageParam version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<!--opt-->
<Color>
<brightnessLevel>41</brightnessLevel>
<contrastLevel>60</contrastLevel>
<saturationLevel>33</saturationLevel>
<hueLevel>63</hueLevel>
</Color>
<!--opt-->
<Sharpness>
<sharpnessLevel>34</sharpnessLevel>
</Sharpness>
<!--opt-->
<Shutter>
<ShutterLevel>1/25</ShutterLevel>
</Shutter>
<!--opt-->
<Gain>
<GainLevel>100</GainLevel>
</Gain>
<!--opt-->
<Brightness>
<brightLevel>50</brightLevel>
</Brightness>
<!--opt-->
<AEspeed>
<aespeedLevel>25</aespeedLevel>
```

```
</AEspeed>
<!--opt-->
<Iris>
<enabled>true</enabled>
</Iris>
<!--opt-->
<SmartIR>
<enabled>true</enabled>
<SmartIR>
<!--opt-->
<BLC>
<enabled>true</enabled>
<BLCRegionList>
<BLCRegion>
<id>1</id>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>3636</positionX>
<positionY>2187</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8940</positionX>
<positionY>7951</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</BLCRegion>
</BLCRegionList>
</BLC>
<!--opt-->
<LightSuppression>
<enabled>true</enabled>
<lightSuppressionStrength>50</lightSuppressionStrength>
</LightSuppression>
<!--opt-->
<WDR>
<mode>blc</mode>
<WDRLevel>50</WDRLevel>
</WDR>
<!--opt-->
<WhiteBalance>
<WhiteBalanceStyle>sunny</WhiteBalanceStyle>
<WhiteBalanceRed>50</WhiteBalanceRed>
<WhiteBalanceBlue>50</WhiteBalanceBlue>
</WhiteBalance>
<!--opt-->
<NoiseReduce>
<mode>general</mode>
<GeneralMode>
<generalLevel>25</generalLevel>
</GeneralMode>
<AdvancedMode>
<FrameNoiseReduceLevel>25</FrameNoiseReduceLevel>
<InterFrameNoiseReduceLevel>0</InterFrameNoiseReduceLevel>
</AdvancedMode>
</NoiseReduce>
<!--opt-->
<ImageStyle>
<style>Self-adaption</style>
```

```
</ImageStyle>
<!--opt-->
<DoorMode>
<mode>outdoor</mode>
<DoorMode>
<!--opt-->
<Defog>
<enbaled>true</enbaled>
<defogStrength>50</defogStrength>
</Defog>
</ImageParam>
```

2.2.42/CGI/Image/channels/<ID>/MinExposal /template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/ MinExposal**/template/<ID>/type/<ID>** **General Resource v2.0**	
GET	
Description	Acquire the min. exposure parameters
Query	None
Inbound Data	None
Success Return	< MinExposal >
PUT	
Description	Set the min. exposure parameters
Query	None
Inbound Data	< MinExposal >
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of the min. exposure parameters, helping client or IE query and set the min. exposure parameters of device via CGI protocol.
Explanations on key parameters:
< MinExposalLevel> means the min. exposure speed

ExposalMin XML Block

```
< ExposalMin version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
< ExposalMin >
<MinExposalLevel
opt="1/2,1/3,1/4,1/5,1/6,1/8,1/10,1/12,1/15,1/25,1/30,1/50,1/60,1/80,1/100,1/120,1/125,1/150,1/
180,1/200,1/250,1/500,1/1k,1/2k,1/4k,1/10k,1/100k" ><!--req,xs:string,-->
< MinExposalLevel >
</ ExposalMin >
```

Test cases
GET /CGI/Image/channels/<ID>/ ExposalMin /template/<ID>/type/<ID>
Request XML: none
Response XML: <Shutter>
PUT/CGI/Image/channels/<ID>/ ExposalMin /template/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
< ExposalMin >
< MinExposalLevel >1/25</ MinExposalLevel >
</ ExposalMin >
```

2.2.43/CGI/Streaming/videomode/channels /<ID>

/CGI/Streaming/videomode/channels/<ID> **General Resource v2.0**
GET

Description	Acquire NP system parameters of device
Query	None
Inbound Data	None
Success Return	**<videomode>**
PUT	
Description	Set NP system parameters of device
Query	None
Inbound Data	**<videomode>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of device NP system, helping client or IE query and set the NP system parameters of device via CGI protocol. **Explanations on key parameters:** <np-Mode> represents standard	

videomodeXML Block

```
<videomode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<np-Mode ><!-- req, ro, xs:string, "NTSC,PAL"></np-Mode>
</videomode>
```

Test cases

GET/CGI/Streaming/videomode/channels/**1**

Request XML: none

Response XML: < videomode>

PUT/CGI/Streaming/videomode/channels/**1**

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
< videomode >
<np-Mode>NTSC</np-Mode>
</videomode>
```

2.2.44/CGI/Image/channels/<ID>/imageSchedule/default

/CGI/Image/channels/<ID>/imageSchedule/default **General Resource v2.0**	
PUT	
Description	Set recovery default of HD template
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: Set recovery default of HD template	

Test cases

PUT/CGI/Image/channels/<ID>/imageSchedule/default

Request XML: none

Response XML: <ResponseStatus>

2.2.45/CGI/Image/channels/<ID>/ImageAdjust/mode/<ID>

/CGI/Image/channels/<ID>/ImageAdjust/mode/<ID> **GeneralResource v2.0**	
GET	
Description	Acquire image adjustment parameters
Query	None
Inbound Data	None
Success Return	**<ImageAdjust>**

PUT	
Description	Set image adjustment parameters
Query	None
Inbound Data	**<ImageAdjust>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of image adjustment parameters, helping client or IE query and set image adjustment parameters of device via CGI protocol. **Explanations on key parameters:** <mode> means the different image adjustment template No. started from 0. <horizontal> means horizontal view parameter value, 0~100 <vertical> means vertical view parameter value, 0~100 <ldc> means distortion correction strength value, 0~100 <enlarge> means remote enlarge value, 0~100	

ImageAdjust XML Block

```
<ImageAdjust version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<horizontal><!-- req, xs:integer --></horizontal>
<vertical><!-- req, xs:integer --></vertical>
<ldc><!-- req, xs:integer --></ldc>
<enlarge><!-- req, xs:integer --></enlarge>
</ImageAdjust>
```

Test cases

GET /CGI/Image/channels/<ID>/ImageAdjust/mode/<ID>

Request XML: none

Response XML: <ImageAdjust>

PUT /CGI/Image/channels/<ID>/ImageAdjust/mode/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ImageAdjust>
<horizontal>50</horizontal>
<vertical>50</vertical>
<ldc>50</ldc>
<enlarge>50</enlarge>
</ImageAdjust>
```

2.2.46/CGI/Image/channels/<ID>/ImageAdjustTemplate

/CGI/Image/channels/<ID>/ImageAdjustTemplate **General Resource v2.0**	
GET	
Description	Acquire property of image adjustment template
Query	None
Inbound Data	None
Success Return	**<ImageAdjustTemplateList>**
Explanations on protocol: This protocol is prepared for acquiring the property of image adjustment template. **Explanations on key parameters:** <iTemplateID> means the image adjustment template No. started from 0; template 0 is disabled as default. If template is unsupported, use 0x7FFFFFFF, which means invalid parameter and it is mutually exclusive with normal S/N and they cannot be reported simultaneously. <iType> means the template type. 1-Fixed template, divided by level; 2-User-defined template, parameters can be customized	

ImageAdjustTemplateList XML Block

```
<ImageAdjustTemplateList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<ImageAdjustTemplate>
<iTemplateID><!-- req, xs:integer--></iTemplateID>
<iType><!-- req, xs:integer--></iType>
</ImageAdjustTemplate>
</ImageAdjustTemplateList >
```

Test cases

GET /CGI/Image/channels/<ID>/ImageAdjustTemplate

Request XML： none

Response XML: <ImageAdjustTemplateList>

Response XML： as below

```
<ImageAdjustTemplateList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<ImageAdjustTemplate>
<iTemplateID>0</iTemplateID>
<iType>1</iType>
</ImageAdjustTemplate>
<ImageAdjustTemplate>
<iTemplateID>1</iTemplateID>
<iType>1</iType>
</ImageAdjustTemplate>
<ImageAdjustTemplate>
<iTemplateID>2</iTemplateID>
<iType>1</iType>
</ImageAdjustTemplate>
<ImageAdjustTemplate>
<iTemplateID>3</iTemplateID>
<iType>1</iType>
</ImageAdjustTemplate>
<ImageAdjustTemplate>
<iTemplateID>4</iTemplateID>
<iType>2</iType>
</ImageAdjustTemplate>
</ImageAdjustTemplateList>
```

2.2.47/CGI/Image/channels/<ID>/ImageAdjust/CurrentTemplate

/CGI/Image/channels/<ID>/ImageAdjust/CurrentTemplate **General Resource v2.0**	
GET	
Description	Acquire image adjustment of present template
Query	None
Inbound Data	None
Success Return	**<CurrentTemplate>**
Explanations on protocol: This protocol is prepared for acquiring the image adjustment of present template. **Explanations on key parameters:** <templateID> means template ID	

CurrentTemplate XML Block

```
<CurrentTemplate version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<templateID><!--req,xs:integer--><templateID>
</CurrentTemplate>
```

Test cases

GET /CGI/Image/channels/<ID>/ImageAdjust/CurrentTemplate

Request XML： none

Response XML: <CurrentTemplate>

```
<?xml version="1.0" encoding="UTF-8"?>
<CurrentTemplate>
<templateID>0</templateID>
</CurrentTemplate>
```

2.2.48/CGI/Image/channels/<ID>/ImageAdjust/template/<ID>/type/<ID>

/CGI/Image/channels/<ID>/ImageAdjust/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire the parameters of single type image adjustment
Query	None
Inbound Data	None
Success Return	**<ImageAdjustType>**
PUT	
Description	Set the parameters of single type image adjustment
Query	None
Inbound Data	**<ImageAdjustType>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of parameters of single type image adjustment, helping client or IE query and set parameters of single type image adjustment of device via CGI protocol. **Explanations on key parameters:** <type> means type of image adjustment parameter. 1-Horizontal view; 2-Vertical view; 3-Distortion correction strength; 4-Remote enlarge value <value> means parameter value, range: 0-100	

ImageAdjustType XML Block

```
<ImageAdjustType version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <value><!--req, xs:integer --></value>
</ImageAdjustType>
```

Test cases

GET /CGI/Image/channels/<ID>/ImageAdjust/template/<ID>/type/<ID>

Request XML: none

Response XML: <ImageAdjustType>

PUT/CGI/Image/channels/<ID>/ImageAdjust/template/<ID>/type/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ImageAdjustType>
<value>50</value>
</ImageAdjustType>
```

2.3/CGI/System

2.3.1/CGI/System/Video/inputs/channels/<ID>/overlays/type/<ID>

/CGI/System/Video/inputs/channels/<ID>/overlays/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire date and addition information
Query	None
Inbound Data	None
Success Return	**<VideoOverlay>**

PUT	
Description	Set date and addition information
Query	None
Inbound Data	**<VideoOverlay>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of date and additional information in character overlay, helping client or IE query and set date and additional information of device via CGI protocol, including image size/image width/image height/channel No./additional information list/coordinates.

Explanations on key parameters:

channels/<ID>: Channel No., started from 1
type/<ID>: Code stream No., started from 1; 1: Main code stream; 2: Auxiliary code stream; 3: Third code stream
If protocol test fails, it is old device and remove this field before use.
<VideoOverlay> Overlay of date and additional information
<normalizedScreenSize> Screen size
<normalizedScreenWidth> Screen width
<normalizedScreenHeight> Screen height
<channelID> Channel No.
<TextOverlayList> means list of additional information
<TextOverlay> means members of additional information
<id> means number of additional information member, range: 1-5
<enabled> means whether enabling member of current additional information; true: Enable; false: Disable
<positionX> means X coordinates at upper left corner of additional information member
<positionY> means Y coordinates at upper left corner of additional information member
<displayText max=""> means text of additional information member; range: IPC 127, H6 64, max.: The max. character length allowed
<TextFontColor> means color of additional information member, take the lower 24 bit of 32 bits as color; rgb means digital mode bgr:
<DateTimeOverlay> means information of date overlay
<enabled> means whether enabling date overlay; true: Enable; false: Disable
<positionX> means X coordinates at upper left corner
<positionY> means Y coordinates at upper left corner
<dateStyle> means date format; YYYY: Year; MM: Month; DD: Day; CHR: Month letter in English (for example: Mar 02 2016), YYYY/MM/DD on IE interface corresponds to 2016/03/02 08:08 and the rest should be analogized in the same way. Field separator should be Chinese for new date (March 23, 2018 15:51:33), Chinese for time (2018/03/23 15:52:00) and Chinese for date interval (March 23, 2018 15:52:00) (2019/05/06), (05/06/2019) AND (6/5/2019)
<dateTimeColor> means date color; take lower 24 bits of 32 bits as color rgb, means digital mode bgr:
<timeStyle> means time format, 12hour: 12h system, 24hour: 24h system
<displayWeek> means whether displaying week information; true: Enabled; false: Disabled
<displaymillisecond> means whether displaying ms information; true: Enabled; false: Disabled
<channelNameOverlay> means channel overlay information; range: DVR 64, others: 32
<enabled> means whether enabling channel name overlay; true: Enabled; false: Disabled
<positionX> means X coordinates
<positionY> means Y coordinates
<channelName max=""> means channel name max: Means max. character length allowed
<channelColor> means channel overlay information and color; take lower 24 bits of 32 bits as color rgb, means digital mode bgr:
<fontSize> means font size of overlay information; 0: Self-adaption, 1:16*16, 2:24*24, 3: 32*32, 4: 48*48, 5:64*64, 6:96*96, 7:128*128 and 8:72*72
<frontColorMode> means front color mode of overlay information (disabled)

```
<frontColor> means front color of overlay information (disabled)
<fontType> means font size of overlay information; 1: Dot matrix; 2: Vector
```

VideoOverlayXML Block

```
<VideoOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<normalizedScreenSize><!--req-->
<normalizedScreenWidth><!--ro, req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!--ro,req,xs:integer--></normalizedScreenHeight>
</normalizedScreenSize>
<channelID><!—req,xs:integer></channelID>
<typeID><!—req,xs:integer></typeID>
<attribute><!--opt-->
<transparent><!-- req, xs:boolean --></transparent>
<flashing><!-- req, xs:boolean--><flashing>
</attribute>
<TextOverlayList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<TextOverlay>      <!-- opt -->
      <id><!-- req, integer, --></id>
      <enabled><!-- req, string, --></enabled>
<positionX><!-- req, integer, --></positionX>
<positionY><!-- req, integer, --></positionY>
<displayText max="128"><!-- req, string, --></displayText>
<TextFontColor><!-- dep, xs: integer --></TextFontColor>
</TextOverlay>
<TextFontColor><!-- opt, xs: hexBinary;color --></TextFontColor>//Disabled
</TextOverlayList>
<DateTimeOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
<dateStyle><!--     opt,     xs:string,     "YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY,
YYYY-MM-DD,    MM-DD-YYYY,    DD-MM-YYYY,    YYYY.MM.DD, MM.DD.YYYY,
DD .MM.YYYY, CHR-YYYY-MM-DD, CHR-MM-DD-YYYY, CHR-DD-MM-YYYY, CHR
DD YYYY, DD CHR YYYY, YYYY Year MM Month DD Day    hh:mm:ss, YYYY/MM/DD
hh Hour mm Minute ss Second, YYYY Year MM Month DD Day hh Hour mm Minute ss
Second", YYYY Year MM Month DD Day, MM Month DD Day YYYY Year, DD Day MM
Month YYYY Year-->
</dateStyle>
<dateTimeColor><!—req,integer --></dateTimeColor>
<timeStyle><!--opt, xs:string, "12hour, 24hour" --></timeStyle>
      <displayWeek><!-- opt, xs:boolean --></displayWeek>
<displaymillisecond><!-- opt, xs:boolean --><displaymillisecond>
</DateTimeOverlay>
<channelNameOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
<channelName max="64"><!-- req, xs: string --></channelName>
<channelColor><!—req,xs: hexBinary;color --></channelColor>
</channelNameOverlay>
<fontSize opt="0,1,2…"><!-- opt, xs:integer, pixels --></fontSize>
<frontColorMode><!-- opt, string,"auto,customize" --></frontColorMode>
<frontColor><!-- dep, xs: hexBinary;color --></frontColor>
<fontType><!—opt,xs:integer--></fontType>
</VideoOverlay>
```

Test cases

GET /CGI/System/Video/inputs/channels/1/overlays/type/1

Request XML： none

Response XML: <VideoOverlay>
PUT/CGI/System/Video/inputs/channels/1/overlays/type/1
Response XML: <ResponseStatus>
Request XML: as below


```
<?xml version="1.0" encoding="UTF-8"?>
<VideoOverlay>
<normalizedScreenSize>
<normalizedScreenWidth>960</normalizedScreenWidth>
<normalizedScreenHeight>1280</normalizedScreenHeight>
</normalizedScreenSize>
<channelID>1</channelID>
<channelNameOverlay>
<enabled>true</enabled>
<positionY>1929</positionY>
<positionX>8395</positionX>
<channelName max="64">Channel 1</channelName>
<channelColor>0</channelColor>
</channelNameOverlay>
<DateTimeOverlay>
<enabled>true</enabled>
<dateStyle>YYYY-MM-DD</dateStyle>
<dateTimeColor>2123414</dateTimeColor>
<positionX>3958</positionX>
<positionY>2828</positionY>
<timeStyle>12hour</timeStyle>
<displayWeek>true</displayWeek>
<displaymillisecond>true<displaymillisecond>
</DateTimeOverlay>
<TextOverlayList>
<TextOverlay>
<ID>1</ID>
<enabled>true</enabled>
<positionX>1833</positionX>
<positionY>4000</positionY>
<displayText max="127"> Test 1</displayText>
<TextFontColor>16777215</TextFontColor>
</TextOverlay>
<TextOverlay>
<ID>2</ID>
<enabled>true</enabled>
<positionX>3208</positionX>
<positionY>4921</positionY>
<displayText max="127"> Test 2</displayText>
<TextFontColor>0</TextFontColor>
</TextOverlay>
<TextOverlay>
<ID>3</ID>
<enabled>true</enabled>
<positionX>4812</positionX>
<positionY>5218</positionY>
<displayText max="127"> Test 3</displayText>
<TextFontColor>16711680</TextFontColor>
</TextOverlay>
<TextOverlay>
<ID>4</ID>
<enabled>true</enabled>
<positionX>6312</positionX>
<positionY>6023</positionY>
```

```
<displayText max="127"> Test 4</displayText>
<TextFontColor>2123414</TextFontColor>
</TextOverlay>
<TextOverlay>
<ID>5</ID>
<enabled>true</enabled>
<positionX>7687</positionX>
<positionY>7085</positionY>
<displayText max="127"> Test 5</displayText>
<TextFontColor>1470742</TextFontColor>
</TextOverlay>
</TextOverlayList>
<fontType>2</fontType>
<fontSize>3</fontSize>
</VideoOverlay>
```

2.3.2/CGI/System/Video/inputs/channels/<ID>/Logo

/CGI/System/Video/inputs/channels/<ID>/Logo	**General Resource v2.0**
GET	
Description	Acquire LOGO enabling and position
Query	None
Inbound Data	None
Success Return	**<TextOverlayLogo>**
PUT	
Description	Set LOGO enabling and position
Query	None
Inbound Data	**<TextOverlayLogo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of LOGO enabling and position, helping client or IE query and set LOGO enabling and position of device via CGI protocol, including Logo overlay information/channel No./coordinates.

Explanations on key parameters:

<TextOverlayLogo> means Logo overlay information
<channelID> Channel No.
<enable> means whether enabling Logo overlay
<LogoPosition> means Logo overlay position in image
<LeftUpX> means X coordinates of upper left corner
<LeftUpY> means Y coordinates of upper left corner

TextOverlayLogoXML Block

```
<TextOverlayLogo="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<channelID><!—req,sx:integer--></channelID>
<enable><!—opt,xs:boolean></enable>
<LogoPosition>
< LeftUpX><!—req,xs:integer--></LeftUpX >
< LeftUpY><!—req,xs:integer--></LeftUpY >
</ LogoPosition >
</TextOverlayLogo>
```

Test cases

GET /CGI/System/Video/inputs/channels/<ID>/Logo

Request XML: none

Response XML: <TextOverlayLogo>

PUT/CGI/System/Video/inputs/channels/<ID>/Logo

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TextOverlayLogo>
<channelID>1</channelID>
<enable>true</enable>
<LogoPosition>
<LeftUpX>5375</LeftUpX>
<LeftUpY>3759</LeftUpY>
</LogoPosition>
</TextOverlayLogo>
```

2.3.3/CGI/System/Video/inputs/channels/<ID>/PrivacyMask

/CGI/System/Video/inputs/channels/<ID>/PrivacyMask General Resource v2.0	
GET	
Description	Acquire video shielding parameters
Query	None
Inbound Data	None
Success Return	**<PrivacyMask>**
PUT	
Description	Set video shielding parameters
Query	None
Inbound Data	**<PrivacyMask>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of video shielding parameters, helping client or IE query and set video shielding parameters of device via CGI protocol, including channel No./list of video shielding overlay information/members of video shielding overlay information/member No. of video shielding overlay information/coordinates.

Explanations on key parameters:

<channelID> Channel No.

< PrivacyMaskPositionList> means list of video shielding overlay information

< PrivacyMaskPosition> means member of video shielding overlay information, ten-thousandth, 4 points, 00: Means deleted

< ID> means member No. of video shielding overlay information

< positionX > means X coordinates of video shielding

< positionY> means Y coordinates of video shielding

PrivacyMaskXML Block

```
< PrivacyMask ="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<PrivacyMaskRegionList><!-- req -->
<PrivacyMaskRegion><!-- req -->
<id><!-- req, xs:string, id --></id>
<RegionCoordinatesList><!-- req -->
<RegionCoordinates><!-- req -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</PrivacyMaskRegion>
</PrivacyMaskRegionList>
</PrivacyMask>
```

Test cases

GET /CGI/System/Video/inputs/channels/1/PrivacyMask

Request XML: none

Response XML: <PrivacyMask>

PUT/CGI/System/Video/inputs/channels/1/PrivacyMask

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PrivacyMask>
<enabled>true</enabled>
<PrivacyMaskRegionList>
<PrivacyMaskRegion>
<id>0</id>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2406</positionX>
<positionY>2541</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>4874</positionX>
<positionY>4332</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</PrivacyMaskRegion>
</PrivacyMaskRegionList>
</PrivacyMask>
```

2.3.4/CGI/System/Network/NTP

/CGI/System/Network/NTP	**General Resource v2.0**
GET	
Description	Acquire NTP server parameters
Query	None
Inbound Data	None
Success Return	**<NTP>**
PUT	
Description	Set NTP server parameters
Query	None
Inbound Data	**<NTP>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of NTP server parameters, helping client or IE query and set NTP server parameters of device via CGI protocol, including server address/port No./time interval.

Explanations on key parameters:

<NTPServer> means server address
<PortNO> 0-65535 Means port No., range: 0-65535
<Inerval> means time interval, range: 1-1440

NTPXML Block

```
< NTP xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<NTPServer><!—opt,xs:string --></NTPServer>
<PortNO><!—opt,xs:integer--></PortNO>
<Inerval><!—opt,xs:integer --></Interval>
</NTP>
```

Test cases

GET /CGI/System/Network/NTP

Request XML: none

Response XML: <NTP>

PUT/CGI/System/Network/NTP

Response XML: <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<NTP>
<NTPServer>10.30.41.51</NTPServer>
<PortNO>123</PortNO>
<Inerval>60</Inerval>
</NTP>
```

2.3.5/CGI/System/Network/registrationCenter/<ID>

/CGI/System/Network/registrationCenter/<ID>	**General Resource v2.0**
GET	
Description	Acquire registration center parameters
Query	None
Inbound Data	None
Success Return	**<RegistrationCenter>**
PUT	
Description	Set registration center parameters
Query	None
Inbound Data	**<RegistrationCenter>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of registration center parameters, helping client or IE query and set registration center parameters of device via CGI protocol, including server name/IP address/port/username/password.
Note: URL ID is reserved for expansion and ID is not processed so far.
Explanations on key parameters:
<ServerName> means server name
<IP1> means IP address 1
<Port1> means port 1; range: 81-65535
<IP2> means IP address 2
<Port2> means port 2; range: 81-65535
<UserName> means username
<Password> means password

RegistrationCenterXML Block

```
<RegistrationCenter>
<ServerName><!--req, xs:string><ServerName>
      <IP1><!--req, xs:string></IP1>
      <Port1><!--req, xs:integer --><Port1>
      <IP2><!--req, xs:string></IP2>
      <Port2><!--req, xs:integer --><Port2>
      <UserName><!--req, xs:string>< UserName >
      <Password><!--req, xs:string></Password>
</RegistrationCenter>
```

Test cases
GET /CGI/System/Network/registrationCenter/1
Request XML： none
Response XML: <RegistrationCenter>
PUT/CGI/System/Network/registrationCenter/1
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<RegistrationCenter>
<ServerName>server</ServerName>
<IP1>10.30.41.51</IP1>
<Port1>82</Port1>
<IP2>192.168.1.51</IP2>
<Port2>81</Port2>
<UserName>admin</UserName>
<Password>1111</Password>
</RegistrationCenter>
```

2.3.6/CGI/System/Network/ConnectInfo

/CGI/System/Network/ConnectInfo	**General Resource v2.0**
GET	
Description	Acquire connection information and parameters
Query	None
Inbound Data	None
Success Return	**<ConnectInfolist>**
PUT	
Description	Set connection information and parameters
Query	None
Inbound Data	**<ConnectInfolist>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of connection information and parameters, helping client or IE query and set connection information and parameters of device via CGI protocol, including channel type/network type/connection status/connection device IP/username.
Explanations on key parameters:
<ChannelType> means channel type; 1: Main code stream; 2: Auxiliary code stream; 3: Third code streams;
<NetMode> means network type; 1: TCP; 2: UDP; 3: Multicast 4: Active mode
<ConnectState> means connection status; 0: Connected; 1: Disconnected
<ChannelNO> means channel No.
<UserIP> means IP of connected device
<UserName> means username

ConnectInfolistXML Block

```
< ConnectInfolist version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <ConnectInfo>
    <ChannelType><!--req,xs:integer,0-cmd,1-data --></ChannelType>
    <NetMode><!--req,xs:integer,0-TCP,   1-UDP--></ NetMode>
    <ConnectState><!--req,xs:integer,0-connectd,1-disconnected--></ConnectState>
    <ChannelNO><!--req,xs:integer--></ChannelNO>
<UserIP><!--req,xs:string></UserIP>
<UserName><!--req,xs:string></UserName>
</ConnectInfo>
</ ConnectInfolist >
```

Test cases
GET /CGI/System/Network/ConnectInfo
Request XML: none
Response XML: <ConnectInfolist>
PUT/CGI/System/Network/ConnectInfo
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ConnectInfolist>
<ConnectInfo>
<ChannelType>1</ChannelType>
<NetMode>1</NetMode>
<ConnectState>0</ConnectState>
<ChannelNO>1</ChannelNO>
<UserIP>10.30.41.51</UserIP>
<UserName>Admin</UserName>
</ConnectInfo>
</ConnectInfolist>
```

2.3.7/CGI/System/PU/<ID>

/CGI/System/PU/<ID>	**General Resource v2.0**
GET	
Description	Acquire PU setting information
Query	None
Inbound Data	None
Success Return	**<PUSet>**
PUT	
Description	Set PU setting information
Query	None
Inbound Data	**<PUSet>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of device PU setting information, helping client or IE query and set PU setting information of device via CGI protocol, including registration center/port No./server/device ID/device name/access No./channel selection/channel No.

Explanations on key parameters:

<enable> means enabling, applies to decoder; true: Enabled; false: Disabled
<registerServer> means registration center, such as 192.168.1.1
<registerPort > means port No.
<heartbeatServer> means heartbeat server
<heartbeatPort > means port No.
<alarmserver> means alarm server
<alarmPort > means port No.
~~<deviceID> means device ID, 32 characters or 16 Chinese characters at most~~
~~<deviceName> means device name, 31 characters or 15 Chinese characters at most~~
<deviceID> means device name, 128 characters or 64 Chinese characters at most
<deviceName> means device name, 128 characters or 64 Chinese characters at most
<VSPport> means VSP port No.l
<VAPport> means VAP port No.
<accessNumber> means access No.
<channelNo> means channel selection, 1: Channel 1
<channelID> means channel No., only figures supported

PUSetXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<PUSet>
<enable><!-- opt, xs:boolern "false,true"--></enable>
<registerServer><!-- opt, xs:string --></registerServer>
<registerPort ><!-- opt, xs:integer--></registerPort >
<heartbeatServer><!-- opt, xs:string --></heartbeatServer>
<heartbeatPort ><!-- opt, xs:integer--></heartbeatPort >
<alarmserver><!-- opt, xs:string --></alarmserver>
<alarmPort ><!-- opt, xs:integer--></alarmPort >
```

```
<deviceID><!-- opt, xs:string --></deviceID>
<deviceName><!-- opt, xs:string --></deviceName>
<VSPport><!-- opt, xs:integer--></VSPport>
<VAPport><!-- opt, xs:integer--></VAPport>
<accessNumber><!-- opt, xs:string --></accessNumber>
<channelNo><!-- opt, xs:integer--></channelNo>// Reserved field, original protocol has error and is abandoned
<channelID><!-- opt, xs: string --></channelID>// Reserved field, original protocol has error and is abandoned
<channelList>
<channel>
      <channelNo><!-- opt, xs:integer--></channelNo> // Channel selection is consistent with ie
      <channelID><!-- opt, xs: string --></channelID> // Channel No. is consistent with ie
Only Chinese character supported
   </channel>
</channelList>
</PUSet>
```

Test cases

GET /CGI/System /PU/1

Request XML: none

Response: XML: <PUSet>

PUT/CGI/System/PU/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PUSet>
<enable>false</enable>
<registerServer>192.168.1.100</registerServer>
<registerPort>10102</registerPort>
<heartbeatServer>192.168.1.100</heartbeatServer>
<heartbeatPort>10102</heartbeatPort>
<alarmserver>192.168.1.100</alarmserver>
<alarmPort>2122</alarmPort>
<deviceID>
</deviceID>
<deviceName>
</deviceName>
<VSPport>8000</VSPport>
<VAPport>9000</VAPport>
<accessNumber>
</accessNumber>
<channelNo>1</channelNo>
<channelID></channelID>
<channelList>
      <channel>
         <channelNo>1</channelNo>
         <channelID></channelID>
      </channel>
   </channelList>
</PUSet>
```

2.3.8/CGI/System/SIP/<ID>

/CGI/System/SIP/<ID>	**General Resource v2.0**
GET	
Description	Acquire SIP setting information

Query	None
Inbound Data	None
Success Return	**<SIPServerList>**
PUT	
Description	Set SIP setting information
Query	None
Inbound Data	**<SIPServerList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of SIP setting information of device, helping client or IE query and set SIP setting information of device via CGI protocol, including IP address/port/server ID/account/password/valid period/channel selection/channel No./channel level.

Explanations on key parameters:

<userName> means username
<enabled> means whether requiring registration; true: Required; false: Not required
<registrar> means IP address
<registrarPort> means port, range: 0-65536
<serverId> means server ID
<authID> means account
<password> means password, 16 characters at most
<expires> means valid period of registration, range: 0-1999999999
<liveTime> means live time, range: 0-99999
<heartbeatTime> means heartbeat interval, range: 0-99999
<heartbeatCount> means heartbeat count, range: 0-999
<deviceId> means device ID
<channelNo> means channel selection
<channelID> means channel No., only Chinese characters supported
<channelLevel> means channel level, range: 0-999
<PTZTime> means PTZ time, range: 0-99999
<alarmInNo> means alarm input
<alarmID> means alarm No., only Chinese characters supported
<alarmLevel> Alarm level, range: 0-999

SIPServerListXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<SIPServerList version="2.0">
<SIPServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!—opt, xs:string --></id>
<localPort><!-- opt, xs:integer, "1-65535"--></localPort>
<streamID><!-- opt, xs:interger, "1(main stream),2（sub stream）"--></streamID>
<Standard><!-- opt -->
<registerStatus><!-- ro, req, xs:boolern, "false（unregistered）,true
（registered）"--></registerStatus>
<enabled><!-- req, xs:string, "true(sign in),false（log out）"--></enabled>
<registrar><!-- req, xs:string--></registrar>
<registrarPort><!-- req, xs:integer--></registrarPort>
<proxy><!-- req, xs:string--></proxy>
<proxyPort><!-- req, xs:integer--></proxyPort>
<displayName><!-- req, xs:string--></displayName>
<userName><!-- req, xs:string--></userName>
<authID><!-- req, xs:string--></authID>
<password><!-- wo, req, xs:string--></password>
<expires><!-- req, xs:integer--></expires>
</Standard>
<GB28181><!-- opt -->
<registerStatus><!-- opt, xs:boolean --></registerStatus>
<enabled><!-- opt, xs:string, "true,false"--></enabled>
```

```
<registrar><!-- opt, xs:string--></registrar>
<registrarPort><!-- opt, xs:integer--></registrarPort>
<serverId><!-- opt, xs:string--></serverId>
<serverDomain><!-- opt, xs:integer--></serverDomain>
<userName><!-- opt, xs:string--></userName>
<authID><!-- opt, xs:string--></authID>
<password><!-- wo, opt, xs:string--></password>
<expires><!-- opt, xs:integer--></expires>
<liveTime><!-- opt, xs:integer--></liveTime>
<heartbeatTime><!-- opt, xs:integer--></heartbeatTime>
<heartbeatCount><!-- opt, xs:integer--></heartbeatCount>
<transportType><!-- opt, xs:string, "UDP, TCP,TLS"--></transportType>
<registerInterval><!-- opt, xs:integer, "60-600", second--></registerInterval>
<deviceId><!-- opt, xs: string, --></deviceId>
<channelNo><!-- opt, xs:integer--></channelNo>// Reserved field, original protocol has error and is abandoned
<channelID><!-- opt, xs: string --></channelID>// Reserved field, original protocol has error and is abandoned
<channelLevel><!-- opt, xs:integer--></channelLevel > // Reserved field, original protocol has error and is abandoned
<PTZTime><!-- opt, xs:integer--></PTZTime > // Reserved field, original protocol has error and is abandoned
<channelList>
<channel>
    <channelNo><!-- opt, xs:integer--></channelNo> // Channel selection is consistent with ie
    <channelID><!-- opt, xs: string --></channelID> // Channel No. is consistent with ie
Only Chinese characters supported
<channelLevel><!-- opt, xs:integer--></channelLevel > // Channel level is consistent with ie, 0-999
    <PTZTime><!-- opt, xs:integer--></PTZTime > // PTZ time is consistent with ie, 0-99999
</channel>
</channelList>
<alarmInList>
    <alarmIn>
    <alarmInNo><!-- opt, xs: integer --></alarmInNo>
    <alarmID><!-- opt, xs: string --></alarmID>
    <alarmLevel><!-- opt, xs:integer--></alarmLevel>
    <alarmIn>
</alarmInList >
</GB28181>
</SIPServer>
</SIPServerList>
```

Test cases

GET /CGI/System /SIP/<ID>

Request XML: none

Response XML: <SIPServerList>

PUT/CGI/System/SIP/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SIPServerList>
<SIPServer>
<GB28181>
<enabled>false</enabled>
<registrar></registrar>
<registrarPort>0</registrarPort>
<serverId></serverId>
```

```
<deviceId></deviceId>
<userName></userName>
<password></password>
<expires>0</expires>
<liveTime>0</liveTime>
<heartbeatTime>0</heartbeatTime>
<heartbeatCount>0</heartbeatCount>
<channelNo>1</channelNo>
<channelID></channelID>
<channelLevel>0</channelLevel>
<PTZTime>0</PTZTime>
<channelList>
<channel>
                <channelNo>1</channelNo>
                <channelID></channelID>
<channelLevel>0</channelLevel>
                <PTZTime>0</PTZTime>
            </channel>
        </channelList>
<alarmInList>
<alarmIn>
<alarmInNo>1</alarmInNo>
<alarmInID>987654321021111112</alarmInID>
<alarmLevel>1</alarmLevel>
</alarmIn>
<alarmIn>
<alarmInNo>2</alarmInNo>
<alarmInID>987654321021111112</alarmInID>
<alarmLevel>1</alarmLevel>
</alarmIn>
</alarmInList>
</GB28181>
</SIPServer>
</SIPServerList>
```


2.3.9/CGI/System/deviceInfo

/CGI/System/deviceInfo	**General Resource v2.0**
GET	
Description	Acquire device version information
Query	None
Inbound Data	None
Success Return	**<DeviceInfo>**
PUT	
Description	Set device version information
Query	None
Inbound Data	<DeviceInfo>
Success Return	**None**

Explanations on protocol:
This protocol is prepared for query and setting of device version information, helping client or IE query and set device version information via CGI protocol, including S/N, kernel version/delivery No./SKD version/web version/access module/CPU.
Explanations on key parameters:
<deviceName> means device name
<deviceID> means device ID
<deviceDescription> means device description
<deviceLocation> means device production location
<systemContact> means device manufacturer
<model> means device model
<serialNumber> means device S/N
<macAddress> means Mac address
<firmwareVersion> means master control version
<firmwareReleasedDate> means date of firmware compiling
<bootVersion> means boot version
<bootReleasedDate> means date of boot compiling
<hardwareVersion> means hardware version
<encoderVersion> means encoder version
<encoderReleasedDate> means date of encoder compiling
<decoderVersion> means decoder version
<decoderReleasedDate> means date of decoder compiling
<deviceType> means device type
<telecontrolID> means device No.
<supportBeep> means whether supporting buzzer
<factoryNumber> means delivery No.
<CPU> means CPU
<Memory> means memory
<FLASH> means Flash
<sdkVersion> means SDK version
<webVersion> means web version
<uiVersion> means UI version
<accessModule> means access module
<trafficVersion> means traffic business version
<mediaVersion> means media version
<algVersion> means algorithm version
<algModelVersion> means algorithm model version
<aiModuleVersion> means intelligent module version

DeviceInfoXML Block

```
<DeviceInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<deviceName><!-- req, xs:string --></deviceName>
<deviceID><!-- ro, req, xs:string, uuid--></deviceID>
<deviceDescription><!—opt, xs:string--></deviceDescription>
<deviceLocation><!—opt, xs:string --></deviceLocation>
<systemContact><!-- opt, req, xs:string --></systemContact>
<model><!-- ro, req, xs:string --></model>
<serialNumber><!-- ro, req, xs:string --></serialNumber>
<macAddress><!-- ro, req, xs:string; --></macAddress>
<firmwareVersion><!-- ro, req, xs:string --></firmwareVersion>
<firmwareReleasedDate><!-- ro, opt, xs:string --></firmwareReleasedDate>
<bootVersion><!-- ro, opt, xs:string --></bootVersion>
<bootReleasedDate><!-- ro, opt, xs:string --></bootReleasedDate>
<hardwareVersion><!-- ro, opt, xs:string --></hardwareVersion>
<encoderVersion><!-- ro, opt, xs:string></encoderVersion>
<encoderReleasedDate><!-- ro, opt, xs:stirng --></encoderReleasedDate>
<decoderVersion><!-- ro, opt, xs:string></decoderVersion>
<decoderReleasedDate><!-- ro, opt, xs:stirng --></decoderReleasedDate>
```

```
<deviceType>
<!--ro, req, xs:string; "IPCamera, IPDome, DVR, HybirdNVR, NVR, DVS, IPZoom"-->
</deviceType>
<telecontrolID><!-- opt, xs:integer; "1-255"><telecontrolID>
<supportBeep><!--opt, xs:boolean --></supportBeep>
<factoryNumber><!-- ro, opt, xs:string --></factoryNumber >
<CPU><!--opt , xs:string --></CPU>
<Memory><!-- ro, opt, xs:string, uuid--></Memory>
<FLASH><!-- ro, opt, xs:string --></FLASH>
<sdkVersion><!-- ro, opt, xs:string --></sdkVersion>
<webVersion><!-- ro, opt, xs:string --><webVersion>
<uiVersion><!-- ro, opt, xs:string --></uiVersion>
<accessModule><!-- ro, opt, xs:string --></accessModule>
</DeviceInfo>
```

Test cases

GET /CGI/System/deviceInfo

Request XML： none

Response XML: <DeviceInfo>

```
<?xml version="1.0" encoding="UTF-8"?>
<DeviceInfo>
<factoryNumber>ID0000801940400311610506</factoryNumber>
<serialNumber>18</serialNumber>
<firmwareVersion>NVSS_V8.1.37.20161202</firmwareVersion>
<webVersion>6.0.16.1118</webVersion>
<CPU>13</CPU>
<Memory>69</Memory>
<FLASH>85</FLASH>
<platformVersionList>
<platformInfo>
<name>onvif</name>
<version>ONVIF_V2.5.0.20161202</version>
</platformInfo>
<platformInfo>
<name>rtsp</name>
<version>RTSP_V2.5.0.20161202</version>
</platformInfo>
<platformInfo>
<name>cgi</name>
<version>CGI_V2.5.0.20161202</version>
</platformInfo>
<platformInfo>
<name>rtmp</name>
<version>RTMP_V2.5.0.20161202</version>
</platformInfo>
</platformVersionList>
</DeviceInfo>
```

PUT /CGI/System/deviceInfo

Request XML: <DeviceInfo>

Response XML: None

```
<?xml version="1.0" encoding="UTF-8"?>
<DeviceInfo>
<deviceName>DVRS</deviceName>// Character string supports 31 characters at most
</DeviceInfo>
```

2.3.10/CGI/System/TelnetCtrl

/CGI/System/TelnetCtrl	**General Resource v2.0**
GET	
Description	Acquire telnet information
Query	None
Inbound Data	None
Success Return	**<telnetCtrl>**
PUT	
Description	Set telnet information
Query	None
Inbound Data	**<telnetCtrl>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of telnet information, helping client or IE query and set telnet information via CGI protocol. **Explanations on key parameters:** <enable> means telnet enabling/disabling; true: Enabled; false: Disabled	

telnetCtrlXML Block

```
<telnetCtrl>
<enable><!-- opt, xs:boolern "false,true"--></ enable >
</telnetCtrl>
```

Test cases

GET /CGI/System/TelnetCtrl

Request XML: none

Response XML: <telnetCtrl>

PUT/CGI/System/TelnetCtrl

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<telnetCtrl>
<enable>true</enable>
</telnetCtrl>
```

2.3.11/CGI/System/Platform

/CGI/System/Platform	**General Resource v2.0**
GET	
Description	Acquire platform enabling information
Query	None
Inbound Data	None
Success Return	**<PlatformList>**
PUT	
Description	Set platform enabling information
Query	None
Inbound Data	**<PlatformList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of platform enabling information, helping client or IE query and set enabling information via CGI protocol, including platform enabling parameters.
Explanations on key parameters:
<platformName> means platform is enabled, value "onvif", "rtsp", "cgi", "rtmp", "p2p", "gb28181", "gat1400", "tencentCloud", “ytlf”, “imgupload”. Interface will display the <platformName> received; there’s no display if no message is received. Interface will display “onvif” and “rtsp” and hide others if it receives “onvif” and “rtsp” only.
<enabled> represents enabling, true：start, false：not start
<supportH265> Support access of H265 video; true: Enabled; false: Disabled

PlatformListXML Block

```
<PlatformList version="2.0">
<Platform>
<platformName><!-- req, xs: string --></platformName>
<enabled><!-- req, xs:string, "true,false"--></enabled>
<supportH265><!-- req, xs:string, "true,false"--></supportH265>
</Platform>
</PlatformList>
```

Test cases
GET /CGI/System/Platform
Request XML： none
Response XML: <PlatformList>
PUT/CGI/System/Platform
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PlatformList>
<Platform>
<platformName>p2p</platformName>
<enabled>true</enabled>
</Platform>
<Platform>
<platformName>onvif</platformName>
<enabled>true</enabled>
</Platform>
<Platform>
<platformName>rtsp</platformName>
<enabled>true</enabled>
</Platform>
<Platform>
<platformName>cgi</platformName>
<enabled>true</enabled>
</Platform>
<Platform>
<platformName>rtmp</platformName>
<enabled>true</enabled>
<supportH265>true</supportH265>
</Platform>
</PlatformList>
```

2.3.12/CGI/System/IrisCorrection/channels/<ID>

/CGI/System/IrisCorrection/channels/<ID>	**General Resource v2.0**
PUT	
Description	Set aperture correction

Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting of aperture correction, helping client or IE set aperture correction of device via CGI protocol.	

Test cases
PUT/CGI/System/IrisCorrection/channels/<ID>
Response XML: <ResponseStatus>
Request XML: None

2.3.13/CGI/System/LensReset/channels/<ID>

/CGI/System/LensReset/channels/<ID> **General Resource v2.0**	
PUT	
Description	Set camera reset
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for resetting of device camera, helping client or IE reset the device camera via CGI protocol.	

Test cases
PUT/CGI/System/LensReset/channels/<ID>
Response XML: <ResponseStatus>
Request XML: None

2.3.14/CGI/System/ExportLogData/<filename>

/CGI/System/ExportLogData/<filename> **General Resource v2.0**	
POST	
Description	Export log
Query	None
Inbound Data	**<CMSearchDescription>**
Success Return	**<CMSearchResult>**
Explanations on protocol: This protocol is prepared for log export, helping client or IE export the device log via CGI protocol, including language/channel No./start time/end time. **Explanations on key parameters:** <languageID> means language; 0: English; 1: Chinese <channelID> represents channel No., 0 is acceptable <logType> represents log type, ALL: all, System: system, Warning: warning, Alarm: alarm, Operation: operation, User: user, Other: other <startTime> represents start time <endTime> represents end time <searchResultPostion> represents search result position. This field cannot be omitted, (when searching from the 1st log, the assigned value is 1, not 0) <maxResults> represents query number (not exceeding 40). This field cannot be omitted. <numOfMatches> represents number of matches <chanNo> represents channel No. <type> represents type, log type, ALL: all, System: system, Warning: warning, Alarm: alarm, Operation: operation, User: user, Other: other <user> represents user	

```
<content> represents content
```

CMSearchDescriptionXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<CMSearchDescription version="1.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<searchID><!—req,sx:string--></searchID>
<languageID><!—opt,sx:integer--></languageID>
<channelID><!—req,sx:integer-- ></channelID>
<LogTypeList>
<logType><!—req:String ALL,System,Warning,Alarm,Operation,User,Other --></logType>
</LogTypeList>
<timeSpanList>
<timeSpan>
<startTime>2013-05-18T10:31:26Z</startTime>
<endTime> 2013-05-18T10:31:26Z</endTime>
</timeSpan>
</timeSpanList>
<metaID><!—opt,sx:integer--></metaID>
<searchResultPostion><!—opt,sx:integer--></searchResultPostion>
<maxResults><!—opt,sx:integer--></maxResults>
</CMSearchDescription>
```

CMSearchResultXML Block

```
<CMSearchResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<numOfMatches><!—req:inter ></numOfMatches>
<matchList>
<matchElement>
    <chanNo><!—req: sx:string ></chanNo >
<Time>2013-05-18T10:31.26</Time>
    <type><!—opt:String ALL,System,Warning,Alarm,Operation,User,Other --></ type>
<user><!—req: sx:string ></user>
    <content><!—req: sx:string ></content>
</matchElement>
</matchList>
</CMSearchResult>
```

Test cases

POST /CGI/System/ExportLogData/<filename>

Response XML：<CMSearchResult>

Request XML：<CMSearchDescription> as below

```
<CMSearchDescription>
<searchID>1</searchID>
<languageID>1</languageID>
<channelID>0</channelID>
<LogTypeList>
<logType>ALL</logType>
</LogTypeList>
<timeSpan>
<startTime>2016-12-14T00:00:00Z</startTime>
<endTime>2016-12-14T23:59:59Z</endTime>
</timeSpan>
<searchResultPostion>1</searchResultPostion>
<maxResults>18</maxResults>
</CMSearchDescription>
```

2.3.15/CGI/System/ExportLocalData/<FileName>

/CGI/System/ExportLocalData/<FileName>	General Resource v2.0

GET	
Description	Local export
Query	None
Inbound Data	None
Success Return	File content
Explanations on protocol: As customized contents of website, this protocol is transferred to server as parameter. The contents are not processed by server and returned via downloading. A dialogue box of "Save as" will pop up theoretically.	

2.3.16/CGI/System/configData/export/<FileName>

/CGI/System/configData/export/<FileName> **General Resource v2.0**	
POST	
Description	Parameter export
Query	None
Inbound Data	Form
Success Return	File content
Explanations on protocol: This protocol is prepared for parameter export, helping client or IE export the device parameters via CGI protocol. Note: Three export settings are included; ALARM: Alarm; VCA: Intelligent analysis; SYSCNF: System setting; STORAGE: Storage; PREVIEW: Preview; ITS_CHN: ITS lane parameters, ITS_SNAP: ITS snapshot parameters; ITS_SYS: Parameters of ITS system; ITS_DOMDEV: Parameters of ITS peripherals; IMAGE: Image parameters; ITS_ALL: All parameters of ITS. Sent by means of form, For example, if three methods are selected: Send "ALARM=on&VCA=on&SYSCNF=on" to CGI; If two methods are selected: Send "ALARM=on&VCA=on" If one method is selected: Send "ALARM=on".	

2.3.17/CGI/System/CommConfigData/channels/<ID>/type/<ID>/export/<FileName>

/CGI/System/CommConfigData/channels/<ID>/type/<ID>/export/<FileName>General Resource v2.0	
POST	
Description	Export common parameters
Query	**None**
Inbound Data	**None**
Success Return	**File content**
Explanations on protocol: This protocol is prepared for common parameter export, helping client or IE export the designated device parameters via CGI protocol.	

Explanations on protocol: This protocol is prepared for common parameter export. **Explanations on key parameters:** channels/<ID> Channel type/<ID> means file type: 1: Channel parameter; 2: Black and white license plate; 3: Bayonet parameters; 4: Stall whitelist

Test cases

POST /CGI/System/CommConfigData/channels/0/type/1/export/<FileName>

POST /CGI/System/CommConfigData/channels/1/type/2/export/<FileName>

2.3.18/CGI/System/Network/InternetStatus

/CGI/System/Network/InternetStatus	**General Resource v2.0**
GET	
Description	Acquire online status of public network
Query	None
Inbound Data	None
Success Return	**<IntrenetStatus>**
Explanations on protocol: This protocol is prepared for query of online status of public network, helping client or IE acquire the public network online status of device via CGI protocol. **Explanations on key parameters:** <status> Status; true: Online; false: Offline <reason> Reason: noConnectServer: The device fails to connect server; noClientConnect: Not connected to client; noConnectNet: The device fails to connect the public network. This field is null under online status.	

IntrenetStatus XML Block

```
<InternetStatus xmlns="http://www.isapi.org/ver20/XMLSchema">
    <status><!-- req, xs:boolean --></status>
    <reason><!-- req, xs:string --></reason>
</InternetStatus>
```

Test cases

GET /CGI/System/Network/InternetStatus

Request XML: none

Response XML: <IntrenetStatus>

Response XML: as below

```
<InternetStatus xmlns="http://www.isapi.org/ver20/XMLSchema">
    <status>off</status>
    <reason>noClientConnect</reason>
</InternetStatus>
```

2.3.19/CGI/System/BackupImage/types/<ID>

/CGI/System/BackupImage/types/<ID>	**General Resource v2.0**
PUT	
Description	Backup present application procedure and resource file
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for backup of present application procedure and resource file, helping client or IE do backup of device via CGI protocol. **Explanations on key parameters:** types/<ID>: Means backup target; 0: Backup of kernel, the rest is reserved	

Test cases

PUT/CGI/System/BackupImage/types/<ID>

Response XML: <ResponseStatus>

2.3.20/CGI/System/Shutdown/types/<ID>

/CGI/System/Shutdown/types/<ID>	General Resource v2.0
PUT	
Description	System shutdown
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for controlling device shutdown, helping client or IE do shut down device via CGI protocol. **Explanations on key parameters:** types/<ID>:0 means shutdown, the rest is to be expanded	

Test cases
PUT/CGI/System/Shutdown/types/<ID>
Response XML: <ResponseStatus>

2.3.21/CGI/System/AutoReboot

/CGI/System/AutoReboot General Resource v2.0	
GET	
Description	Acquire auto maintenance time of device
Query	None
Inbound Data	None
Success Return	**<AutoRebootPara>**
PUT	
Description	Set auto maintenance time of device
Query	None
Inbound Data	**<AutoRebootPara>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of auto maintenance configuration of device, helping client or IE query and set auto maintenance of device (auto restart) via CGI protocol. **Explanations on key parameters:** <frequency> Maintenance frequency, daily/weekly/monthly/year or never <month> means month if it is set as year <day> means day if it is set as year and month; means day of week if set as week; value range has minor difference <hour> means hour <minute> means minute	

AutoRebootParaXML Block

```
<AutoRebootPara>
    <frequency><!-- req, xs: string,"never,yearly,monthly,weekly,dayly"--></frequency>
    <month><!-- dep: frequency, xs: integer,"1-12"--></month>
    <day><!-- dep, xs: integer,"1-31"--></day>
    <hour><!-- req, xs:integer,"0-23"--></hour>
    <minute><!-- req, xs: integer,"0-59"--></minute>
</AutoRebootPara>
```

Test cases
GET /CGI/System/AutoReboot
Request XML: none
Response XML: <AutoRebootPara>
PUT/CGI/System/ AutoReboot
Response XML: <ResponseStatus>

Request XML: <AutoRebootPara>
<AutoRebootPara>XML as follows

```
<AutoRebootPara>
    <frequency>yearly</frequency>
    <month>7</month>
    <day>3</day>
    <hour>10</hour>
    <minute>0</minute>
</AutoRebootPara>
```

2.3.22/CGI/System/LogLevel

/CGI/System/LogLevel	**General Resource v2.0**
GET	
Description	Acquire device log level
Query	None
Inbound Data	None
Success Return	**<LogLevelPara>**
PUT	
Description	Set device log level
Query	None
Inbound Data	**<LogLevelPara>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of device log level, helping client or IE query and set device log level via CGI protocol.
Explanations on key parameters:
<system> means whether enabling system log; enable; True; disable: False
<warning> means whether enabling warning log; enable: True; disable: False
<alarm> means whether enabling alarm log; enable: True; disable: False
<operate> means whether enabling operation log; enable: True; disable: False
<user> means whether enabling user log; enable: True; disable: False
<other> means whether enabling other logs; enable: True; disable: False
<logsize> means setting of log size

LogLevelPara XML Block

```
<LogLevelPara>
    <system><!-- req, xs:string, "true,false"--></system>
    <warning><!-- req, xs:string, "true,false"--></warning>
    <alarm><!-- req, xs:string, "true,false"--></alarm>
    <operate><!-- req, xs:string, "true,false"--></operate>
    <user><!-- req, xs:string, "true,false"--></ user>
    <other><!-- req, xs:string, "true,false"--></other>
    <logsize><!-- req, xs:integer--></logsize>
</LogLevelPara>
```

Test cases
GET /CGI/System/LogLevel
Request XML： none
Response: XML: <LogLevelPara>
PUT/CGI/System/LogLevel
Response XML： <ResponseStatus>
Request XML: <LogLevelPara>
<LogLevelPara>XML as follows

```
<LogLevelPara>
    <system>true</system>
    <warning>true</warning>
    <alarm>true</alarm>
    <operate>true</operate>
    <other>false</other>
    <logsize>10000</logsize>
</LogLevelPara>
```

2.3.23/CGI/System/Video/inputs/channels/<ID>/DynamicPrivacyMask

/CGI/System/Video/inputs/channels/<ID>/DynamicPrivacyMaskGeneral Resource v2.0	
GET	
Description	Acquire shielding parameters of privacy
Query	None
Inbound Data	None
Success Return	**<DynamicPrivacyMask>**
PUT	
Description	Set shielding parameters of privacy
Query	None
Inbound Data	**<DynamicPrivacyMask>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of privacy shielding parameters, helping client or IE query and set privacy shielding parameters via CGI protocol.
Explanations on key parameters:
<channelID> Channel No.
<shieldingfactormax> means the max. shielding factor
<DynamicPrivacyMaskRegionList> means the list of privacy shielding region information
<DynamicPrivacyMaskRegion> means the privacy shielding region information
<regionId> means the privacy shielding region No.
<color> means privacy shielding region color
<shieldingfactor> means shielding factor
<regionCoordinateList> Regional coordinate list, including the coordinates of fixed points; ten-thousandth, all points 00: Deleted

DynamicPrivacyMaskXML Block

```
<DynamicPrivacyMask ="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<channelID><!—req,sx:integer--></channelID>
<enabled><!—req,xs:bool--></enabled>
<shieldingfactormax><!—req,xs:integer--></ shieldingfactormax >
<DynamicPrivacyMaskRegionList>
<DynamicPrivacyMaskRegion>
<id><!—req,xs:integer--><id>
<regionId><!—req,xs:integer--></regionId>
<color><!—req,xs:string,"black,red,green,yellow,blue,purple,cyan,white,mosaic"--></color>
<shieldingfactor><!—req,xs:integer--></shieldingfactor>
<regionCoordinateList>
<regionCoordinate>
<positionX><!—req,xs:integer--></positionX>
<positionY><!—req,xs:integer--></positionY>
</regionCoordinate>
</regionCoordinateList>
</ DynamicPrivacyMaskRegion>
< /DynamicPrivacyMaskRegionList>
</DynamicPrivacyMask>
```

Test cases

GET /CGI/System/Video/inputs/channels/<ID>/DynamicPrivacyMask

Request XML： none
Response XML: <DynamicPrivacyMask>
PUT/CGI/System/Video/inputs/channels/<ID>/DynamicPrivacyMask
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DynamicPrivacyMask>
<enabled>true</enabled>
<shieldingfactormax>44</shieldingfactormax>
<DynamicPrivacyMaskRegionList>
<DynamicPrivacyMaskRegion>
<id>1</id>
<regionId>1</regionId>
<color>yellow</color>
<shieldingfactor>1</shieldingfactor>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2406</positionX>
<positionY>2541</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>4874</positionX>
<positionY>4332</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3350</positionX>
<positionY>3387</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</DynamicPrivacyMaskRegion>
</DynamicPrivacyMaskRegionList>
</DynamicPrivacyMask>
```

2.3.24/CGI/System/HotBackup/mode

/CGI/System/HotBackup/mode	**General Resource v2.0**
GET	
Description	Acquire hot standby mode (working device/hot standby device) of present device
Query	None
Inbound Data	None
Success Return	**<HotBackupMode>**
PUT	
Description	Set hot standby mode (working device /hot standby device) of present device
Query	None
Inbound Data	**<HotBackupMode>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting of hot standby mode. **Explanations on key parameters:** <mode>workDev: Working device hotBackupDev: Hot backup device	

HotBackupModeXML Block

```
<HotBackupMode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<mode><!-- req,xs:string, "workDev, hotBackupDev"></ mode>
</HotBackupMode>
```

Test cases
GET /CGI/System/HotBackup/mode
Request XML: none
Response XML: <hotBackupMode>
PUT/CGI/System/HotBackup/mode
Response XML: <ResponseStatus>
Request XML: as below

```
<hotBackupMode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<mode>workDev</mode>
</hotBackupMode>
```

2.3.25/CGI/System/HotBackup/workDev/enable

/CGI/System/HotBackup/workDev/enable	**General Resource v2.0**
GET	
Description	Acquire hot standby enabling of present device
Query	None
Inbound Data	None
Success Return	**<HotBackupEn>**
PUT	
Description	Set hot standby enabling of present device
Query	None
Inbound Data	**<HotBackupEn>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting of hot standby enabling of device. **Explanations on key parameters:** <enabled> Hot standby enabling; true: Enabled; false: Disabled	

HotBackupEnXML Block

```
<HotBackupEn version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<enabled><!-- req, xs:boolern "false,true"--></enabled>
</HotBackupEn>
```

Test cases
GET /CGI/System/HotBackup/workDev/enable
Request XML: none
Response XML: <hotBackupEn>
PUT/CGI/System/HotBackup/workDev/enable
Response XML: <ResponseStatus>
Request XML: as below

```
<HotBackupEn version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<enabled>true</enabled>
</HotBackupEn>
```

2.3.26/CGI/System/HotBackup/workDevList

/CGI/System/HotBackup/workDevList	**General Resource v2.0**
GET	
Description	Client acquires the list of searched working device IP

Query	None
Inbound Data	**<WorkDevList>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for sending the searched working device IP to client. This protocol requires regular call of client for device information is changed constantly. **Explanations on key parameters:** <ip> Working device IP -- Support IPv6 address	

WorkDevListXML Block

```
<WorkDevList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<dev>
<id><!-- opt, xs:integer --></id>
<ip><!-- req, xs:string --></ip>
</dev>
</WorkDevList>
```

Test cases

GET /CGI/System/HotBackup/workDevList

Request XML： none

Response XML: <WorkDevList>

```
<WorkDevList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<dev>
<id>1</id>
<ip>10.30.31.78</ip>
</dev>
<dev>
<id>2</id>
<ip>10.30.30.158</ip>
</dev>
</WorkDevList>
```

2.3.27/CGI/System/HotBackup/modifyDev

/CGI/System/HotBackup/modifyDev	**General Resource v2.0**
PUT	
Description	Set IP list of working device/hot standby device of present device
Query	None
Inbound Data	**<HotModifyInfoList>**
Success Return	**<ResponseStatus>**
DELETE	
Description	Delete IP list of working device/hot standby device of present device
Query	None
Inbound Data	**<HotDeleteInfoList>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for adding or deleting hot standby device IP for working device, adding or deleting working device IP of hot standby device. The details are determined by the working mode of device. **Explanations on key parameters:** <mode>workDev: Working device hotBackupDev: Hot backup device <ip> ip address -- Support IPv6 address <username> Username of working device <password>Login password of working device	

HotModifyInfoList XML Block

```
<HotModifyInfoListversion="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<HotModifyInfo>
<mode><!-- req, xs:string,   "workDev, hotBackupDev"--></mode>
<ip><!-- req,xs:string --></ip>
<username><!-- req,xs:string --></username>
<password><!-- req,xs:string --></password>
</HotModifyInfo>
</HotModifyInfoList>
```

HotDeleteInfoList XML Block

```
<HotDeleteInfoList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<HotDeleteInfo>
<mode><!-- req, xs:string,"workDev, hotBackupDev"--></mode>
<ip><!-- req,xs:string --></ip>
</HotDeleteInfo>
</HotDeleteInfoList>
```

Test cases

PUT /CGI/System/HotBackup/modifyDev

Request XML: <HotModifyInfoList>

Response XML: <ResponseStatus>

DELETE/CGI/ System/HotBackup/modifyDev

Request XML: <HotDeleteInfoList>

Response XML: <ResponseStatus>

<HotModifyInfoList>XML: As follows

```
<HotModifyInfoList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<HotModifyInfo>
<mode>workDev</mode>
<ip>10.30.31.47</ip>
<username>admin</username>
<password>admin11</password>
</HotModifyInfo>
</HotModifyInfoList >
```

p<HotDeleteInfoList>XML: As follows

```
<HotDeleteInfoList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<HotDeleteInfo>
<mode>hotBackupDev--></mode>
<ip>10.30.31.44</ip>
</HotDeleteInfo>
</HotDeleteInfoList>
```

2.3.28/CGI/System/HotBackup/devStatus

/CGI/System/HotBackup/devStatus	**General Resource v2.0**
GET	
Description	Client acquires the configuration information and connection status of hot standby device or working device
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquiring working status information of hot standby device for working device, or acquiring working status information of working device for hot standby device.
Explanations on key parameters:
<mode>workDev: Working device hotBackupDev: Hot backup device
<ip> ip address -- Support IPv6 address
<state> Working device: online: Online; offline: Offline; syncing: Synchronizing in progress
Hot standby device: Normal; hot standby; backup: Backup: syncing: Synchronizing; offline: Offline; pswerr: Username or password error

<progress> Synchronization percentage, 0~100

HotDevStatusListXML Block

```
<HotDevStatusList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<mode><!-- req, xs:string,"workDev, hotBackupDev"--></devType>
<HotDevStatus>
<id><!-- opt,xs:integer --></id>
<ip><!-- reqxs:string;ip --></ip>
<state><!-- depxs:integer;devType--></state>
<progress><!-- dep: state ,xs:integer--></progress>
</HotDevStatus>
</HotDevStatusList>
```

Test cases
GET/CGI/System/HotBackup/devStatus
Request XML：None
Response XML: <HotDevStatusList>
<HotDevStatusList>XML: As follows

```
<HotDevStatusListversion="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
<mode>workDev</mode>
<HotDevStatus>
<id>1</id>
<ip>10.30.31.44</ip>
<state>syncing</state>
<progress>35</progress>
</HotDevStatus>
</HotModifyInfo>
```

2.3.29/CGI/System/textPlan

/CGI/System/textPlan	**General Resource v2.0**
GET	
Description	Acquire plan management parameters
Query	None
Inbound Data	None
Success Return	**<TextPlanList>**
PUT	
Description	Set plan management parameters
Query	None
Inbound Data	**<TextPlanList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of plan parameters, helping client or IE query and set device plan via CGI protocol, including S/N, alias and contents.
Explanations on key parameters:
None

TextPlanList XML Block

```
< TextPlanList version="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
<textPlan>
<id><!-- req, xs: :integer--></id>//Plan No. 1,2…..
<alias><!-- req, xs:string --></alias>// Plan alias, 63 characters at most
<text><!-- req, xs:string--></text>// Plan text, 255 characters at most
</textPlan>
</TextPlanList>
```

Test cases

GET /CGI/System/textPlan

Request XML： none

Response XML: <TextPlanList>

PUT/CGI/System/textPlan

Response XML: <TextPlanList>

Request XML： as below

```
<TextPlanList version="1.0" >
<textPlan>
    <id>1</id>
    <alias>yuan1</alias>
    <text>alarm</text>
</textPlan>
</TextPlanList>
```

2.3.30/CGI/System/channels/capabilities

/CGI/System/channels/capabilities	**General Resource v2.0**
POST	
Description	Equipment channel specific capability set
Query	None
Inbound Data	**<CapDiscription>**
Success Return	**<ChanBasicCapList>**

Explanations on protocol:

This protocol is prepared for acquiring certain capability set from all channels of device.

Explanations on key parameters:

<capType> Types of capability sets acquired; value: laserlight (laser light), alert (alert), guardSound (guard sound), whitelight (white light), activateDualLight (dual light), dynprvarea (dynamic privacy shielding), color2gray (color to black), image (video parameters), vca (intelligent analysis), talk (talk), keyregion (key region), alarminput (alarm input), daynight (day/night mode), encodeSet (encode set), staticPrvarea (static privacy shielding)

OSD (character overlay), MotionDetection (motion detection), tamperDetection (tampering detection), videoLoss (loss alarm), ptzSet (PTZ setting), imageSchedule (HD template), smartConfig (smart configuration), AudioPonticello: Audio mutation; accessDetection (loop detection), protocolAuthType (protocol authentication method)

AutoTestCloudIPC: Whether NVR supports auto detection of IPC cloud version

AutoChangeIPCTime: Whether NVR supports auto timing of IPC.

NetCardGather: Whether it supports gather mode of net card

<channel> Channel No.: Means NVR property if this field is “all”

CapDiscriptionXML Block

```
<CapDiscription>
    <capType><!--req, xs:string,"laserlight,alert,guardSound" --></capType>
</CapDiscription>
```

ChanBasicCapListXML Block

```
<ChanBasicCapList>
    <capType><!--req, xs:string,"laserlight,alert,guardSound" --></capType>
    <ChanBasicCap>
        <channel><!-- req, xs:integer --></channel>
        <support><!-- req, xs:bool,"true,false" --></support>
        <supportSoundSampleNum >
            <!-- dep: capType=guardSound, xs: integer;-->
        </supportSoundSampleNum >    // Number of linkage warning sounds supported
        <supportSoundCustomNum >
            <!-- dep: capType=guardSound, xs: integer;-->
        </supportSoundCustomNum >    // Number of linkage customized warning sounds supported
    </ChanBasicCap>
</ChanBasicCapList>
```

Test cases

POST/CGI/System/channels/capabilities

Request XML: <CapDiscription>

Response XML: <ChanBasicCapList>

Request XML：None

CapDiscriptionXML as follows:

```
<CapDiscription>
    <capType>laserlight</capType>
</CapDiscription>
```

ChanBasicCapListXML as follows:

```
<ChanBasicCapList>
    <capType>laserlight</capType>
    <ChanBasicCap>
        <channel>1</channel>
        <support>ture</support>
    </ChanBasicCap>
    <ChanBasicCap>
        <channel>2</channel>
        <support>false</support>
    </ChanBasicCap>
</ChanBasicCapList>
Or
<ChanBasicCapList>
    <capType>NetCardGather</capType>
    <ChanBasicCap>
        <channel>all</channel>
        <support>ture</support>
    </ChanBasicCap>
</ChanBasicCapList>
```

2.3.31/CGI/System/channels/<ID>/capabilities

/CGI/System/channels/<ID>/capabilities General Resource v2.0	
POST	
Description	Capability set of device channel
Query	None
Inbound Data	**<CapDiscription>**
Success Return	**<ChanBasicCapList>**

Explanations on protocol:
This protocol is prepared for acquiring the capability set of device channel.
Explanations on key parameters:
<capType> Types of capability set acquired: laserlight: Laser light; guardSound: Guard sound; Whitelight: White light; activateDualLight: Dual light; talk: Talk; ROI, exposureBright: Exposure; mutualExclusion: Intelligent analysis is mutually exclusive with S+; detectionMoved: Motion detection; tamperDetection: Tampering detection; videoLoss: Loss alarm; ptzSet: PTZ setting; Calibrate: Calibrate; vcaAndAlert: Intelligent analysis is mutually exclusive with alert; vcaFaceAndAudio: Face recognition is mutually exclusive with audio diagnosis under intelligent analysis; vcaFaceAndVIdeo: Face recognition is mutually exclusive with video diagnosis under intelligent analysis; alertSupport: Alert; alertPerimeter: Perimeter alert; alertTrip: Trip alert; alertScreenNum: screens supported; fastLight: Fast enabling of strong light; fastLaser: Fast enabling of laser; ptzPoint: Preset position; ptzCruise: PTZ cruising; playAlertSound: Play alert sound; highframerateandother: Mutually exclusively functions above 25/30 frames; color2graylight: Whether support brightness control over color-to-black far infrared light and white light; drawFace: Information of face drawn at client. spaceHeatMap: Space heat map. algoResourceProcess: Distribution of algorithm resources; algoResourceTiming: Regular distribution of resource distribution; defaultSchedule: Recover default setting of HD template.
Face recognition laser: faceDiscernLaserLight
Face recognition sound: faceDiscernGuardSound
Face recognition white light: faceDiscernWhiteLight
Face recognition guard light: faceDiscernGuardLight

Video flip: videoFlip
NP system setting: npModeSwitch
Face recognition is mutually exclusively with people counting: FaceDetectDemographics
Lines of characters added on each OSD block: osdLine OSD
Number of additional characters: osdNumber
ABF function: AutoBackFocus,
Whether OSD overlay date supports Chinese: osdSupportChineseDate; true: Supported; false: Not supported
Whether support dynamic ROI: DynamicRoi; true 1: Support dynamic ROI of ball camera
2 support dynamic ROI of bolt
Flase: Not supported
Face detection laser: faceDetectLaserLight
Face detection sound: faceDetectGuardSound
Face detection white light: faceDetectWhiteLight
Face detection guard light: faceDetectGuardLight
Face detection area: faceDetectArea; 0: Not supported; 1: Screen 0 supported; 2 Multi-screen supported
Support shielding area setting: vcaMaskArea
Smart code: smartCode
Smart image: smartImage
Smart alarm: smartAlarm
Setting of electrical anti-shaking level: eleantiShakeLevel
Working mode of serial port: comWorkMode
Temperature control mode: tempCtrlMode
Priority mode: proirityMode
Onvif supports access of H265 video: insertH265
Intelligent alarm support multi areas：smartAlmMulArea,
Switching screen snapshot: SceneSnap
Audio mutation: AudioPonticello
Image adjustment: imageAdjust
Guard light: guardLight
Auto scan mode: AutoScanMode (this mode includes < subCap ><ScanMode > //0-Left/right scan; 1-Auto scan; 2-Frame scan; 3-Random scan; 4-Vertical scan; 5-Panoramic scan; 6-Helical scan)

Traffic trigger: trafficTouch
Auto detection of cloud upgrade: autoTestCloud
Structured attribute: structuredAttribute
Support IPv6: ipv6Support

CapDiscription XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<CapDiscription>
    <capType><!--req,xs:string,"laserlight,guardSound,whitelight,activateDualLight,talk,exposureBright,ROI,mutualExclusion, SceneSnap, AudioPonticello,Calibrate,guardLight, trafficTouch,structuredAttribute " -->
    </capType>
</CapDiscription>
```

ChanBasicCapList XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<ChanBasicCapList>
 <capTypeList>
    <capType><!--req,xs:string,"laserlight,guardSound,whitelight,activateDualLight,talk,exposureBright,ROI,mutualExclusion" --></capType>
    <support><!-- req, xs:bool,"true,false" --></support>
    <subCap>// This field exists if sub capability set is available and the field of sub capability set varies
            // This field does not exist if there's no capability set
        < supportSoundSampleNum >
            <!-- dep: capType=guardSound, xs: integer;-->
        </supportSoundSampleNum >   // Number of linkage warning sounds supported
        <supportSoundCustomNum>
            <!-- dep: capType=guardSound, xs: integer;-->
        </supportSoundCustomNum >   // Number of linkage customized warning sounds supported
        < supportSmartType>
            <!-- dep: capType= exposureBright or ROI,xs:string,"LineDetection、DoubleLineDetection、FieldDetection、 Loitering、RapidMove、AttendedBaggage、UnattendedBaggage、 Alert、Face、Group、OnDuty、PlatLicense、ParkGuard、IllegalPark" -->
        </supportSmartType>
    </subCap>
 </capTypeList>
 <capTypeList>
    <capType> highframerateandother </capType>
    <support>ture</support>
    <subCap>
        <mutexType>lcd</ mutexType >// Distortion correction
        < mutexType >vcabaisc</ mutexType >// Behavior analysis
        < mutexType >vcavfd</ mutexType >// Face detection
        < mutexType >vcacdd</ mutexType >// Gathering
        < mutexType >vcacpc</ mutexType >// People counting
        < mutexType >vcasvd</ mutexType >// On-duty detection
        < mutexType >vcavideo</ mutexType >// Video diagnosis
        < mutexType >vcaalert</ mutexType >// Alert template
        < mutexType >vcalpr</ mutexType >// License plate recognition
        < mutexType >vcaillpark</ mutexType >// Illegal parking
        < mutexType >wdr</ mutexType >// Wide dynamic
        < mutexType >videocover </ mutexType >// Video shielding
        < mutexType >corridor</ mutexType >// Corridor mode
        < mutexType >vcaspalert </ mutexType >// Special warning
        < mutexType >vcalpd</ mutexType >// Park guard:
        < mutexType >vcafollow</ mutexType >// Traction
```

```
            < mutexType >vcaallfolloew</ mutexType >// Panoramic ball algorithm
            < mutexType >vcahat</ mutexType >// Helmet algorithm
            < mutexType >antishake</ mutexType >// Electronic anti-shaking
            < mutexType >digitalzoom</ mutexType >// Electronic zoom
            < mutexType >allvca</ mutexType >// All intelligent algorithms
        </subCap>
 </capTypeList>
 <capTypeList>
      <capType> color2graylight </capType>
      <support>ture</support>
      <subCap>
            < lightType >farinfraredLamp</ lightType >// Infrared light
            < lightType > whiteLamp</ lightType >// Brightness control of white lamp
        </subCap>
 </capTypeList>
 <capTypeList>
      <capType><!--req,xs:string," FaceDetectDemographics " --></capType>
      <support><!-- req, xs:bool,"true,false" --></support>    //true: Mutually exclusive    false:
Not mutually exclusive
 </capTypeList>
 <capTypeList>
      <capType><!--req,xs:string," AutoBackFocus " --></capType>
      <support><!-- req, xs:bool,"true,false" --></support> // true: Support ABF; false: Not
support ABF
 </capTypeList>
 <capTypeList>
      <capType> faceDetectArea </capType>
      <support>ture</support>
      <subCap>
            <supportSceneNum>1</supportSceneNum >//1 Screen 0: Support 2: Multi-screen
support
        </subCap>
 </capTypeList>
 <capTypeList>
      <capType><!--req,xs:string,"comWorkMode" --></capType>
      <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
      <subCap>
            <comMode><!-- req, xs:string,"1,2,3" --></comMode> //1: Protocol mode; 2:
Transparent channel; 3: Peripheral mode
      </subCap>
 </capTypeList>
 <capTypeList>
      <capType><!--req,xs:string,"tempCtrlMode" --></capType>
      <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
      <subCap>
            <ctrlMode><!-- req, xs: string,"1,2,3,4,5" --></ctrlMode> // 0-Disabled 1-Air cooling
2-Auto 3-Defog 4-Heating
      </subCap>
 </capTypeList>
 <capTypeList>
      <capType><!--req,xs:string,"proirityMode" --></capType>
      <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
      <subCap>
            <proirityMode><!-- req, xs: string,"1,2" --></proirityMode> // 0-Network priority;
1-PTZ priority
      </subCap>
 </capTypeList>
 <capTypeList>
```

```
        <capType>insertH265</capType>
        <support>true</support>
    </capTypeList>
    <capTypeList>
        <capType><!--req,xs:string,"SceneSnap" --></capType>
        <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
    </capTypeList>
    <capTypeList>
        <capType><!--req,xs:string,"AudioPonticello" --></capType>
        <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
    </capTypeList>
    <capTypeList>
        <capType><!--req,xs:string,"Calibrate" --></capType>
        <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
    </capTypeList>
    <capTypeList>
        <capType><!--req,xs:string,"ImageAdjust" --></capType>
        <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
        <subCap>
            <supportImageNum><!--dep: xs: integer;--></supportImageNum>// Number of
templates supported
            <adjustType><!--dep,xs:string,"horizontal, vertical, ldc, enlarge" --><adjustType>
        </subCap>
    </capTypeList>
    <capTypeList>
        <capType><!--req,xs:string,"guardLight" --></capType>
        <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
    </capTypeList>
    <capTypeList>
       <capType><!--req,xs:string,"faceDiscernGuardLight" --></capType>
       <support><!-- req, xs:bool,"true,false" --></support>
    </capTypeList>
    <capTypeList>
       <capType><!--req,xs:string,"faceDetectGuardLight" --></capType>
       <support><!-- req, xs:bool,"true,false" --></support>
    </capTypeList>
    <capTypeList>
        <capType><!--req,xs:string," AutoScanMode " --></capType>
        <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
        <subCap>
        < ScanMode ><!--req,xs:string,"0,1,2,3,4,5,6 " --></ ScanMode > // 0-Left/right scan,
1-Auto scan, 2-Frame scan, 3-Random scan, 4-Vertical scan, 5-Panoramic scan, 6-Helical scan
        </subCap>
    </capTypeList>
    <capTypeList>
        <capType><!--req,xs:string,"trafficTouch" --></capType>
        <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
    </capTypeList>
    <capTypeList>
        <capType> <!--req,xs:string," structuredAttribute " --></capType>
        <support><!-- req, xs:bool,"true,false" --></support >
        <subCap>
            <supportType>face</supportType>// Face attribute
            <supportType>human</supportType>// Human attribute
            <supportType>vehicle</supportType>// Vehicle attribute
            <supportType>plate</supportType>// Plate attribute
            <supportType>nonmotor</supportType>// Nonmotor attribute
        </subCap>
```

```
  </capTypeList>
</ChanBasicCapList>
```

Test cases
POST/CGI/System/channels/1/capabilities
Request XML: <CapDiscription>
Response XML: <ChanBasicCapList>
CapDiscriptionXML as follows:

```
<?xml version="2.0" encoding="UTF-8"?>
<CapDiscription>
      <capType>laserlight</capType>
      <capType>guardSound</capType>
      <capType> FaceDetectDemographics </capType>
      <capType> faceDetectArea </capType>
      <capType>comWorkMode</capType>
      <capType>tempCtrlMode</capType>
      <capType>proirityMode</capType>
      <capType>AudioPonticello</capType>
      <capType>guardLight</capType>
      <capType>AutoScanMode</capType>
      <capType> trafficTouch</capType>
      <capType>structuredAttribute</capType>
</CapDiscription>
```

ChanBasicCapListXML as follows:

```
<?xml version="2.0" encoding="UTF-8"?>
<ChanBasicCapList>
  <capTypeList>
      <capType>laserlight</capType>
      <support>ture</support >
  </capTypeList>
  <capTypeList>
      <capType>guardSound</capType>
      <support>true</support>
      <subCap>
            <supportSoundSampleNum >7</supportSoundSampleNum >
            <supportSoundCustomNum >2</supportSoundCustomNum >
      </subCap>
  </capTypeList>
  <capTypeList>
      <capType>osdLine</capType>      // Lines of additional characters of each block
      <support>true</support>
      <subCap>
            <supportOsdLine >2</ supportOsdLine >
      </subCap>
  </capTypeList>
  <capTypeList>
      <capType>osdNumber</capType> // Number of additional characters of OSD
      <support>true</support>
      <subCap>
            <supportOseNumber >1</supportOsdNumber >
      </subCap>
  </capTypeList>
  <capTypeList>
      <capType>imageAdjust</capType>
      <support>true</support> //true: Supported false: Not supported
      <subCap>
            <supportImageNum>5</supportImageNum>// Number of templates supported
            <adjustType>horizontal</adjustType>
```

```
            <adjustType>vertical</adjustType>
            <adjustType>ldc</adjustType>
            <adjustType>enlarge</adjustType>
            //adjustType field name corresponds to the distortion calibrationlevel of network protocol. 1:horizontal
            //2:vertical
            //3:ldc
            //4:enlarge
        </subCap>
  </capTypeList>
  <capTypeList>
      <capType>osdSupportChineseDate</capType> // Whether OSD overlay date supports Chinese format
      <support>true</support>
  <capTypeList>
      <capType>DynamicRoi</capType> // Whether support dynamic ROI
      <support>true</support>// When support is flase: Not supported (No subCap if it is flase)
      <subCap>
            <supportDynamicRoi>1</supportDynamicRoi>
    </subCap>
  </capTypeList>
  < capTypeList >
      <capType>exposureBright</capType>
      <support>true</support>
      <subCap>
            < supportSmartType>Face</supportSmartType>
            < supportSmartType>Alert</supportSmartType>
            < supportSmartType>IllegalPark</supportSmartType>
      </subCap>
  </capTypeList>
  <capTypeList>
      <capType>alertSupport</capType>// Alert
      <support>true</support>
  </capTypeList>
  <capTypeList>
      <capType>alertPerimeter</capType>
      <support>ture</support >
      <subCap>
            <supportAlertType>targetSet</supportAlertType>// Set target box
            <supportAlertType>targetDiff</supportAlertType>// Distinguish target box
            <supportAlertType>tripDisplay</supportAlertType>// Display trip
            <supportAlertType>linkFollow</supportAlertType>// Linkage traction
            <supportAlertType>linkSound</supportAlertType>// Linkage sound
            <supportAlertType>linkLaser</supportAlertType>// Linkage laser
            <supportAlertType>linkWhiteLight</supportAlertType>// Linkage white light
            <supportAlertType>targetTypeCheck</supportAlertType>// Target type check
      </subCap>
  </capTypeList>
  <capTypeList>
      <capType>alertTrip</capType>
      <support>ture</support>
      <subCap>
            <supportAlertType>targetSet</supportAlertType>// Set target box
            <supportAlertType>targetDiff</supportAlertType>// Distinguish target box
            <supportAlertType>tripDisplay</supportAlertType>// Display trip
            <supportAlertType>linkFollow</supportAlertType>// Linkage traction
            <supportAlertType>linkSound</supportAlertType>// Linkage sound
            <supportAlertType>linkLaser</supportAlertType>// Linkage laser
```

```
            <supportAlertType>linkWhiteLight</supportAlertType>// Linkage white light
            <supportAlertType>targetTypeCheck</supportAlertType>// Target type check
            <supportAlertType>twoWayAlarm </supportAlertType>// Two-way alarm
        </subCap>
  </capTypeList>
  <capTypeList>
      <capType>alertScreenNum</capType>// Number of screens supported
      <support>4</support>// Number, 0 or 4 supported, 2 or more may be supported latterly
  </capTypeList>
  <capTypeList>
      <capType>drawFace</capType>
      <support>ture</support>
  </capTypeList>
  <capTypeList>
      <capType> FaceDetectDemographics </capType>
      <support>ture</support>
  </capTypeList>
  <capTypeList>
      <capType> AutoBackFocus </capType>
      <support>ture</support>
  </capTypeList>
  <capTypeList>
      <capType> faceDetectArea </capType>
      <support>ture</support>
      <subCap>
            <supportSceneNum>1</supportSceneNum >//1 Screen 0: Support 2: Multi-screen
support
      </subCap>
  </capTypeList>
  <capTypeList>
      <capType> comWorkMode </capType>
      <support>ture</support>
      <comMode>1,2,3</comMode> //1: Protocol mode; 2: Transparent mode; 3: Peripheral
mode </capTypeList>
  <capTypeList>
      <capType> tempCtrlMode </capType>
      <support>ture</support>
      <ctrlMode>1,2,3,4,5</ctrlMode> // 0-Disabled 1-Air cooling 2-Auto 3-Defog 4-Heating
  </capTypeList>
  <capTypeList>
      <capType> proirityMode </capType>
      <support>ture</support>
      <proirityMode>1,2</proirityMode> // 0-Network priority; 1-PTZ priority
  </capTypeList>
  <capTypeList>
      <capType>SceneSnap</capType>
      <support>true</support>
  </capTypeList>
  <capTypeList>
      <capType> AudioPonticello</capType>
      <support>true</support>
  </capTypeList>
  <capTypeList>
      <capType><!--req,xs:string,"Calibrate" --></capType>
      <support><!-- req, xs:bool,"true,false" --></support> // true: Support; false: Not support
  </capTypeList>
  <capTypeList>
      <capType> guardLight </capType>
```

```
        <support>true</support>
</capTypeList>
  <capTypeList>
     <capType>faceDiscernGuardLight</capType>
     <support>true</support>
  </capTypeList>
  <capTypeList>
     <capType>faceDetectGuardLight</capType>
     <support>true</support>
  </capTypeList>
  <capTypeList>
        <capType> AutoScanMode </capType>
        <support>ture</support>
        < ScanMode >0,1,2,3,4,5,6</ ScanMode > // 0-Left/right scan, 1-Auto scan, 2-Frame scan,
3-Random scan, 4-Vertical scan, 5-Panoramic scan, 6-Helical scan
  </capTypeList>
  <capTypeList>
        <capType>trafficTouch</capType>
        <support>true</support>
  </capTypeList>
  <capTypeList>
  <capType>autoTestCloud</capType>
        <support>true</support>
        <capTypeList>
  <capTypeList>
        <capType>structuredAttribute</capType>
        <support>ture</support >
        <subCap>
              <supportType>face</supportType>
              <supportType>human</supportType>
              <supportType>vehicle</supportType>
              <supportType>plate</supportType>
              <supportType>nonmotor</supportType>
        </subCap>
  </capTypeList>
  </capTypeList>

</ChanBasicCapList>
```

2.3.32/CGI/System/ActivationStatus

/CGI/System/ActivationStatus	**General Resource v2.0**
GET	
Description	Acquire device activation status
Query	None
Inbound Data	None
Success Return	**<ActivationStatus>**
Explanations on protocol: This protocol is prepared for query of device activation status, helping client or IE query the device activation status via CGI protocol. **Explanations on key parameters:** <activated> Status; active: Activated; inactive: Not activated; unknown: Unknown	

ActivationStatus XML Block

```
<ActivationStatus xmlns="http://www.isapi.org/ver20/XMLSchema">
    <activated><!-- req, xs:string, "active, inactive,unknown" --></activated>
</ActivationStatus>
```

Test cases
GET /CGI/System/ActivationStatus
Request XML： none
Response XML: <ActivationStatus>
Response XML： as below

```
<ActivationStatusxmlns="http://www.isapi.org/ver20/XMLSchema">
    <activated>inactive</activated>
</ActivationStatus>
```

d2.3.33/CGI/System/Video/inputs/channels/<ID>/focus

/CGI/System/Video/inputs/channels/<ID>/focus	**General Resource v2.0**
PUT	
Description	Focus control
Query	None
Inbound Data	< FocusData >
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for focus setting. **Explanations on key parameters:** <focus> 100 means: Increase focus; -100 means: Decrease focus; 0 means: stop	

FocusData XML Block

```
<FocusData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<focus>    <!-- req, xs:intger -->    </focus>    100: Add focus;    -100: Reduce focus; 0: Stop
</FocusData>
```

Test cases
PUT /CGI/System/Video/inputs/channels/<ID>/focus
Response XML： <ResponseStatus>
Request XML： as below

```
<FocusData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <focus>100</focus>
</FocusData>
```

2.3.34/CGI/System/Video/inputs/channels/<ID>/iris

/CGI/System/Video/inputs/channels/<ID>/iris	**General Resource v2.0**
PUT	
Description	Aperture control
Query	None
Inbound Data	**< IrisData >**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting aperture control. **Explanations on key parameters:** <iris> 100: Aperture enabled; -100: Aperture disabled;	

IrisData XML Block

```
<IrisData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<iris>    <!-- req, xs:intger -->    </iris> 100: Aperture enabled;    -100: Aperture disabled;
</IrisData>
```

Test cases

PUT /CGI/System/Video/inputs/channels/1/iris

Response XML: <ResponseStatus>

Request XML: as below

```
<IrisData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <iris>100</iris>
</IrisData>
```

2.3.35/CGI/System/IO/inputs/<ID>

/CGI/System/IO/inputs/<ID>	**General Resource v2.0**
GET	
Description	Obtain alarm input parameters
Query	None
Inbound Data	None
Success Return	**<IOInputPort>**
PUT	
Description	Set alarm input parameters
Query	None
Inbound Data	**<IOInputPort>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquisition and setting of alarm input **Explanations on key parameters:** <triggering> means mode setting; high: Open circuit alarm; low: Closed circuit alarm	

IOInputPort XML Block

```
<IOInputPort    version="2.0"       xmlns="http://www.isapi.org/ver20/XMLSchema">
<id>       <!-- req, xs:string;id -->       </id> // Input port value is consistent with ie
<enabled> <!--req,Boolean,"true,false"--> </enabled>    // Enabling; true: Enabled; false:
Disabled
<triggering>       <!-- req, xs:string, "high,low" -->       <triggering>    // Mode setting; high:
Open circuit alarm; low: Closed circuit alarm
<name> <!--opt,xs:string--></name>
</IOInputPort>
```

Test cases

GET /CGI/System/IO/inputs/<ID>

Request XML: none

Response XML: <IOInputPort>

PUT /CGI/System/IO/inputs/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<IOInputPort>
<id>1</id>
<enabled>true</enabled>
<triggering>low</triggering>
</IOInputPort>
```

2.3.36/CGI/System/IO/outputs/<ID>

/CGI/System/IO/inputs/<ID>	General Resource v2.0
GET	
Description	Obtain alarm output parameters
Query	None
Inbound Data	None
Success Return	**<IOOutputPort>**
PUT	
Description	Set alarm output parameters
Query	None
Inbound Data	**<IOOutputPort>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquisition and setting of alarm output **Explanations on key parameters:** <outputState> means mode setting; high: Open circuit alarm; low: Closed circuit alarm	

IOOutputPort XML Block

```
<IOOutputPort version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id> <!-- req, xs:string; id --> </id> // Output port: Value is consistent with ie
<PowerOnState>                <!-- req -->
<defaultState>          <!—ro, req, xs:string, "high,low" -->          </defaultState>
<outputState>             <!—ro, req, xs:string, "high,low" -->       </outputState> // Mode
setting; high: Open circuit alarm; low: Closed circuit alarm
<delayTime><!-- dep, xs:integer,seconds --></ delayTime > // Delay time is consistent with ie:
0, 1, 2, 5, 10 and 30
<pulseDuration>       <!-- dep, xs:integer, milliseconds --> </pulseDuration>
</PowerOnState>
   <name> <!--opt, xs:string--> </name>
</IOOutputPort>
```

Test cases

GET /CGI/System/IO/outputs/<ID>

Request XML: none

Response XML: <IOOutputPort>

PUT /CGI/System/IO/outputs/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<IOOutputPort>
<id>1</id>
<PowerOnState>
<outputState>low</outputState>
<delayTime>30</delayTime>
</PowerOnState>
</IOOutputPort>
```

2.3.37/CGI/System/Video/inputs/channels/<ID>/motionDetection

/CGI/System/Video/inputs/channels/<ID>/motionDetection General Resource v2.0	
GET	
Description	Acquire motion alarm parameters of video
Query	None
Inbound Data	None
Success Return	**<MotionDetection>**

PUT	
Description	Set motion alarm parameters of video
Query	None
Inbound Data	**<MotionDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquisition and setting of motion alarm parameters of video
Explanations on key parameters:
<sensitivityLevel> means sensitivity level, value is consistent with ie; range: 0-100s
<gridMap> means regional coordinates of image (see web6.0 interface module introduction.doc for details)

IOOutputPort XML Block

```
<MotionDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
   <enabled> <!--req,Boolean,"true,false"--> </enabled>    // Enabling; true: Enabled; false:
Disabled
   <enableHighlight><!-- opt, xs:boolean --> </enableHighlight>
<samplingInterval> <!-- opt, xs:integer, number of frames --> </samplingInterval>
<startTriggerTime> <!-- opt, xs:integer, milliseconds --> </startTriggerTime>
<endTriggerTime> <!-- opt, xs:integer, milliseconds --> </endTriggerTime>
  <regionType><!-- ro, req, xs:string, "grid" --> </regionType> // Assignment is "grid"
   <Grid>                          <!-- dep -->
      <rowGranularity>              <!-- ro, req, xs:integer -->       </rowGranularity>    //
Assignment is 18
      <columnGranularity>       <!-- ro, req, xs:integer -->       </columnGranularity> //
Assignment is 22
   </Grid>
   <ROI>       <!-- dep -->
   <normalizedScreenWidth> <!--ro,req,xs:integer --></normalizedScreenWidth>
   <normalizedScreenHeight> <!-- ro, req, xs:integer --></normalizedScreenHeight>
   </ROI>
   <MotionDetectionLayout/>       <!-- req -->
</MotionDetection>

<MotionDetectionLayout version="2.0"
   xmlns="http://www.isapi.org/ver20/XMLSchema">
<sensitivityLevel>              <!-- req -->
      <!-- req, xs:integer, "0-100", 0 is least sensitive -->    // Sensitivity is consistent with ie;
0-100s
   </sensitivityLevel>
   <layout>
<gridMap> <!--dep, xs:hexstring--> </gridMap> // Regional coordinates of image (see web6.0
interface module introduction.doc for details)
<roiMap/>
</layout>
</MotionDetectionLayout>
```

Test cases

GET /CGI/System/Video/inputs/channels/<ID>/motionDetection
Request XML： none
Response XML： <MotionDetection>

PUT /CGI/System/Video/inputs/channels/<ID>/motionDetection
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<MotionDetection>
<enabled>true</enabled>
<regionType>grid</regionType>
```

```
<Grid>
<rowGranularity>18</rowGranularity>
<columnGranularity>22</columnGranularity>
</Grid>
<MotionDetectionLayout>
<sensitivityLevel>76</sensitivityLevel>
<layout>
<gridMap>fffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcfffffcff
fffcfffffc</gridMap>
</layout>
</MotionDetectionLayout>
</MotionDetection>
```


2.3.38 /CGI/System/RecodeLog/type/<ID>

/CGI/System/RecodeLog/type/<ID>	**Resource v2.0**
PUT	
Description	Record log
Query	None
Inbound Data	**NONE**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for sending CGI protocol and recording the logs after warning via client or IE.
Explanations on key parameters:
<type> Type: 1. Immediate handling of alarm; 2. Delayed handling of alarm

Test cases
PUT /CGI/System/RecodeLog/type/<ID>
Request XML: None
Response XML: <ResponseStatus>

2.3.39/CGI/System/ScreenResolutionList

/CGI/System/ScreenResolutionList	**GeneralResourcev2.0**
GET	
Description	Acquire list of screen resolution
Query	None
Inbound Data	**None**
Success Return	**<VoDevInfoList>**

Explanations on protocol:
This protocol is prepared for acquiring the list of resolution supported by device screen.
explanations on important parameters:
voDevNum: Number of device screens
voDevId: Device screen ID
voDevName: Screen name
para: Resolution

VoDevInfoList XML Block


```
<VoDevInfoList version="1.0" >
<voDevNum><!-- req, xs:integer --></voDevNum>
<voDevResList>
    <voDevInfo>
        <voDevId><!-- req, xs:integer --></voDevId>
        <voDevName ><!-- req, xs:string --></voDevName>
```

```
            <voDevParam>
                <para><!-- req, xs:string --></para>
                <para><!-- req, xs:string --></para>
            </voDevParam>
        </voDevInfo>
        <voDevInfo>
            <voDevId><!-- req, xs:integer --></voDevId>
            <voDevName ><!-- req, xs:string --></voDevName>
            <voDevParam>
                <para><!-- req, xs:string --></para>
                <para><!-- req, xs:string --></para>
            </voDevParam>
        </voDevInfo>
</voDevResList>
</VoDevInfoList>
```

Test cases

GET /CGI/System/ScreenResolutionList

Response XML: <SmartTestStatus>

Request XML: None

```
<VoDevInfoList version="1.0" >
<voDevNum>2</voDevNum>
<voDevResList>
        <voDevInfo>
            <voDevId>1</voDevId>
            <voDevName>VGA123<!-- req, xs:integer --></voDevName>
            <voDevParam>
                <para>(1080P)1920*1080(30HZ)</para>
                <para>(960P)1260*960(30HZ)</para>
            </voDevParam>
        </voDevInfo>
        <voDevInfo>
            <voDevId>2</voDevId>
            <voDevName>DH456</voDevName>
            <voDevParam>
                <para>(1080P)1920*1080(30HZ)</para>
                <para>(960P)1260*960(30HZ)</para>
            </voDevParam>
        </voDevInfo>
</voDevResList>
</VoDevInfoList>
```

2.3.40/CGI/System/ScreenCurrentResParam/<ID>

/CGI/System/ScreenCurrentResParam/<ID>	**General Resource v2.0**
GET	
Description	Acquire present resolution parameters of screen
Query	None
Inbound Data	**None**
Success Return	**<ScrResParam>**
PUT	
Description	Set present resolution parameters of screen
Query	None
Inbound Data	**<ScrResParam>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of present resolution parameters of screen via CGI protocol.
Explanations on key parameters:
ID: Device screen ID
voDevResAuto: Self-adaption of screen resolution; true: Disabled; false: Enabled
voDevResParam: Present resolution of screen

ScrResParam Block

```
<ScrResParamList>
<ScrResParam>
   <voDevResAuto><!--rsp, xs:boolean--></voDevResAuto>
   <voDevResParam><!--rsp, xs:string--></voDevResParam>
</ScrResParam>
```

Test cases
GET /CGI/System/ScreenCurrentResParam/<ID>
Request XML: none
Response XML: <ScrResParam>
PUT /CGI/System/ScreenCurrentResParam/<ID>
Response XML: <ResponseStatus>
Request XML: <ScrResParam> As follows

```
<ScrResParam>
<voDevResAuto>true</voDevResAuto>
<voDevResParam>(1080P)1920x1080(60HZ)</voDevResParam>
</ScrResParam>
```

2.3.41/CGI/System/ScreenCurrentResParam

/CGI/System/ScreenCurrentResParam	**General Resource v2.0**
GET	
Description	Acquire the list of present resolution parameters of screen
Query	None
Inbound Data	**None**
Success Return	**<ScrResParamList>**

Explanations on protocol:
This protocol is prepared for acquisition of present resolution parameters of screen via CGI protocol.
Explanations on key parameters:
ID: Device screen ID
voDevResAuto: Self-adaption of screen resolution; true: Disabled; false: Enabled
voDevResParam: Present resolution of screen

ScrResParamList Block

```
<ScrResParamList>
    <ScrResParam>
        <voDevId><!--rsp, xs:integer--></voDevId>
        <voDevResAuto><!--rsp, xs:boolean--></voDevResAuto>
        <voDevResParam><!--rsp, xs:string--></voDevResParam>
    </SceResParam>
</ScrResParamList>
```

Test cases
GET /CGI/System/ScreenCurrentResParam
Request XML: none
Response XML: <ScrResParamLIst>

```
<ScrResParamList>
    <ScrResParam>
        <voDevId>1</voDevId>
        <voDevResAuto>true</voDevResAuto>
        <voDevResParam>(960P)1260*960(30HZ)</voDevResParam>
    </ScrResParam>
    <ScrResParam>
        <voDevId>2</voDevId>
        <voDevResAuto>false</voDevResAuto>
        <voDevResParam>(960P)1260*960(30HZ)</voDevResParam>
    </ScrResParam>
</ScrResParamList>
```

2.3.42/CGI/System/ipcVersionInfo/channels/<ID>

/CGI/System/ipcVersionInfo/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire information of IPC version
Query	None
Inbound Data	None
Success Return	**<IPCVerInfo>**
Explanations on protocol: This protocol is prepared for acquisition of IPC version information of certain channel via CGI protocol. **Explanations on key parameters:** ipcVersionInfo: ipc version information	

IPCVerInfo XML Block

```
<IPCVerInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <channels><!-- ro, rsp, xs:integer --></channels>
    <ipcVersionInfo><!-- ro, rsp, xs:string --></ipcVersionInfo>
</IPCVerInfo>
```

Test cases

GET /CGI/System/ipcVersionInfo/channels/<ID>

Request XML: none

Response: XML: <IPCVerInfo>

```
<?xml version="1.0" encoding="UTF-8"?>
<IPCVerInfo>
    <channels>1</channels>
    <ipcVersionInfo>NVSS_V9.10.1.20180101</ipcVersionInfo>
</IPCVerInfo>
```

2.3.43/CGI/System/DeviceRegistorStatus

/CGI/System/DeviceRegistorStatus	**General Resource v2.0**
GET	
Description	Acquire device registration status
Query	None
Inbound Data	None
Success Return	**<DeviceRegistor>**

Explanations on protocol:
This protocol is prepared for query and setting of device registration status, helping client or IE query device registration status via CGI protocol, including registration status of traffic algorithm and monitoring algorithm.
Explanations on key parameters:
<monitorRegistorState> means whether monitoring algorithm is registered. 0-Unregistered; 1-Registered
<trafficRegistorState> means whether traffic algorithm is registered. 0-Unregistered; 1-Registered

DeviceRegistor XML Block

```
<DeviceRegistor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<monitorRegistorState><!-- req, xs:integer--></monitorRegistorState>
<trafficRegistorState><!-- req, xs:integer--></trafficRegistorState>
</DeviceRegistor >
```

Test cases
GET /CGI/System/DeviceRegistorStatus
Request XML: none
Response XML:<DeviceRegistor>

```
<DeviceRegistor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<monitorRegistorState>1</monitorRegistorState>
<trafficRegistorState>1</trafficRegistorState>
</DeviceRegistor >
```

2.3.44/CGI/System/IrisCorrection/channels/<ID>/type/<ID>

/CGI/System/IrisCorrection/channels/<ID>/type/<ID> **General Resource v2.0**	
PUT	
Description	Set aperture correction
Query	None
Inbound Data	**<IrisCorrectionInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting of aperture correction, helping client or IE set aperture correction of device via CGI protocol.
<type> means types of different image parameters 0 - Monitoring image; 1- Snapshot image; 2 - Analysis image
(Snapshot image has no aperture correction)

TemplateName XML Block

```
<IrisCorrectionInfo version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
</IrisCorrectionInfo>
```

Test cases
PUT/CGI/System/IrisCorrection/channels/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<IrisCorrectionInfo>
</IrisCorrectionInfo>
```

2.3.45 /CGI/System/reboot/type/<ID>

/CGI/System/reboot/type/<ID> **General Resource**

v2.0	
PUT	
Description	Set restart
Query	**None**
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: Restart setting of device or designated process **Explanations of parameters:** types: 0-Device, 1-GUI 2-APP (ITS) 3-APP (all)	

Test cases
PUT /CGI/System/reboot/type/<ID>
Request XML: none
Response XML: <ResponseStatus>

2.3.46 /CGI/System/Identify

/CGI/System/Identify **General Resource v2.0**	
Post	
Description	User password identification
Query	**None**
Inbound Data	**<identifyPara>**
Success Return	**<identifyResult>**
Explanations on protocol: Whether enabling authentication **Explanations of parameters:** <userName> Username, default is admin, un-editable, 16 characters <passWord> Password, 16 characters	

IdentifyPara XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<identifyPara>
    <userName><!--req,xs:string,"admin" --></userName>
    <passWord><!--req,xs:string --></passWord>
</identifyPara>
```

IdentifyResult XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<identifyResult>
    <retCode><!--req,xs: Integer --></retCode> //0: Success 1: Failure
</identifyResult>
```

Test cases
POST /CGI/System/Identify
Request XML:

```
<identifyPara>
    <userName>admin</userName>
    <passWord>1111</passWord>
</identifyPara>
```

Response XML:

```
<identifyResult>
    <retCode>0</retCode>
</identifyResult>
```

2.3.47 /CGI/System/Identify/Enable/State

/CGI/System/Identify/Enable/State General Resource v2.0	
GET	
Description	Acquire enabling status of authentication
Query	**None**
Inbound Data	**None**
Success Return	**<enableState>**
PUT	
Description	Set enabling status of authentication
Query	**None**
Inbound Data	**<enableState>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Whether enabling authentication **Explanations of parameters:** <identifyEnable> true: Enable authentication; false: Disable authentication	

EnableState XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<enableState>
    <identifyEnable><!--req,xs:Boolean"true,false"--></identifyEnable>
</enableState>
```

Test cases

GET /CGI/System/Identify/Enable/State

Request XML: none

Response XML: <EnableState>

PUT /CGI/System/Identify/Enable/State

Request XML: <EnableState>

```
<enableState>
    <identifyEnable>true</identifyEnable>
</enableState>
```

Response XML: <ResponseStatus>

2.3.48/CGI/System/IOUseful/outputs/<ID>/channels/<ID>

/CGI/System/IOUseful/outputs/<ID>/channels/<ID> General Resource v2.0	
GET	
Description	Acquire the present usage of port output
Query	None
Inbound Data	None
Success Return	**<IOOutputPortUseful>**
PUT	
Description	Set the present usage of port output
Query	None
Inbound Data	**<IOOutputPortUseful>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring/setting the present usage of output port. **Explanations on key parameters:** <useful opt=0,1,2>0: Reserved; 1: Alarm; 2: Control light	

IOOutputPortUseful XML Block

```
<IOOutputPortUseful version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<useful opt=0,1,2><!-- req, xs:integer --></useful>
</IOOutputPortUseful>
```

Test cases
GET /CGI/System/IOUseful/outputs/0/channels/0
Request XML: none
Response XML: <IOOutputPortUseful>
PUT /CGI/System/IOUseful/outputs/0/channels/0
Response XML: <ResponseStatus>
Request XML: as below

```
<IOOutputPortUseful version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<useful>2</useful>
</IOOutputPortUseful >
```

2.3.49 /CGI/System/WebService/Info

/CGI/System/WebService/Info	**General Resource v2.0**
GET	
Description	Acquire WebService information
Query	None
Inbound Data	None
Success Return	**<WebServiceInfo>**
PUT	
Description	Set WebService information
Query	None
Inbound Data	**<WebServiceInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring and setting WebService information. **Explanations on key parameters:** <webUrl>: url **http://<ServerIp>:<ServerPort>/VGAlarmReceiver/Receiver.svc** <siteNo>: 6-digit figure at most	

WebServiceInfo XML Block

```
<webServiceInfo>
<webUrl><!--req, xs:string--></webUrl>
<siteNo><!-- req, xs: string--></siteNo>
</webServiceInfo>
```

Test cases
GET /CGI/System/WebService/Info
Request XML: none
Response: XML: <WebServiceInfo>
PUT /CGI/System/WebService/Info
Request XML: <WebServiceInfo>
Response XML: <ResponseStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<webServiceInfo>
<webUrl>http://<10.30.30.66>:<3000>/VGAlarmReceiver/Receiver.svc</webUrl>
<siteNo>123456</siteNo>
</webServiceInfo>
```

2.3.50 /CGI/System/Channel/Expand

/CGI/System/Channel/Expand	**General Resource v2.0**

GET	
Description	Acquire number of expanded channels
Query	**None**
Inbound Data	**None**
Success Return	**<chnExpand>**
PUT	
Description	Set number of expanded channels
Query	**None**
Inbound Data	**<chnExpand>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
Set and acquire number of expanded channels
Explanations of parameters:
<expandNum> Number of channel modes supporting expansion; 0-Expansion not supported; 2-Two-way setting supported
<chnNum> List of number of expanded channels, 4 channels supported at most
<curChnNum> Actual channel number of present device

chnExpand XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<chnExpand>
    <expandNum>!--req,xs: integer--</expandNum>
    <expandChnList>
      <chnNum><!--req,xs: integer--></chnNum>
                ……..
      <chnNum><!--req,xs: integer--></chnNum>
    </expandChnList >
    <curChnNum><!--req,xs: integer--></curChnNum>
</chnExpand>
```

Test cases
GET /CGI/System/Channel/Expand
Request XML: none
Response XML: <chnExpand>

```
<chnExpand>
    <expandNum>2</expandNum>
    <expandChnList>
      <chnNum>5</chnNum>
      <chnNum>7</chnNum>
    </expandChnList >
    <curChnNum>5</curChnNum>
</chnExpand>
```

PUT /CGI/System/Channel/Expand
Request XML: <chnExpand>

```
<chnExpand>
<expandNum>2</expandNum>
<expandChnList>
<chnNum>5</chnNum>
<chnNum>7</chnNum>
</expandChnList >
<curChnNum>5</curChnNum>
</chnExpand>
```

Response XML: <ResponseStatus>

2.3.51/CGI/Event/Touch/channels

/CGI/Event/Touch/channels	
	General Resource v2.0

GET	
Description	Acquire the alarm status of all alarm output ports
Query	None
Inbound Data	None
Success Return	**<touchChannelList>**
PUT	
Description	Set the alarm status of all alarm output ports
Query	None
Inbound Data	**<touchChannelList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

Acquire and set the alarm status of all alarm output ports

Explanations on key parameters:

<channelID> NVR channel No. (local alarm output) is 0; frontend alarm output means the actual channel number which is started from 1

<eventType> IO, further expansion supported

<id> Port No. of local alarm output or frontend alarm output

<state>touch: touch: Trigger alarm clear: Clear alarm

touch XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<touchChannelList>
        <channel>
                <channelID><!--req,xs: integer --></channelID>
                <eventList>
                        <event>
                                <eventType><!--req,xs: string--></eventType>//IO, for further
expansion
                                <id><!--req,xs: integer --></id>
                                <state><!--req,xs: string--></state>
                        </event>
                        <event>
                                <eventtype><!--req,xs: string--></eventtype>
                                <id><!--req,xs: integer --></id>
                                <state><!--req,xs: string--></state>
                        </event>
                </eventList>
        </channel>
</touchChannelList>
```

Test cases

GET /CGI/Event/Touch/channels

Request XML: none

Response XML: <touchChannelList>

<touchChannelList>

```
<touchChannelList>
        <channel>
                <channelID>0</channelID>
                <eventList>
                        <event>
                                <eventType>IO</eventType>
                                <id>1</id>
                                <state>touch</state>
                        </event>
                        <event>
                                <eventtype>IO</eventtype>//For further expansion
                                <id>2</id>
```

```
                <state>clear</state>
            </event>
        </eventList>
    </channel>
    <channel>
        <channelID>1</channelID>
        <eventList>
            <event>
                <eventType>IO</eventType>
                <id>1</id>
                <state>touch</state>
            </event>
            <event>
                <eventType>IO</eventType>
                <id>2</id>
                <state>clear</state>
            </event>
        </eventList>
    </channel>
</touchChannelList>
```

PUT /CGI/Event/Touch/channels
Request XML: <touchChannelList>
Response XML: <ResponseStatus>

2.3.52/CGI/Event/Touch/channels/<ID>

/CGI/Event/Touch/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire the alarm status of the designated alarm output ports
Query	None
Inbound Data	None
Success Return	**<touchChannelList>**
PUT	
Description	Set the alarm status of the designated alarm output ports
Query	None
Inbound Data	**<touchChannelList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
Acquire and set the alarm status of the designated alarm output ports
Explanations on key parameters:
<channelID> NVR channel No. (local alarm output) is 0; frontend alarm output means the actual channel number which is started from 1
<eventType> IO, further expansion supported
<id> Port No. of local alarm output or frontend alarm output
<state>touch: touch: Trigger alarm clear: Clear alarm

touch XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<touchChannelList>
    <channel>
        <channelID><!--req,xs: integer --></channelID>
        <eventList>
            <event>
                <eventType><!--req,xs: string--></eventType>//IO, for further
expansion
```

```
                        <id><!--req,xs: integer --></id>
                        <state><!--req,xs: string--></state>
                    </event>
                </eventList>
        </channel>
</touchChannelList>
```

Test cases

GET /CGI/Event/Touch/channels/1

Request XML： none

Response XML: <touchChannelList>

<touchChannelList>

```
<touchChannelList>
        <channel>
                <channelID>0</channelID>
                <eventList>
                        <event>
                                <eventType>IO</eventType>
                                <id>1</id>
                                <state>touch</state>
                        </event>
                </eventList>
        </channel>
</touchChannelList>
```

PUT /CGI/Event/Touch/channels/1

Request XML: <touchChannelList>

Response XML： <ResponseStatus>

2.3.53/CGI/System/ipcAlm/output/channel/<ID>

/CGI/System/ipcAlm/output/channel/<ID>	**General Resource v2.0**
GET	
Description	Acquire the frontend alarm output parameters of the designated channels
Query	None
Inbound Data	None
Success Return	**<ipcAlmOutCnfList>**
PUT	
Description	Set the frontend alarm output parameters of the designated channels
Query	None
Inbound Data	**<ipcAlmOutCnf>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for acquiring and setting the frontend alarm output parameters of the designated channel

Explanations on key parameters:

<portCnt> Port count

<portState> Port alarm status; 0: Clear 1: Trigger

<portNum> Port No.

ipcAlmOutCnfList XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<ipcAlmOutCnfList>
        <portCnt><!--req,xs: integer--></portCnt>
        <portStateList>
            <portState><!--req,xs: integer--></portState>
                        ……..
```

```
        <portState><!--req,xs: integer--></portState>
    </portStateList >
</ipcAlmOutCnfList>
```

ipcAlmOutCnf XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<ipcAlmOutCnf>
    <portNum><!--req,xs: integer--></portNum>
    <portState><!--req,xs: integer--></portState>
</ipcAlmOutCnf>
```

Test cases

GET /CGI/System/ipcAlm/output/channel/01

Request XML： none

Response XML: <ipcAlmOutCnfList>

```
<ipcAlmOutCnfList>
    <portCnt>3</portCnt>
    <portStateList>
        <portState>0</portState>
        <portState>1</portState>
        <portState>1</portState>
    </portStateList >
</ipcAlmOutCnfList>
```

PUT /CGI/System/ipcAlm/output/channel/01

Request XML: <ipcAlmOutCnf>

```
<ipcAlmOutCnf>
    <portNum>1</portNum>
    <portState>0</portState>
</ipcAlmOutCnf>
```

Response XML： <ResponseStatus>

2.3.54 /CGI/System/Video/inputs/channels/<ID>/BackFocus

/CGI/System/Video/inputs/channels/<ID>/BackFocus	**General Resource v2.0**
PUT	
Description	**Back focus control**
Query	**None**
Inbound Data	**<BackFocusData >**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting ABF back focus. **Explanations on key parameters:** <backFocus> 100 means: Increase back focus; -100 means: Decrease back focus; 0 means: Stop back focus	

BackFocusData XML Block

```
<BackFocusData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <backFocus><!-- req, xs:intger --></backFocus> 100 means: Increase back focus; -100 means:
Decrease back focus; 0 means: Stop back focus
</BackFocusData>
```

Test cases

PUT /CGI/System/Video/inputs/channels/<ID>/BackFocus

Response XML： <ResponseStatus>

Request XML： as below

```
<BackFocusData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <backFocus>100</backFocus>
</BackFocusData>
```

2.3.55 /CGI/System/AutoBackFocusCtrl

/CGI/System/AutoBackFocusCtrl	**General Resource v2.0**
GET	
Description	Acquire function enabling information of ABF
Query	None
Inbound Data	None
Success Return	**<autoBackFocusCtrl>**
PUT	
Description	Set ABF function enabling
Query	None
Inbound Data	**<autoBackFocusCtrl >**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of ABF(AutoBackFocus) functions of device. **Explanations on key parameters:** <enable> means enabling/disabling of ABF function; true: Enabled; false: Disabled	

autoBackFocusCtrl XML Block

```
<autoBackFocusCtrl>
    <enable><!-- opt, xs:boolern "false,true"--></enable>
</autoBackFocusCtrl>
```

Test case:

GET /CGI/System/AutoBackFocusCtrl

Request XML: none

Response XML: <autoBackFocusCtrl>

PUT /CGI/System/AutoBackFocusCtrl

Request XML: <autoBackFocusCtrl>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<autoBackFocusCtrl>
    <enable>true</enable>
</autoBackFocusCtrl>
```

2.3.56/CGI/System/Temhum/channels/<ID>

/CGI/System/Temhum/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire temperature/humidity alarm parameters
Query	None
Inbound Data	None
Success Return	**<Temhum>**
PUT	
Description	Set temperature/humidity alarm parameters
Query	None
Inbound Data	**<Temhum>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquiring and setting temperature & humidity alarm parameters
Explanations on key parameters:
<channelID> Channel No.
<enabled> Whether enabling function; true: Enabled; false: Disabled
<upload> Whether enable uploaded data; true: Enabled; false: Disabled
<interval>Time interval: 1-600 s
<upper> Upper threshold: Actual display (accurate to one digit after decimal point) *10+1000
<lower> Lower threshold: Actual display (accurate to one digit after decimal point) *10+1000

Temhum XML Block

```
<Temhum version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled> <!--req,Boolean,"true,false"--> </enabled>    // Enabling; true: Enabled; false:
Disabled
<upload><!--req,Boolean,"true,false"--></upload>      // Enabling; true: Enabled; false:
Disabled
<interval><!-- req, xs:integer --> </interval>
<temperature>    //Temperature
<upper><!-- req, xs:integer --> </upper>
<lower><!-- req, xs:integer --> </lower>
</temperature>
<humidity>    //Humidity
<upper><!-- req, xs:integer --> </upper>
<lower><!-- req, xs:integer --> </lower>
</humidity>
</Temhum>
```

Test cases
GET /CGI/System/Temhum/channels/<ID>
Request XML: none
Response XML: <Temhum>
PUT /CGI/System/Temhum/channels /<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Temhum>
<enabled>true</enabled>
<upload>false</upload>
<interval>50</interval>
<temperature>
<upper>1085</upper>
<lower>1024</lower>
</temperature>
<humidity>
<upper>1135</upper>
<lower>1050</lower>
</humidity>
</Temhum>
```

2.3.57 /CGI/System/Network/Tencent/<ID>

/CGI/System/Network/ Tencent **/<ID>** **General Resource v2.0**	
GET	
Description	Acquire Tencent setting information
Query	None
Inbound Data	None
Success Return	<Tencent**Set>**
PUT	

Description	Set Tencent information
Query	None
Inbound Data	<Tencent**Set**>
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of device Tencent information, helping client or IE query and set the Tencent information of device via CGI protocol, including domain name, id and key.
Explanations on key parameters:
<url> Domain name, such as: https://smartshop.cloud.tencent.com/upload/api/
<id> Username
<key> Password

Tencent**Set XML Block**

```
<?xml version="1.0" encoding="UTF-8"?>
<TencentSet>
< url ><!-- opt, xs:string --></ url >
< id ><!-- opt, xs:string --></ id >
< key ><!-- opt, xs:string --></ key >
</TencentSet>
```

Test cases
GET /CGI/System/Network/Tencent/**<ID>**
Request XML: none
Response XML: <TencentSet>
PUT/CGI/System/Network/Tencent/**<ID>**
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TencentSet>
<url>https://smartshop.cloud.tencent.com/upload/api</url>
< id >123456</ id >
< key >654321</key>
</TencentSet>
```

2.3.58 /CGI/System/Network/Dzcommon/<ID>

/CGI/System/Network/Dzcommon/**<ID>**	**General Resource v2.0**
GET	
Description	Acquire Dzcommon setting information
Query	None
Inbound Data	None
Success Return	<Dzcommon**Set**>
PUT	
Description	Set Dzcommon information
Query	None
Inbound Data	<Dzcommon**Set**>
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of device customization information, helping client or IE query and set the device customization information of device via CGI protocol, including domain name, username and password.
Explanations on key parameters:
<Name>tencent</Name> Name of customization platform
<Param>cloud.tencent.com</Param> Parameters

YTLF platform: Name [ytlf], parameter list [Platform ip, platform port, device id, key, region id,

node id]
Dz19572- Multiple identification linkage configuration: Name [facereconum], parameter list [Min. face alarm number], KS active registration platform: Name [ksactive], parameter list [Server ip, server port, login server account, login server password, device name]

DzcommonSet **XML Block**

```
<?xml version="1.0" encoding="UTF-8"?>
< DzcommonSet >
< Name ><!-- opt, xs:string --></ Name >
< ParamList >
< Param><!-- opt, xs:string --></ Param>
</ ParamList >
</ DzcommonSet >
```

fTest cases

GET /CGI/System/Network/ Dzcommon **/<ID>**

Request XML: none

Response XML: < DzcommonSet >

PUT/CGI/System/Network/ Dzcommon **/<ID>**

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
< DzcommonSet >
< Name >tencent</ Name >
< ParamList >
< Param>www.tencent.com</ Param>
< Param>admin</ Param>
< Param>1111</ Param>
</ ParamList >
</ DzcommonSet >
```

2.3.59 /CGI/System/Network/DevStatus/<ID>

/CGI/System/Network/DevStatus/<ID>	**General Resource v2.0**
GET	
Description	Acquire device status
Query	None
Inbound Data	None
Success Return	**<DevStatus>**
Explanations on protocol: This protocol is prepared for query whether PPPoE dial is successful, acquiring the IP address and gateway, or 28181 online/offline status after successful dial. **Explanations on key parameters:** <id> means whether acquired PPPoE is 28181 online or offline: PPPoE: 1; 28181: 2 <devStatus> Corresponding function status of id; success: True; failure: False <devInfo> It is valid if id is 1, it means the ip acquired vai PPPoE; the return is null if id is 2	

DevStatusXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<DevStatus>
<devStatus><!-- ro, req, xs:boolern, "false (failure) ,true (success) "--></devStatus>
<devInfo1><!-- req, xs:string --></devInfo1>
<devInfo2><!-- req, xs:string --></devInfo2>
</DevStatus >
```

Test cases

/CGI/System/ Network/DevStatus/<ID>

Request XML: none

Response XML: <DevStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<DevStatus>
<devStatus>false</devStatus>
<devInfo1>192.168.1.66</devInfo1>
<devInfo2>192.168.1.1</devInfo2>
</DevStatus>
```

2.3.60 /CGI/System/SessionId/<ID>/Type/<ID>Progress

/CGI/System/SessionId/<ID>/Type/<ID>Progress General Resource v2.0	
GET	
Description	Acquire the common import/export progress
Query	**None**
Inbound Data	**None**
Success Return	**<Progress>**
Explanations on protocol: Acquire the common import/export progress **Explanations of parameters:** URL: SessionId/<ID> Interaction ID of client and device, see attached table 1 Type/<ID> means acquisition progress type: 1, export face image Reply xml: <state> State; 0-Not imported/exported; 1-Import/export in progress; 2-Import/export succeeds; 3-Export/import fails <pro> Progress, 0-100	

Progress XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state><!—req,sx:integer--></state>
<pro><!—req,sx:integer--></pro>
</progress>
```

Test cases

GET /CGI/System/SessionId/123/Type/1/Progress

Response XML: <Progress>

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state>1</state>
<pro>50</pro>
</progress>
```

2.3.61 /CGI/System/SessionId/<ID>/Type/<ID>/Progress

/CGI/System/SessionId/<ID>/Type/<ID>Progress General Resource v2.0	
GET	
Description	Acquire the common import/export progress
Query	**None**
Inbound Data	**None**
Success Return	**<Progress>**

Explanations on protocol:
Acquire the common import/export progress
Explanations of parameters:
URL:
SessionId/<ID> Interaction ID of client and device, see attached table 1
Type/<ID> means progress type; 1-Face image export; 2-Total face retrieval query count; 3-Asynchronous statistic of heat map; 4-Asynchronous statistics of target alarm; 5- Asynchronous statistics of channel alarm; 6-Export asynchronous report
Reply xml:
<state> State; 0-Not imported/exported; 1-Import/export in progress; 2-Import/export succeeds; 3-Export/import fails
<pro> Progress, 0-100
<resultNum> Handling result number

Progress XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state><!—req,sx:integer--></state>
<pro><!—req,sx:integer--></pro>
<resultNum><!—req,sx:integer--></resultNum>
</progress>
```

Test cases
GET /CGI/System/SessionId/123/Type/1/Progress
Response XML: <Progress>

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state>1</state>
<pro>50</pro>
<resultNum>5</resultNum>
</progress>
```

2.3.62 /CGI/System/ImgUpload/Info

/CGI/System/ImgUpload/Info **General Resource v2.0**	
GET	
Description	Acquire imgupload information
Query	None
Inbound Data	None
Success Return	**<imgUploadInfo>**
PUT	
Description	Set imgupload information
Query	None
Inbound Data	**<imgUploadInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring and setting imgupload information. **Explanations on key parameters:** **<url> Server path, such as: http://<ServerIp>:<ServerPort>/VGAlarmReceiver/Receiver.svc**	

ImgUploadInfo XML Block

```
<imgUploadInfo>
<url><!--req, xs:string--></url>
</imgUploadInfo>
```

Test cases
GET /CGI/System/ImgUpload/Info
Request XML: none
Response XML: < imgUploadInfo>

PUT /CGI/System/ ImgUpload /Info

Request XML: < imgUploadInfo>

Response XML: <ResponseStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<imgUploadInfo>
<url>http://<10.30.30.66>:<3000>/VGAlarmReceiver/Receiver.svc</url>
</imgUploadInfo>
```

2.3.63 /CGI/System/Network/ProtocolAuthType

/CGI/System/Network/ProtocolAuthType **General Resource v2.0**	
GET	
Description	Acquire protocol verification method
Query	None
Inbound Data	None
Success Return	**<ProtocolAuthType>**
PUT	
Description	Set protocol verification method
Query	None
Inbound Data	**<ProtocolAuthType >**
Success Return	**None**
Explanations on protocol: This protocol is prepared for setting and acquiring the verification method of Http and Rtsp protocol.	

ProtocolAuthType XML Block

```
<ProtocolAuthType version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<protocolList>
  <protocol>
    <name><!-- opt, xs:string--></name> // Protocol name rtsp or http
    <digest><!—opt, xs:string--></digest> // Whether enabling digest verification, false=Disabled, true=Enabled
    <basic><!—opt, xs:string--></basic> // Whether enabling basic verification, false=Disabled, true=Enabled
  </protocol>
  …
</protocolList>
</ProtocolAuthType>
```

Test cases

GET /CGI/System/Network/ProtocolAuthType

Response XML: as below

```
<ProtocolAuthType version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<protocolList>
  <protocol>
    <name>rtsp</name>
    <digest>false</digest>
    <basic>true</basic>
  </protocol>
  <protocol>
    <name>http</name>
    <digest>false</digest>
    <basic>true</basic>
  </protocol>
</protocolList>
</ProtocolAuthType>
```

Test cases

PUT /CGI/System/Network/ProtocolAuthType

Request XML: as below

```
<ProtocolAuthType version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<protocolList>
  <protocol>
    <name>rtsp</name>
    <digest>false</digest>
    <basic>true</basic>
  </protocol>
  <protocol>
    <name>http</name>
    <digest>false</digest>
    <basic>true</basic>
  </protocol>
</protocolList>
</ProtocolAuthType>
```

2.3.64/CGI/System/AutoChangeTime

/CGI/System/AutoChangeTime	**General Resource v2.0**
GET	
Description	Acquire IPC time parameters during NVR auto calibration
Query	None
Inbound Data	None
Success Return	**<AutoChangeTimePara>**
PUT	
Description	Set IPC time parameters during NVR auto calibration
Query	None
Inbound Data	**<AutoChangeTimePara>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of IPC configuration during NVR auto calibration.
Explanations on key parameters:
<frequency> Maintenance frequency, daily/weekly/monthly/year or never
<month> means month if it is set as year
<day> means day if it is set as year and month; means day of week if set as week; value range has minor difference
<hour> means hour
<minute> means minute

AutoChangeTimePara XML Block

```
<AutoChangeTimePara>
      <frequency><!-- req, xs: string,"never,yearly,monthly,weekly,dayly"--></frequency>
      <month><!-- dep: frequency, xs: integer,"1-12"--></month>
      <day><!-- dep, xs: integer,"1-31"--></day>
      <hour><!-- req, xs:integer,"0-23"--></hour>
      <minute><!-- req, xs: integer,"0-59"--></minute>
</AutoChangeTimePara>
```

Test cases
GET /CGI/System/AutoChangeTime
Request XML: none
Response XML: <AutoChangeTimePara>
PUT /CGI/System/AutoChangeTime
Response XML: <ResponseStatus>
Request XML: <AutoChangeTimePara>

<AutoChangeTimePara>XML as follows

```
<AutoChangeTimePara>
    <frequency>yearly</frequency>
    <month>7</month>
    <day>3</day>
    <hour>10</hour>
    <minute>0</minute>
</AutoChangeTimePara>
```

2.3.65/CGI/System/CloudUpload/Versions/TestState

/CGI/System/CloudUpload/Versions/TestState	**General Resource v2.0**
GET	
Description	Acquire the auto detection state of cloud upgrade
Query	**None**
Inbound Data	**None**
Success Return	**<AutoTest>**
Explanations on protocol: This protocol is prepared for helping IE acquire the auto detection state of cloud upgrade via CGI protocol. **Explanations on key parameters:** <testState> Whether detecting cloud upgrade device; 0-Undetected; 1-IPC detected; 2-NVR detected; 3-IPC and NVR detected simultaneously	

AutoTest XML Block

```
<AutoTest>
  <testState><!-- req, xs: integer --></testState>
</AutoTest>
```

Test cases

GET /CGI/System/CloudUpload/Versions/TestState

Request XML: none

Response XML: <AutoTest>

```
<?xml version="1.0" encoding="UTF-8"?>
<AutoTest>
  <testState>2</testState>
</AutoTest>
```

2.3.66/CGI/System/CloudUpload/Versions/Para

/CGI/System/CloudUpload/Versions/Para	**General Resource v2.0**
GET	
Description	Acquire information of device which supports cloud upgrade
Query	**None**
Inbound Data	**None**
Success Return	**<VersionParas>**
Explanations on protocol: This protocol is prepared for helping IE acquire the information of device which supports cloud upgrade via CGI protocol. **Explanations on key parameters:** <totalCnt> Total amount of devices which support cloud upgrade <chn> Channel No.: 1~n means IPC; 0x7FFFFFFF means NVR <version> Cloud version <releaseDate> Release date	

VersionParas XML Block

```
<VersionParas>
  <totalCnt><!-- req, xs: integer --></totalCnt>
  <VersionParaList>
  <VersionPara>
  <chn><!--req, xs:integer--></chn>
  <version><!--req, xs:string--></version>
  <releaseDate><!--req, xs:string--></releaseDate>
  </VersionPara>
  //Repeat VersionPara
  </VersionParaList>
</VersionParas>
```

Test cases

GET /CGI/System/CloudUpload/Versions/Para

Request XML: none

Response XML: <VersionParas>

```
<?xml version="1.0" encoding="UTF-8"?>
<VersionParas>
  <totalCnt>2</totalCnt>
  <VersionParaList>
    <VersionPara>
        <chn>1</chn>
        <version>DVRS_V9.9.4.20171124</version>
        <releaseDate>20171128</releaseDate>
    </VersionPara>
    <VersionPara>
        <chn>3</chn>
        <version>DVRS_V9.9.4.20171124</version>
        <releaseDate>20171128</releaseDate>
    </VersionPara>
    </VersionParaList>
</VersionParas>
```

2.3.67/CGI/System/Common/ItemPara/Channel/<ID>/ Type/<ID>

/CGI/System/Common/ItemPara/Channel/<ID>/ Type/<ID> General Resource v2.0	
GET	
Description	Acquire common parameters of device
Query	None
Inbound Data	None
Success Return	**<paraValue>**
PUT	
Description	Set common parameters of device
Query	None
Inbound Data	**<paraValue>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of common parameters.
Channel/<ID>: <ID> means channel No.
Type/<ID>: <ID> means parameter type, as follows:
1、 If Type is 1, enable auto detection of IPC cloud upgrade
2、 If Type is 2, enable auto detection of NVR cloud upgrade
explanations on important parameters:
<paraValue> Returned parameters, the detailed explanation is as follows:
If Type is 1, enable auto detection of IPC cloud upgrade; 1: Enabled; 0: Disabled
If Type is 2, enable auto detection of NVR cloud upgrade; 1: Enabled; 0: Disabled

ItemPara XML Block

```
<ItemPara version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<paraValue><!-- req, xs:integer --></paraValue>//Item parameters
</ItemPara>
```

Test cases
GET /CGI/System/Common/ItemPara/Channel/1/ Type/1
Request XML: none
Response XML: <ItemPara>

PUT /CGI/System/Common/ItemPara/Channel/1/ Type/1
Response XML: <ResponseStatus>
Request XML: as below

```
<ItemPara version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <paraValue>1</paraValue>
</ItemPara>
```

2.4/CGI/Snapshot

2.4.1/CGI/Snapshot/channels/<ID>

/CGI/Snapshot/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire setting parameters of snapshot
Query	None
Inbound Data	None
Success Return	**<SnapshotChannel>**
PUT	
Description	Set snapshot parameters
Query	None
Inbound Data	**<SnapshotChannel>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of snapshot device parameters, helping client or IE query and set the snapshot parameters of device via CGI protocol, including linkage FTP/linkage Email/enabling/time interval.
Explanations on key parameters:
<captureLinkFTP> means linkage FTP; true: Enabled; false: Disabled
<captureLinkEmail> means linkage Email; true: Enabled; false: Disabled
<timingCapture> means timing snapshot
<enabled> represents enabling, true: start, false: not start
<timeEnable> means time enabling
<captureInterval> means time interval; unit: ms; range: 1*1000 – 24*3600*1000

SnapshotChannelXML Block

```
<SnapshotChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string;id --></id>
<videoInputChannelID><!-- req, xs:string;id --></videoInputChannelID>
<captureLinkFTP><!—opt,xs:Boolean--></captureLinkFTP >
<captureLinkEmail><!—opt,xs:Boolean--></captureLinkEmail>
<timingCapture><!-- opt -->
<enabled><!-- req, xs:boolean --></enabled>
<supportSchedule><!-- opt, ro, xs:boolean></supportSchedule>
<compress>
   <pictureCodecType><!-- req, xs:string, "JPEG,BMP,GIF,PNG" --></pictureCodecType>
   <pictureWidth><!-- req, xs:integer --></pictureWidth>
   <pictureHeight><!-- req, xs:integer --></pictureHeight>
   <quality><!-- opt, xs:integer, percentage, 0..100 --></quality>
   <captureMode><!-- req, xs:integer "0: Single 1: Multiple"--><captureMode>// Snapshot
mode
   <captureInterval><!-- req, xs:integer --></captureInterval> // Snapshot interval
   <TimeBlockList><!-- req -->
<TimeBlock>   // 1 day consists of 4 time ranges
<TimeRange><!-- req -->   // Time range 1
<timeEnable><!-- opt, ro, xs:boolean></timeEnable>// Enabling of time range 1
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>// Begin time; format: 14:42:00
(Hour: Minute: Second; assignment 00)
<endTime><!-- req, xs:time, ISO8601 time --></endTime>   // End time; format: 14:42:00
(Hour: Minute: Second; assignment 00)
</TimeRange>
<TimeRange><!-- req -->   // Time range 2
<timeEnable><!-- opt, ro, xs:boolean></timeEnable>// Enabling of time range 2
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>// Begin time; format: 14:42:00
(Hour: Minute: Second; assignment 00)
<endTime><!-- req, xs:time, ISO8601 time --></endTime>   // End time; format: 14:42:00
(Hour: Minute: Second; assignment 00)
</TimeRange>
<TimeRange><!-- req -->   // Time range 3
<timeEnable><!-- opt, ro, xs:boolean></timeEnable>// Enabling of time range 3
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>// Begin time; format: 14:42:00
(Hour: Minute: Second; assignment 00)
<endTime><!-- req, xs:time, ISO8601 time --></endTime>   // End time; format: 14:42:00
(Hour: Minute: Second; assignment 00)
</TimeRange>
<TimeRange><!-- req -->   // Time range 4
<timeEnable><!-- opt, ro, xs:boolean></timeEnable>// Enabling of time range 4
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>// Begin time; format: 14:42:00
(Hour: Minute: Second; assignment 00)
<endTime><!-- req, xs:time, ISO8601 time --></endTime>   // End time; format: 14:42:00
(Hour: Minute: Second; assignment 00)
</TimeRange>
      <dayOfWeek>   // Week
<!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, … --> // 1: Monday; 2: Tuesday; 3:
Wednesday; 4: Thursday; 5: Friday; 6: Saturday; 7: Sunday
      <dayOfWeek>
</TimeBlock>
   </TimeBlockList>
   <captureLinkFTP><!-- req, xs:boolean --></captureLinkFTP>// Linkage ftp
   <captureLinkEmail><!-- req, xs:boolean --></captureLinkEmail>// Linkage email
</compress>
</timingCapture>
<eventCapture><!-- opt -->
<enabled><!-- req, xs:boolean --></enabled>
```

```
<captureMode><!-- req, xs:integer "0: Single 1: Multiple"--><captureMode>// Snapshot mode
<supportSchedule><!-- opt, ro, xs:boolean></supportSchedule>
<compress>
<quality><!-- opt, xs:integer, percentage, 0..100 --></quality>
   <captureInterval><!-- opt,xs:integer, milliseconds --></captureInterval>
   <captureLinkFTP><!-- req, xs:boolean --></captureLinkFTP>
   <captureLinkEmail><!-- req, xs:boolean --></captureLinkEmail>
</compress>
</eventCapture>
</SnapshotChannel>
```

Test cases

GET /CGI/Snapshot/channels/<ID>

Request XML: none

Response XML: <SnapshotChannel>

PUT /CGI/Snapshot/channels/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<SnapshotChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id>1</id>
<videoInputChannelID>1</videoInputChannelID>
<timingCapture>
<enabled>true</enabled>
<supportSchedule>true</supportSchedule>
<compress>
<pictureCodecType>""</pictureCodecType>
<pictureWidth>0</pictureWidth>
<pictureHeight>0</pictureHeight>
<quality>0</quality>
<captureMode>1<captureMode>// Snapshot mode
<captureInterval>30000</captureInterval> // Snapshot interval
<TimeBlockList>
<TimeBlock>    // 1 day consists of 4 time ranges
<TimeRange>
<timeEnable>true</timeEnable>
<beginTime>00:00:00</beginTime>
<endTime>12:00:00</endTime>
</TimeRange>
<TimeRange>
<timeEnable>false</timeEnable>
<beginTime>00:00:00</beginTime>
<endTime>00:00:00</endTime>
</TimeRange>
<TimeRange>
<timeEnable>false</timeEnable>
<beginTime>00:00:00</beginTime>
<endTime>00:00:00</endTime>
</TimeRange>
<TimeRange>
<timeEnable>false</timeEnable>
<beginTime>00:00:00</beginTime>
<endTime>00:00:00</endTime>
</TimeRange>
      <dayOfWeek>1<dayOfWeek>
</TimeBlock>
</TimeBlockList>
<captureLinkFTP>true</captureLinkFTP>// Linkage ftp
<captureLinkEmail>true</captureLinkEmail>// Linkage email
```

```
</compress>
</timingCapture>
<eventCapture>
<enabled>true</enabled>
<captureMode>0<captureMode>// Snapshot mode
<supportSchedule>true</supportSchedule>
<compress>
<quality>0</quality>
<captureInterval>0</captureInterval>
<captureLinkFTP>true</captureLinkFTP>
<captureLinkEmail>true</captureLinkEmail>
</compress>
</eventCapture>
</SnapshotChannel>
```

2.5/CGI/ContentMgmt

2.5.1/CGI/ContentMgmt/record/tracks/<ID>

/CGI/ContentMgmt/record/tracks/<ID> **General Resource v2.0**	
GET	
Description	Acquire video strategy parameter
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
PUT	
Description	Set video strategy parameter
Query	None
Inbound Data	**<ResponseStatus>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of video strategy parameters, helping client or IE query and set the video strategy parameters of device via CGI protocol, including state/time range/week, multiple channels supported.

Explanations on key parameters:

<statusString> means status; ManualRec: Manual recording; AlarmRec: Alarm recording, Continuous: Continuous recording; defineRec: Customized recording; stop: Stop (This field can be acquired only and it is not settable)
<manualRec> means manual recording; true: Enabled; false: Disabled
<alarmRec> means alarm recording; true: Enabled; false: Disabled
<continuous> means continuous recording; true: Enabled; false: Disabled
<TimeBlock> 1 day consists of 4 time ranges
<TimeRange> means time range
<beginTime> means begin time; format: 14:42:00 (Hour: Minute: Second; assignment 00)
<endTime> means end time; format: 14:42:00 (Hour: Minute: Second; assignment 00)
<dayOfWeek> means week; 1: Monday; 2: Tuesday; 3: Wednesday; 4: Thursday; 5: Friday; 6: Saturday; 7: Sunday; 8: Holiday
<prompt> means offline recording; true: Enabled; false: Disabled

ResponseStatusXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<ResponseStatus version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<requestURL>/Streaming/Channels</requestURL>
<Channel><!—req,xs:integer></Channel>
<statusCode><!—req,xs:integer></statusCode>
<!-- O=1-OK, 2-Device Busy, 3-Device Error, 4-Invalid Operation, 5-Invalid XML Format, 6-Invalid XML Content; 7-Reboot Required -->
```

```
<statusString><!- ManualRec, Continuous, AlarmRec, stop></statusString>
<ID><!—req,xs:boolean></ID>
<manualRec><!—req,xs:boolean ></manualRec >
<alarmRec><!—req,xs:boolean></alarmRec >
<continuous><!—req,xs:boolean></continuous>
<TimeBlockList><!-- req -->
<TimeBlock>
<TimeRange><!-- req -->
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
<endTime><!-- req, xs:time, ISO8601 time --></endTime>
<AlarmType><!—opt,xs:integer></AlarmType> // 0: No recording; 1: Timing recording; 2:
Alarm input; 3: Motion alarm; 4: Loss alarm; 5: Detection | port; 6: Shielding alarm; 7:
Detection & port
    <Enable><!—dep:AlarmType, xs: integer 0-Disabled 1-Customized1 2-Customized
2></Enable>  // Valid during timing recording
</TimeRange>
<TimeRange><!-- req -->
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
<endTime><!-- req, xs:time, ISO8601 time --></endTime>
<AlarmType><!—opt,xs:integer></AlarmType> // 0: No recording; 1: Timing recording; 2:
Alarm input; 3: Motion alarm; 4: Loss alarm; 5: Detection | port; 6: Shielding alarm; 7:
Detection & port
    <Enable><!—dep:AlarmType, xs: integer 0-Disabled 1-Customized1 2-Customized
2></Enable>  // Valid during timing recording
</TimeRange>
<TimeRange><!-- req -->
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
<endTime><!-- req, xs:time, ISO8601 time --></endTime>
<AlarmType><!—opt,xs:integer></AlarmType> // 0: No recording; 1: Timing recording; 2:
Alarm input; 3: Motion alarm; 4: Loss alarm; 5: Detection | port; 6: Shielding alarm; 7:
Detection & port
    <Enable><!—dep:AlarmType, xs: integer 0-Disabled 1-Customized1 2-Customized
2></Enable>  // Valid during timing recording
</TimeRange>
<TimeRange><!-- req -->
<beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
<endTime><!-- req, xs:time, ISO8601 time --></endTime>
<AlarmType><!—opt,xs:integer></AlarmType> // 0: No recording; 1: Timing recording; 2:
Alarm input; 3: Motion alarm; 4: Loss alarm; 5: Detection | port; 6: Shielding alarm; 7:
Detection & port
    <Enable><!—dep:AlarmType, xs: integer 0-Disabled 1-Customized1 2-Customized
2></Enable>  // Valid during timing recording
</TimeRange>
    <dayOfWeek>
<!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, … -->
<dayOfWeek>
</TimeBlock>
</TimeBlockList>
<prompt><!—req,xs:boolean></prompt>
<StorageMode><!-- opt, xs:integer, 0-SD/USB,1-NAS,2-FTP--></<StorageMode>
<RedundentVideo><!—req,xs:boolean></RedundentVideo> // Redundant recording; true:
Enabled; false: Disabled
<FrameExtraction><!—req,xs:boolean></FrameExtraction> // Frame extraction; true: Enabled;
false: Disabled
<AudioRecording><!—req,xs:boolean></AudioRecording> // Audio recording; true: Enabled;
false: Disabled
<ANR><!—req,xs:boolean></ANR>              // ANR true: Enabled; false: Disabled
<MainStream><!—req,xs:boolean></MainStream>             // Main stream recording; true:
```

```
Enabled; false: Disabled
<SubStream><!—req,xs:boolean></SubStream>                    // Sub stream recording; true: Enabled; false: Disabled
<SavingTime><!-- opt, xs:integer--></SavingTime>// Saving time; range: 0~60; unit: Day
</ResponseStatus>
```

Test cases

GET /CGI/ContentMgmt/record/tracks/1

Request XML: none

Response XML: <ResponseStatus>

PUT/CGI/ContentMgmt/record/tracks/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ResponseStatus>
<requestURL>/Streaming/Channels</requestURL>
<Channel>1</Channel>
<statusCode>1</statusCode>
<statusString>stop</statusString>
<ID>true</ID>
<manualRec>false</manualRec>
<alarmRec>true</alarmRec>
<continuous>true</continuous>
<TimeBlockList>
<TimeBlock>
<TimeRange>
<beginTime>00:00:00</beginTime>
<endTime>23:59:00</endTime>
</TimeRange>
<TimeRange>
<beginTime>00:00:00</beginTime>
<endTime>00:00:00</endTime>
</TimeRange>
<TimeRange>
<beginTime>00:00:00</beginTime>
<endTime>00:00:00</endTime>
</TimeRange>
<TimeRange>
<beginTime>00:00:00</beginTime>
<endTime>00:00:00</endTime>
</TimeRange>
<dayOfWeek>7</dayOfWeek>
</TimeBlock>
</TimeBlockList>
<prompt>false</prompt>
<StorageMode>0</StorageMode>
<RedundentVideo>true</RedundentVideo> // Redundant video; true: Enabled; false: Disabled
  <FrameExtraction>true</FrameExtraction>  // Frame extraction; true: Enabled; false: Disabled
  <AudioRecording>true</AudioRecording> // Audio recording; true: Enabled; false: Disabled
  <ANR>true</ANR>                // ANR true: Enabled; false: Disabled
  <SubStream>true</SubStream>                    // Sub stream recording; true: Enabled; false: Disabled
  <SavingTime>5</SavingTime>// Saving time; range: 0~60; unit: Day
</ResponseStatus>
```

2.5.2/CGI/ContentMgmt/Storage/quota/<ID>

/CGI/ContentMgmt/Storage/quota/<ID> General Resource v2.0	
GET	
Description	Acquire storage setting parameters
Query	None
Inbound Data	None
Success Return	**<diskQuota>**
PUT	
Description	Set storage parameters
Query	None
Inbound Data	**<diskQuota>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of video strategy information, helping client or IE query and set the video strategy information of device via CGI protocol, including the free disk space.

Explanations on key parameters:

<freeDiskSpace> means free disk space; range: 512-10240

<whenHDDfull> means storage strategy; DEL_VRF_WHEN_DOS: Circular deletion; DEL_NA_VRF_WHEN_DOS: Circular deletion (except for alarm file); STOP_VR_WHEN_DOS: Stop recording

diskQuotaXML Block

```
<diskQuota version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:integer; channel --></id>
<freeDiskSpace><!—opt,xs:integer,MB--></freeDiskSpace>
<packMode><!—opt,xs:integer "1: Pack by size; 2: Pack by time "><packMode>
<sizepack><!—opt,xs:integer></sizepack>// Pack by size
<timepack><!—opt,xs:integer></timepack>// Pack by time
<whenHDDfull><!--- opt,xs:string, DEL_VRF_WHEN_DOS, DEL_NA_VRF_WHEN_DOS,
STOP_VR_WHEN_DOS--></whenHDDfull>
</diskQuota>
```

Test cases

GET /CGI/ContentMgmt/Storage/quota/0

Request XML: none

Response XML: <diskQuota>

PUT/CGI/ContentMgmt/Storage/quota/0

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<diskQuota>
<freeDiskSpace>1048576</freeDiskSpace>
<packMode>1</packMode>
  <timepack>600</timepack>
<sizepack>1048576</sizepack>
<whenHDDfull>DEL_VRF_WHEN_DOS</whenHDDfull>
</diskQuota>
```

2.5.3/CGI/ContentMgmt/preAlarmRecord/channels/<ID>

/CGI/ContentMgmt/preAlarmRecord/channels/<ID> General Resource v2.0	
GET	
Description	Acquire alarm prerecord parameters
Query	None

Inbound Data	None
Success Return	**<PreAlarmRecord>**
PUT	
Description	Set alarm prerecord parameters
Query	None
Inbound Data	**<PreAlarmRecord>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of video strategy information, helping client or IE query and set the video strategy information of device via CGI protocol, including the alarm prerecord enabling/prerecord/delayed recording. **Explanations on key parameters:** <policePreRecord> means alarm prerecord enabling; true: Enabled; false: Disabled <preRecordTimeSeconds> means prerecord; range: 5, 10 and 15 <postRecordTimeSeconds> means delayed recording; range: 10, 15, 30 and 60	

PreAlarmRecordXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<PreAlarmRecord version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<policePreRecord><!—req,xs:boolean>< / policePreRecord >
<preRecordTimeSeconds><!—req,xs:interger></ preRecordTimeSeconds >
<postRecordTimeSeconds><!—req,xs:interger></ postRecordTimeSeconds >
</PreAlarmRecord >
```

Test cases

GET /CGI/ContentMgmt/preAlarmRecord/channels/1

Request XML： none

Response XML: <PreAlarmRecord>

PUT/CGI/ContentMgmt/preAlarmRecord/channels/1

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PreAlarmRecord>
<policePreRecord>true</policePreRecord>
<preRecordTimeSeconds>15</preRecordTimeSeconds>
<postRecordTimeSeconds>10</postRecordTimeSeconds>
</PreAlarmRecord>
```

2.5.4/CGI/ContentMgmt/channels/<ID>/NFS/<ID>

/CGI/ContentMgmt/channels/<ID>/NFS/<ID> **General Resource v2.0**	
GET	
Description	Acquire network storage parameters
Query	None
Inbound Data	None
Success Return	**<CloudStorage>**
PUT	
Description	Set network storage parameters
Query	None
Inbound Data	**<CloudStorage>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of network storage information, helping client or IE query and set the network storage information of device via CGI protocol, including the disk No./IP address/status/usage/mapping path/space. **Explanations on key parameters:** <id> means disk No.	

<ipAddress> means IP address, legal value calibration needed - Support IPv6 address
<status> means status; 1: No disk; 2: Formatting; 3: Unformatted; 4: Mounted; 5: Read/write in progress
<usage> means usage; 1: Recording; 2: Backup; 3: Redundancy; 4: Disk read only
<mappingPath> means mapping path
<totalSize> means total size
<freeSpace> means free space

CloudStorageXML Block

```
<CloudStorage version="2.0">
<id><!—req,xs:integer SATA1~SATA8 No. 0~7, USB0~USB3 No. 8~11, NFS No. 12, esata No. 32, SD card No. 50, SATA9~SATA16 No. 1008~1015 VD No. 2000~2015 IPSAN No. 3000~3007--></id >
<ipAddress><!—opt,xs:string--></ipAddress>
<status><!—opt,xs: integer -- ></status>
<usage><!—opt.xs:interger --></usage>
<mappingPath><!—opt,sx:string--></mappingPath >
<totalSize><!—opt,xs:integer--></totalSize>
<freeSpace><!—opt,xs:integer--></ freeSpace >
<CloudStorage>
```

Test cases

GET /CGI/ContentMgmt/channels/<ID>/NFS/<ID>

Request XML: none

Response XML: <CloudStorage>

PUT/CGI/ContentMgmt/channels/<ID>/NFS/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<CloudStorage>
<id>1</id>
<ipAddress>0</ipAddress>
<status>1</status>
<usage>1</usage>
<mappingPath>/nfs</mappingPath>
<totalSize>0</totalSize>
<freeSpace>0</freeSpace>
</CloudStorage>
```

2.5.5/CGI/ContentMgmt/Storage/Policy

/CGI/ContentMgmt/Storage/Policy	**General Resource v2.0**
GET	
Description	Acquire disk strategy parameters
Query	None
Inbound Data	None
Success Return	**<storagePolicy>**
PUT	
Description	Set disk strategy parameters
Query	None
Inbound Data	**<storagePolicy>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of disk strategy information, helping client or IE query and set the disk strategy information of device via CGI protocol, including disk group and quota.
Explanations on key parameters:
Mode: modeSelection(HDD: Disk group, quota: Quota)
Disk group list: hddModelList has <disk group number> nodes
Quota list: quotaModelList has <disk group number> nodes

storagePolicyXML Block

```
<storagePolicy version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<modeSelection><!--req,string --></modeSelection>// Mode
<hddModelList>
<hddMode>
<hdd><!--req,string --></hdd> // Disk group starts from 1
<hddSelectionList>/ Select disk group
<hddSelection><!-- req, xs:integer --></hddSelection>
</hddSelectionList>
<hddChannelList>// Select channel
<hddChannel><!-- req, xs:integer --></hddChannel>
</hddChannelList>
</hddModel>
</hddModelList>
<quotaModelList>// Select quota
<quotaMode>
<id><!-- req, xs:integer; channel --></id>// Channel starts from 1
<useVideoQuota><!-- ro, integer, MB --></useVideoQuota>
<usePictureQuota><!-- ro, integer, MB --></usePictureQuota>
<totalDiskVolume><!-- ro, integer, MB --></totalDiskVolume>
<videoQuota><!-- req, integer, MB --></videoQuota>// Video quota
<pictureQuota><!-- opt, integer, MB --></pictureQuota>// Picture quota
<type><!--opt,xs:string,"volume,ratio"--></type>
<videoQuotaRatio><!--                dep,                integer,                0...100
percentage--></videoQuotaRatio><pictureQuotaRatio><!--            dep,            0...100
percentage--></pictureQuotaRatio>
<totalVideoVolume><!-- ro, integer, MB --></totalVideoVolume> // Total video volume
<totalPictureVolume><!-- ro, integer, MB --></totalPictureVolume>// Total picture volume
<freeVideoQuota><!-- ro, integer, MB --></freeVideoQuota >// Free video quota
<freePictureQuota><!-- ro, integer, MB --></freePictureQuota >// Free picture quota
</quotaMode>
</quotaModelList>
</storagePolicy>
```

Test cases

GET /CGI/ContentMgmt/Storage/Policy

Request XML: none

Response XML: <storagePolicy>

PUT/CGI/ContentMgmt/Storage/Policy

Response XML: <ResponseStatus>

Request XML: as below

```
"<storagePolicy version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<modeSelection>HDD</modeSelection>
<hddModelList>
<hddMode>
<hdd>1</hdd>
<hddselectionlist>
<hddselection>0</hddselection>
<hddselection>2</hddselection>
<hddselection>3</hddselection>
```

```
<hddselection>6</hddselection>
</hddselectionlist>
<hddchannellist>
<hddchannel>0</hddchannel>
<hddchannel>3</hddchannel>
<hddchannel>4</hddchannel>
<hddchannel>6</hddchannel>
</hddchannellist>
</hddModel>
</hddModelList>
<quotaModelList>
<quotaMode>
<id>1</id>
<useVideoQuota>0</useVideoQuota>
<usePictureQuota>0</usePictureQuota>
<totalDiskVolume>0</totalDiskVolume>
<videoQuota>0</videoQuota>
<pictureQuota>0</pictureQuota>
<type>0</type>
<videoQuotaRatio>0</videoQuotaRatio>
<pictureQuotaRatio>0</pictureQuotaRatio>
<totalVideoVolume>0</totalVideoVolume>
<totalPictureVolume>0</totalPictureVolume>
<freeVideoQuota>0</freeVideoQuota>
<freePictureQuota>0</freePictureQuota>
</quotaMode>
</quotaModelList>
</storagePolicy>
```


2.5.6/CGI/ContentMgmt/Storage/RebuildIndex

/CGI/ContentMgmt/Storage/RebuildIndex General Resource v2.0	
PUT	
Description	Rebuild index
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for rebuilding index of disk. **Explanations on key parameters:** None	

Test cases

PUT/CGI/ContentMgmt/Storage/RebuildIndex

Request XML: none

Response XML: <ResponseStatus>

2.5.7/CGI/ContentMgmt/Storage/RebuildIndexStatus

/CGI/ContentMgmt/Storage/RebuildIndexStatus General Resource v2.0	
GET	
Description	Obtain formatted disk status
Query	None
Inbound Data	None
Success Return	**<RebuildIndexStatus>**

Explanations on protocol: This protocol is to realize the query of the formatted disk status, and realize the query of the client sides or IE for the equipment formatted disk status through the CGI protocol. **Explanations on key parameters:** <formating> means formatting status; REBUILD_ERRO: Error; REBUILD_DOING: Rebuilding in progress; REBUILD_DONE: Formatting completed; NOT_ REBUILD: No rebuilding

formatStatusXML Block

```
<RebuildIndexStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<Rebuilding><!-- ro, req, xs:string REBUILD_ERROR , REBUILD_DOING , REBUILD_DONE, NOT_ REBUILD--></formating>
<percent><!-- ro, req, xs:integer "0-100" --></percent>
</RebuildIndexStatus>
```

Test cases

GET/CGI/ContentMgmt/Storage/RebuildIndexStatus

Request XML: none

Response XML: <RebuildIndexStatus>

```
<RebuildIndexStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<Rebuilding>REBUILD_DOING</formating>
<percent>50</percent>
</RebuildIndexStatus>
```

2.5.8/CGI/ContentMgmt/InputProxy/channels/<ID>/ipcReboot

/CGI/ContentMgmt/InputProxy/channels/<ID>/ipcReboot General Resource v2.0	
PUT	
Description	Restart frontend device via NVR
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for restarting frontend device via NVR.	

Test cases

PUT /CGI/ContentMgmt/InputProxy/ipcConfig

Request XML: None

Response XML: <ResponseStatus>

2.5.9/CGI/ContentMgmt/InputProxy/PlugAndPlay

/CGI/ContentMgmt/InputProxy/PlugAndPlay General Resource v2.0	
GET	
Description	Acquire plug-and-play status
Query	None
Inbound Data	None
Success Return	**<PlugAndPlayPara>**
PUT	
Description	Modify plug-and-play status
Query	None
Inbound Data	**<PlugAndPlayPara>**

Success Return	<ResponseStatus>
Explanations on protocol: This protocol is prepared for setting and acquiring plug-and-play function.	

PlugAndPlayPara XML Block

```
<?xml version="1.0" encoding="UTF-8" ?>
<PlugAndPlayPara>
<Enable><!--req, xs:boolean--></Enable>
<Type><!—req, xs:integer, 1: Auto adding 2: Auto detection></Type>
</PlugAndPlayPara>
```

Test cases

PUT /CGI/ContentMgmt/InputProxy/PlugAndPlay

Response XML: <ResponseStatus>

Request XML: <PlugAndPlayPara>

```
<PlugAndPlayPara>
    <Enable>ture</Enable>
    <Type>1</Type>
</PlugAndPlayPara>
```

GET /CGI/ContentMgmt/InputProxy/PlugAndPlay

Request XML: None

Response XML: <PlugAndPlayPara>

```
<PlugAndPlayPara>
    <Enable>ture</Enable>
    <Type>1</Type>
</PlugAndPlayPara>
```

2.5.10/CGI/ContentMgmt/Storage/hdd/<ID>/operation

/CGI/ContentMgmt/Storage/hdd/<ID>/operation **General Resource v2.0**	
PUT	
Description	Manual operation of disk
Query	None
Inbound Data	**< HDDOperation>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for manual operation of disk function, helping client or IE implement plug-and-play of device via CGI protocol. Disk number rule is as follows and consistent with the returned value of disk information protocol. SATA1~SATA8 No. 0~7 SD Card No. 50 SATA9~SATA16 No. 1008~1015 IPSAN No. 3000~3007 Add SATA17-SATA24 No. 1016~1023 Add expansion cabinet 1 SATA1~SATA24 No. 1100-1123 Add expansion cabinet 2 SATA1~SATA24 No. 1200-1223 Add expansion cabinet 3 SATA1~SATA24 No. 1300-1323	

HDDOperation XML Block

```
<HDDOperation version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<operateType><!—req, xs:integer, 1: Offline (prepare for unplugging disk); 2: Online (insert disk, not supported temporarily); 3: Change application>
</operateType>
<HDDUsage>
<!—dep, xs:integer, 0: Read/write (video recording); 1: Backup; 2: Redundancy; 3: Read-only>
```

```
</HDDUsage>
</HDDOperation>
```

Test cases
PUT/CGI/ContentMgmt/Storage/hdd/0/operation
Response XML: <ResponseStatus>
Request XML: <HDDOperation> As follows

```
<HDDOperation>
<operateType>3</operateType>
<HDDUsage>0</HDDUsage>
</HDDOperation>
```

2.5.11/CGI/ContentMgmt/Storage/raids/HDDInfos

/CGI/ContentMgmt/Storage/raids/HDDInfos	**General Resource v2.0**
GET	
Description	Acquire information of physical disk
Query	None
Inbound Data	None
Success Return	**<HDDInfoList>**
PUT	
Description	Operate physical disk
Query	None
Inbound Data	**<HDDInfoList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquiring and setting disk information.
Disk numbering rules are as follows:
// Device SATA1~SATA24 No. 0- 23
// Expansion cabinet 1 SATA1~SATA24 No. 1100-1123
// Expansion cabinet 2 SATA1~SATA24 No. 1200-1223
// Expansion cabinet 3 SATA1~SATA24 No. 1300-1323	

HDDInfoList XML Block

```
<HDDInfoList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<HDD>
<id><!—req, xs:integer--></id>
<raidName><!—opt, xs:string--></raidName>
<workMode><!—req, xs:integer0=Common disk;1=Array hot standby disk;2= Overall hot
standby disk;3=RAID disk;4=Invalid RAID disk;5=Faulty disk—></workMode>
<status><!—opt, xs:integer0=Normal;1=Offline;2=Health warning—></status>
<size><!—opt, xs:integer Unit: MB—></size>
<model><!—opt, xs:string--></model>
</HDD>
</HDDInfoList>
```

Test cases
GET/CGI/ContentMgmt/Storage/raids/HDDInfos
Response XML: <HDDInfoList>
Request XML: None
PUT/CGI/ContentMgmt/Storage/raids/HDDInfos
Response XML: <ResponseStatus>
Request XML: <HDDInfoList> As follows

```
<HDDInfoList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<HDD>
<id>1</id>
<raidName>Raid 1</raidName>
<workMode>1</workMode>
</HDD>
</HDDInfoList>
```

2.5.12/CGI/ContentMgmt/Storage/raids

/CGI/ContentMgmt/Storage/raids	**General Resource v2.0**
PUT	
Description	Create array
Query	None
Inbound Data	<RaidInfoList>
Success Return	<ResponseStatus>

Explanations on protocol:
This protocol is prepared for building, rebuilding and deleting arrays, acquiring array information; array list will be sent if <name> field of url is null; otherwise, the designated array information will be sent.

Disk number rule is as follows and consistent with the returned value of disk information protocol.

// Device SATA1~SATA24 No. 0- 23
// Expansion cabinet 1 SATA1~SATA24 No. 1100-1123
// Expansion cabinet 2 SATA1~SATA24 No. 1200-1223
// Expansion cabinet 3 SATA1~SATA24 No. 1300-1323

RaidInfoListXML Block

```
<RaidInfoList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<RaidInfo/>
</RaidInfoList>
```

RaidInfoXML Block

```
<RaidInfoversion="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<name><!—req, xs:string including ending character, 64 characters at most --></name>
<operateType><!—opt, xs:integer, 1: Build 2: Rebuild 3: Delete--></operateType>
<raidType><!—req, xs:integer, 0=RAID0；1=RAID1；5=RAID5；6=RAID6；10=RAID10；
100=JBOD；50=RAID50;60=RAID60--></raidType>
<HDDList>
<id><!—req, xs:integer--></id>
</HDDList>
</RaidInfo>
```

Test cases

PUT /CGI/ContentMgmt/Storage/raids

Response XML： <ResponseStatus>

Request XML: <RaidInfoList> As follows

```
<RaidInfoList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<RaidInfo>
<name>123<name>
<operateType>1</operateType>
<raidType>5</raidType>
<HDDList>
<id>0</id>
<id>1</id>
<id>2</id>
</HDDList>
</RaidInfo>
</RaidInfoList>
```

2.5.13/CGI/ContentMgmt/Storage/raids/status

/CGI/ContentMgmt/Storage/raids/status	**General Resource v2.0**
GET	
Description	Acquire array status
Query	None
Inbound Data	<RaidName>
Success Return	<RaidStatusList>
Explanations on protocol: This protocol is prepared for acquiring array status.	

RaidStausListXML Block

```
<RaidStausList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<RaidStaus />
</RaidStausList>
```

RaidStaus XML Block

```
<RaidStausversion="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<name><!—req, xs:string including ending character, 64 characters at most --></name>
<allSize><!—req, xs:integer, MB--></allSize >
<useAbleSize><!—req, xs:integer, MB--></useAbleSize>
<status><!—req, xs:integer, 1= Normal ;2= Degraded ;3= Failure--></status>
<task><!—req, xs:integer, 1=None; 2= Initializing; 3= Rebuilding--></task>
<percent><!—req, xs:integer,0-100--></percent>
<leftTime><!—req, xs:integer, Unit: Minute --></leftTime>
<raidType><!—req, xs:integer, 0=RAID0； 1=RAID1； 5=RAID5； 6=RAID6； 10=RAID10；
100=JBOD； 50=RAID50;60=RAID60--></raidType>
<HDDList>
<id><!—req, xs:integer--></id>
</HDDList>
</RaidStaus>
```

Test cases

GET/CGI/ContentMgmt/Storage/raids/status

Response XML: <RaidStatusList>

Request XML： None

<RaidStatusList> As follows

```
<RaidStausList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<RaidStaus>
<name>123</name>
<allSize>1024</allSize>
<useAbleSize>1000</useAbleSize>
<status>1</status>
<task>2</task>
<percent>50</percent>
<leftTime>20</leftTime>
<raidType>5</raidType>
<HDDList>
<id>0</id>
<id>1</id>
<id>2</id>
</HDDList>
</RaidStaus>
</RaidStausList>
```

2.5.14/CGI/ContentMgmt/Storage/VDs

/CGI/ContentMgmt/Storage/VDs	**General Resource v2.0**
POST	
Description	Acquire information of virtual disk
Query	None
Inbound Data	**<VDName>**
Success Return	**<VDList>**
PUT	
Description	Create array
Query	None
Inbound Data	**<VDList>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for building, rebuilding and deleting virtual disk, and acquiring information of virtual disk; array list will be sent if <name> field of url is null; otherwise, the designated array information will be sent. This protocol is unused by NVR temporarily.	

VDName Block

```
<VDNameversion="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<name><!—req, xs:string including ending character, 64 characters at most --></name>
</VDName>
```

VDListXML Block

```
<VDInfoList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<VDInfo/>
</VDInfoList>
```

VDInfoXML Block

```
<VDInfoversion="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<name><!—req, xs:string including ending character, 64 characters at most --></name>
<operateType><!—opt, xs:integer, 1: Build 2: Rebuild 3: Delete--></operateType>
<size><!—req, xs:integer, MB--></size>
<initType><!—opt, xs:integer 1= Frontend; 2= Backend; 3= Fast--></initType>
<raidName><!—req, xs: Name of string raid--></raidName>
</VDInfo>
```

Test cases

POST/CGI/ContentMgmt/Storage/VDs

Response XML:<VDInfoList >

Request XML：None

PUT/CGI/ContentMgmt/Storage/VDs

Response XML： <ResponseStatus>

<VDNameXML> As follows:

```
<VDNameversion="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<name>345</name>
</VDName>
```

Request XML: <VDInfoList> As follows

```
<VDInfoList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<VDInfo>
<name>345</name>
<operateType>1</operateType>
<size>512</size>
<initType>2</initType>
<raidName>123</raidName>
</VDInfo>
</VDInfoList>
```

2.5.15/CGI/ContentMgmt/Storage/VDs/status

/CGI/ContentMgmt/Storage/VDs/status	**General Resource v2.0**
GET	
Description	Acquire virtual disk status
Query	None
Inbound Data	None
Success Return	**<VDStatusList>**
Explanations on protocol: This protocol is prepared for acquiring virtual disk status. It is unused by NVR temporarily.	

VDStausListXML Block

```
<VDStausList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<VDStaus />
</VDStausList>
```

VDStaus XML Block

```
<VDStausversion="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<name><!—req, xs:string including ending character, 64 characters at most --></name>
<useAbleSize><!—req, xs:integer, MB --></useAbleSize>
<status><!—req, xs:integer 1= Normal; 2= Degraded; 3= Offline--></status >
<task><!—req, xs:integer1= None; 2= Initializing; 3= Recovering--></task >
<percent><!—req, xs:integer 0-100--></percent >
<leftTime><!—req, xs:string, x.x Hour--></leftTime >
</VDStaus>
```

Test cases

GET/CGI/ContentMgmt/Storage/VDs/status

Response XML: <VDStatusList>

Request XML：None

```
<VDStausList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<VDStaus>
<name>123</name>
<useAbleSize>512</useAbleSize>
<status>1</ status >
<task>2</ task >
<percent>50</ percent >
<leftTime>0.2</ leftTime >
</VDStaus>
</VDStausList>
```

2.5.16/CGI/ContentMgmt/InputProxy/channels/<ID>/pseStatus

/CGI/ContentMgmt/InputProxy/channel/<ID>/pseStatus General Resource v2.0	
GET	
Description	Request status of one PSE port
Query	None
Inbound Data	None
Success Return	**<PseStatus>**
Explanations on protocol: This protocol is prepared for acquiring status request of independent PSE port. **Explanations on key parameters:** <ID> and <id> means PSE port No.; range: 0-Max. PSE port number of device <LinkState> means connection status; Disconnect: Disconnected; connect: Connected; overload: Disconnected due to overload <Power> means POE power; value is PSE port power *100; for example, 500 means 5W	

PseStatusXML Block

```
<PseStatus version="2.0">
    <id>!--req, xs:integer --</id>
    <LinkState>!--req, xs:string --</LinkState>
    <Power>!--req, xs:integer --</Power>
</PseStatus>
```

Test cases

GET /CGI/ContentMgmt/InputProxy/channels/<ID>/pseStatus

Request XML： none

Response XML: <PseStatus>

```
<PseStatusversion="2.0" >
    <id>1</id>
    <LinkState>1</LinkState>
    <Power >500</Power >
</PseStatus>
```

2.5.17/CGI/ContentMgmt/InputProxy/channels/pseStatus

/CGI/ContentMgmt/InputProxy/channels/pseStatus General Resource v2.0	
GET	
Description	Request status of all PSE ports
Query	None
Inbound Data	None
Success Return	**<PseStatusList>**
Explanations on protocol: This protocol is prepared for acquiring status request of all PSE ports **Explanations on key parameters:** <id> means PSE port No.; range: 0-Max. PSE port number of device <LinkState> means connection status; Disconnect: Disconnected; connect: Connected; overload: Disconnected due to overload <Power> means POE power; value is PSE port power *100; for example, 500 means 5W	

PseStatusListXML Block

```
<PseStatusList version="2.0">
<PseStatus version="2.0">
    <id>!--req, xs:integer --</id>
    <LinkState>!--req, xs:integer --</LinkState>
    <Power>!--req, xs:integer --</Power>
</PseStatus>
</PseStatusList>
```

Test cases

GET /CGI/ContentMgmt/InputProxy/channels/pseStatus

Request XML： none

Response XML: <PseStatusList>

PseStatusListXML Block

```
<PseStatusList version="2.0" >
<PseStatusversion="2.0" >
    <id>1</id>
    <LinkState>1</LinkState>
    <Power >500</Power >
</PseStatus>
<PseStatusversion="2.0">
    <id>2</id>
    <LinkState>1</LinkState>
    <Power>630</Power>
</PseStatus>
</PseStatusList>
```

2.5.18/CGI/ContentMgmt/InputProxy/channels/<ID>/pseMode

/CGI/ContentMgmt/InputProxy/channels/<ID>/pseMode General Resourcev2.0	
GET	
Description	Acquire working mode of PSE channel
Query	None
Inbound Data	None
Success Return	**<PseMode>**
PUT	
Description	Set working mode of PSE channel
Query	None
Inbound Data	**<PseMode>**
Success Return	**<ResponseStatus >**
Explanations on protocol: This protocol is prepared for setting and acquiring working mode of PSE channel. **Explanations on key parameters:** <WorkMode > means channel working mode; disable: Plug-and-play disabled; autoadd: Auto adding; reserved: Reserved	

PseMode XML Block

```
<PseMode version="2.0">
    <WorkMode >!--req, xs:string--</ WorkMode >
</PseMode>
```

Test cases

GET /CGI/ContentMgmt/InputProxy/channels/1/pseMode

Request XML： none

Response XML:<PseMode>

PUT/CGI/ContentMgmt/InputProxy/channels/1/pseMode

Response XML: ResponseStatus

Request XML： as below

PseMode XML Block

```
<PseMode version="2.0">
    <WorkMode >1</ WorkMode >
</PseMode>
```

2.5.19 /CGI/ContentMgmt/Storage/raids/enable

/CGI/ContentMgmt/Storage/raids/enable General Resource v2.0	
GET	
Description	Acquire array enabling
Query	None
Inbound Data	None
Success Return	**<RaidEnable>**
PUT	
Description	Enable/disable array
Query	None
Inbound Data	**<RaidEnable>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for enabling/disabling of array and acquiring array enabling status.	

RaidEnable XML Block

```
<RaidEnable version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
</RaidEnable>
```

Test cases

GET/CGI/ContentMgmt/Storage/raids/enable

Response XML: <RaidEnable>

Request XML：None

PUT/CGI/ContentMgmt/Storage/raids/enable

Response XML： <ResponseStatus>

Request XML: <RaidEnable> As follows

```
<RaidEnable version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<enabled>true</enabled>
</RaidEnable>
```

2.5.20/CGI/ContentMgmt/InputProxy/OnvifLanSearch/enable

/CGI/ContentMgmt/InputProxy/OnvifLanSearchEn General Resource v2.0	
GET	
Description	Acquire onvif intranet searching functions
Query	None
Inbound Data	**None**
Success Return	**<OnvifLanSearch>**
PUT	
Description	Set onvif intranet searching functions
Query	None
Inbound Data	**<OnvifLanSearch>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring or setting enabling status of onvif ntranet searching functions of device Explanations on key parameters:	

OnvifSearchXML Block

```
<OnvifLanSearch>
  <enabled><!--req, xs:boolean--></enabled>
</OnvifLanSearch>
```

Test cases

GET /CGI/ContentMgmt/InputProxy/OnvifLanSearch/enable

Request XML： none

Response XML: <OnvifLanSearch>

PUT /CGI/ContentMgmt/InputProxy/OnvifLanSearch/enable

Response XML： <ResponseStatus>

Request XML： as below

```
<OnvifLanSearch>
  <enabled>true</enabled>
</OnvifLanSearch>
```

2.5.21/CGI/ContentMgmt/InputProxy/channels/<ID>/PortMapped

/CGI/ContentMgmt/InputProxy/channels/<ID>/PortMapped General Resource v2.0	
GET	
Description	Acquire port mapping parameters
Query	**None**

Inbound Data	**None**
Success Return	**<PortMapParameter>**
PUT	
Description	Set port mapping parameters
Query	**None**
Inbound Data	**<PortMapParameter>**
Success Return	**<ResponseStatus>**
Explanations on protocol: IE acquires or sets port mapping parameters via CGI protocol. Explanations on key parameters: <httpEnable> Whether enable http; true, false <httpSrcPort> Whether enable http source port No. <httpProxyPort> Mapping port No. <tcpEnable> Whether enable tcp; true, false <tcpSrcPort> tcp source port No. <tcpProxyPort> Mapping port No. Mapping port No. is [4000,65534]	

PortMapParameter XML Block

```
<PortMapParameter>
   <httpEnable><!--req, xs:boolean --></httpEnable>
   <httpSrcPort><!--req, xs:integer --></httpSrcPort>
   <httpProxyPort><!--req, xs:integer --></httpProxyPort>
   <tcpEnable><!--req, xs:boolean --></tcpEnable>
   <tcpSrcPort><!--req, xs:integer --></tcpSrcPort>
   <tcpProxyPort ><!--req, xs:integer --></tcpProxyPort>
</PortMapParameter>
```

Test cases

GET /CGI/ContentMgmt/InputProxy/channels/<ID>/PortMapped

Request XML: none

Response XML: <PortMapParameter>

PUT /CGI/ContentMgmt/InputProxy/channels/<ID>/PortMapped

Response XML: <ResponseStatus>

Request XML: <PortMapParameter> As follows

```
<PortMapParameter>
<httpEnable>true</httpEnable>
<httpSrcPort>80</httpSrcPort>
<httpProxyPort>4567</httpProxyPort>
<tcpEnable>true</tcpEnable>
<tcpsrcport>3000</tcpsrcport>
<tcpproxyport>5555</tcpproxyport>
</PortMapParameter>
```

2.5.22 /CGI/ContentMgmt/Storage/ModeAndHddInfo

/CGI/ContentMgmt/Storage/ModeAndHddInfo General Resource v2.0	
GET	
Description	Acquire the present disk group mode and status
Query	None
Inbound Data	None
Success Return	**<storagePolicy>**
Explanations on protocol: This protocol is prepared for helping IE acquire the disk group mode and status of present device via CGI protocol. **Explanations on key parameters:** Mode: modeSelection (HDD: Disk group, QUOTA: Quota) Disk group list: hddModelList has <disk group number> nodes	

storagePolicy XML Block

```
<storagePolicy version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<modeSelection><!--req,string --></modeSelection>// Mode
<hddModelList>
<hddMode>
<hdd><!--req,string --></hdd> // Disk group
<hddSelectionList>/ Select disk group
<hddSelection><!-- req, xs:integer --></hddSelection>
</hddSelectionList>
<hddChannelList>// Select channel
<hddChannel><!-- req, xs:integer --></hddChannel>
</hddChannelList>
</hddMode>
</hddModelList>
</storagePolicy>
```

Test cases

GET /CGI/ContentMgmt/Storage/ModeAndHddInfo

Request XML： none

Response XML: <storagePolicy>

```
<storagePolicy version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<modeSelection>HDD</modeSelection>// Mode
<hddModelList>
<hddMode>
<hdd>1</hdd> // Disk group
<hddSelectionList>/ Select disk group
<hddSelection>1</hddSelection>
<hddSelection>2</hddSelection>
<hddSelection>3</hddSelection>
<hddSelection>6</hddSelection>
</hddSelectionList>
<hddChannelList>// Select channel
<hddChannel>9</hddChannel>
<hddChannel>31</hddChannel>
<hddChannel>42</hddChannel>
<hddChannel>60</hddChannel>
</hddChannelList>
</hddMode>
</hddModelList>
</storagePolicy>
```

2.5.23/CGI/ContentMgmt/InputProxy/channels/<ID>/PseNetLanStatus

/CGI /ContentMgmt/InputProxy/channels/<ID>/PseNetLanStatus General Resource v2.0	
GET	
Description	Acquire enabling status of PSE long/short wire
Query	**None**
Inbound Data	**None**
Success Return	**<PseNetLanStatus>**
PUT	
Description	Set enabling status of PSE long/short wire
Query	**None**
Inbound Data	**<PseNetLanStatus>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
IE acquires or sets enabling status parameters of PSE long/short wire via CGI protocol.
Explanations on key parameters:
<enable>: true: Enabling false: Disabling

PseNetLanStatus XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<PseNetLanStatus>
  <enable><!--req, xs:boolean --></enable>
</PseNetLanStatus>
```

Test cases
GET /CGI/ContentMgmt/InputProxy/channels/<ID>/PseNetLanStatus
Request XML: none
Response XML: <PseNetLanStatus>
PUT /CGI/ContentMgmt/InputProxy/channels/<ID>/PseNetLanStatus
Response XML: <ResponseStatus>
Request XML: <PseNetLanStatus> As follows

```
<?xml version="2.0" encoding="UTF-8"?>
<PseNetLanStatus>
  <enable>true</enable>
</PseNetLanStatus>
```

2.5.24/CGI/ContentMgmt/Storage/Raids/Progress/type/<ID>

/CGI/ContentMgmt/Storage/Raids/Progress/type/<ID>	**General Resource v2.0**
GET	
Description	Acquire the present progress of array
Query	None
Inbound Data	None
Success Return	**<raidProgress>**

Explanations on protocol:
This protocol is prepared for helping IE acquire the present array progress via CGI protocol.
Explanations on key parameters:
Sent XML:
<type>: Integer, range: “0-2”, which means: 0: Array creation progress; 1: Array rebuilding progress; 2: Array deletion progress; the rest means return fails
Returned XML:
<state> : 0: No array operation; 1: Array operation in progress; 2: Array operation succeeds; 3: Array operation fails
<progress>: Progress "0-100"

raidProgress XML Block

```
<raidProgress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<state><!-- ro, req, xs:integer--></state>
<progress><!-- ro, req, xs:integer--></progress>
</raidProgress>
```

Test cases
GET /CGI/ContentMgmt/Storage/Raids/Progress/type/<ID>
Request XML: none
Response XML: <raidProgress>

```
<?xml version="1.0" encoding="UTF-8"?>
<raidProgress>
<state>1</state>
<progress >99</progress>
</raidProgress>
```

2.5.25/CGI/ContentMgmt/Storage/SmartHddList

/CGI/ContentMgmt/Storage/SmartHddList	**General Resource v2.0**
GET	
Description	Acquire the disk list of array
Query	**<NONE>**
Inbound Data	**<NONE>**
Success Return	**<SmartHddList>**
Explanations on protocol: This protocol is prepared for helping IE acquire disk list via CGI protocol under the array mode.	

SmartHddList XML Block

```
<SmartHddList>
<SmartHdd>
<id><!—req, xs:integer--></id> // Disk id
<hddName><!—req, xs:string--></hddName>// Disk name
</SmartHdd>
<SmartHdd>
<id><!—req, xs:integer--></id>
<hddName><!—req, xs:string--></hddName>
</SmartHdd>
</SmartHddList>
```

Test cases

GET /CGI/ContentMgmt/Storage/SmartHddList

Request XML：None

Response XML: <SmartHddList>

<SmartHddList> As follows:

```
<SmartHddList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<SmartHdd>
<id>2</id>
<hddName>sata3</hddName>
</SmartHdd>
<SmartHdd>
<id>3</id>
<hddName>sata4</hddName>
</SmartHdd>
<SmartHdd>
<id>4</id>
<hddName>sata5</hddName>
</SmartHdd>
<SmartHdd>
<id>6</id>
<hddName>sata7</hddName>
</SmartHdd>
</SmartHddList>
```

2.5.26 /CGI/ContentMgmt/Storage/Picture/Tracks/<ID>

/CGI/ContentMgmt/Storage/Picture/Tracks/<ID>	**General Resource v2.0**
GET	
Description	Acquire picture storage and setting parameters
Query	None
Inbound Data	None
Success Return	**<picStore>**
PUT	
Description	Set picture storage and setting parameters

Query	None
Inbound Data	**<picStore>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of picture storage information, helping client or IE query and set the picture storage information via CGI protocol, including picture retention days and picture retention type.
Explanations on key parameters:
<ID> means channel No.
<storeTime> means picture storage period (unit: Day)
<storeEnable> means picture storage enabling; true: Enabled; false: Disabled
<facePicSnap> means whether face snapshot pictures are saved; true: Saved; false: Not saved
<facePicBase> Whether face picture base is saved; true: Saved; false: Not saved
<facePicBackdrop> Whether face background picture is saved; true: Saved; false: Not saved

picStore XML Block

```
<picStore version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<storeTime><!--req,xs:integer--></ storeTime>
<storeEnable><!-- opt, xs:boolean "true, false" --></storeEnable>
<facePicSnap><!-- opt, xs:boolean "true, false" --></facePicSnap>
<facePicBase><!-- opt, xs:boolean "true, false" --></facePicBase>
<facePicBackdrop><!-- opt, xs:boolean "true, false" --></ facePicBackdrop>
</picStore>
```

Test cases
GET /CGI/ContentMgmt/Storage/Picture/Tracks/0
Request XML: none
Response XML: <picStore>
PUT /CGI/ContentMgmt/Storage/Picture/Tracks/0
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<picStore>
<storeTime>30</ storeTime>
<storeEnable>true</storeEnable>
<facePicSnap>true</ facePicSnap>
<facePicBase>false</ facePicBase>
<facePicBackdrop>true</facePicBackdrop>
</picStore>
```

2.5.27/CGI/ContentMgmt/InputProxy/OnvifActive/Enable

/CGI/ContentMgmt/InputProxy/OnvifActive/Enable General Resource v2.0	
GET	
Description	Acquire IPC switch which has auto access to onvif
Query	None
Inbound Data	**None**
Success Return	**<onvifActive>**
PUT	
Description	Set IPC switch which has auto access to onvif
Query	None
Inbound Data	**<onvifActive>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquiring or setting the IPC switch which has auto access to onvif of device
Explanations on key parameters:

enabled: Means enabling/disabling of IPC switch which has auto connection to onvif; true: Enabled; false: Disabled

onvifActive XML Block

```
<onvifActive >
   <enabled><!-- opt, xs:boolean "true, false" --></enabled>
</onvifActive >
```

Test cases

GET /CGI/ContentMgmt/InputProxy/OnvifActive/Enable

Request XML: none

Response XML: <onvifActive>

PUT /CGI/ContentMgmt/InputProxy/OnvifActive/Enable

Response XML: <ResponseStatus>

Request XML: as below

```
<onvifActive>
   <enabled>true</enabled>
</onvifActive>
```

2.5.28/CGI/ContentMgmt/InputProxy/OnvifInsertHEVC /Enable

/CGI/ContentMgmt/InputProxy/OnvifInsertHEVC/Enable General Resource v2.0	
GET	
Description	Acquire NVR switch which allows onvif access to H265
Query	None
Inbound Data	**None**
Success Return	<InsertEnable>
PUT	
Description	Set NVR switch which allows onvif access to H265
Query	None
Inbound Data	**<InsertEnable>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring or setting the NVR switch which allows access of onvif to H265 **Explanations on key parameters:**	
enabled: Means enabling/disabling of NVR which allows onvif access to H265; true: Enabled; false: Disabled	

InsertEnable XML Block

```
<InsertEnable>
   <enabled><!-- opt, xs:boolean "true, false" --></enabled>
</InsertEnable>
```

Test cases

GET /CGI/ContentMgmt/InputProxy/OnvifInsertHEVC/Enable

Request XML: none

Response XML: <InsertEnable>

PUT /CGI/ContentMgmt/InputProxy/OnvifInsertHEVC/Enable

Response XML: <ResponseStatus>

Request XML: as below

```
<InsertEnable>
   <enabled>true</enabled>
</InsertEnable>
```

2.6/CGI/Common

2.6.1/CGI/Common/channels/<ID>/RealTimeValue

/CGI/Common/channels/<ID>/RealTimeValue General Resource v2.0	
POST	
Description	Acquire real-time parameters
Query	None
Inbound Data	**<RealTimeValue>**
Success Return	**<RealTimeValue>**
Explanations on protocol: This protocol is prepared for real-time query of information, helping client or IE query the real-time information of device via CGI protocol, including type/value. **Explanations on key parameters:** <type> means type; brightness: Brightness; cpu: CPU information; memory: Memory information; flash: Flash information <value> means value	

RealTimeValueXML Block

```
<RealTimeValue version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<ElementList>
<Element>
<type><!--req, xs: string --></type >
<value><!--req, xs:integer--></value >
</Element>
</ElementList>
</RealTimeValue>
```

Test cases

POST/CGI/Common/channels/<ID>/RealTimeValue

Response XML: <RealTimeValue>

Request XML: <RealTimeValue> As follows

```
<?xml version="1.0" encoding="UTF-8"?>
<RealTimeValue>
<ElementList>
<Element>
<type>brightness</type>
<value>98</value>
</Element>
</ElementList>
</RealTimeValue>
```

2.6.2/CGI/Common/session

/CGI/Common/session General Resource v2.0	
GET	
Description	Acquire talk information
Query	None
Inbound Data	**None**
Success Return	**<SessionInfo>**
Explanations on protocol: This protocol is prepared for acquiring the protocol of present talk information **Explanations on key parameters:** <SessionID> means talk ID	

SessionInfo XML Block

```
<SessionInfoversion="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<SessionID><!--req, xs:integer--></SessionID>
</SessionInfo>
```

Test cases
GET /CGI/Common/session
Request XML: none
Response XML: <SessionInfo> As follows

```
<SessionInfo version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<SessionID>1479998710</SessionID>
</SessionInfo>
```

2.6.3/CGI/Common/PlatFromParam

/CGI/System/PlatFromParam	**General Resource v2.0**
GET	
Description	Acquire parameters of access platform
Query	None
Inbound Data	None
Success Return	**<PlatFromParam>**
PUT	
Description	Set parameters of access platform
Query	None
Inbound Data	**<PlatFromParam>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting the platform parameters which need to be accessed to customize the DZ19749 signal converter, including the URL address and device portal No.
Explanations on key parameters:
<type>url type: 1 Means http protocol, further expansion supported as needed
<platFromUrl> means the URL address of access platform
For example: http:// 127.0.0.5/dfs/G000111001000110010/jsonapi/{filename}
<number>DZ19749 DZ19749 signal converter means portal No. For example: G000111001000110010

NTPXML Block

```
<PlatFromParam xmlns="http://www.isapi.org/ver20/XMLSchema">
<platFromUrl><!-- req, xs:string --></platFromUrl>
<number><!—req,xs:string --><number>
</PlatFromParam>
```

Test cases
GET /CGI/System/PlatFromParam
Request XML: none
Response XML: <PlatFromParam>
PUT /CGI/System/PlatFromParam
Response XML: <ResponseStatus>
Request XML: as below

```
<PlatFromParam xmlns="http://www.isapi.org/ver20/XMLSchema">
<platFromUrl>http:// 127.0.0.5/dfs/G000111001000110010/jsonapi/{filename}</platFromUrl>
<number>G000111001000110010<number>
</PlatFromParam>
```

2.7/CGI/Smart

2.7.1/CGI/Smart/AlarmInfo

/CGI/Smart/AlarmInfo	**General Resource v2.0**
GET	
Description	Acquire alarm information and parameters
Query	None
Inbound Data	None
Success Return	**<AlarmItemList>**

Explanations on protocol:
This protocol is prepared for query and setting of alarm information and parameters, helping client or IE query and set the alarm information parameters via CGI protocol, including channel No./screen No./rule No./rule name.

Explanations on key parameters:

<channelID> Channel No.
<SceneID> represents scene No.
<ruleID> means rule No.
<ruleName> means rule name
<alarmCaptureImage > means alarm snapshot picture
<eventType> Event type: faceDetect: Frontend face detection; ipcComPare: Frontend comparison; ipcStranger: Frontend stranger; nvrDetect: Backend face detection; nvrComPare: Backend comparison; nvrStranger: Backend stranger; nvrFrequerncy: Backend frequency; nvrHold: Backend delay; plateShade: Plate shading: helmet: Helmet
PeptIntrusion: Oilfield monitoring - Defense area intrusion alarm; PeptResident: Oilfield monitoring - Abnormal lingering alarm
Ielddetection: Perimeter –intrusion, regionEntrance: Perimeter -Entrance, regionExiting: Perimeter –exiting, linedetection: Line, doubleLineDetection: Double line, loitering: Loitering, parking: Parking, rapidMove: Run, unattendedBaggage: unattended baggage, attendedBaggage: Theft, platLicenseRecog: Plate license recognition, audioDetection: Audio detection, videoDetection: Video detection, group: Gathering, onDutyDetection: On-duty detection, demographics: Flow statistics, alert: Alert, heatMap: Heat map, parkGuard: Park guard, illegalPark: Illegal park, helmet: Helmet detection, PeopleNumAlarm: People number error, PrctdutySingle: Single interrogation, PrctdutyNone: Unattended, Sleep: Sleep, NewFight: New fight, GetUp: Get up, HeightLimit: Height limit, NewDuty: New duty, Stranded: Stranded, Alone: Alone, Delivergoods: Deliver goods

AlarmItemListXML Block

```
<AlarmItemList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<AlarmItem>
<dateTime>2012-04-18T21:26:20+08:00</dateTime>
<channelID><!-- req, xs:string --></channelID>
<SceneID><!-- req, xs:string --></SceneID>
<ruleID><!-- req, xs:string --></ruleID>
<ruleName><!-- req, xs:string --></ruleName>
<eventType>"linedetection,fielddetection,regionEntrance,regionExiting,loitering,group
,rapidMove,parking,unattendedBaggage,attendedBaggage,faceDetect,platLicenseRecog,
audioDetection,videoDetection,group,onDutyDetection,demographics,doubleLineDetection,
alert,heatMap, parkGuard,illegalPark, ipcComPare, ipcStranger, nvrDetect, nvrComPare,
nvrStranger, nvrFrequerncy, nvrHold,
helmet,PeptIntrusion,PeptResident,Prctduty,Sleep,NewFight,GetUp,HeightLimit,NewDuty,Stra
nded,Alone,Delivergoods"
</eventType>
< alarmCaptureImage ><!-- opt, xs:string --></alarmCaptureImage>
</AlarmItem>
</AlarmItemList>
```

2.7.2/CGI/Smart/AlarmInfoClean

/CGI/Smart/AlarmInfoClean	**General Resource v2.0**
PUT	
Description	Clear alarm information
Query	None
Inbound Data	**<AlarmInfoClean>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for clearing alarm information, helping client or IE clear the alarm information via CGI protocol, including event type/rule No.

Explanations on key parameters:

<eventType> means event type, including: "all, linedetection, doubleLineDetection, fielddetection, regionEntrance, regionExiting, loitering, group, rapidMove, parking, unattendedBaggage, attendedBaggage, alert, heatMap, faceDetect, platLicenseRecog, audioDetection, videoDetection, onDutyDetection, Demographics, IllegalPark, ParkGuard, alerttemplate, helmet PeptIntrusion, PeptResident, PeopleNumAlarm, PrctdutySingle, PrctdutyNone, Sleep, NewFight, GetUp, HeightLimit, NewDuty, Stranded, Alone and Delivergoods"

<ruleID> means rule No., range: 0~11; 0 means all rule numbers; No. 11 rule is occupied by alert template

AlarmInfoCleanXML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<AlarmInfoClean>
<channelID><!-- req, xs:integer --></channelID>
<SceneID><!-- req, xs: integer --></SceneID>
<eventType><!-- req, xs:string --></eventType>
<ruleID><!-- req, xs:string --></ruleID>
</AlarmInfoClean>
```

Test cases

PUT/CGI/Smart/AlarmInfoClean

Response XML: <ResponseStatus>

Request XML: <RuleMatch>

```
<AlarmInfoClean>
<channelID>1</channelID>
<SceneID>0</SceneID>
<eventType>linedetection</eventType>
<ruleID>1</ruleID>
</AlarmInfoClean>
```

2.7.3/CGI/Smart/LineDetection/<ID>/Channels/<ID>/Scene/<ID>

/CGI/Smart/LineDetection/<ID>/Channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire line parameters
Query	None
Inbound Data	None
Success Return	**<LineDetection>**
PUT	
Description	Set line parameters
Query	None
Inbound Data	**<LineDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of line parameters, helping client or IE query and set the line parameters via CGI protocol, including rule No./rule enabling/line No./rule name/percentage/arrow direction/coordinates/statistics type/alarm count.
Explanations on key parameters:
<id> represents rule No., range: 1-8
<enabled> represents rule enabling, true: start, false: not start
<id> means channel No.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> means percentage
<directionSensitivity> means arrow direction: Degree
<CoordinatesList> means coordinates
<identifyType > means statistics type, including people, car, all, people and car
<alarmColor> represents alarm color default is red
<noAlarmColor> represents no alarm color default is green
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<twoWayAlarm> represents two-way alarm, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start

LineDetectionXML Block

```
<LineDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<intelliBackSearch><!-- opt, xs:boolean --></intelliBackSearch>
<startTriggerTime><!-- req, xs:integer, milliseconds --></startTriggerTime>
<endTriggerTime><!-- req, xs:integer, milliseconds --></endTriggerTime>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<LineItemList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<LineItem version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<ruleName><!-- req, xs:string --></ruleName>
<enabled><!-- req, xs:boolean --></enabled>
<sensitivityLevel>
<!--req, xs:integer-->
</sensitivityLevel>
<directionSensitivity>
<!-- opt, xs:integer -->
</directionSensitivity>
<CoordinatesList>
<Coordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate      --></positionY>
</Coordinates>
</CoordinatesList>
<identifyType ><!-- req, xs: string --></identifyType>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
<displayStat ><!-- req, xs:boolean --></displayStat >
```

```
<alarmRule><!-- req, xs:boolean --></alarmRule>
<twoWayAlarm><!-- req, xs:boolean --></twoWayAlarm>
<displayTarget><!-- req, xs:boolean -->< /displayTarget >
</LineItem>
</LineItemList>
</LineDetection>
```

Test cases

GET /CGI/Smart/LineDetection/1/Channels/1/Scene/0

Request XML： none

Response XML: <LineDetection>

PUT/CGI/Smart/LineDetection/1/Channels/1/Scene/0

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<LineDetection>
<id>1</id>
<enabled>true</enabled>
<LineItemList>
<LineItem>
<id>1</id>
<ruleName>Rule1</ruleName>
<enabled>true</enabled>
<sensitivityLevel>20</sensitivityLevel>
<CoordinatesList>
<Coordinates>
<positionX>2500</positionX>
<positionY>7968</positionY>
</Coordinates>
<Coordinates>
<positionX>7400</positionX>
<positionY>2413</positionY>
</Coordinates>
</CoordinatesList>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<twoWayAlarm>true</twoWayAlarm>
<displayStat>true</displayStat>
<identifyType>all</identifyType>
<displayTarget>true</displayTarget>
<alarmRule>true</alarmRule>
</LineItem>
</LineItemList>
</LineDetection>
```

2.7.4/CGI/Smart/attendedBaggage/<ID>/Channels/<ID>/Scene/<ID>

/CGI/Smart/attendedBaggage/<ID>/Channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire item loss parameters
Query	None
Inbound Data	None
Success Return	**<AttendedBaggage>**
PUT	
Description	Set item loss parameters
Query	None

Inbound Data	<AttendedBaggage>
Success Return	<ResponseStatus>

Explanations on protocol:

This protocol is prepared for clearing alarm information, helping client or IE query and set the item loss parameters, including rule No./rule name/alarm count/alarm rule/display target/ percentage.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents rule enabling, true: start, false: not start
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<alarmColor> represents alarm color default is red
<noAlarmColor> represents no alarm color default is green
< alarmTime > means alarm time; 0-8s
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start
<id> represents region No., note: currently it only supports one region, the value of which is 1.
<sensitivityLevel> means percentage (sensitivity)
<IgnoreRegionList> corresponding ignored regions (maximum three)

AttendedBaggageXML Block

```
< AttendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<ruleName><!-- req, xs:string --></ruleName>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
< alarmTime ><!-- req, xs:integer --></alarmTime >
<displayStat ><!-- req, xs:boolean --></displayStat >
<alarmRule><!-- req, xs:boolean --></alarmRule>
<displayTarget><!-- req, xs:boolean -->< /displayTarget >
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<attendedBaggageRegionList version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<attendedBaggageRegion    version="2.0"
  xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<sensitivityLevel><!--req, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>
<timeThreshold><!--opt, xs:integer--></timeThreshold>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<IgnoreRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<IgnoreRegion>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IgnoreRegion>
```

```
</IgnoreRegionList>
</attendedBaggageRegion>
</attendedBaggageRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene><!-- opt, xs:boolen --></isSupportMultiScene>
</ AttendedBaggage >
```

Test cases

GET /CGI/Smart/attendedBaggage/1/Channels/1/Scene/0

Request XML： none

Response XML: <AttendedBaggage>

PUT/CGI/Smart/attendedBaggage/1/Channels/1/Scene/0

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AttendedBaggage>
<id>3</id>
<enabled>true</enabled>
<ruleName>Rule3</ruleName>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<alarmTime>5</alarmTime>
<displayStat>true</displayStat>
<displayTarget>true</displayTarget>
<alarmRule>true</alarmRule>
<attendedBaggageRegionList>
<attendedBaggageRegion>
<id>1</id>
<sensitivityLevel>15</sensitivityLevel>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1377</positionX>
<positionY>399</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>426</positionX>
<positionY>4878</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>426</positionX>
<positionY>9131</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8522</positionX>
<positionY>9600</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9147</positionX>
<positionY>1545</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>5781</positionX>
<positionY>312</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1349</positionX>
<positionY>277</positionY>
</RegionCoordinates>
```

```
</RegionCoordinatesList>
<IgnoreRegionList>
<IgnoreRegion>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2272</positionX>
<positionY>1701</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1448</positionX>
<positionY>3125</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>2982</positionX>
<positionY>4670</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>4474</positionX>
<positionY>2343</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3480</positionX>
<positionY>1631</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IgnoreRegion>
<IgnoreRegion>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2002</positionX>
<positionY>6545</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3125</positionX>
<positionY>8750</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>6150</positionX>
<positionY>8333</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>6178</positionX>
<positionY>5538</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>2826</positionX>
<positionY>5277</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>2073</positionX>
<positionY>6545</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IgnoreRegion>
<IgnoreRegion>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>6150</positionX>
```

```
<positionY>1840</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7130</positionX>
<positionY>3715</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7428</positionX>
<positionY>1979</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>6335</positionX>
<positionY>1631</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IgnoreRegion>
</IgnoreRegionList>
</attendedBaggageRegion>
</attendedBaggageRegionList>
</AttendedBaggage>
```

2.7.5/CGI/Smart/loitering/<ID>/Channels/<ID>/Scene/<ID>

/CGI/Smart/loitering/<ID>/Channels/<ID>/Scene/<ID>General Resource v2.0	
GET	
Description	Acquire loitering parameters
Query	None
Inbound Data	None
Success Return	**<loitering>**
PUT	
Description	Set loitering parameters
Query	None
Inbound Data	**<loitering>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of loitering, helping client or IE query and set the loitering parameters via CGI protocol, including rule No./region No./sensitivity/alarm count/alarm rule/display target.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents whether it is effective, true: start, false: not start
<id> represents region No., note: currently it only supports one region, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> represents sensibility level
<alarmColor> means alarm color, red as default
<noAlarmColor> means color of no alarm, green as default
< alarmTime > means alarm period: 1-60s
<minArea> means the min. area
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start

loiteringXML Block

```
<loitering version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<LoiteringRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<LoiteringRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<ruleName><!-- req, xs:string --></ruleName>
<sensitivityLevel><!--req, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>
<timeThreshold><!--opt, xs:integer--></timeThreshold>
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!--opt, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate--></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>
< alarmTime ><!-- req, xs:integer --></alarmTime >
<minArea><!-- req, xs:integer --></minArea >
<displayStat ><!-- req, xs:boolean --></displayStat >
<alarmRule><!-- req, xs:boolean --></alarmRule>
<displyTarget><!-- req, xs:boolean -->< /displyTarget >
</LoiteringRegion>
</LoiteringRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene><!-- opt, xs:boolen --></isSupportMultiScene>
</loitering>
```

Test cases

GET /CGI/Smart/loitering/1/Channels/1/Scene/0

Request XML: none

Response XML: <loitering>

PUT/CGI/Smart/loitering/1/Channels/1/Scene/0

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<loitering>
<id>4</id>
<enabled>true</enabled>
<LoiteringRegionList>
<LoiteringRegion>
<id>1</id>
<ruleName>Rule4</ruleName>
<sensitivityLevel>0</sensitivityLevel>
<alarmTime>10</alarmTime>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2258</positionX>
<positionY>781</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>397</positionX>
<positionY>5000</positionY>
</RegionCoordinates>
```

```
<RegionCoordinates>
<positionX>4048</positionX>
<positionY>8715</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9673</positionX>
<positionY>8246</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9105</positionX>
<positionY>1666</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>5752</positionX>
<positionY>1041</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3210</positionX>
<positionY>937</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>2258</positionX>
<positionY>868</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<minArea>3</minArea>
<displayStat>true</displayStat>
<displayTarget>true</displayTarget>
<alarmRule>true</alarmRule>
</LoiteringRegion>
</LoiteringRegionList>
</loitering>
```


2.7.6/CGI/Smart/PlatLicenseRecog/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/PlatLicenseRecog/<ID>/channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire plate recognition parameters
Query	None
Inbound Data	None
Success Return	**<PlatLicenseRecogList>**
PUT	
Description	Set plate recognition parameters
Query	None
Inbound Data	**<PlatLicenseRecogList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of plate recognition, helping client or IE query and set the plate recognition parameters via CGI protocol, including plate recognition id/first Chinese character/percentage/list of coordinates of detection area/coordinates of detection area.
Explanations on key parameters:
<id> means plate recognition id; value is 1
<enableBWlist> Enabling of black/white plate list; true, false

```
<firstWord> means the first Chinese character
<firstLetter> means the first letter
<percentage> means percentage, range: 1-100
<topRange> means top range; range: 0-100
<bottomRange> means bottom range; range: 0-100
<leftRange> means left range; range: 0-100
<rightRange> means right range; range: 0-100
<RegionCoordinatesList> represents detection region coordinate list
<RegionCoordinates> represents detection region coordinate
<positionX> represents detection region abscissa
<positionY> represents detection region ordinate
```

PlatLicenseRecogListXML Block

```
<PlatLicenseRecogList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<PlatLicenseRecog version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<enableBWlist><!-- req, xs:boolean --></enableBWlist>
<firstWord><!-- req, xs:string --></firstWord>
<firstLetter><!-- req, xs:string --></firstLetter>
<percentage><!-- req, xs:integer --></percentage>
<topRange><!-- req, xs:integer --></topRange>
<bottomRange><!-- req, xs:integer --></bottomRange>
<leftRange><!-- req, xs:integer --></leftRange>
<rightRange><!-- req, xs:integer --></rightRange>
<RegionCoordinatesList>
<RegionCoordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</PlatLicenseRecog>
</ PlatLicenseRecogList >
```

Test cases

GET /CGI/Smart/PlatLicenseRecog/1/Channels/1/Scene/0

Request XML： none

Response XML: <PlatLicenseRecogList>

PUT/CGI/Smart/PlatLicenseRecog/1/Channels/1/Scene/0

Response XML： <ResponseStatus>

Request XML： as below

```
<PlatLicenseRecogList>
<PlatLicenseRecog>
<id>1</id>
<enabled>true</enabled>
<enableBWlist>false</enableBWlist>
<firstWord> J </firstWord>
<firstLetter>A</firstLetter>
<platsize>1</platsize>
<percentage>50</percentage>
<topRange>6</topRange>
<bottomRange>90</bottomRange>
<leftRange>5</leftRange>
<rightRange>96</rightRange>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>3590</positionX>
<positionY>7333</positionY>
```

```
</RegionCoordinates>
<RegionCoordinates>
<positionX>6613</positionX>
<positionY>6636</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>6340</positionX>
<positionY>3909</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3045</positionX>
<positionY>2787</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</PlatLicenseRecog>
</PlatLicenseRecogList>
```

2.7.7/CGI/Smart/GuardPark/<ID>/channels/<ID>/scene/<ID>

/CGI/Smart/GuardPark/<ID>/channels/<ID>/scene/<ID>General Resource v2.0	
GET	
Description	Acquire stall parameters
Query	None
Inbound Data	None
Success Return	**<GuardPark>**
PUT	
Description	Set stall parameters
Query	None
Inbound Data	**< GuardPark>**
Success Return	**<ResponseStatus >**

Explanations on protocol:
This protocol is prepared for query and setting of intelligent analysis on stall, helping client or IE query and set stall parameters via CGI protocol.
Explanations on key parameters:
<RightRecoRange> Unit: Second (1~7200)
<AreaName> Area name; 31 characters at most
<TimeRange> means time frame; format: 19:35:00 (hour; minute; second, second assignment 00)

GuardPark XML Block

```
<GuardPark version="2.0" >
  <id><!--req, xs:integer --></id>// Channel No.
  <PresetID><!--req, xs:integer --></PresetID>// Preset bit No.
  <iAreaID><!--req, xs:integer --></ iAreaID >// Area No.
  <iIllegalParkTime ><!--req, xs:integer --><iIllegalParkTime >// Illegal parking detection time
  <TimeRangeList>
    <TimeRange><!-- req -->// Enabling time range; 4 time ranges supported
      <beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
      <endTime><!-- req, xs:time, ISO8601 time --></endTime>
    </TimeRange>
  </TimeRangeList>
  <CheckParkTime ><!--req, xs:integer --><CheckParkTime >// Parking check time
  <Sensitivity><!--req, xs:integer --><Sensitivity>// Sensitivity level; 0: Low 1: Intermediate 2: High
  <AreaName><!-- req, xs:string --><AreaName>// Area name
  <AreaEnable><!-- req, xs:boolean --><AreaEnable>// Area enabling
```

```
<Valid><!-- req, xs:boolean --><Valid>// Whether event detection is valid
<CapEnable><!--req, xs:integer --<CapEnable>// Snapshot enabling
<RegionCoordinatesList>                    // List of area point coordinates
  <RegionCoordinates><!-- req, -->                    // Area coordinates
      <positionX><!-- req, xs:integer;coordinate --></positionX>// X coordinates of area points
      <positionY><!-- req, xs:integer;coordinate --></positionY>// Y coordinates of area points
  </RegionCoordinates>
</RegionCoordinatesList>
<Enable><!-- req, xs:boolean --></Enable>// Whether enable plate whitelist
<WhiteCnt><!--req, xs:integer --</WhiteCnt>// Whitelist count
<PlateList><!--opt>
    <Plate>// Plate information
    < PlateNum>!-- req, xs:string --></ PlateNum>// Plate number
    < PlateType>!--opt, xs:integer --</ PlateType >// Plate type; black plate: 1; white plate: 2 (only white plate is available now)
    </Plate>
</ PlateList>
</GuardPark>
```

Test cases

GET /CGI/Smart/GuardPark/<ID>/channels/<ID>/scene/<ID>

Request XML: none

Response XML: <GuardPark>

PUT /CGI/Smart/GuardPark/<ID>/channels/<ID>/scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<GuardPark version="2.0" >
<PresetID>0</PresetID>
<iAreaID>0</iAreaID>
<iIllegalParkTime>30</iIllegalParkTime>
<TimeRangeList>
    <TimeRange>
    <beginTime>00:00:00</beginTime>
    <endTime>4:59:59</endTime>
    </TimeRange>
    <TimeRange>
    <beginTime>00:00:00</beginTime>
    <endTime>4:59:59</endTime>
    </TimeRange>
    <TimeRange>
    <beginTime>00:00:00</beginTime>
    <endTime>4:59:59</endTime>
    </TimeRange>
    <TimeRange>
    <beginTime>00:00:00</beginTime>
    <endTime>4:59:59</endTime>
    </TimeRange>
</TimeRangeList>
<CheckParkTime>100</CheckParkTime>
<Sensitivity>1</Sensitivity>
<AreaName>0</AreaName>
<AreaEnable>true</AreaEnable>
<Valid>true</Valid>
<CapEnable>true</CapEnable>
<RegionCoordinatesList>
<RegionCoordinates>
```

```
        <positionX>50</positionX>
        <positionY>75</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<Enable>true</Enable>
<WhiteCnt>2</WhiteCnt>
<PlateList>
        <Plate>
        <PlateNum> Jin A1111</PlateNum>
        <PlateType>2</PlateType>
        </Plate>
</PlateList>
</GuardPark>
```

2.7.8/CGI/Smart/group/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/group/<ID>/channels/<ID>/Scene/<ID>General Resource v2.0	
GET	
Description	Acquire group parameters
Query	None
Inbound Data	None
Success Return	**<GroupList>**
PUT	
Description	Set group parameters
Query	None
Inbound Data	**<GroupList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of group, helping client or IE query and set the group parameters via CGI protocol, including group id/alarm time/alarm count/alarm rule/percentage.

Explanations on key parameters:
<id> means group id; value: 1
<alarmTime> means alarm time; range: 1-255
<displayStat > represents alarm counting, true：start, false：not start
<alarmRule> represents alarm rules, true：start, false：not start
<percentage> means percentage, range: 1-100
<id> Only one is supported by now

GroupListXML Block

```
<GroupList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<Group version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<GroupRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<GroupRegion>
        <id><!-- req, xs:string;id --></id>
        <RegionCoordinatesList><!-- opt -->
                <RegionCoordinates><!-- opt -->
                        <positionX><!-- req, xs:integer;coordinate --></positionX>
                        <positionY><!-- req, xs:integer;coordinate --></positionY>
                </RegionCoordinates>
        </RegionCoordinatesList>
```

```
</GroupRegion>
</GroupRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene><!-- opt, xs:boolen --></isSupportMultiScene>
<alarmTime><!-- req, xs:integer --></alarmTime>
<displayStat ><!-- req, xs:boolean --></displayStat >
<alarmRule><!-- req, xs:boolean --></alarmRule>
<percentage><!-- req, xs:integer --></percentage>
</Group>
</GroupList>
```

Test cases

GET /CGI/Smart/group/<ID>/1/Channels/1/Scene/0

Request XML： none

Response XML: <GroupList>

PUT/CGI/Smart/group/1/Channels/1/Scene/0

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Group>
<id>1</id>
<enabled>true</enabled>
<GroupRegionList>
<GroupRegion>
<id>1</id>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2556</positionX>
<positionY>1805</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1406</positionX>
<positionY>6666</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8508</positionX>
<positionY>8541</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8607</positionX>
<positionY>2274</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>2755</positionX>
<positionY>625</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>2457</positionX>
<positionY>1736</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>2457</positionX>
<positionY>1909</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</GroupRegion>
</GroupRegionList>
<alarmTime>74</alarmTime>
```

```
<displayStat>true</displayStat>
<alarmRule>true</alarmRule>
<percentage>42</percentage>
</Group>
```

2.7.9/CGI/Smart/Advance/channels/<ID>/Scene/<ID>/SceneType/<ID>

/CGI/Smart/Advance/channels/<ID>/Scene/<ID>/SceneType/<ID> General Resource v2.0	
GET	
Description	Acquire senior parameters
Query	None
Inbound Data	None
Success Return	**<Advance>**
PUT	
Description	Set senior parameters
Query	None
Inbound Data	**<Advance>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of senior parameters, helping client or IE query and set the senior parameters via CGI protocol, including target size/target confirmation frame.
Explanations on key parameters:
Scene means screen No.; when high 16-bit number is 0, low 16-bit number means intelligent analysis, range: 0~31;
When high 16-bit number is 1, low 16-bit number means alarm, range: 0~3; SceneType: Screen type; intelligent analysis, 0; guard, 1;
<maxTargetSize> means max. target size, range: 0% -100%
<minTargetSize> means min. target size; range: 0% -100%
<targetComfirmedFrame> means target confirmation frame; range: 10-30
<enable> means whether target parameters are enabled; false: Disabled; true: Enabled

AdvanceXML Block

```
< Advance version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<SceneNumber><!-- req, xs:string --></ SceneNumber >
<MaxTargetSize><!-- req, xs:string --></ MaxTargetSize >
<MinTargetSize><!-- req, xs:string --></ MinTargetSize >
<IntegrateBackgroundTime><!-- req, xs:string --></ IntegrateBackgroundTime >
<TargetCombinedSensitivity ><!-- req, xs:string --></ TargetCombinedSensitivity >
<TargetCheckSensitivity ><!-- req, xs:string --></TargetCombinedSensitivity >
<BackgroundUpdateSpeed><!-- req, xs:string --></ BackgroundUpdateSpeed >
<ForegroundMaxDifference><!-- req, xs:string --></ ForegroundMaxDifference >
<ForegroundMinDifference><!-- req, xs:string --></ ForegroundMinDifference >
<TargetComfirmedFrame><!-- req, xs:string --></ TargetComfirmedFrame >
<enable><!-- req, xs:string --></enable>
</ Advance >
```

Test cases
GET /CGI/Smart/Advance/channels/1/Channels/1/Scene/0
Request XML: none
Response XML: <Advance>
PUT/CGI/Smart/Advance/channels/1/Channels/1/Scene/0
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Advance>
<maxTargetSize>30</maxTargetSize>
<minTargetSize>3</minTargetSize>
```

```
<targetComfirmedFrame>15</targetComfirmedFrame>
<enable>false</enable>
</Advance>
```

2.7.10/CGI/Smart/Behavior/RuleMatch/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/Behavior/RuleMatch/<ID>/channels/<ID>/Scene/<ID>General Resource v2.0	
GET	
Description	Acquire the behavior analysis rule events
Query	None
Inbound Data	None
Success Return	**<RuleMatch>**

Explanations on protocol:
This protocol is prepared for query and setting of behavior analysis rule events, helping client or IE query and set the behavior analysis rule events via CGI protocol, including rule No./intelligent analysis type.
Explanations on key parameters:
<id> means rule No.
<smartType> means intelligent analysis type
<enable> means rule enabling

RuleMatchXML Block

```
<RuleMatch>
<id><!-- req, xs: integer --></id >
<smartType> "
,linedetection, doubleLineDetection,fielddetection,regionEntrance,regionExiting,loitering
,rapidMove,parking,unattendedBaggage,attendedBaggage,Alert,HeatMap"
</smartType >
<enable><!-- req, xs:Boolean"true,false" --></ enable >
</RuleMatch>
```

Test cases
GET/CGI/Smart/Behavior/RuleMatch/1/channels/1/Scene/0
Request XML: none
Response XML: <RuleMatch>

```
<?xml version="1.0" encoding="UTF-8"?>
<RuleMatch>
<id>1</id>
<smartType>linedetection</smartType>
<enable>true</ enable >
</RuleMatch>
```

2.7.11/CGI/Smart/Demographics/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/Demographics/<ID>/channels/<ID>/Scene/<ID> General Resource v2.0	
GET	
Description	Acquire statistical parameters of behavior analysis count
Query	None
Inbound Data	None
Success Return	**<DemographicsList>**
PUT	
Description	Set statistical parameters of behavior analysis count
Query	None

Inbound Data	<DemographicsList>
Success Return	<ResponseStatus>

Explanations on protocol:
This protocol is prepared for query and setting of statistics functions of analysis people count.
Explanations on key parameters:
maxTargetSize: Max. target size6-30, 15 as default
minTargetSize: Min. target size: 5-20, 10 as default
sensitivity: Sensitivity 0-100, 50 as default
minSizeEx: 1~10000 picture width ten-thousandth, 10000 means the entire screen width. Not handled if this field is 0.

DemographicsList XML Block

```
<DemographicsList      version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
< Demographics ><!-- opt -->
</DemographicsList>

<Demographics    version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id> means people statistics count and only one is available. This value is 1.
<enabled><!-- req, xs:boolean --></enabled>
<dispalyTarget><!-- req, xs:boolean --></dispalyTarget>// Display target; true: Displayed; false: Not displayed
<detectionType><!-- req, xs:string -->< /detectionType>// Detection type: LINE: Detection line AREA: Detection area is consistent with Ie
<mode><!-- req, xs:string -->< /mode>// Mode: VERTICAL: Vertical people count statistics; HORIZONTAL: Horizontal people count statistics is consistent with Ie
<maxTargetSize><!-- req, xs: integer --></maxTargetSize>// Max. target size    0-100, default
<minTargetSize><!-- req, xs: integer --></minTargetSize>// Min. target size 0-100, default
<sensitivity><!-- req, xs: integer--></sensitivity>// Sensitivity 0-100, default 50
<minSizeEx><!-- opt, xs:integer--></ minSizeEx> //1~10000 picture width ten-thousandth, 10000 means the entire screen width. Not handled if this field is 0.
<RegionCoordinatesList>                                    // List of coordinates of detection area
<RegionCoordinates><!-- req, -->                    // Coordinates of detection area
<positionX><!-- req, xs:integer;coordinate --></positionX>// X coordinates of detection area
<positionY><!-- req, xs:integer;coordinate --></positionY>// Y coordinates of detection area
</RegionCoordinates>
</RegionCoordinatesList>
<RegionExCoordinatesList>                                  // List of coordinates of detection line
<RegionCoordinates><!-- req, -->                    // Coordinates of detection line
<positionX><!-- req, xs:integer;coordinate --></positionX>// X coordinates of detection line
<positionY><!-- req, xs:integer;coordinate --></positionY>// Y coordinates of detection line
</RegionCoordinates>
</RegionExCoordinatesList>
</Demographics>
```

Test cases
GET/CGI/Smart/Demographics/1/channels/1/scenes/0
Request XML: none
Response XML: <DemographicsList>
PUT/CGI/Smart/Demographics/1/channels/1/scenes/0
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DemographicsList>
<Demographics>
<id>1</id>
<enabled>ture</enabled>
<dispalyTarget>true</dispalyTarget>
```

```
<detectionType>LINE</detectionType>
<mode>VERTICAL</mode>
<maxTargetSize>50</maxTargetSize>
<minTargetSize>50</minTargetSize>
<sensitivity>50</sensitivity>
<minSizeEx>256</minSizeEx>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1000</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>1000</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1000</positionX>
<positionY>1000</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<RegionExCoordinatesList>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>500</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>500</positionY>
</RegionCoordinates>
</RegionExCoordinatesList>
</Demographics>
</DemographicsList>
```


2.7.12/CGI/Smart/FaceDetect/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/FaceDetect/<ID>/channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire face recognition parameters
Query	None
Inbound Data	None
Success Return	**<FaceDetect>**
PUT	
Description	Set face recognition parameters
Query	None
Inbound Data	**<FaceDetect>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of face recognition functions. Model face detection mode, 0 nvr 1 ipc.

explanations on important parameters:

minObjectSize: Min. face size 8-100, 8 as default

maxObjectSize: Max. face size 9-100 (the max. face size should be higher than the min. face size), 16 as default

sensitivityLevel: Sensitivity, 60 as default

<pushMode> means picture push strategy; fastest: Fastest; optimal; Optimal; custom: Customized; timing: Timing

access: Door access (continuous call in interface)

FaceDetect XML Block

```
<FaceDetect version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id/><!-- req, xs:string, id --> Face detection id, this value is 1
<enabled><!-- req, xs:boolean --></enabled>
<dispalyTarget><!-- req, xs:boolean --></dispalyTarget>// Display target; true: Displayed; false: Not displayed
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->      // Min. face size 8-99, 8 as default
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->     //d Max. face size 9-100 (the max. face size should be higher than the min. face size), 16 as default
</maxObjectSize>
<ROI><!--opt-->
<minHorizontalResolution><!-- req, xs:integer --></minHorizontalResolution>
<minVerticalResolution><!-- req, xs:integer --></minVerticalResolution>
</ROI>
      <RegionCoordinatesList>
      <RegionCoordinates>
      <positionX>
            <!--req-->
            <!--req,xs:integer-->
      </positionX>
      <positionY>
            <!--req-->
            <!--req,xs:integer-->
      </positionY>
      </RegionCoordinates>
      </RegionCoordinatesList>
<sensitivityLevel><!-- req -->
<!-- req, xs:integer -->                    // Sensitivity 0-5, IE presentation form is 0-100
</sensitivityLevel>
<detectionThreshold><!-- dep-->
<!-- req, xs:integer-->
</detectionThreshold>
<highlightsenabled><!-- req, xs:boolean --></highlightsenabled>
<snapshotenabled><!-- req, xs:boolean --></snapshotenabled >// Face snapshot
<snapSpace><!-- opt, xs:integer--></snapSpace> // Snapshot interval, enabled when picture push strategy is timing
<algorithmRunLevel ><!-- opt, xs:integer"0-5" -->     </algorithmRunLevel > // Algorithm run level
<picScal><!-- opt, xs:integer"1-10" --></picScal>// Picture scaling proportion
<snapTimes><!-- opt, xs:integer"1-10"--></snapTimes> // Snapshot times
<exposureBright><!-- opt, xs:integer"0-255"--></exposureBright> // Exposure brightness
Follow this item when setting exposure brightness "/CGI/Image/channels/<ID>/brightness/template/<ID>"
```

```
<displayRule><!-- req, xs:Boolean"true,false"--></ displayRule> // Whether display rule frame
< livingbodyEnable ><!-- req, xs:Boolean"true,false"--></livingbodyEnable>// Whether enable living body detection
<minSizeEx><!-- opt, xs:integer--></ minSizeEx> //1~10000 picture width ten-thousandth, 10000 means the entire screen width. Not handled if this field is 0.
<maxSizeEx><!-- opt, xs:integer--></ maxSizeEx>// 1~10000 picture width ten-thousandth, 10000 means the entire screen width. Not handled if this field is 0.
<pushMode opt ="fastest,optimal,custom,timing,collisionLine,access ">
<!-- opt, xs:string"fastest,optimal,custom,timing,collisionLine,access"-->
</ pushMode> // Picture push mode option will occur when picture push strategy is custom; delay will occur when picture push strategy is optimal
<pushLevel opt = "hspeed,mspeed,lspeed">
<!-- opt, xs:string "hspeed,mspeed,lspeed"-->
</ pushLevel> // Picture push level is valid when picture push strategy is custom
<snapMode opt="all, highquality,custom">
<!-- opt, xs:string "all, highquality,custom"-->
</ snapMode> // Snapshot strategy; Snapshot level will display only if snapshot strategy is custom
<snapLevel><!-- opt, xs:integer"0-100"--></ snapLevel> // Snapshot level is valid when snapshot strategy is custom
<delayTime><!-- opt, xs:integer”500,1000,2000”--></ delayTime>// Delay time; it is valid when snapshot strategy is optimal; unit: ms
<timeSpace><!-- opt, xs:integer”100,200,300,500,1000,2000”--></ timeSpace> // Time space; unit: ms
</FaceDetect>
```

Test cases

GET /CGI/Smart/FaceDetect/1/channels/1/scenes/0

Request XML： none

Response XML: <FaceDetect>

PUT /CGI/Smart/FaceDetect/1/channels/1/scenes/0

Response XML： <ResponseStatus>

Request XML： as below

```
<FaceDetect version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id>1</id>
<enabled>true</enabled>
<dispalyTarget>true</dispalyTarget>
<minObjectSize>8</minObjectSize>
<maxObjectSize>16</maxObjectSize>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1000</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>1000</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1000</positionX>
<positionY>1000</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<sensitivityLevel>50</sensitivityLevel>
```

```
<snapSpace>0</snapSpace>
<algorithmRunLevel>5</algorithmRunLevel>
<picScal>5</picScal>
<snapTimes>5</snapTimes>
<exposureBright>138</exposureBright>
<displayRule>true</displayRule>
<livingbodyEnable>true</livingbodyEnable>
<minSizeEx>0</minSizeEx>
<maxSizeEx>0</maxSizeEx>
<pushMode opt ="fastest,optimal,custom">custom</pushMode>
<pushLevel opt ="hspeed,mspeed,lspeed">hspeed</pushLevel>
<snapMode opt="all,highquality,custom">custom</snapMode>
<snapLevel>80</snapLevel>
<timeSpace>200</timeSpace>
</FaceDetect>
```

2.7.13/CGI/Smart/Alert/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/Alert/<ID>/channels/<ID>/Scene /<ID> General Resource v2.0	
GET	
Description	Acquire guard parameters
Query	None
Inbound Data	None
Success Return	**<Alert>**
PUT	
Description	Set guard parameters
Query	None
Inbound Data	**<Alert>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of guard parameters, helping client or IE query and set the guard parameters via CGI protocol, including rule No./rule enabling/region No./rule name/sensitivity/coordinates of detection area/alarm count.
Explanations on key parameters:
None

Alert XML Block

```
<Alert version="2.0" >
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<intelliBackSearch><!-- opt, xs:boolean --></intelliBackSearch>
<startTriggerTime><!-- req, xs:integer, milliseconds --></startTriggerTime>
<endTriggerTime><!-- req, xs:integer, milliseconds --></endTriggerTime>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<AlertRegionList version="2.0" >
<AlertRegion version="2.0" >
<id><!-- req, xs:string --></id>// Means rule No.; range: 1-8
```

```
<ruleName><!-- req, xs:string --></ruleName>// Rule name, 16 characters and 5 Chinese characters at most
<enabled><!-- req, xs:Boolean"true,false" --></enabled>// Whether enabled
<RegionCoordinatesList>//detection region coordinate list
<RegionCoordinates><!-- req, -->//detection region coordinates
<positionX><!-- req, xs:integer;coordinate --></positionX>// X coordinates
<positionY><!-- req, xs:integer;coordinate --></positionY>// Y coordinates
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>// Alarm color
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>// Color of no alarm
<identifyType><!-- req, xs:string "all,human,vehicle,humanAndVehicle"-->
</identifyType>// Distinguish target type
<mode><!-- req, xs:string "invade,entry,leave"--></mode>// Detection mode
<minDistance ><!-- req, xs:integer --></ minDistance >      // Min. distance
<minTime><!-- req, xs:integer --></ minTime>// Min. time
<type><!-- req, xs:integer --></ type>// Direction limit
<direction><!-- req, xs:integer --></ direction>// Forbidden direction angle
<miniSize><!—req,xs: integer "0-100"></miniSize>// 5 as default, multiplexing sensitivity
<maxSize><!—req,xs: integer "0-100"></ maxSize>// 30 as default
<resortTime><!-- req, xs: integer --></ resortTime>// Detention time; unit: ms
< displayStat ><!-- req, xs:Boolean"true,false" --></displayStat>// Alarm count
< displayRule ><!-- req, xs:boolean"true,false" --></ displayRule >// Alarm rule
<displyTarget><!-- req, xs:boolean"true,false" -->< /displyTarget >// Display target
</AlertRegion>
</AlertRegionList >
</Alert>
```

Test cases

GET /CGI/Smart/Alert/<ID>/channels/<ID>/scene/<ID>

Request XML： none

Response XML: <Alert>

PUT/CGI /Smart/Alert /<ID>/channels/<ID>/scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<Alert>
<AlertRegionList>
<AlertRegion>
<id>1</id>
<ruleName>rule1</ruleName>
<enabled>true</enabled>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2656</positionX>
<positionY>1302</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>951</positionX>
<positionY>5468</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>752</positionX>
<positionY>8906</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3806</positionX>
<positionY>9548</positionY>
```

```
</RegionCoordinates>
<RegionCoordinates>
<positionX>7357</positionX>
<positionY>9548</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>8940</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>5381</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8480</positionX>
<positionY>2013</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<identifyType>all</identifyType>
<mode>invade</mode>
<minDistance>0</minDistance>
<minTime>0</minTime>
<type>0</type>
<direction>0</direction>
<miniSize>5</miniSize>
<maxSize>30</ maxSize>
<resortTime>30000</resortTime>
<displayStat>true</displayStat>
<displayRule> true</displayRule>
<displyTarget>false</displyTarget>
</AlertRegion>
</AlertRegionList>
</Alert>
```


2.7.14/CGI/Smart/HeatMap/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/HeatMap/<ID>/channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire heat parameter
Query	None
Inbound Data	None
Success Return	**<HeatMap>**
PUT	
Description	Set heat parameter
Query	None
Inbound Data	**<HeatMap >**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of heat parameters, helping client or IE query and set the heat parameters via CGI protocol, including rule No./rule enabling/region No./rule name/sensitivity/coordinates of detection area/alarm count. **Explanations on key parameters:** None	

HeatMap XML Block

```
<HeatMap version="2.0" >
  <id><!-- req, xs:string --></id>
  <enabled><!-- req, xs:boolean --></enabled>
  <intelliBackSearch><!-- opt, xs:boolean --></intelliBackSearch>
<startTriggerTime><!-- req, xs:integer, milliseconds --></startTriggerTime>
<endTriggerTime><!-- req, xs:integer, milliseconds --></endTriggerTime>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<HeatMapRegionList version="2.0">
   <HeatMapRegion version="2.0">
   <id><!-- req, xs:string --></id>// Means rule No.; range: 1-8
   <ruleName><!-- req, xs:string --></ruleName>// Rule name, 16 characters and 5 Chinese
characters at most
   <enabled><!-- req, xs:Boolean"true,false" --></enabled>// Whether enabled
   <RegionCoordinatesList>//detection region coordinate list
      <RegionCoordinates><!-- req, -->//detection region coordinates
        <positionX><!-- req, xs:integer;coordinate --></positionX>// X coordinates
        <positionY><!-- req, xs:integer;coordinate --></positionY>// Y coordinates
      </RegionCoordinates>
   </RegionCoordinatesList>
   <minDistance ><!-- req, xs:integer --></ minDistance >  // Min. distance [0-100]
<minTime><!-- req, xs:integer --></ minTime>// [0-100] Min. time [0-100]
<miniSize><!—req,xs: integer "0-100"></miniSize>// 5 as default, multiplexing sensitivity
<maxSize><!—req,xs: integer "0-100"></ maxSize>// 30 as default
</HeatMapRegion>
</HeatMapRegionList>
</HeatMap>
```

Test cases

GET /ISAPI/Smart/HeatMap/<ID>/channels/<ID>/scene/<ID>

Request XML： none

Response XML: <HeatMap>

PUT/ISAPI/Smart/HeatMap/<ID>/channels/<ID>/scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<HeatMap>
<HeatMapRegionList version="2.0" >
<HeatMapRegion version="2.0" >
<id>1</id>
<ruleName>rule1</ruleName>
<enabled>true</enabled>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2656</positionX>
<positionY>1302</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>951</positionX>
```

```
<positionY>5468</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>752</positionX>
<positionY>8906</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3806</positionX>
<positionY>9548</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7357</positionX>
<positionY>9548</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>8940</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>5381</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8480</positionX>
<positionY>2013</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<minDistance>0</minDistance>
<minTime>0</minTime>
<miniSize>5</miniSize>
<maxSize>30</maxSize>
</HeatMapRegion>
</HeatMapRegionList>
</HeatMap>
```


2.7.15/CGI/Smart/OnDutyDetection/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/OnDutyDetection/<ID>/channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire duty detection parameters
Query	None
Inbound Data	None
Success Return	**<OnDutyDetection>**
PUT	
Description	Set duty detection parameters
Query	None
Inbound Data	**<OnDutyDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of duty detection parameters, helping client or IE query and set the duty detection parameters via CGI protocol, including rule No./rule enabling/region No./rule name/sensitivity/coordinates of detection area/alarm count.
Explanations on key parameters:
<absencesAlarmTime> Absence alarm time; unit: Second; range: 60-3600
<onDutyNum > On-duty personnel number; range: 1-2

OnDutyDetectionXML Block

```
<OnDutyDetectionversion="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!-- req, xs:string --></id>
  <enabled><!-- req, xs:boolean --></enabled>
<intelliBackSearch><!-- opt, xs:boolean --></intelliBackSearch>
<startTriggerTime><!-- req, xs:integer, milliseconds --></startTriggerTime>
<endTriggerTime><!-- req, xs:integer, milliseconds --></endTriggerTime>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
  <RegionCoordinatesList>//detection region coordinate list
    <RegionCoordinates><!-- req, -->//detection region coordinates
      <leftpositionX><!-- req, xs:integer;coordinate --></leftpositionX>// X coordinate of upper left corner
      <leftpositionY><!-- req, xs:integer;coordinate --></leftpositionY>//upper left corner y-point coordinate
      <rightpositionX><!-- req, xs:integer;coordinate --></rightpositionX>// X coordinates of lower right corner
      <rightpositionY><!-- req, xs:integer;coordinate --></rightpositionY>// Y coordinates of lower right corner
    </RegionCoordinates>
  </RegionCoordinatesList>
  <alarmColor><!-- req, xs:string"red" --></alarmColor>// Alarm color
  <noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>// Color of no alarm
  <absencesAlarmTime ><!-- req, xs:string "60-3600"-->
  </absencesAlarmTime >// Absence alarm time; unit: Second; default value: 120S
  <onDutyNum ><!-- req, xs:integer"1,2" --></onDutyNum >     // On-duty personnel number
  <minDistance><!—req,xs: integer "1-50"></minDistance>// 3 as default
  <maxDistance><!—req,xs: integer "5-100"></maxDistance>// 15 as default
  <sensitivity ><!-- req, xs: integer"0-5" --></sensitivity >// Default value of sensitivity: 2
  < displayStat ><!-- req, xs:Boolean"true,false" --></displayStat>// Alarm count
  <alarmRule ><!-- req, xs:boolean"true,false" --></alarmRule >// Alarm rule
  <dispalyTarget ><!-- req, xs:boolean"true,false" -->< /dispalyTarget >// Display target
</OnDutyDetection>
```

Test cases
GET /CGI/Smart/OnDutyDetection/<ID>/channels/<ID>/Scene/<ID>
Request XML: none
Response XML: <OnDutyDetection>
PUT/CGI /Smart/OnDutyDetection/<ID>/channels/<ID>/Scene/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<OnDutyDetection>
<id>1</id>
<enabled>true</enabled>
<RegionCoordinatesList>
<RegionCoordinates>
<leftpositionX>1420</leftpositionX>
<leftpositionY>1076</leftpositionY>
<rightpositionX>7230</rightpositionX>
<rightpositionY>8593</rightpositionY>
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor >red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<onDutyNum>2</onDutyNum>
<absencesAlarmTime>240</absencesAlarmTime>
<sensitivity>3</sensitivity>
<maxDistance>35</maxDistance>
<minDistance>20</minDistance>
<displayStat>true</displayStat>
<alarmRule>true</alarmRule>
<dispalyTarget>false</dispalyTarget>
</OnDutyDetection>
```

2.7.16/CGI/Smart/IllegalPark/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/IllegalPark/<ID>/channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire illegal parking parameters
Query	None
Inbound Data	None
Success Return	**<IllegalPark>**
PUT	
Description	Set illegal parking parameters
Query	None
Inbound Data	**<IllegalPark>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of illegal parking, helping client or IE query and set the illegal parking parameters via CGI protocol, including rule No./rule enabling/region No./rule name/sensitivity/coordinates of detection area/alarm count.
Explanations on key parameters:
None

IllegalPark XML Block

```
<IllegalPark version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<enabled><!-- req, xs:boolean --></enabled>
<intelliBackSearch><!-- opt, xs:boolean --></intelliBackSearch>
<startTriggerTime><!-- req, xs:integer, milliseconds --></startTriggerTime>
<endTriggerTime><!-- req, xs:integer, milliseconds --></endTriggerTime>
<normalizedScreenSize>
<normalizedScreenWidth><!-- req, xs:integer --></normalizedScreenWidth>
<normalizedScreenHeight><!-- req, xs:integer --></normalizedScreenHeight>
</normalizedScreenSize>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
```

```
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<IllegalParkRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<IllegalParkRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<areaId><!-- req, xs: integer --></areaId> // Region No. supported is 1
< iIllegalParkTime><!-- req, xs: integer"1-7200" --></ iIllegalParkTime> // Unit: Second
<timeRange><!-- opt, xs:string --></timeRange>// Default 0,0,0,0 support 4 time ranges,
bit24-bit31: Start hour,bit16-bit23: Start minute bit8-bit15: End hour bit0-bit7: End minute
<outerRegionCoordinatesList>// List of coordinates of outer detection region
<RegionCoordinates><!-- req, -->//detection region coordinates
<positionX><!-- req, xs:integer;coordinate --></positionX>// X coordinates
<positionY><!-- req, xs:integer;coordinate --></positionY>// Y coordinates
</RegionCoordinates>
</ outerRegionCoordinatesList>
<InnerRegionList>// List of coordinates of inner detection region
<RegionCoordinates><!-- req, -->//detection region coordinates
<leftpositionX><!-- req, xs:integer;coordinate --></leftpositionX>// X coordinate of upper left
corner
<leftpositionY><!-- req, xs:integer;coordinate --></leftpositionY>//upper left corner y-point
coordinate
<rightpositionX><!-- req, xs:integer;coordinate --></rightpositionX>// X coordinates of lower
right corner
<rightpositionY><!-- req, xs:integer;coordinate --></rightpositionY>// Y coordinates of lower
right corner
</RegionCoordinates>
</InnerRegionList >
<checkParkTime><!-- req, xs:integer --></ checkParkTime>     // Min. judgment time of
parking: 1
<sensitivity><!-- req, xs: integer --></ sensitivity>     // Sensitivity level; 0: Low; 1:
Intermediate; 2: High
<areaName><!-- req, xs:string--></areaName>    // Region name: 31 characters
<areaEnable><!-- req, xs:Boolean"true,false"--></areaEnable>   // Region enabling
<capEnable><!-- req, xs:Boolean"true,false" --></ capEnable>// Snapshot enabling
<parkWarningEnable><!--req,xs:Boolean"true,false"-->
</ parkWarningEnable>// Park warning enabling
<parkWarningTime><!-- req, xs:integer"0-300" -->
</parkWarningTime>// Park warning time; unit: Second
</IllegalParkRegion>
</IllegalParkRegionList>
</IllegalPark>
```

Test cases

GET /CGI/Smart/IllegalPark/<ID>/channels/<ID>/Scene/<ID>

Request XML: none

Response XML: <IllegalPark>

PUT/CGI /Smart/IllegalPark/<ID>/channels/<ID>/Scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<IllegalPark>
<enabled>false</enabled>
<IllegalParkRegionList>
<IllegalParkRegion>
<areaId>0</areaId>
<iIllegalParkTime>30</iIllegalParkTime>
<timeRange>0,0,0,0</timeRange>
<checkParkTime>2</checkParkTime>
```

```
<sensitivity>2</sensitivity>
<areaName>1</areaName>
<areaEnable>1</areaEnable>
<capEnable>false</capEnable>
<outerRegionCoordinatesList>
<RegionCoordinates>
<positionX>5497</positionX>
<positionY>9131</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>752</positionX>
<positionY>2256</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7755</positionX>
<positionY>798</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9034</positionX>
<positionY>8750</positionY>
</RegionCoordinates>
</outerRegionCoordinatesList>
<InnerRegionList>
<RegionCoordinates>
<leftpositionX>3792</leftpositionX>
<leftpositionY>2500</leftpositionY>
<rightpositionX>5653</rightpositionX>
<rightpositionY>5225</rightpositionY>
</RegionCoordinates>
<RegionCoordinates>
<leftpositionX>7500</leftpositionX>
<leftpositionY>5850</leftpositionY>
<rightpositionX>7784</rightpositionX>
<rightpositionY>7881</rightpositionY>
</RegionCoordinates>
<RegionCoordinates>
<leftpositionX>4247</leftpositionX>
<leftpositionY>6250</leftpositionY>
<rightpositionX>5468</rightpositionX>
<rightpositionY>6944</rightpositionY>
</RegionCoordinates>
<RegionCoordinates>
<leftpositionX>6619</leftpositionX>
<leftpositionY>2256</leftpositionY>
<rightpositionX>7585</rightpositionX>
<rightpositionY>4652</rightpositionY>
</RegionCoordinates>
</InnerRegionList>
</IllegalParkRegion>
</IllegalParkRegionList>
</IllegalPark>
```


2.7.17/CGI/Smart/CPCQuery/<ID>/channels/<ID>

/CGI/Smart/ CPCQuery /<ID>/channels/<ID>	
	General Resource v2.0
POST	

Description	Query statistical result of passenger flow
Query	None
Inbound Data	**<CPCQuery>**
Success Return	**<CPCQueryResult>**

Explanations on protocol:
This protocol is prepared for query of statistical result of passenger flow
Explanations on key parameters:

CPCQuery XML Block

```
<CPCQuery version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type><!-- req, xs: integer --></type>// 0: Default type; 1: By hour; 2: By day; 3: By month; 4: By year
<timeSpan>
<startTime>2013-05-18T10:31:26Z</startTime>
<endTime> 2013-05-18T10:31:26Z</endTime>
</timeSpan>
</CPCQuery >
```

CPCQueryResult XML Block

```
<CPCQueryResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <total><!-- req, xs: integer --></total> // Total count
  <type><!-- req, xs: integer --></type>// 0: Default type; 1: By hour; 2: By day; 3: By month; 4: By year
  <showNum><!-- req, xs: integer --></showNum> // Max. item should not exceed 80
  <queryResultList> // List of query results
  <queryResult>
  <channelNo><!-- req, xs: integer --></channelNo>    // Channel No.
  <pushPerson><!-- req, xs: integer --></ pushPerson> // Amount of entering person
  <popPerson><!-- req, xs: integer --></ popPerson> // Amount of leaving person
  <time>2017-07-18T10:31.26</time> // Occurrence time
    </queryResult>
  < /queryResultList >
</CPCQueryResult >
```

Test cases

POST/ISAPI/Smart/QueryReport /<ID>/channels/<ID>

Request XML： as below

```
<CPCQuery version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type>3</type>
<timeSpan>
<startTime>2017-07-01T00:00:00Z</startTime>
<endTime>2017-07-31T23:59:59Z</endTime>
</timeSpan>
</CPCQuery>
```

Response XML: <CPCQueryResult >

```
<CPCQueryResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <total>12</total> // Total number
  <type>3</type>// 0: Default type; 1: By hour; 2: By day; 3: By month; 4: By year
  <showNum>12</showNum> // Max. item should not exceed 80
  <queryResultList> // List of query results
  <queryResult>
  <channelNo>4</channelNo>    // Channel No.
  <pushPerson>304</ pushPerson> // Amount of entering person
  <popPerson>299</ popPerson> // Amount of leaving person
  <time>2017-07-18T10:31.26</time> // Occurrence time
    </queryResult>
  <queryResult>
  <channelNo>4</channelNo>    // Channel No.
  <pushPerson>306</ pushPerson> // Amount of entering person
```

```
<popPerson>301</ popPerson> // Amount of leaving person
<time>2017-07-18T10:32.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>245</ pushPerson> // Amount of entering person
<popPerson>239</ popPerson> // Amount of leaving person
<time>2017-07-18T10:33.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>264</ pushPerson> // Amount of entering person
<popPerson>259</ popPerson> // Amount of leaving person
<time>2017-07-18T10:34.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>238</ pushPerson> // Amount of entering person
<popPerson>233</ popPerson> // Amount of leaving person
<time>2017-07-18T10:35.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>269</ pushPerson> // Amount of entering person
<popPerson>263</ popPerson> // Amount of leaving person
<time>2017-07-18T10:36.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>285</ pushPerson> // Amount of entering person
<popPerson>280</ popPerson> // Amount of leaving person
<time>2017-07-18T10:37.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>230</ pushPerson> // Amount of entering person
<popPerson>221</ popPerson> // Amount of leaving person
<time>2017-07-18T10:38.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>103</ pushPerson> // Amount of entering person
<popPerson>100</ popPerson> // Amount of leaving person
<time>2017-07-18T10:39.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>209</ pushPerson> // Amount of entering person
<popPerson>205</ popPerson> // Amount of leaving person
<time>2017-07-18T11:31.26</time> // Occurrence time
  </queryResult>
<queryResult>
<channelNo>4</channelNo>    // Channel No.
<pushPerson>109</ pushPerson> // Amount of entering person
<popPerson>108</ popPerson> // Amount of leaving person
<time>2017-07-18T12:31.26</time> // Occurrence time
  </queryResult>
<queryResult>
```

```
  <channelNo>4</channelNo>    // Channel No.
  <pushPerson>23</ pushPerson> // Amount of entering person
  <popPerson>21</ popPerson> // Amount of leaving person
  <time>2017-07-18T13:31.26</time> // Occurrence time
    </queryResult>
  </queryResultList>
</CPCQueryResult>
```

2.7.18/CGI/Smart/QueryHeatMap/channels/<ID>

/CGI/Smart/ QueryHeatMap/channels/<ID>General Resource v2.0	
POST	
Description	Query spatial heat map
Query	None
Inbound Data	**<QueryHeatMap >**
Success Return	**<QueryHeatMapResult>**
Explanations on protocol: This protocol is prepared for query of spatial heat map Only E16 of NVR supports heat map; it needs at least 1h to generate the heat map of NVR, or data will be null if it is less than this period. **Explanations on key parameters:**	

QueryHeatMap XML Block

```
<QueryHeatMap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
</QueryHeatMap>
```

QueryHeatMapResultResult

```
<QueryHeatMapResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <heatMapUrl ><!-- req, xs:string--></heatMapUrl >//url address
</QueryHeatMapResult >
```

Test cases

POST/ISAPI/Smart/QueryHeatMap /<ID>/channels/<ID>

Response XML: <QueryHeatMapResult>

```
<QueryHeatMapResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <heatMapUrl >http://10.30.31.233:80/heatmap.jpg</heatMapUrl >
</QueryHeatMapResult >
```

Request XML： as below

```
<QueryHeatMap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
</QueryHeatMap>
```

2.7.19/CGI/Smart/QueryReport/channels/<ID>

/CGI/Smart/QueryReport/channels/<ID> **General Resource v2.0**	
POST	
Description	Query report
Query	None
Inbound Data	**<QueryReport>**
Success Return	**<QueryReportResult>**

Explanations on protocol:
This protocol is prepared for query of report
Explanations on key parameters:
iReportType// Query type: 0: Time heat map; 1: Age bracket; 2: Gender; 3: Person amount; 6: Nationality; 7: Glasses; 8: Mask; 12: Pedestrian - Gender; 13: Pedestrian - Amount; 14: Pedestrian - Motion direction; 15: Vehicle - Type; 16: Vehicle - Motion direction

logContent// Max. length of query content is 128 bits
When iReportType=0, format is "%d", it means the target duration; unit: Second
When iReportType=1, format is "%d:%d:%d:%d", it means the juvenile, youth, middle-aged person, the aged; unit: Person
When iReportType=2, format is "%d:%d:%d", it means the male, female, unidentified person; unit: Person
When iReportType=3, format is "%d", it means the person amount; unit: Person
When iReportType=4, format is "%d", it means temperature
When iReportType=5, format is "%d", it means humidity
When iReportType=6, format is "%d:%d", it means [Han nationality, minority]; unit: Person
When iReportType=7, format is "%d:%d", it means [Wear glasses, not wear glasses]; unit: Person
When iReportType=8, format is "%d:%d", it means [Wear mask, not wear mask]; unit: Person
When iReportType=12, format is "%d:%d:%d", it means the male, female, unidentified person; unit: Person
When iReportType=13, format is "%d", it means person amount; unit: Person
When iReportType=14, format is "%d:%d:%d:%d:%d", it means unknown, up, down, left, right; unit: Person
When iReportType=15, format is "%d:%d:%d", it means [unknown, motor vehicle and non-motor vehicle]; unit: Vehicle
When iReportType=16, format is "%d:%d:%d:%d:%d", it means unknown, up, down, left, right; unit: Vehicle

QueryReport XML Block

```
<QueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType ><!-- req, xs: integer -->
  </reportType >// Type; 0: Time heat map; 1: Age bracket; 2: Gender; 3: Person amount; 6: Nationality; 7: Glasses; 8: Mask
  <reportPre ><!-- req, xs: integer -->
  </reportPre >// Report type; 0: Daily report; 1: Weekly report; 2: Monthly report; 3: Yearly report
  <timeSpan>
  <startTime>2017-07-18T00:00:00Z</startTime>
  <endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
</QueryReport >
```

QueryReportResultXML Block

```
<QueryReportResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType><!-- req, xs: integer -->
  </reportType>//0: Time heat map; 1: Age bracket; 2: Gender; 3: Person amount; 6: Nationality; 7: Glasses; 8: Mask
  <showNum><!-- req, xs: integer --></showNum> // Max. item should not exceed 80
  <queryResultList> // List of query results
  <queryResult>
  <logContent><!-- req, xs:string--></ logContent>    // Contents
  <channelNo><!-- req, xs: integer --></channelNo>    // Channel No.
  <time>2013-05-18T10:31.26</time>
    </queryResult>
  < /queryResultList >
</QueryReportResult >
```

Test cases

POST/ISAPI/Smart/QueryReport/channels/<ID>

Request XML: as below

```
<QueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>0</reportType>
  <reportPre>1</reportPre>
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
</QueryReport>
```

Response XML: <QueryReportResult >

```
<QueryReportResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>0</reportType>
  <showNum>7</showNum>
  <queryResultList>
  <queryResult>
<logContent>0
     </logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T10:31.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T11:35.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T11:39.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T12:31.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T13:31.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T14:31.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T15:31.26</time>
    </queryResult>
  < /queryResultList >
</QueryReportResult >
```

2.7.20/CGI/Smart/BlackWhitePlate

/CGI/Smart/BlackWhitePlate	**General Resource v2.0**

POST	
Description	Query list of black and white plate
Query	None
Inbound Data	<BWSearchDescription>
Success Return	<BLackWhitePlate>

Explanations on protocol:
This protocol is prepared for plate recognition and query of black and white plate.
Explanations on key parameters:
<BWsearchPostion> means the start number of searching plate (assignment is 1 if searching from the 1st plate; 0 means the total amount of pictures searched)
<BWmaxResults> means query amount (not above 50), this field is not omissible
< BWCurCnt> means current query amount, or it means total amount of plate if request is query of total amount

BWSearchDescription XML Block

```
<BWSearchDescription version="1.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
< BWsearchPostion ><!—req,sx:integer--></BWsearchPostion >
< BWmaxResults ><!—opt,sx:integer--></BWmaxResults >
</ BWSearchDescription >
```

BLackWhitePlateXML Block

```
<BLackWhitePlate    ersion="2.0" >
< BWCurCnt><!--req, xs:integer --></BWCurCnt>// Current query amount/total query amount
<PlateList>!—opt,
      <Plate>// Plate information
      <PlateNum><!-- req, xs:string --></PlateNum>// Plate No.
      < PlateType><!--opt, xs:integer --></ PlateType >// Plate type; black plate: 1; white plate:
2
      <Plate>
</ PlateList>
</BLackWhitePlate></CMSearchResult>
```

Test cases
POST /CGI/Smart/BlackWhitePlate
Request XML: as below

```
<BWSearchDescription version="1.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
< BWsearchPostion >1</ BWsearchPostion >
<BWmaxResults>50</BWmaxResults>
</BWSearchDescription >
```

Response XML: as below

```
<BLackWhitePlate ersion="2.0">
<BWCurCnt>50</BWCurCnt>
<PlateList>
      <Plate>
      <PlateNum> Jin 0A1111</PlateNum>
      <PlateType>1</PlateType>
      <Plate>
</PlateList>
</BLackWhitePlate>
```

2.7.21/CGI/Smart/AlertTemplate/channels/<ID>/capabilities

/CGI/Smart/AlertTemplate/channels/<ID>/capabilities General Resource v2.0	
GET	
Description	Acquire alert plan capability set of single channel
Query	None

Inbound Data	None
Success Return	**< AlertCap>**

Explanations on protocol:
This protocol is prepared for acquiring alert plan capability set of single channel, helping client or IE acquire the plans supported by device, linkage sound amount, flashing times of linked white light and plan name via CGI protocol.
Explanations on key parameters:
<ID>: Channel No.
<templateName>: 0: Linkage white light; 1: Linkage white light, single warning sound; 2: Linkage laser, circular warning sound; 3: Linkage laser, white light, circular warning sound; 4: Linkage white light, circular warning sound; 5: Linkage single warning sound; 6: Linkage circular warning sound; 7: Linkage multilevel audible/visual warning
<SupportTemplateNum>: Amount of alert template supported: 0: Not supported; 4: Support 4 templates; 5: Support 5 templates (customization supported)

AlerCap XML Block

```
<AlertCapversion="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
<templateNameList>
<templateName>
<id><!-- req, xs: integer;id --></id>// Template No. 1,2,…..
<name><!-- req xs: integer;--></name>// Template name 1 - 7
</templateName>
<templateNameList>
<supportTemplateNum><!-- req, xs: integer;--></SupportTemplateNum>// Amount of alert templates supported: 0: Not supported; 4: Support 4 templates; 5: Support 5 templates
<supportSoundSampleNum><!-- dep, xs: integer;--></ supportSoundSampleNum> // Amount of linkage alert sounds supported
<supportSoundCustomNum><!-- dep, xs: integer;--></supportSoundCustomNum> // Amount of linkage customized alert sounds supported
<earlyWarnCap><!-- dep>
<iMaxLevel><!-- req, xs:integer;--></iMaxLevel>// Max. alert level supported
<earlyWarnLevelCap List>
<earlyWarnLevelCap>
<level><!-- req, xs:integer; --></ level >// Level 1,2,…..
<supportFlashNum><!-- dep, xs:integer;--></ supportFlashNum > // Flash number supported
<isSupportFlash><!-- dep, xs:boolen;--></isSupportFlash>// Whether support flash
<earlyWarnLevelCap>
<earlyWarnLevelCap List>
</earlyWarnCap >
</AlertCap>
```

Test cases
GET /CGI/Smart/AlertTemplate/channels/4/capabilities
Request XML: none
Response XML: <AlertCap>

```
< AlertCap version="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
<templateNameList>
<templateName>
<id>1</id>
<name>0</name>
</templateName>
<templateName>
<id>2</id>
<name>1</name>
</templateName>
<templateNameList>
<supportTemplateNum>5</SupportTemplateNum>
<supportSoundSampleNum>7</ supportSoundSampleNum>
<supportSoundCustomNum>2</supportSoundCustomNum>
```

```
<earlyWarnCap><!-- dep >
<iMaxLevel>3</iMaxLevel>
<earlyWarnLevelCap List>
<earlyWarnLevelCap>
<level>1</ level >
<support FlashNum>10</ support FlashNum >
<isSupport Flash>true</isSupport Flash>
<earlyWarnLevelCap>
<earlyWarnLevelCap>
<level>2</ level >
<support FlashNum>10</ support FlashNum >
<isSupport Flash>false</isSupport Flash>
<earlyWarnLevelCap>
<earlyWarnLevelCap>
<level>3</ level >
<support FlashNum>10</ support FlashNum >
<isSupport Flash>true</isSupport Flash>
<earlyWarnLevelCap>
<earlyWarnLevelCap List>
</earlyWarnCap >
</AlertCap>
```

2.7.22/CGI/Smart/AlertTemplate/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/AlertTemplate/<ID>/channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire alert template parameter of single channel
Query	None
Inbound Data	None
Success Return	<AlertTemplate >
PUT	
Description	Set alert template parameter of single channel
Query	None
Inbound Data	<AlertTemplate >
Success Return	<ResponseStatus>

Explanations on protocol:
This protocol is prepared for query and setting of alert template parameters of single channel, helping client or IE query and set the alert template parameters via CGI protocol, including enabling, template No. and customization.
Explanations on key parameters:
<ID>: Rule No.; alert template No. is 10
/scene/<ID>: Screen No.: Alert template No. is 31
<enabled>: Enabled
<earlyWarn>: Early warning parameters
<prohibit>: Prohibition parameters

AlertTemplate XML Block

```
<AlertTemplate version="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
<enabled>< xs:xs:boolean --></enabled> // Enabled: True; Disabled: False
<RegionCoordinatesList><!-- opt -->
<RegionCoordinates><!-- opt, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<templateID><req, xs:integer ></templateID>// Template No.: 1-5
```

```
<type><dep, xs:integer ></type>// When template No. is 5; 0: Prohibited; 1: Early warning (this field is -1 when template No. is 1-4)
<templateSet>< dep, xs:integer ></templateSet>// Whether belong to customized parameter; 0: No customized value as default; 1: Customized parameters (this field is -1 when template No. is 1-4)
<earlyWarn><!-- dep>
<earlyWarnLevelList>
<earlyWarnLevel>
<level opt = "LinkSound, LinkWhite, LinkLaser, LinkFollow"><!-- req, xs:integer; --></ level >// Level 1,2,…..
<detainedTime><!-- req, xs: integer;--></detainedTime>// Detention time; unit: Second: 5 10 30 45 60
<flashNum><!-- req, xs: integer;--></ supportFlashNum > // Flash times; 0: Disabled; 1-10 means flash times; 0xff means strobing
<linkSoundNum><!-- req, xs:integer;--></ linkSound Num >// Linkage sound No.: Number of linked alert sound
<enabledLinkFollow><!-- req, xs:boolen;--></enabledLinkFollow>// Enabling of linkage traction: Enable: True; disable: False
<enabledLinkLaser><!-- req, xs:boolen;--></enabledLinkLaser >// Linkage laser enabling: Enable: True; disable: False
<earlyWarnLevel>
<earlyWarnLevelList>
</earlyWarn>
<prohibit    opt = "LinkSound, LinkFollow" >
<detainedTime><!-- req, xs: integer;--></detainedTime>
<linkSoundNum><!-- req, xs:integer;--></ linkSound Num >// Linkage sound No.: Number of linked alert sound
<enabledLinkFollow><!-- req, xs:boolen;--></enabledLinkFollow>// Enabling of linkage traction: Enable: True; disable: False
</prohibit>
</AlertTemplate>
```

Test cases

GET /CGI/Smart/AlertTemplate/10/channels/4/scene/31

Request XML: none

Response XML: <AlertTemplate >

PUT /CGI/Smart/AlertTemplate/10/channels/4/scene/31

Response XML: <ResponseStatus>

Request XML: as below

```
<AlertTemplateversion="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
<enabled>true </enabled>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>5000</positionX>
<positionY>5000</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>6000</positionX>
<positionY>6000</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7000</positionX>
<positionY>8000</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<templateID>5</templateID>
<type>1</type>
<templateSet>1</templateSet>
```

```
<earlyWarn>
<earlyWarnLevelList>
<earlyWarnLevel>
<level opt="LinkSound, LinkWhite, LinkLaser,">1</level><detainedTime>5</detainedTime>
<flashNum>10</ supportFlashNum >
<linkSoundNum>8 </ linkSound Num >
<enabledLinkFollow>false</enabledLinkFollow>
<enabledLinkLaser>true</enabledLinkLaser >
<earlyWarnLevel>
<earlyWarnLevel>
<level opt="LinkSound, LinkWhite, LinkLaser,">2</level>
<detainedTime>5</detainedTime>
<flashNum>10</ supportFlashNum >
<linkSoundNum>8 </ linkSound Num >
<enabledLinkFollow>false</enabledLinkFollow>
<enabledLinkLaser>true</enabledLinkLaser >
<earlyWarnLevel>
<earlyWarnLevelList>
<earlyWarnLevel>
<level opt="LinkSound, LinkWhite, LinkLaser, LinkFollow">3</level>
<detainedTime>5</detainedTime>
<flashNum>10</ supportFlashNum >
<linkSoundNum>8</ linkSound Num >
<enabledLinkFollow>false</enabledLinkFollow>
<enabledLinkLaser>true<</enabledLinkLaser >
<earlyWarnLevel>
<earlyWarnLevelList>
</earlyWarn>
<prohibit    opt = "LinkSound, LinkFollow" >
<detainedTime>5</detainedTime>
<linkSoundNum>9</ linkSoundNum>
<enabledLinkFollow>true</ enabledLinkFollow>
</prohibit>
</ AlertTemplate>
```

2.7.23/CGI/Smart/ReportData/channels/<ID>/export/<FileName>

/CGI/Smart/ReportData/channels/<ID> **General Resource v2.0**	
POST	
Description	Export report
Query	None
Inbound Data	**<QueryReport>**
Success Return	**File content**
Explanations on protocol: This protocol is prepared for exporting report, sending 0x7fffffff as url of target alarm and channel alarm, and analyzing library and channel in xml **Explanations on key parameters:** iReportType// Query type: 0: Statistics of passenger flow; 1: Time heat map; 2: Spatial heat map; 3: Face - Age bracket; 4: Face - Gender; 5: Face - Person amount; 6: Face - Nationality; 7: Feature statistics: Glasses; 8: Feature statistics: Mask; 9: Target alarm statistics; 10: Channel alarm statistics - All types; 11: Face detection; 12: Comparison alarm; 13: Stranger alarm; 14: Frequency alarm; 15: Detention alarm; 16: Pedestrian - Gender; 17: Pedestrian - Motion direction; 18: Pedestrian - Person amount; 19: Vehicle - Vehicle type; 20; Vehicle - Motion direction language// Means language; 2: English; 1: Chinese	

QueryReport XML Block

```
<QueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType ><!-- req, xs: integer -->
  </reportType >// Type
  <reportPre ><!-- req, xs: integer -->
  </reportPre >// Report type; 0: Daily report; 1: Weekly report; 2: Monthly report; 3: Yearly report
  < language><!-- req, xs: integer -->
  </language >// Means language; 2: English; 1: Chinese
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
<faceLibList>
<faceLib><!-- dep, xs: integer --></faceLib>
// Repeat faceLib
</faceLibList>
<channelList>
<channel><!-- dep, xs: integer --></channel>
// Repeat channel
</channelList>
</QueryReport >
```

Test cases

POST/ISAPI/Smart/ReportData/channels/<ID>/export/<FileName>

Request XML: as below

```
<QueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType >0</reportType>
  <reportPre >1</reportPre>
<language>0</language>
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
<faceLibList>
<faceLib>1234567890</faceLib>
…
</faceLibList>
<channelList>
<channel>1</channel>
…
</channelList>
</QueryReport>
```

2.7.24/CGI/Smart/channels/<ID>/PicStream/enable

/CGI/Smart/channels/<ID>/PicStream/enable **General Resource v2.0**	
GET	
Description	Acquire enabling of picture stream receiving
Query	None
Inbound Data	**None**
Success Return	**<PicStream>**
PUT	
Description	Set enabling of picture stream receiving
Query	None
Inbound Data	**<PicStream>**
Success Return	**<ResponseStatus>**

Explanations on protocol: This protocol is prepared for acquiring or setting intelligent analysis function and determining whether enabling picture stream receiving function when intelligent analysis function is enabled **Explanations on key parameters:**

PicStreamXML Block

```
<PicStream>
  <enabled><!--req, xs:boolean--></enabled>
</PicStream>
```

Test cases

GET /CGI/Smart/channels/0/PicStream/enable

Request XML: none

Response XML: <PicStream>

PUT /CGI/Smart/channels/0/PicStream/enable

Response XML: <ResponseStatus>

Request XML: as below

```
<PicStream>
  <enabled>true</enabled>
</PicStream>
```

2.7.25/CGI/Smart/QueryCheck/channels/<ID>

/CGI/Smart/QueryCheck/channels/<ID>	**General Resource v2.0**
POST	
Description	Query result
Query	None
Inbound Data	**<QueryCheck>**
Success Return	**<QueryCheckResult>**
Explanations on protocol: This protocol is prepared for checking if required files exist **Explanations on key parameters:** CheckType: Type of checked events: heatMap, faceHeatMap	

QueryCheck XML Block

```
<QueryCheck version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<checkType><!-- req, xs:string,"heatMap",   " faceHeatMap"--></checkType>
</QueryCheck>
```

QueryCheckResult

```
<QueryCheckResult    version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <checkType><!-- req, xs:string,"heatMap"--></checkType>
  <checkResult><!-- opt, xs:Boolean,"true,false" --></checkResult>
</QueryCheckResult>
```

Test cases

POST /CGI/Smart/QueryCheck/channels/<ID>

Request XML: as below

```
<QueryCheck version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<checkType>faceHeatMap</checkType>
</QueryCheck>
```

Response XML: <QueryCheckResult >

```
<QueryCheckResult    version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <checkType>faceHeatMap</checkType>
  <checkResult>true</checkResult>
</QueryCheckResult>
```

2.7.26/CGI/Smart/regionExiting/<ID>/Channels/<ID>/Scene/<ID>

/CGI/Smart/regionExiting/<ID>/Channels/<ID>/Scene/<ID>	General Resource v2.0
GET	
Description	Acquire the functional parameters of leaving area detection
Query	None
Inbound Data	None
Success Return	**< RegionExiting >**
PUT	
Description	Set the functional parameters of leaving area detection
Query	None
Inbound Data	**< RegionExiting >**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of detection of leaving area, helping client or IE query and set the detection of device area and leaving area, including rule name, coordinates of detection area, alarm color, color of no alarm, alarm type, alarm count, alarm rule and display target.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents rule enabling, true: start, false: not start
<RegionExitingRegion> represents exiting detection implementation region
<id> represents region No., note: currently the perimeter only supports one region, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> represents sensibility level 0-100
<RegionCoordinatesList> represents detection region coordinate list
<RegionCoordinates> represents detection region coordinate
<positionX> represents detection region abscissa
<positionY> represents detection region ordinate
<alarmColor> means alarm color; 1: Red; 2: Green; 3: Yellow; 4: Blue; 5: Purple; 6: Cyan; 7: Black; 8: White
<noAlarmColor> means color of no alarm; 1: Red; 2: Green; 3: Yellow; 4: Blue; 5: Purple; 6: Cyan; 7: Black; 8: White
<identifyType> means alarm type; 1-Person; 2-Vehicle; 3-Person and vehicle; 0-Unlimited
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start
<displyTarget> means display target; true: Enable; false: Disable

RegionExiting XML Block

```
<RegionExiting version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string -->  </id> // Rule No.; range: 1-8
  <enabled> <!-- req, xs:boolean -->  </enabled>Valid: true: Enable; false: Disabled
<normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
<RegionExitingRegionList>
<RegionExitingRegion>
<id> <!-- req, xs:string --> </id>        // Region No.; Note: Only one region supported in
current perimeter; this value is 1
<ruleName> <!-- req, xs:string --> </ruleName>                    // Rule name is
consistent with ie; 16 characters and 5 Chinese characters at most
<sensitivityLevel><!--req, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>    //
```

```
Sensitivity is consistent with ie
<RegionCoordinatesList> <!-- opt -->                                    // List of
coordinates of detection area
<RegionCoordinates> <!-- opt, -->                                       // Coordinates of
detection area
<positionX> <!-- req, xs:integer;coordinate --> </positionX>            // X coordinates
of detection area
<positionY> <!-- req, xs:integer;coordinate --> </positionY>            // Y coordinates
of detection area
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>// Alarm color
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>// Color of no alarm
<identifyType><!-- req, xs:string "all"--></identifyType>          // Alarm type
<displayStat ><!-- req, xs:boolean --> </displayStat>// Alarm count; true: Enabled; false:
Disabled
<alarmRule><!-- req, xs:boolean --> </alarmRule>// Alarm rule; true: Enabled; false: Disabled
<displyTarget><!-- req, xs:boolean -->< /displyTarget>// Display target; true: Enabled; false:
Disabled
< /RegionExitingRegion >                                                // Leaving detection
implementation region
</RegionExitingRegionList>
<mutexAbility opt="PDC"/><!—opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolen --> </isSupportMultiScene>
</RegionExiting>
```

Test cases

GET /CGI/Smart/regionExiting/<ID>/Channels/<ID>/Scene/<ID>

Request XML： none

Response XML： <RegionExiting>

PUT /CGI/Smart/regionExiting/<ID>/Channels/<ID>/Scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<RegionExiting>
<id>1</id>
<enabled>true</enabled>
<RegionExitingRegionList>
<RegionExitingRegion>
<id>1</id>
<ruleName>Rule1</ruleName>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<displayStat>true</displayStat>
<displayTarget>true</displayTarget>
<identifyType>all</identifyType>
<alarmRule>true</alarmRule>
<sensitivityLevel>20</sensitivityLevel>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2848</positionX>
<positionY>5037</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7083</positionX>
<positionY>2388</positionY>
</RegionCoordinates>
<RegionCoordinates>
```

```
<positionX>8312</positionX>
<positionY>9037</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1395</positionX>
<positionY>8166</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</RegionExitingRegion>
</RegionExitingRegionList>
</RegionExiting>
```

2.7.27/CGI/Smart/GuardDetection/<ID>/Channels/<ID>/Scene/<ID>

/CGI/Smart/GuardDetection/<ID>/Channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire alert function parameters
Query	None
Inbound Data	None
Success Return	**< GuardDetection >**
PUT	
Description	Set alert function parameters
Query	None
Inbound Data	**< GuardDetection >**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of alert, helping client or IE query and set the device alert via CGI protocol, including alert detection type, lateral mode, direction limit, min. pixel distance, shortest alarm period, rule line, alarm count, rule line color without alarm, rule line color with alarm, whether display size and target frame, detention time and guard region.

Explanations on key parameters:

<TargetTypeCheck> means detection type: 1-Person; 2-Vehicle; 3-Person and vehicle; 0-Unlimited
<Mode> means detection mode: Intrusion, entering and leaving
<Direction> means direction limit
<MinDistance> means min. pixel distance of alarm: 0 as default
<MinTime> means shortest alarm period: Default
<DisplayRule> means whether display line: 0-Not displayed; 1-Displayed
<DisplayStat> means whether display alarm count: 0-Not displayed 1: Displayed*/
<Color> means rule line color without alarm; 1: Red; 2: Green; 3: Yellow; 4: Blue; 5: Purple; 6: Cyan; 7: Black; 8: White
<AlarmColor> means rule line color with alarm; 1: Red; 2: Green; 3: Yellow; 4: Blue; 5: Purple; 6: Cyan; 7: Black; 8: White
<MinSize> means the min. size [0, 100] 5 as default
<MaxSize> means the max. size [0, 100] 30 as default
<DisplayTgt> means whether display target frame; 0: Not displayed; 1: Displayed
<ResoreTime> means detention period; unit: ms 0x7fffffff: Permanent detention
<GuardRegionList> means guard region
Note: Screen 31, rule 10, means alert template; other parameter setting beyond region are invalid

GuardDetection XML Block

```
<GuardDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <id>    <!-- req, xs:string -->    </id> // Rule No.; range: 1-8
    <enabled> <!-- req, xs:boolean -->    </enabled>    // Rule is valid: true: Enable false: Disabled
    <SceneName>    <!-- opt, xs:string -->    </SceneName> // Screen name
    <RuleName>    <!-- opt, xs:string -->    </RuleName> // Rule name
    <TargetTypeCheck> <!-- req, xs:integer-->    </TargetTypeCheck>/* Detection type:
1-Person; 2-Vehicle; 3-Person and vehicle; 0-Unlimited*/
    <Mode> <!-- req, xs:integer-->    </Mode>/* Lateral mode: Intrusion, entering, leaving*/
    <Type> <!-- req, xs:integer-->    </Type>/* Whether has direction*/
    <Direction> <!-- req, xs:integer-->    </Direction> /* Direction limit*/
    <MinDistance> <!-- req, xs:integer-->    </MinDistance>/* Min. pixel distance of alarm: 0 as
default     */
    <MinTime> <!-- req, xs:integer-->    </MinTime>/* Shortest alarm time: 0 as default */
    <DisplayRule> <!-- req, xs:integer-->    </DisplayRule>/* Whether display rule line: 0-Not
displayed; 1-Displayed */
    <DisplayStat> <!-- req, xs:integer-->    </DisplayStat>/* Whether display alarm count: 0-Not
displayed; 1-Displayed */
    <AlarmCount> <!-- req, xs:integer-->    </AlarmCount>/* Alarm count: Display the number
on screen*/
    <Color> <!-- req, xs:integer-->    </Color>/* Rule line color without alarm */
    <AlarmColor> <!-- req, xs:integer-->    </AlarmColor>/* Rule line color with alarm */
    <MinSize> <!-- req, xs:integer-->    </MinSize>// Min. size
    <MaxSize> <!-- req, xs:integer-->    </MaxSize>// Max. size
    <DisplayTgt> <!-- req, xs:integer-->    </DisplayTgt>// Whether display target frame
    <ResoreTime> <!-- req, xs:integer-->    </ResoreTime>/* Detention time*/
    <GuardRegionList>    // Guard region
        <GuardRegion>
            <RegionCoordinatesList>      <!-- opt -->
                <RegionCoordinates>      <!-- opt -->
                    <positionX> <!-- req, xs:integer;coordinate --> </positionX>
                    <positionY> <!-- req, xs:integer;coordinate --> </positionY>
                </RegionCoordinates>
            </RegionCoordinatesList>
        </GuardRegion>
    </GuardRegionList>
</GuardDetection>
```

Test cases

GET /CGI/Smart/GuardDetection/<ID>/Channels/<ID>/Scene/<ID>

Request XML: none

Response XML: <GuardDetection>

PUT /CGI/Smart/GuardDetection/<ID>/Channels/<ID>/Scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<GuardDetection>
<id>1</id>
<enabled>true</enabled>
<SceneName>Scene1</SceneName>
<RuleName>Rule1</RuleName>
<TargetTypeCheck>0</TargetTypeCheck>
<Mode>0</Mode>
<Type>0</Type>
<Direction>0</Direction>
<MinDistance>0</MinDistance>
<MinTime>3000</MinTime>
<DisplayRule>1</DisplayRule>
<DisplayStat>1</DisplayStat>
```

```
<AlarmCount>0</AlarmCount>
<Color>2</Color>
<AlarmColor>1</AlarmColor>
<MinSize>20</MinSize>
<MaxSize>0</MaxSize>
<DisplayTgt>1</DisplayTgt>
<ResoreTime>10000</ResoreTime>
<GuardRegionList>
<GuardRegion>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1536</positionX>
<positionY>2444</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8072</positionX>
<positionY>1444</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7296</positionX>
<positionY>7694</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1489</positionX>
<positionY>7694</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</GuardRegion>
</GuardRegionList>
</GuardDetection>
```

2.7.29/CGI/Smart/VideoDetection/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/VideoDetection/<ID>/channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire video error detection parameters
Query	None
Inbound Data	None
Success Return	**< VideoDetection >**
PUT	
Description	Set video exception detection parameters
Query	None
Inbound Data	**< VideoDetection >**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of video error, helping client or IE query and set the video error of device via CGI protocol, including lens diagnosis, sensitivity and screen switch diagnosis **Explanations on key parameters:** <id> represents video exception detection id, the value of which is 1. <LensDignose> represents lens diagnosis. <enabled> represents whether to start, true：start, false：not start <sensitivityLevel> represents sensibility level, range：0-5 < SceenSwitchDignose> represents scene switch diagnosis	

VideoDetection XML Block

```
<VideoDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
   <id>    <!-- req, xs:string;id -->    </id> Video error detection id; this value is 1
<VideoInputException>
     <enabled>        <!-- req, xs:boolean -->        </enabled>
</VideoInputException>
<LensDignose> <!-- req -->          // Lens diagnosis
     <enabled>    <!-- req, xs:boolean -->    </enabled> // true: Enabled; false: Disabled
     <sensitivityLevel>
        <!--req, xs:integer--> // Sensitivity 0-5
     </sensitivityLevel>
   </ LensDignose >
< SceenSwitchDignose> <!-- req --> // Screen switch diagnosis
     <enabled>    <!-- req, xs:boolean -->    </enabled> // true: Enabled; false: Disabled
     <sensitivityLevel>
        <!--req, xs:integer--> // Sensitivity 0-5
     </sensitivityLevel>
   </ SceenSwitchDignose >
</VideoDetection>
```

Test cases

GET /CGI/Smart/VideoDetection/<ID>/channels/<ID>/Scene/<ID>

Request XML: none

Response XML: <VideoDetection>

PUT /CGI/Smart/VideoDetection/<ID>/channels/<ID>/Scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<VideoDetection>
<id>1</id>
<VedioInputException/><LensDignose>
<enabled>true</enabled>
<sensitivityLevel>3</sensitivityLevel>
</LensDignose>
<SceenSwitchDignose>
<enabled>true</enabled>
<sensitivityLevel>3</sensitivityLevel>
</SceenSwitchDignose>
</VideoDetection>
```

2.7.30/CGI/Smart/FieldDetection/<ID>/Channels/<ID>/Scene/<ID>

/CGI/Smart/FieldDetection/<ID>/Channels/ <ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire perimeter intrusion parameter
Query	None
Inbound Data	None
Success Return	**< VideoDetection >**
PUT	
Description	Set perimeter intrusion parameter
Query	None
Inbound Data	**< VideoDetection >**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of perimeter intrusion, helping client or IE query and set the perimeter intrusion of device via CGI protocol, including rule No., rule name, coordinates of detection region, alarm color, alarm type, intrusion time, alarm count, alarm rule and display target.

Detection mode: Intrusion

Explanations on key parameters:

<id> represents rule No., range: 1-8
<enabled> represents whether it is effective, true: start, false: not start
<FieldDetectionRegion> represents invasion detection implementation region
<id> represents region No., note: currently the perimeter only supports one region, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> means sensitivity; range: 0-100; 80 as default
<RegionCoordinatesList> represents detection region coordinate list
<RegionCoordinates> represents detection region coordinate
<positionX> represents detection region abscissa
<positionY> represents detection region ordinate
<alarmColor> means alarm color: Red
<noAlarmColor> represents no alarm color
<invasionTime> means intrusion time; range: 1-10s; 3s as default
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start

FieldDetection XML Block

```
<FieldDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id> <!-- req, xs:string --> </id> Rule No.; range: 1-8
<enabled> <!-- req, xs:boolean --> </enabled>Valid: true: Enable; false: Disabled
<intelliBackSearch> <!-- opt, xs:boolean --> </intelliBackSearch>
<startTriggerTime> <!-- req, xs:integer, milliseconds --> </startTriggerTime>
<endTriggerTime> <!-- req, xs:integer, milliseconds --> </endTriggerTime>
<normalizedScreenSize>
<normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
<normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
</normalizedScreenSize>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
<!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<FieldDetectionRegionList size="4"/>
</FieldDetection>

<FieldDetectionRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<FieldDetectionRegion/>                                    // Intrusion detection
implementation region
</FieldDetectionRegionList>

Note:
<FieldDetectionRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id> <!-- req, xs:string --> </id>                // Region No.; Note: Only one region supported in
current perimeter; this value is 1
<ruleName> <!-- req, xs:string --> </ruleName>    // Rule name is consistent with ie; 16 characters
and 5 Chinese characters at most
<enabled> <!-- req, xs:boolean --> </enabled>
<sensitivityLevel> <!--req, xs:integer--> </sensitivityLevel>      // Sensitivity is consistent with ie
```

```
<timeThreshold> <!--req, xs:integer --> </timeThreshold>
<objectOccupation> <!--req, xs:integer--> </objectOccupation>
<RegionCoordinatesList>                    // List of coordinates of detection area
<RegionCoordinates> <!-- req, -->                          // Coordinates of detection area
<positionX> <!-- req, xs:integer;coordinate --> </positionX>      // X coordinates of detection area
<positionY> <!-- req, xs:integer;coordinate --> </positionY>      // Y coordinates of detection area
</RegionCoordinates>
</RegionCoordinatesList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>// Alarm color
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>// Color of no alarm
<identifyType><!-- req, xs:string "all"--></identifyType>           // Alarm type
<invasionTime><!-- req, xs:integer --></invasionTime>              // Intrusion time is consistent with
ie
<displayStat ><!-- req, xs:boolean --> </displayStat>// Alarm count; true: Enabled; false: Disabled
< displayRule ><!-- req, xs:boolean --> </alarmRule>// Alarm rule; true: Enabled; false: Disabled
<displyTarget><!-- req, xs:boolean -->< /displyTarget>// Display target; true: Enabled; false:
Disabled
</FieldDetectionRegion>
```

Test cases

GET /CGI/Smart/FieldDetection/<ID>/Channels/<ID>/Scene/<ID>

Request XML： none

Response XML： <FieldDetection>

PUT /CGI/Smart/FieldDetection/<ID>/Channels/<ID>/Scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<FieldDetection>
<id>1</id>
<enabled>true</enabled>
<FieldDetectionRegionList>
<FieldDetectionRegion>
<id>1</id>
<ruleName>Rule1</ruleName>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<displayStat>true</displayStat>
<displayTarget>true</displayTarget>
<identifyType>all</identifyType>
<alarmRule>true</alarmRule>
<invasionTime>3</invasionTime>
<sensitivityLevel>20</sensitivityLevel>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1109</positionX>
<positionY>1250</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8664</positionX>
<positionY>1625</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8875</positionX>
<positionY>8944</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>484</positionX>
<positionY>9152</positionY>
```

```
</RegionCoordinates>
</RegionCoordinatesList>
</FieldDetectionRegion>
</FieldDetectionRegionList>
</FieldDetection>
```

2.7.31/CGI/Smart/DoubleLineDetection/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/DoubleLineDetection/<ID>/channels/<ID>/Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire double line function parameter
Query	None
Inbound Data	None
Success Return	**< DoubleLineDetection >**
PUT	
Description	Set double line function parameter
Query	None
Inbound Data	**DoubleLineDetection**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of regional intrusion, helping client or IE query and set the regional intrusion of device via CGI protocol, including rule name, percentage, alarm color, arrow direction, max. time, min. time, alarm count, alarm rule and display target.

Explanations on key parameters:

<id> represents rule No., range: 1-8
<SceneID> represents scene No.
<enabled> represents whether it is effective, true: start, false: not start
<id> represents trip-line No., note: the current trip-line only supports one double trip-line, the value of which is 1.
<ruleName> represents rule name, maximum 16-bit characters and 5 Chinese characters
<sensitivityLevel> means percentage
<directionSensitivity> means arrow direction
<CoordinatesList> means line coordinates
<alarmColor> represents alarm color
<noAlarmColor> represents no alarm color
< tripwireMaxTimeInterval > means max. time
<tripwireMaxTimeInterval > means min. time
<identifyType > means statistics type, people, car, all, people, car
<displayStat > represents alarm counting, true: start, false: not start
<alarmRule> represents alarm rules, true: start, false: not start
<twoWayAlarm> represents two-way alarm, true: start, false: not start
<displyTarget> represents display target, true: start, false: not start

DoubleLineDetection XML Block

```
<DoubleLineDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string -->  </id> Rule No.; range: 1-8
  <enabled> <!-- req, xs:boolean -->  </enabled>Valid: true: Enable; false: Disabled
<intelliBackSearch> <!-- opt, xs:boolean -->  </ intelliBackSearch>
<startTriggerTime>  <!-- req, xs:integer, milliseconds --> </startTriggerTime>
  <endTriggerTime>  <!-- req, xs:integer, milliseconds --> </endTriggerTime>
<normalizedScreenSize>
  <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
  <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <minObjectSize>
  <!-- opt, xs:integer, min number of pixels per object -->
```

```
</minObjectSize>
   <maxObjectSize>
   <!-- opt, xs:integer, max number of pixels per object -->
   </maxObjectSize>
<DoubleLineItemList>
<DoubleLineItem>
   <id> <!-- req, xs:string --> </id>    // Line No.; Note: Only 1 double line is supported by now;
this value is 1
   <ruleName> <!-- req, xs:string --> </ruleName>// Rule name is consistent with IE. 16
characters and 5 Chinese characters at most
<enabled>    <!-- req, xs:boolean -->    </enabled>
      <sensitivityLevel> // Percentage
      <!--req, xs:integer-->
   </sensitivityLevel>
<directionSensitivity>
<!-- opt,integer, 0-360 -->
</directionSensitivity>    // Arrow direction
   <CoordinatesList>    // Line coordinates
      <Coordinates>       <!-- req, -->
         <positionX>                    <!-- req, xs:integer;coordinate -->              </positionX>
         <positionY>                    <!-- req, xs:integer;coordinate      -->          </positionY>
      </Coordinates>
   </CoordinatesList>
<CoordinatesExList>
      <CoordinatesEx>       <!-- req, -->
         <positionX>                    <!-- req, xs:integer;coordinate -->              </positionX>
         <positionY>                    <!-- req, xs:integer;coordinate      -->          </positionY>
      </CoordinatesEx>
   </CoordinatesExList>
<alarmColor><!-- req, xs:string"red" --></alarmColor>// Alarm color
<noAlarmColor><!-- req, xs:string "green"--></noAlarmColor>// Color of no alarm
< tripwireMaxTimeInterval ><!-- req, xs:integer --></tripwireMaxTimeInterval>// Max. time
<tripwireMaxTimeInterval ><!-- req, xs:integer --></ tripwireMaxTimeInterval >// Min. time
<identifyType ><!-- req, xs: string --></identifyType>// Statistics type: people, car , all, people
and car
<displayStat ><!-- req, xs:boolean --> </displayStat>// Alarm count; true: Enabled; false:
Disabled
<alarmRule><!-- req, xs:boolean --> </alarmRule>// Alarm rule; true: Enabled; false: Disabled
<twoWayAlarm><!-- req, xs:boolean --> </twoWayAlarm>// Two-way alarm; true: Enabled;
false: Disabled
<displyTarget><!-- req, xs:boolean -->< /displyTarget>// Display target; true: Enabled; false:
Disabled
</DoubleLineItem>
</DoubleLineItemList>
</ DoubleLineDetection >
```

Test cases

GET /CGI/Smart/DoubleLineDetection/<ID>/channels/<ID>/Scene/<ID>

Request XML： none

Response XML： <DoubleLineDetection>

PUT /CGI/Smart/DoubleLineDetection/<ID>/channels/<ID>/Scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DoubleLineDetection>
<id>1</id>
<enabled>true</enabled>
<DoubleLineItemList>
```

```
<DoubleLineItem>
<id>1</id>
<ruleName>Rule1</ruleName>
<enabled>true</enabled>
<sensitivityLevel>20</sensitivityLevel>
<directionSensitivity>0</directionSensitivity>
<alarmColor>red</alarmColor>
<noAlarmColor>green</noAlarmColor>
<tripwireMaxTimeInterval>30</tripwireMaxTimeInterval>
<tripwireMinTimeInterval>0</tripwireMinTimeInterval>
<identifyType>all</identifyType>
<displayStat>true</displayStat>
<alarmRule>true</alarmRule>
<twoWayAlarm>true</twoWayAlarm>
<displayTarget>true</displayTarget>
<CoordinatesList>
<Coordinates>
<positionX>4804</positionX>
<positionY>2500</positionY>
</Coordinates>
<Coordinates>
<positionX>6945</positionX>
<positionY>5291</positionY>
</Coordinates>
</CoordinatesList>
<CoordinatesExList>
<CoordinatesEx>
<positionX>3507</positionX>
<positionY>3930</positionY>
</CoordinatesEx>
<CoordinatesEx>
<positionX>5500</positionX>
<positionY>8013</positionY>
</CoordinatesEx>
</CoordinatesExList>
</DoubleLineItem>
</DoubleLineItemList>
</DoubleLineDetection>
```


2.7.32/CGI/Smart/AudioDetection/channels/<ID>/status

/ISAPI/Smart/AudioDetection/channels/<ID>/status	**General Resource v2.0**
GET	
Description	Obtain audio exception detection real-time volume parameters
Query	None
Inbound Data	None
Success Return	**<AudioStrengthStatus>**
PUT	
Description	Set audio exception detection real-time volume parameters
Query	None
Inbound Data	**<AudioStrengthStatus>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of real-time volume in audio error detection, helping client or IE query and set the real-time volume parameters during detection of audio error.
Explanations on key parameters:
<audioStrength> represents audio exception detection real-time volume

AudioStrengthStatusXML Block

```
<AudioStrengthStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id><!-- req, xs:string --></id>
<audioStrength><!—ro, req, xs:integer--></audioStrength>
</AudioStrengthStatus>
```

Test cases
GET /ISAPI/Smart/AudioDetection/channels/<ID>/status
Request XML： none
Response XML：<AudioStrengthStatus>
PUT/ISAPI/Smart/AudioDetection/channels/<ID>/status
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AudioStrengthStatus>
<id>1</id>
<audioStrength>-1</audioStrength>
</AudioStrengthStatus>
```

2.7.33/CGI/Smart/channels/<ID>/capabilities

/ISAPI/Smart/channels/<ID>/ capabilities General Resource v2.0	
GET	
Description	Obtain intelligent analysis algorithm capability set
Query	None
Inbound Data	None
Success Return	**<SmartCapList>**

Explanations on protocol:
This protocol is to query the intelligent analysis support algorithm capability set.
Explanations on key parameters:
<Type> means intelligent analysis type; Behavior: Behavior analysis; Face: Face recognition Audio: Audio diagnosis; Video: Video diagnosis; Group: Group; OnDuty: On-duty detection; Demographics: Person statistics; PlatLicense: Plate recognition; ParkGuard: Park guard; IllegalPark: Illegal park; IntelliTrace: Intelligent traction; Helmet: Helmet
Behavior analysis type：
LineDetection: Line; DoubleLineDetection: Double line; FieldDetection: Perimeter detection; Loitering: Loitering; Parking: Parking; RapidMove: Run; AttendedBaggage: Attended baggage; UnattendedBaggage: Unattended baggage; Alert: Alert; HeatMap: Heat map
Demographics：
Vertical： vertical, Horizontal： horizontal
Video diagnosis type：
Noise： noise diagnosis, Clarity： clarity diagnosis, Brightness： brightness diagnosis, ColourCast: Color cast diagnosis; Frezze: Picture freeze diagnosis; Lost: Signal lost diagnosis; SceneChange: Scene change detection; Jamming: Jamming diagnosis
Video diagnosis type：
Lost: Audio lost; Abnormal: Audio abnormal; NoiseSupr: Noise suppression
EchoSupr：echo suppression, FeedbackSupr： audio signal feedback abnormal
Human face detection type：
Tiandy: Tiandy algorithm; ST: ST algorithm; FacePlusPlus: FACE++ algorithm

SmartCap XML Block

```
<SmartCapList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < SmartTypeCap>
    <MainType>
      <Type>
        <!--req,xs:string"Behavior,Face,Audio,Video,Group,OnDuty,PlatLicense,
        Demographics,ParkGuard, IllegalPark, IntelliTrace, Helmet" -->
      </Type>
      <IsSupport><!-- req, xs: boolean -->< /IsSupport >
    </MainType>
    < SubTypeList>
     <subtype>
      < Type><!--req,xs:string></ Type>
      < IsSupport ><!-- req, xs: boolean -->< IsSupport >
      </subtype>
    </SubTypeList>
  < / SmartTypeCap >
< /SmartTypeCapList>
```

Test cases

/ISAPI/Smart/channels/<ID>/ capabilities

Request XML： none

Response XML： <SmartCap >

```
<SmartTypeCapList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < SmartTypeCap>
    <MainType>
      <Type>Behavior</Type>
      <IsSupport>True< /IsSupport >
    </MainType>
    < SubTypeList>
     <subtype>
      < Type>LineDetection</ Type>
      < IsSupport > True< IsSupport >
      </subtype>
      <subtype>
      < Type>DoubleLineDetection</ Type>
      < IsSupport > True< IsSupport >
      </subtype>
      <subtype>
      < Type>Alert</ Type>
      < IsSupport >False< IsSupport >
      </subtype>
      <subtype>
      < Type>Loitering</ Type>
      < IsSupport > True< IsSupport >
      </subtype>
      <subtype>
      < Type>HeatMap</ Type>
      < IsSupport >False< IsSupport >
      </subtype>
    </SubTypeList>
  < / SmartTypeCap >
  < SmartTypeCap>
    <MainType>
      <Type>Face</Type>
      <IsSupport>True< /IsSupport >
    </MainType>
    < SubTypeList>
```

```
        <subtype>
          < Type>Tiandy</ Type>
          < IsSupport >False< IsSupport >
          </subtype>
          <subtype>
          < Type>ST</ Type>
          < IsSupport >False< IsSupport >
          </subtype>
          <subtype>
          < Type>FacePlusPlus</ Type>
          < IsSupport > True< IsSupport >
          </subtype>
      </SubTypeList>
   < / SmartTypeCap >
< /SmartTypeCapList>
```

2.7.34/CGI/Smart/Alert/ApplyScene/channels/<ID>

/CGI/Smart/Alert/ApplyScene/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire the scene called by special alert
Query	None
Inbound Data	**None**
Success Return	**<SceneInfo>**
PUT	
Description	Set the scene called by special alert
Query	None
Inbound Data	**<SceneInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for helping client acquire or set the called scenes via CGI protocol.
Explanations on key parameters:
Type: Scene type; 0-Special alert scene; 1-Common scene; 2-Privacy shading; 3-Fast enabling of smart scene
4-Fast enabling of alert scene

SceneInfo Block

```
<SceneInfo>
   <scene><!--req, xs:integer--></scene>
   < type ><!--req, xs:integer--></ type >
</SceneInfo>
```

Test cases
GET /CGI/Smart/Alert/ApplyScene/channels/<ID>
Request XML: none
Response XML: <SceneInfo>
PUT /CGI/Smart/Alert/ApplyScene/channels/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<SceneInfo>
   <scene>3</scene>
   < type >0</ type >
</SceneInfo>
```

2.7.35/CGI/Smart/Alert/TemplateName/channels/<ID>/scene/<ID>/type/<ID>

/CGI/Smart/Alert/TemplateName/channels/<ID>/scene/<ID>/type/<ID>	**General**

	Resource v2.0
GET	
Description	Acquire the list of templates supported by special alert
Query	None
Inbound Data	None
Success Return	**<AlertTemplate>**

Explanations on protocol:
This protocol is prepared for helping client acquire the list of templates (name) supported by special alert via CGI protocol.
Explanations on key parameters:
scene: Scene No., starts from 0
type: Algorithm type; 0: Perimeter; 1: Line; other values: Return fails
alertNum: Number of alert templates supported, 6 at most
id: Number of template support list, defined as follows:
Snapshot and link white light when id is 1
Snapshot and link white light and single warning sound when id is 2
Snapshot and link white light and circular warning sound when id is 3
Snapshot and link burst multistage audible and visual alarm when id is 4
Snapshot and link gradual multistage audible and visual alarm when id is 5
Snapshot white light flash and circular alarm sound when id is 6
Snapshot and link alarm light when id is 7
Snapshot and link alarm light and single alarm sound when id is 8
Snapshot and link alarm light and circular sound alarm when id is 9
Snapshot and link burst multistage audible and visual alarm (alarm light) when id is 10
Snapshot and link gradual multistage audible and visual alarm (alarm light) when id is 11

AlertTemplate XML Block

```
<AlertTemplate>
    <alertNum><!--req, xs:integer --></alertNum>
    <AlertTemplateList>
        <template>
            <id><!--req, xs:integer --></id>// Number of template support list
        </template>
    </AlertTemplateList>
</AlertTemplate>
```

Test cases
GET /Smart/Alert/TemplateName/channels/<ID>/scene/<ID>/type/<ID>
Request XML: none
Response XML: <AlertTemplate >

```
<AlertTemplate>
    <alertNum>5</alertNum>
    <AlertTemplateList>
        <template>
            <id>1</id>
        </template>
        <template>
            <id>2</id>
        </template>
        <template>
            <id>3</id>
        </template>
        <template>
            <id>4</id>
        </template>
        <template>
            <id>5</id>
```

```
            </template>
        </AlertTemplateList>
</AlertTemplate>
```

2.7.36/CGI/Smart/Alert/AlgTypeParam/channels/<ID>

/CGI/Smart/Alert/AlgTypeParam/channels/<ID> **General Resource v2.0**	
GET	
Description	Acquire the algorithm type and parameters of special alert
Query	None
Inbound Data	None
Success Return	**<AlgTypeParamList>**

Explanations on protocol:
This protocol is prepared for helping client acquire the algorithm type and parameters supported by special alert via CGI protocol.
Explanations on key parameters:
type: Algorithm type; PERI: Perimeter; TRIP: Line.
param: Parameters of algorithm type; if type is perimeter; invade: Invade; leave: Leave.
If type is line, no such value.

AlgTypeParamList XML Block

```
<AlgTypeParamList>
    <channels><!-- ro, rsp, xs:integer --></channels>
    <Param>
        <type><!--req, xs:string --></type>
        <invade><!--req, xs:boolean --></invade>
        <leave><!--req, xs:boolean --></leave>
    </Param>
</AlgTypeParamList>
```

Test cases
GET /Smart/Alert/AlgTypeParam/channels/<ID>
Request XML: none
Response XML: <AlgTypeParamList>

```
<AlgTypeParamList>
<Param>
  <type>PERI</type>
  <invade>true</invade>
  <leave>true</leave>
</Param>
<Param>
  <type>TRIP</type>
</Param>
</AlgTypeParamList>
```

2.7.37/CGI/Smart/Alert/WhiteLightMode/channels/<ID>/type/<ID>/capabilities

/CGI/Smart/Alert/WhiteLightMode/channels/<ID>/type/<ID>/capabilities **General Resource v2.0**	
GET	
Description	Acquire the white light linkage mode parameters of

	special alert
Query	None
Inbound Data	None
Success Return	**<WhiteLightParam>**

Explanations on protocol:

This protocol is prepared for helping client acquire the white light linkage mode parameters of special alert via CGI protocol.

Explanations on key parameters:

supportGrade: Total amount of levels supported. 3 level supported at most. 0 means not supported.
grade: Grade
defaultMode: Whether support default mode. True: Supported; false: Not supported
num: Max. flash times supported
ficker: Whether support flicker; true: Supported: false: Not supported
alwaysLight: Whether support always light; true: Supported; false: Not supported.
time: Delayed off time supported by always light. 0: Not supported. Other values indicate the max. time support; unit: Second. Max.: 999.

WhiteLightParam XML Block

```
<WhiteLightParam>
    <supportGrade><!--req, xs:integer --></supportGrade>
    <whiteLightParamList>
        <param>
            <grade><!--req, xs:integer --></grade>
            <defaultMode><!--req, xs:boolean --></defaultMode>
            <num><!--req, xs:integer --></num>
            <ficker><!--req, xs:boolean --></ficker>
            <alwaysLight><!--req, xs:boolean --></alwaysLight>
            <time><!--req, xs:integer --></time>
        </param>
        <param>
            <grade><!--req, xs:integer --></grade>
            <defaultMode><!--req, xs:boolean --></defaultMode>
            <num><!--req, xs:integer --></num>
            <ficker><!--req, xs:boolean --></ficker>
            <alwaysLight><!--req, xs:boolean --></alwaysLight>
            <time><!--req, xs:integer --></time>
        </param>
        <param>
            <grade><!--req, xs:integer --></grade>
            <defaultMode><!--req, xs:boolean --></defaultMode>
            <num><!--req, xs:integer --></num>
            <ficker><!--req, xs:boolean --></ficker>
            <alwaysLight><!--req, xs:boolean --></alwaysLight>
            <time><!--req, xs:integer --></time>
        </param>
    </whiteLightParamList>
</WhiteLightParam>
```

Test cases

GET /Smart/Alert/WhiteLightMode/channels/<ID>/type/<ID>/capabilities

Request XML: none

Response XML: <WhiteLightParam>

```
<WhiteLightParam>
    <supportGrade>3</supportGrade>
    <whiteLightParamList>
        <param>
            <grade>1</grade>
            <defaultMode>false</defaultMode>
```

```
            <num>3</num>
            <ficker>false</ficker>
            <alwaysLight>true</alwaysLight>
            <time>60</time>
        </param>
        <param>
            <grade>2</grade>
            <defaultMode>true</defaultMode>
            <num>5</num>
            <ficker>true</ficker>
            <alwaysLight>true</alwaysLight>
            <time>120</time>
        </param>
        <param>
            <grade>3</grade>
            <defaultMode>true</defaultMode>
            <num>8</num>
            <ficker>true</ficker>
            <alwaysLight>true</alwaysLight>
            <time>180</time>
        </param>
    </whiteLightParamList>
</WhiteLightParam>
```

2.7.38/CGI/Smart/Alert/ALGEnable/channels/<ID>/type/<ID>

/CGI/Smart/Alert/ALGEnable/channels/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire the enabling of special alert algorithm
Query	None
Inbound Data	**None**
Success Return	**<ALGEnableInfo>**
PUT	
Description	Set the enabling of enabling of special alert algorithm
Query	None
Inbound Data	**<ALGEnableInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring or setting enabling of special alert algorithm via CGI protocol. **Explanations on key parameters:** type: Algorithm type; 0: Local channel; 1: Frontend channel. Other values: Return fails enable: Whether enable special alert. False: Disabled; true: Enabled.	

ALGEnableInfo Block

```
<ALGEnableInfo>
  <enable><!--rsp, xs:boolean--></enable>
</ALGEnableInfo>
```

Test cases

GET /CGI/Smart/Alert/ALGEnable/channels/<ID>/type/<ID>

Request XML： none

Response XML: <ALGEnableInfo>

PUT /CGI/Smart/Alert/ALGEnable/channels/<ID>/type/<ID>

Response XML： <ResponseStatus>

Request XML: <ALGEnableInfo> As follows

```
<ALGEnableInfo>
   <enable>false</enable>
</ALGEnableInfo>
```

2.7.39/CGI/Smart/Alert/ALGParam/channels/<ID>/scene/<ID>/type/<ID>

/CGI/Smart/Alert/ALGParam/channels/<ID>/scene/<ID>/type/<ID>	**General Resource v2.0**
GET	
Description	Acquire algorithm parameters of special alert
Query	None
Inbound Data	**None**
Success Return	**<ALGParameter>**
PUT	
Description	Set algorithm parameters of special alert
Query	None
Inbound Data	**<ALGParameter>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for helping client acquire or set parameters of special alert algorithm via CGI protocol.
Explanations on key parameters:
type: Algorithm type; 0: Perimeter; 1: Line.
channelNo: Channel No., starts from 1
scene: Scene No., starts from 1
linkMode: Linkage mode under the valid event type; 0: Customized; 1-6: Template No.
eventVaild: Whether event detection is enabled; false: Disabled; true: Enabled
sensitivity: Sensitivity: 0-100
displayRule: Whether display rules; 0: Not displayed; 1: Displayed.
displayStat: Whether display alarm count; 0: Not displayed; 1: Displayed
displayTarget: Whether display target frame; 0: Not displayed; 1: Displayed; displayed by default
color: Region color without alarm; 0: Default; 1: Red; 2: Green; 3: Yellow; 4: Blue; 5: Purple; 6: Cyan; 7: Black; 8: White
alarmColor: Region color with alarm; 0: Default; 1: Red; 2: Green; 3: Yellow; 4: Blue; 5: Purple; 6: Cyan; 7: Black; 8: White
targetTypeCheck: 0: Not distinguished; 1: Distinguish person; 2: Distinguish vehicle; 3: Distinguish person and vehicle
invade: Invade; true: Enabled; false: Disabled
leave: Leave; true: Enabled; false; Disabled
trackTime: Track time; unit: Second; 300 as default
trackTime: Track time; unit: Second; 300 as default
minDistance: Min. alarm distance; 0 as default
minTime: Min. alarm time; 0 as default
directionAstrict: Whether direction is limited. 0: Unlimited; 1: Limited (perimeter algorithm)
direction: Prohibit direction angle. Angle: 0~359° (perimeter algorithm)
minSize: Min. size; 0-100, 5 as default (perimeter algorithm)
maxSize: Max. size; 0-100, 30 as default (perimeter algorithm)
resortTime: Detention time; unit: Second; 0 as default (perimeter algorithm)
tripwireType: Cross type; 0: One-way; 1: Two-way. Two-way as default (line algorithm)
tripwireDirection: Prohibit direct crossing; 0~359° (line algorithm)

ALGParameter Block

```
<ALGParameter>
    <linkMode><!--rsp, xs:integer--></linkMode>// Link mode 0-5
    <CoordinatesList>// Line coordinates in scene
        <Coordinates>
            <positionX><!--rsp, xs:integer--></positionX> // Ten-thousandth X coordinates
            <positionY><!--rsp, xs:integer--></positionY>// Ten-thousandth Y coordinates
        </Coordinates>
        <Coordinates>
            <positionX><!--rsp, xs:integer--></positionX> // Ten-thousandth X coordinates
            <positionY><!--rsp, xs:integer--></positionY>// Ten-thousandth Y coordinates
    </Coordinates>
    </CoordinatesList>
    <ALGParam><!-- dep, xs:integer: type -->// Rely on valid type; not send line algorithm
parameters when effectType is 0; not send perimeter algorithm when effectType is 1
        <eventVaild><!--rsp, xs:boolean--></eventVaild>
        <sensitivity><!--rsp, xs:integer--></sensitivity>
        <displayRule><!--rsp, xs:integer--></displayRule>
        <displayStat><!--rsp, xs:integer--></displayStat>
        <displayTarget><!--rsp, xs:integer--></displayTarget>
        <color><!--rsp, xs:integer--></color>
        <alarmColor><!--rsp, xs:integer--></alarmColor>
        <targetTypeCheck>
            <person><!--rsp, xs:boolean--></person>
            <car><!--rsp, xs:boolean--></car>
            <other><!--rsp, xs:boolean--></other>
        </targetTypeCheck>
        <trackTime><!--rsp, xs:integer--></trackTime>
        <minDistance><!--rsp, xs:integer--></minDistance>
        <minTime><!--rsp, xs:integer--></minTime>
        <mode>
            <invade><!--rsp, xs:boolean--></invade>// Perimeter algorithm
            <leave><!--rsp, xs:boolean--></leave>// Perimeter algorithm
        </mode>
        <directionAstrict><!--rsp, xs:integer--></directionAstrict>// Perimeter algorithm
        <direction><!--rsp, xs:integer--></direction>// Perimeter algorithm
        <minSize><!--rsp, xs:integer--></minSize>// Perimeter algorithm
        <maxSize><!--rsp, xs:integer--></maxSize>// Perimeter algorithm
        <resortTime><!--rsp, xs:integer--></resortTime>// Perimeter algorithm
        <tripwireType><!--rsp, xs:integer--></tripwireType>// Line algorithm
        <tripwireDirection><!--rsp, xs:integer--></tripwireDirection>// Line algorithm
    </ALGParam>
</ALGParameter>
```

Test cases

GET /CGI/Smart/Alert/ALGParam/channels/<ID>/scene/<ID>/type/<ID>

Request XML: none

Response XML: <ALGParameter>

PUT /CGI/Smart/Alert/ALGParam/channels/<ID>/scene/<ID>/type/<ID>

Response XML: <ResponseStatus>

Request XML: <ALGParameter> As follows

```
<ALGParameter>
<linkMode>1</linkMode>
  <RegionCoordinatesList>
        <RegionCoordinates>
            <positionX>1850</positionX>
            <positionY>7433</positionY>
        </RegionCoordinates>
        <RegionCoordinates>
```

```
            <positionX>7850</positionX>
            <positionY>4133</positionY>
    </RegionCoordinates>
    </RegionCoordinatesList>
    <eventVaild>true</eventVaild>
    <sensitivity>100</sensitivity>
    <displayRule>1</displayRule>
    <displayStat>1</displayStat>
    <displayTarget>1</displayTarget>
    <color>2</color>
    <alarmColor>1</alarmColor>
    <targetTypeCheck>0</targetTypeCheck>
    <trackTime>300</trackTime>
    <minDistance>5</minDistance>
    <minTime>0</minTime>
    <tripwireType>1</tripwireType>
    <tripwireDirection>270</tripwireDirection>
</ALGParameter>
```

2.7.40/CGI/Smart/Alert/SceneTime/channels/<ID>/scene/<ID>

/CGI/Smart/Alert/SceneTime/channels/<ID>/scene/<ID> General Resource v2.0	
GET	
Description	Acquire the scene patrol time of special alert
Query	None
Inbound Data	**None**
Success Return	**<SceneTimeInfo>**
PUT	
Description	Special the scene patrol time of special alert
Query	None
Inbound Data	**<SceneTimeInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for helping client acquire or set scene patrol time of special alert via CGI protocol. **Explanations on key parameters:** scene: Scene No., starts from 0 enable: Whether enable patrol time; false: Disabled; true: Enabled startTime: Start time endTime: End time	

SceneTimeInfo Block

```
<SceneTimeInfo>
    <channels><!-- ro, rsp, xs:integer --></channels>
    <enable><!--rsp, xs:boolean--></enable>
    <startTime><!--rsp, xs:string--></startTime>
    <endTime><!--rsp, xs:string--></endTime>
</SceneTimeInfo>
```

Test cases

GET /CGI/Smart/Alert/SceneTime/channels/<ID>/scene/<ID>

Request XML: none

Response XML: <SceneTimeInfo>

PUT /CGI/Smart/Alert/SceneTime/channels/<ID>/scene/<ID>

Response XML: <ResponseStatus>

Request XML: <SceneTimeInfo> As follows

```
<SceneTimeInfo>
    <channels>1</channels>
    <enable>true</enable>
    <startTime>14:00</startTime>
    <endTime>15:59</endTime>
</SceneTimeInfo>
```

2.7.41/CGI/Smart/Alert/CurrentEffectALGType/channels/<ID>/scene/<ID>

/CGI/Smart/Alert/CurrentEffectALGType/channels/<ID>/scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire the valid algorithm type of special alert
Query	None
Inbound Data	**None**
Success Return	**<CurrentTypeList>**
PUT	
Description	Set the valid algorithm type of special alert
Query	None
Inbound Data	**<CurrentTypeList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for helping client acquire or set the valid algorithm type of special alert via CGI protocol.
Explanations on key parameters:
channelNo: Channel No., starts from 1
scene: Scene No., starts from 1
effectType: Valid algorithm type. PERI: Perimeter; TRIP: Line. Only one type is valid by now, or both types will be valid latterly.

CurrentTypeList Block

```
<CurrentTypeList>
    <CurrentType>
        <effectType><!--req, xs:string--></effectType>
    </CurrentType>
</CurrentTypeList>
```

Test cases
GET /CGI/Smart/Alert/CurrentEffectALGType/channels/<ID>/scene/<ID>
PUT /CGI/Smart/Alert/CurrentEffectALGType/channels/<ID>/scene/<ID>
Request XML： none
Response XML: <CurrentTypeList> As follows

```
<?xml version="1.0" encoding="UTF-8"?>
<CurrentTypeList>
    <CurrentType>
        <effectType>PERI</effectType>
    </CurrentType>
</CurrentTypeList>
```

2.7.42/CGI/Smart/Command/channels/<ID>/Suspend

/CGI/Smart/Command/channels/<ID>/Suspend	**General Resource v2.0**
PUT	
Description	Pause intelligent analysis
Query	None
Inbound Data	**None**

Success Return	<ResponseStatus>
Explanations on protocol: This protocol is prepared for helping client pause intelligent analysis via CGI protocol.	

Test cases
PUT /CGI/Smart/Command/channels/<ID>/Suspend
Request XML：None
Response XML： <ResponseStatus>

2.7.43/CGI/Smart/Command/channels/<ID>/Resume

/CGI/Smart/Command/channels/<ID>/Resume	General Resource v2.0
PUT	
Description	Recover intelligent analysis
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for helping client recover intelligent analysis via CGI protocol.	

Test cases
PUT /CGI/Smart/Command/channels/<ID>/Resume
Request XML：None
Response XML： <ResponseStatus>

2.7.44 /CGI/Smart/FaceCnf/FaceCnfEnable/channels/<ID>/Event/<ID>/Scene/<ID>

/CGI/Smart/FaceCnf/FaceCnfEnable/channels/<ID>/Event/<ID>/Scene/<ID>	
GET	
Description	Acquire enabling status of face configuration channel
Query	None
Inbound Data	None
Success Return	**<FaceCnfEnable>**
PUT	
Description	Set enabling status of face configuration channel
Query	None
Inbound Data	**<FaceCnfEnable>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring and setting the intelligent analysis on enabling status of face configuration channel. **Explanations on key parameters:** Event type; 1: Face detection; 2: Face recognition, sent to url Scene id, sent to url <ipcEnable>ipc enabling <nvrEnable>nvr enabling	

FaceCnfEnable XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<FaceCnfEnable>
<ipcEnable><!-- req, xs: boolean --></ipcEnable>
<nvrEnable><!-- req, xs: boolean --></nvrEnable>
</FaceCnfEnable>
```

Test cases

GET /CGI/Smart/FaceCnf/FaceCnfEnable/channels/1/Event/1/Scene/1

Request XML： none

Response XML: <FaceCnfEnable>

PUT /CGI/Smart/FaceCnf/FaceCnfEnable/channels/1/Event/1/Scene/1

Request XML: <FaceCnfEnable>

Response XML： <ResponseStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<FaceCnfEnable>
<ipcEnable>true</ipcEnable>
<nvrEnable>true</nvrEnable>
</FaceCnfEnable>
```

2.7.45 /CGI/Smart/FaceCnf/FaceDiscernParam/channels/<ID>/Scene/<ID>/Model/<ID>/Type/<ID>

/CGI/Smart/FaceCnf/FaceDiscernParam/channels/<ID>/Scene/<ID>/Model/<ID>/Type/<ID>	
GET	
Description	Acquire face recognition alarm parameters
Query	None
Inbound Data	None
Success Return	**<FaceDiscernParam>**
PUT	
Description	Set face recognition alarm parameters
Query	None
Inbound Data	**<FaceDiscernParam>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Acquire and set the intelligent analysis on alarm parameters of face recognition. **Explanations on key parameters:** Model recognition mode; 0 nvr, 1 ipc Type: Alarm type; 0: Comparison alarm; 1: Stranger alarm; 2: Frequency alarm; 3: Detention alarm <alarmParam> Parameter structure <enable> Alarm enabling <timeRange> Time range (frequency); unit: Second <frequency> Frequency <standTime> Detention time (detention); unit: Second <similarityDegree> Similarity <upMsgEnable> Whether upload recognition information <faceLib> Stranger has no face library concept, this field does not apply <key> 0: Disabled; key value: Enabled; list name is acquired from face library protocol; only enabling status is acquired here	

FaceDiscernParam XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<FaceDiscernParam>
<enable><!-- req, xs: boolean--></enable>
<timeRange><!-- dep, xs: integer --></timeRange>
<frequency><!-- dep, xs: integer --></frequency>
<standTime><!-- dep, xs: integer --></standTime>
<similarityDegree><!-- req, xs: integer --></similarityDegree>
<upMsgEnable><!-- req, xs: boolean--></upMsgEnable>
<faceLibList>
<faceLib>
<key><!-- req, xs: long long --></key>
</faceLib>
// Repeat faceLib
</faceLibList>
```

```
</FaceDiscernParam>
```

Test cases

GET /CGI/Smart/FaceCnf/FaceDiscernParam/channels/1/Scene/0

Request XML: none

Response XML: <FaceDiscernParam>

PUT /CGI/Smart/FaceCnf/FaceDiscernParam/channels/1/Scene/0

Request XML: <FaceDiscernParam>

Response XML: <ResponseStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<FaceDiscernParam>
<enable>true</enable>
<similarityDegree>100</similarityDegree>
<upMsgEnable>false</upMsgEnable>
<faceLibList>
<faceLib>
<key>123456790</key>
</faceLib>
<faceLib>
<key>9876543210</key>
</faceLib>
</faceLibList>
</FaceDiscernParam>
```

2.7.46/CGI/Smart/FaceLib/<Key>/Manage

/CGI/Smart/FaceLib/<Key>/Manage	
POST	
Description	Add face recognition library
Query	None
Inbound Data	**<FaceLibParas>**
Success Return	**<FaceLibResult>**
PUT	
Description	Set face recognition library
Query	None
Inbound Data	**<FaceLibParas>**
Success Return	**<ResponseStatus>**
DELETE	
Description	Delete face recognition library
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: Acquire, set, add and delete parameters of face recognition library and check if library has lock and password. Introduction to key parameters: URL <Key> key value of face library; key=0 means adding of face library; key>0 means setting of face library parameters; long: Long type Request xml <name> Face library name, 64 bits at most <descripInfo> Description information, 64 bits at most <threshold> Face library dependability, >=0 <lock> Whether library is locked; 1: Locked; 0: Unlocked <access> Random information, for calibration use; 32 bits <password> Lock password, encrypted, 16 bits at most Response xml <key> key value of face library, responded when adding value. -1 means failure	

FaceLibParas XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<faceLibParas>
<name><!-- req, xs:string --></name>
<descripInfo><!-- dep, xs:string --></descripInfo>
<threshold><!-- dep, xs: integer --></threshold>
<picstreamEnable><!--req, xs:boolean--></picstreamEnable>
<lock><!-- req, xs: integer --></lock>
<access><!-- req, xs:string --></access>
<password><!-- req, xs:string --></password>
</faceLibParas>
```

ResponseResult XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<faceLibResult>
<key><!-- dep, xs: integer --></key>
</faceLibResult>
```

Test cases

POST /CGI/Smart/FaceLib/0/Manage

Request XML: <FaceLibParas>

```
<?xml version="1.0" encoding="UTF-8"?>
<faceLibParas>
<key>2</key>
<name> R&D library</name>
<descripInfo> R&D staff library</descripInfo>
<threshold>80</threshold>
<picstreamEnable>false</picstreamEnable>
<lock>1</lock>
<access>94AAABB419A9820DC171B43240CEEF41</access>
<password>T6g05arqzu4=</password>
</faceLibParas>
```

Response XML: <FaceLibResult>

```
<?xml version="1.0" encoding="UTF-8"?>
<responseResult>
<key>456</key>
</responseResult>
```

PUT /CGI/Smart/FaceLib/123/Manage

Request XML: <FaceLibParas>

```
<?xml version="1.0" encoding="UTF-8"?>
<faceLibParas>
<key>2</key>
<name> R&D library</name>
<descripInfo> R&D staff library</descripInfo>
<threshold>70</threshold>
<picstreamEnable>ture</picstreamEnable>
<lock>1</lock>
<access>94AAABB419A9820DC171B43240CEEF41</access>
<password>T6g05arqzu4=</password>
</faceLibParas>
```

Response XML: <ResponseStatus>

DELETE /CGI/Smart/FaceLib/123/Manage

Request XML: none

Response XML: <ResponseStatus>

2.7.47/CGI/Smart/FaceLib/Manage

/CGI/Smart/FaceLib/Manage

GET	
Description	Acquire parameters of face recognition library in batch
Query	None
Inbound Data	None
Success Return	**<FaceLibInfo>**

Explanations on protocol:
Acquire parameters of face recognition library in batch
Explanations on key parameters:
<facePicModelNum> Picture amount of established models
<facePicNum> Total number of base map
<key> key value of face library
<name> Face library name, 64 bits at most
<descripInfo> Description information, 64 bits at most
<lock> Whether locked; 1: Locked; 0: Unlocked

FaceLibParas XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<faceLibInfo>
<facePicModelNum><!-- req, xs: integer --></facePicModelNum>
<facePicNum><!-- req, xs: integer --></facePicNum>
<faceLibParasList>
<faceLibParas>
<key><!-- req, xs: integer --></key>
<name><!-- req, xs:string --></name>
<descripInfo><!-- dep, xs:string --></descripInfo>
<lock><!-- req, xs: integer --></lock>
</faceLibParas>
//…Repeat <faceLibParas > Structure
</faceLibParasList>
```

Test cases

GET /CGI/Smart/FaceLib/Manage

Request XML: none

Response XML: <FaceLibParas>

```
<?xml version="1.0" encoding="UTF-8"?>
<faceLibInfo>
<facePicModelNum>100</facePicModelNum>
<facePicNum>500</facePicNum>
<faceLibParasList>
<faceLibParas>
<key>2</key>
<name> R&D library</name>
<descripInfo> R&D staff library</descripInfo>
<lock>1</lock>
</faceLibParas>
…
</faceLibParasList>
</faceLibInfo>
```

2.7.48 /CGI/Smart/Import/FaceLib/<Key>/SessionId/<ID>/Access/<Access>/Password/<Password>

/CGI/Smart/Import/FaceLib/<Key>/SessionId/<ID>/Access/<Access>/Password/<Password> **General Resource v2.0**	
PUT	
Description	Import face library
Query	**None**
Inbound Data	**File content**
Success Return	**<ResponseStatus>**

Explanations on protocol: Import of face library **Explanations of parameters:** <Key> key value of face library <sessionId> client side and equipment interaction ID, refer to Schedule 1 <Access> means random information, for calibration use, 32 bits <PassWord> Import password, encrypted transmission, 16 bits

Test cases

PUT /CGI/Smart/Import/FaceLib/123/SessionId/456/Access/94AAABB419A9820DC171B43240CEEF41/Password/T6g05arqzu4=

Request XML: none

Response XML: <ResponseStatus>

2.7.49 /CGI/Smart/StartExport/FaceLib/<Key>/SessionId/<ID>/File/<FileName>/Access/<Access>/Password/<Password>

/CGI/Smart/StartExport/FaceLib/<Key>/SessionId/<ID>/File/<FileName>/Access/<Access>/Password/<Password> **General Resource v2.0**	
PUT	
Description	Export face library, request of starting export
Query	**None**
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: Export face library **Explanations of parameters:** <Key> key value of face library <sessionId> client side and equipment interaction ID, refer to Schedule 1 <FileName> Export filename, 128 bits <Access> means random information, for calibration use, 32 bits <PassWord> Export password, encrypted transmission, 16 bits	

Test cases

PUT /CGI/Smart/StartExport/FaceLib/123/SessionId/456/File/0.jpg/Access/94AAABB419A9820DC171B43240CEEF41/Password/T6g05arqzu4=

Request XML: none

Response XML: <ResponseStatus>

2.7.50 /CGI/Smart/FaceLib/SessionId/<ID>/Progress

/CGI/Smart/FaceLib/SessionId/<ID>/Progress **General Resource v2.0**	
GET	
Description	Import/export face library progress
Query	**None**
Inbound Data	**None**
Success Return	**<Progress>**

Explanations on protocol: Progress of importing/exporting face library **Explanations of parameters:** URL: <sessionId> client side and equipment interaction ID, refer to Schedule 1 Reply xml: <state> State; 0-Not imported/exported; 1-Import/export in progress; 2-Import/export succeeds; 3-Export/import fails <pro> Progress, 0-100

Progress XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state><!—req,sx:integer--></state>
<pro><!—req,sx:integer--></pro>
</progress>
```

Test cases

GET /CGI/Smart/FaceLib /SessionId/123/Progress

Response XML: <Progress>

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state>1</state>
<pro>50</pro>
</progress>
```

2.7.51 /CGI/Smart/FaceLib/<Key>/SyncToIpc/State

/CGI/Smart/FaceLib/<key>/SyncToIpc/State **General Resource v2.0**	
GET	
Description	Status of synchronizing face library to frontend
Query	**None**
Inbound Data	**None**
Success Return	**<SyncState>**
Explanations on protocol: Acquire status of synchronizing face library to frontend **Explanations of parameters:** <channel> Channel <state> Status; 0: Unsynchronized; 1: Synchronization in progress; 2: Synchronization succeeds; 3: Synchronization fails; 4: To be synchronized <progress> Progress percentage <successdCnt> Success count <failedCnt> Failure count	

SyncPara XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<syncState version="2.0">
<elementList>
<element>
<channel><!—req,sx:integer--></channel>
<state><!—dep,sx: integer--></state>
<progress><!—dep,sx: integer--></progress>
<successdCnt><!—dep,sx: integer--></successdCnt>
<failedCnt><!—dep,sx: integer--></failedCnt>
</element>
…
</elementList >
</syncState>
```

Test cases
GET /CGI/Smart/FaceLib/xxxx/SyncToIpc/State
Request XML: none
Response XML: <SyncState>

```
<?xml version="2.0" encoding="UTF-8"?>
<syncState version="2.0">
<elementList>
<element>
<channel>1</channel>
<state>0</state>
<progress>50</progress>
<successdCnt>5</successdCnt>
<failedCnt>0</failedCnt>
</element>
…
</elementList >
</syncState>
```

2.7.52 /CGI/Smart/FaceLib/<Key>/SyncToIpc/Cmd

/CGI/Smart/FaceLib/<key>/SyncToIpc/Cmd **General Resource v2.0**	
PUT	
Description	Synchronize face library to frontend
Query	**None**
Inbound Data	**<SyncCmd>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Synchronize face library to frontend and acquire status. **Explanations of parameters:** <channel> Channel <cmd> Command; start: 20; stop: 21; delete: 22	

SyncPara XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<syncCmd version="2.0">
<elementList>
<element>
<channel><!—req,sx:integer--></channel>
<cmd><!—dep,sx: integer--></cmd>
</element>
…
</elementList>
</syncCmd>
```

Test cases
PUT /CGI/Smart/FaceLib/xxxx/SyncToIpc/Cmd
Request XML: <SyncCmd>
Response XML: <ResponseStatus>

```
<?xml version="2.0" encoding="UTF-8"?>
<syncCmd version="2.0">
<elementList>
<element>
<channel>1</channel>
<cmd>20</cmd>
</element>
…
</elementList >
```

</syncCmd>

2.7.53/CGI/Smart/Import/FacePic

/CGI/Smart/Import/FacePic **General Resource v2.0**	
PUT	
Description	Add face picture, import picture firstly
Query	**None**
Inbound Data	**File content**
Success Return	**<ResponseStatus>**
Explanations on protocol: Query by picture and analyze the face in group photo **Explanations of parameters:** None	

Test cases
PUT /CGI/Smart/Import/FacePic
Request XML: none
Response XML: <ResponseStatus>

2.7.54 /CGI/Smart/FacePic/<Key>/Manage

/CGI/Smart/FacePic/<Key>/Manage	
POST	
Description	Add face picture, import picture firstly
Query	None
Inbound Data	**<FacePicParas>**
Success Return	**<FacePicResult>**
PUT	
Description	Set face parameters
Query	None
Inbound Data	**<FacePicParas>**
Success Return	**<ResponseStatus>**
DELETE	
Description	Delete face
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: Acquire, set, add and delete face parameters. **Explanations on key parameters:** URL <facePicKey> key value of face, faceKey=0: Add face; faceKey>0: Modify face Request xml <libKey> key value of face library <checkCode> File check code; valid when faceKey=0, for calibrating face picture; no calibration needed when transmitted file is null <model> Whether modeling; 0-Not establish model; 1-Establish model; send 1 during single import; send 0 during batch import <name> Name, 64 bits at most <sex> Gender; 0-Unknown; 1-Male; 2-Female <birthday> Birthday; format: 2018-07-24, 16 bits at most <nation> Nationality, as per national standard code <province> Native place, province, as per code of national administrative division; 0 means unknown	

<city> Native place, city, as per code of national administrative division; 0 means unknown
<certType> Certificate type; 0-Unknown; 1-ID card; 2-Certificate of officer; 3-Passport; 4-Staff No.
<certNum> Certificate No., 64 bits at most
<facePath> Path; upload upload.jpg or upload.png to add path, or transmit the file name to copy the path
<country> Country, as per national and local ISO 3166-1 code table (see figure)
<address> Address, 64 bits at most
<company> Company name, 64 bits at most
Response xml
<key> key value of face library, responded when adding value.

FaceParas XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<facePicParas>
<libKey><!-- req, xs: integer --></libKey>
<checkCode><!-- req, xs:string --></checkCode>
<model><!-- req, xs: integer --></model>
<name><!-- req, xs:string --></name>
<sex><!-- req, xs: integer --></sex>
<birthday><!-- req, xs: string--></birthday>
<nation><!-- req, xs: integer --></nation>
<province><!-- req, xs: integer --></province>
<city><!-- req, xs: integer --></city>
<certType ><!-- req, xs: integer --></certType>
<certNum ><!-- req, xs: string --></certNum>
<facePath><!-- req, xs: string --></facePath>
<country><!-- req, xs: integer --></country>
<address ><!-- req, xs: string --></address>
<company ><!-- req, xs: string --></company>
</facePicParas>
```

ResponseResult XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<facePicResult>
<key><!-- req, xs: integer --></key>
</facePicResult>
```

Test cases

POST /CGI/Smart/FacePic/0/Manage

Request XML:

```
<?xml version="1.0" encoding="UTF-8"?>
<facePicParas>
<libKey>2</libKey>
<checkCode>120142</checkCode>
<model>1</model>
<name> Zhang San</name>
<sex>1</sex>
<birthday>2017-10-19</birthday>
<nation>66</nation>
<place>33</place>
<certType>1</certType>
<certNum>341886199212171516</certNum>
<facePath>P_01_50.jpg</facePath>
<country >0</country>
<address >huake</address>
<company >Tiandy</company>
</facePicParas>
```

Response XML: <FaceParas>

```
<?xml version="1.0" encoding="UTF-8"?>
<facePicResult>
<key>456</key>
</facePicResult>
```

PUT /CGI/Smart/FacePic/1/Manage

Request XML: <FacePicParas>

Response XML: <ResponseStatus>

DELETE /CGI/Smart/FacePic/1/Manage

Request XML: none

Response XML: <ResponseStatus>

2.7.55 /CGI/Smart/FacePic/Query

/CGI/Smart/FacePic/Query	**General Resource v2.0**
POST	
Description	Query face information
Query	**None**
Inbound Data	**<FacePicQueryCondition>**
Success Return	**<FacePicQueryResult>**

Explanations on protocol:

Query face data

Explanations of parameters:

Query xml:

<pageNo> Page, pageNo >=0

<pageSize> Item per page, pageSize>=0

<libKey> key value of face library, LibKey>=0, No retrieval -1

<model> Modeling status; 0-Neglected; 1-Modeling succeeds; 2-Modeling fails; 3-No modeling

<name> Name, 64 bits at most, support query of wildcard characters, such as Zhang *, Li Si *, Wang * Wu, * Liu, no retrieval "####"

<sex> Gender; 0-Neglected; 1-Male; 2-Female; no retrieval -1

<birthDayStart> Start time of birthday, 2017-10-19, 16 bits at most

<birthDayEnd> End time of birthday, 2017-10-19, 16 bits at most

<nation> Nationality, as per national standard code, no retrieval-1

<province> Native place, province, as per code of national administrative division; 0 means unknown; no retrieval-1

<city> Native place, city, as per code of national administrative division; 0 means unknown; no retrieval-1

<certType> Certificate type; 0-Unknown; 1-ID card; 2-Certificate of officer; 3-Passport; 4-Staff No; no retrieval-1

<certNum> Certificate No., 64 bits at most, no retrieval "####"

<country> Country, as per national and local ISO 3166-1 code table (see figure); no retrieval-1

<address> Address, 64 bits at most, no retrieval "####"

<company> Company name, 64 bits at most, no retrieval "####"

<access> Random information, for calibration use; 32 bits

<password> Library password, encryption supports 16 bits at most

Return statusCode:9 if password authentication fails
statusString:"Securitycode Failed"
subStatusCode:"CodeError"

Reply xml:

<totalCount> Total count

<pageSize> Total count of current page

<index> Page No.

<libKey> key value of face library

<faceKey> Face key value

<facePath> http path

<downloadfacePath> File download path (encrypted, avoid digest authentication to satisfy CGI)
<model> Whether modeling; 0-Not establish model; 1-Establish model; send 1 during single import; send 0 during batch import
<name> Name, 64 bits at most
<sex> Gender; 0-Unknown; 1-Male; 2-Female
<birthday> Birthday; format: 2018-07-24, 16 bits at most
<province> Native place, province, as per code of national administrative division; 0 means unknown
<city> Native place, city, as per code of national administrative division; 0 means unknown
<place> Native place, higher 16 digits means province, lower 16 digits means city; as per code of national administrative division; 0 means unknown
<certType> Certificate type; 0-Unknown; 1-ID card; 2-Certificate of officer; 3-Passport; 4-Staff No.
<certNum> Certificate No., 64 bits at most
<country> Country, as per national and local ISO 3166-1 code table (see figure)
<address> Address, 64 bits at most
<company> Company name, 64 bits at most

FacePicQueryCondition XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<facePicQueryCondition version="1.0">
<pageNo><!—req,sx:integer--></pageNo>
<pageSize><!—req,sx:integer--></pageSize>
<faceKey><!—req,sx: integer--></faceKey>
<model><!—req,sx:integer--></model>
<name><!—req,sx:string--></name>
<sex><!—req,sx:integer--></sex>
<timeSpanList>
<timeSpan>
<birthdayStart><!-- req, xs: datetime --></birthdayStart>
<birthdayEnd><!-- req, xs: datetime --></birthdayEnd>
</timeSpan>
</timeSpanList>
<nation><!—req,sx:integer--></nation>
<province><!-- req, xs: integer --></province>
<city><!-- req, xs: integer --></city>
<certType><!—req,sx:integer--></certType>
<certNum><!—req,sx: string--></certNum>
<country ><!-- req, xs: integer --></country>
<address ><!-- req, xs: string --></address>
<company ><!-- req, xs: string --></company>
</facePicQueryCondition>
```

FacePicQueryResult XML Block

```
<facePicQueryResult version="2.0">
<totalCount><!—req,sx:integer--></totalCount>
<pageSize><!—req,sx:integer--></pageSize>
<matchList>
<matchElement>
<index><!—req,sx:integer--></index>
<libKey><!—req,sx: integer--></libKey>
<faceKey><!—req,sx: integer--></faceKey>
<facePath><!—req,sx: string--></facePath>
<downloadfacePath><!—req,sx: string--></downloadfacePath>
<model><!—req,sx:integer--></model>
<name><!—req,sx:integer--></name>
<sex><!—req,sx:integer--></sex>
<birthday><!-- req, xs: datetime --></birthday>
<nation><!—req,sx:integer--></nation>
<province><!-- req, xs: integer --></province>
<city><!-- req, xs: integer --></city>
```

```
<certType><!—req,sx:integer--></certType>
<certNum><!—dep,sx: string--></certNum>
</matchElement>
</matchList>
<country ><!-- req, xs: integer --></country>
<address ><!-- req, xs: string --></address>
<company ><!-- req, xs: string --></company>
</facePicQueryResult>
```

Test cases

POST /CGI/Smart/FacePic/Query

Request XML: <facePicQueryCondition> As follows

```
<?xml version="1.0" encoding="UTF-8"?>
<facePicQueryCondition version="1.0">
<pageNo>1</pageNo>
<pageSize>12</pageSize>
<libKey>123</libKey>
<faceKey>456</faceKey>
<model>1</model>
<name> Zhang San</name>
<sex>1</sex>
<timeSpanList>
<timeSpan>
<birthdayStart>1991-2-1</birthdayStart>
<birthdayEnd>2001-2-1</birthdayEnd>
</timeSpan>
</timeSpanList>
<nation>55</nation>
<province>66</province>
<city>77</city>
<certType>1</certType>
<certNum>341886199212171516</certNum>
<access>94AAABB419A9820DC171B43240CEEF41</access>
<password>/T6g05arqzu4=</password>
<country >0</country>
<address >huake</address>
<company >Tiandy</company>
</facePicQueryCondition>
```

Response XML: <facePicQueryResult>

```
<facePicQueryResult version="2.0">
<totalCount>120</totalCount>
<pageNo>1</pageNo>
<pageSize>12</pageSize>
<matchList>
<matchElement>
<index>1</index>
<libKey>123</libKey>
<faceKey>456</faceKey>
<facePath>XXXXXXXX</facePath>
<downloadfacePath>XXXXXXXX</downloadfacePath>
<model>1</model>
<name> Zhang San</name>
<sex>1</sex>
<birthday>1991-2-1</birthday>
<nation>55</nation>
<province>66</province>
<city>77</city>
<certType>1</certType>
```

```
<certNum>341886199212171516</certNum>
</matchElement>
…
</matchList>
<country >0</country>
<address >huake</address>
<company >Tiandy</company>
</facePicQueryResult>
```

2.7.56/CGI/Smart/Import/AnalysisImage/SessionId/<ID>

/CGI/Smart/Import/AnalysisImage/SessionId/<ID> **General Resource v2.0**	
PUT	
Description	Query by picture and analyze the face in group photo
Query	**None**
Inbound Data	**File content**
Success Return	**<ResponseStatus>**
Explanations on protocol: Query by picture and analyze the face in group photo **Explanations of parameters:** None	

Test cases
PUT /CGI/Smart/Import/AnalysisImage/SessionId/1
Request XML: none
Response XML: <ResponseStatus>

2.7.57/CGI/Smart/Query/AnalysisImage/SessionId/<ID>

/CGI/Smart/FacePic/AnalysisImage/SessionId/<ID> **General Resource v2.0**	
POST	
Description	Query analyzed face
Query	**None**
Inbound Data	**<FaceCondition>**
Success Return	**<FaceResult>**
Explanations on protocol: Acquire analyzed face **Explanations of parameters:** URL <sessionId> client side and equipment interaction ID, refer to Schedule 1 Query xml <pageNo> Page, pageNo >=0 <pageSize> Item per page, pageSize>=0 Response xml <faceNum> Total file number (-2=Error handling; -1-Handling in progress; 0-Finished, no face; >0Finished, face found) <faceName> Picture name <faceSrc> Picture path	

FaceCondition XML Block

```
<faceCondition version="1.0">
<pageNo><!—req,sx: integer--></pageNo>
<pageSize><!—req,sx: integer--></pageSize>
</faceCondition>
```

FaceResult XML Block

```
<faceResult version="1.0">
<faceNum><!—req,sx: integer--></faceNum>
<faceInfoList>
<faceInfo>
<faceName><!—req,sx:string--></faceName>
<faceSrc><!—req,sx:string--></faceSrc>
</faceInfo>
…
</faceInfoList>
</faceResult>
```

POST /CGI/Smart/Query/AnalysisImage/SessionId/<ID>
Request XML: <FaceCondition>

```
<faceCondition version="1.0">
<pageNo>1</pageNo>
<pageSize>20</pageSize>
</faceCondition>
```

Response XML: <FaceResult>

```
<faceResult version="1.0">
<faceNum>20</faceNum>
<faceInfoList>
<faceInfo>
<faceName>name0.jpg</faceName>
<faceSrc>/tmp/face/face/name0.jpg</faceSrc>
</faceInfo>
…
</faceInfoList>
</faceResult>
```

2.7.58 /CGI/Smart/FacePic/QueryByPic/Condition

/CGI/Smart/FacePic/QueryByPic/Condition **General Resource v2.0**	
PUT	
Description	Search by picture, send picture
Query	**None**
Inbound Data	**<Condition>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Search and send query picture by base map of face **Explanations of parameters:** Query xml: <sessionId> Interaction ID between client and device <libKey> key value of face library, LibKey>=0 <similarity> Similarity <faceName> Name of analyzed face picture	

FaceQueryPicture XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<condition version="1.0">
<sessionId><!—req,sx:integer--></sessionId>
<libKey><!—req,sx:integer--></ libKey>
<similarity><!—req,sx:integer--></similarity>
<faceName><!—req,sx:string--></faceName>
</condition>
```

Test cases
PUT /CGI/Smart/FacePic/QueryByPic/Condition
Request XML: <Condition> As follows

```
<?xml version="1.0" encoding="UTF-8"?>
<condition version="1.0">
<sessionId>1</sessionId>
<libKey>123</libKey>
<similarity>50</similarity>
<faceName>1.jpg</faceName>
</condition>
```

2.7.59 /CGI/Smart/FacePic/QueryByPic/Result

/CGI/Smart/Face/QueryByPic/Result **General Resource v2.0**	
POST	
Description	Search face information by picture
Query	**None**
Inbound Data	**<FacePicQueryCondition>**
Success Return	**<FacePicQueryResult>**

Explanations on protocol:
Query face data by picture
Explanations of parameters:
Query xml:
<sessionId> Interaction ID between client and device
<libKey> key value of face library, LibKey>=0
<similarity> Similarity
<faceName> Name of analyzed face picture
<pageNo> Page, pageNo >=0
<pageSize> Item per page, pageSize>=0
<access> Random information, for calibration use; 32 bits
<password> Library password, max. length of encryption is 16 bits
Return statusCode:9 if password authentication fails
statusString:"Securitycode Failed"
subStatusCode:"CodeError"

Reply xml:
<sessionId> Interaction ID between client and device
<totalCount> Total count
<pageSize> Total count of current page
<index> Page No.
<libKey> key value of face library
<faceKey> Face key value, faceKey=0 if it is put, means adding of face; faceKey>0 means face modification
<model> Whether modeling; 0-Not establish model; 1-Establish model; send 1 during single import; send 0 during batch import
<name> Name, 64 bits at most
<sex> Gender; 0-Unknown; 1-Male; 2-Female
<birthday> Birthday; format: 2018-07-24, 16 bits at most
<nation> Nationality, as per national standard code
<province> Native place, province, as per code of national administrative division; 0 means unknown
<city> Native place, city, as per code of national administrative division; 0 means unknown
<certType> Certificate type; 0-Unknown; 1-ID card; 2-Certificate of officer;
<certNum> Certificate No., 64 bits at most
<country> Country, as per national and local ISO 3166-1 code table (see figure)
<address> Address, 64 bits at most
<company> Company name, 64 bits at most
<similarity> Similarity

FacePicQueryCondition XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<facePicQueryCondition version="1.0">
<sessionId><!—req,sx:integer--></sessionId>
<libKey><!—req,sx:integer--></ libKey>
<similarity><!—req,sx:integer--></similarity>
<faceName><!—req,sx:string--></faceName>
<pageNo><!—req,sx:integer--></pageNo>
<pageSize><!—req,sx:integer--></pageSize>
<access><!—req,sx:string--></access>
<password><!—req,sx:string--></password>

</facePicQueryCondition>
```

FacePicQueryResult XML Block

```
<facePicQueryResult version="2.0">
<sessionId><!—req,sx:integer--></sessionId>
<totalCount><!—req,sx:integer--></totalCount>
<pageSize><!—req,sx:integer--></pageSize>
<matchList>
<matchElement>
<index><!—req,sx:integer--></index>
<libKey><!—req,sx: integer--></libKey>
<faceKey><!—req,sx: integer--></faceKey>
<fileType><!—req,sx:integer--></fileType>
<model><!—req,sx:integer--></model>
<name><!—req,sx:integer--></name>
<sex><!—req,sx:integer--></sex>
<timeSpanList>
<timeSpan>
<birthdayt><!-- req, xs: datetime --></birthday>
</timeSpan>
</timeSpanList>
<nation><!—req,sx:integer--></nation>
<province><!—req,sx:integer--></province>
<city><!—req,sx:integer--></city>
<certType><!—req,sx:integer--></certType>
<certNum><!—dep,sx: string--></certNum>
</matchElement>
</matchList>
<country ><!-- req, xs: integer --></country>
<address ><!-- req, xs: string --></address>
<company ><!-- req, xs: string --></company>
<similarity><!—req,sx:integer--></similarity>
</facePicQueryResult>
```

Test cases

POST /CGI/Smart/FacePic/QueryByPic/Result

Request XML: <facePicQueryCondition> As follows

```
<?xml version="1.0" encoding="UTF-8"?>
<facePicQueryCondition version="1.0">
<sessionId>1</sessionId>
<libKey>456</libKey>
<similarity>50</similarity>
<faceName>1.jpg</faceName>
<pageNo>1</pageNo>
<pageSize>12</pageSize>
<access>94AAABB419A9820DC171B43240CEEF41</access>
<password>/T6g05arqzu4=</password>
</facePicQueryCondition>
```

Response XML: <facePicQueryResult>

```
<facePicQueryResult version="2.0">
<sessionId>1</sessionId>
<totalCount>120</totalCount>
<pageSize>12</pageSize>
<matchList>
<matchElement>
<index>1</index>
<libKey>123</libKey>
<faceKey>456</faceKey>
<fileType>0</fileType>
<model>1</model>
<name> Zhang San</name>
<sex>1</sex>
<birthday>1991-2-1</birthday>
<nation>55</nation>
<province>66</province>
<city>77</city>
<certType>1</certType>
<certNum>341886199212171516</certNum>
<similarity>50</similarity>
</matchElement>
…
</matchList>
<country >0</country>
<address >huake</address>
<company >Tiandy</company>
</facePicQueryResult>
```

2.7.60/CGI/Smart/Export/FacePic/<Key>/SessionId/<ID>/File/<FileName>

/CGI/Smart/Export/FacePic/<Key>/SessionId/<ID>/File/<FileName> **General Resource v2.0**	
GET	
Description	Export face picture
Query	**None**
Inbound Data	**None**
Success Return	**File content**
Explanations on protocol: Export face picture **Explanations of parameters:** <key> Face key value <sessionId> client side and equipment interaction ID, refer to Schedule 1 <fileName> File name	

Test cases

GET /CGI/Smart/Export/FacePic/123/SessionId/456/File/0.jpg

Request XML: none

Response XML: File contents

2.7.61 /CGI/Smart/SessionId/<ID>/Release

/CGI/Smart/SessionId/<ID>/Release **General Resource v2.0**	
PUT	
Description	Release cache data of affair
Query	**None**
Inbound Data	**None**

Success Return	<ResponseStatus>
Explanations on protocol: Release affair cache **Explanations of parameters:** <sessionId> Interaction ID of client and device, see attached Table 1	

Test cases

PUT /CGI/Smart/SessionId/0/Release

Request XML: none

Response XML: <ResponseStatus>

2.7.62 /CGI/Smart/FaceCount/TargetAlm

/CGI/Smart/FaceCount/TargetAlm	
POST	
Description	Statistics of face and target alarm
Query	None
Inbound Data	**<TargetAlmReq>**
Success Return	**<TargetAlmRsp>**
Explanations on protocol: Statistics of target alarm **Explanations on key parameters:** Request: <sort> Sort type; 1: Positive; 2: Reverse <libKey> Library key, unique <accuracy> Accuracy; 0: Day; 1: Week; 2: Month; 3: Year <beginTime> Begin time <endTime> End time <page> Page, the first page is 0 <perPageCnt> Count per page Reply: <totalCnt> Total count, calculate the total pages <countTargetAlmMsgList> <countTargetAlmMsg> <almCnt> Total alarm count <libKey> Key of face library <faceKey> Key of face library <picFileName> Base map path and name, 63 bits <name> Name, 63 bits <sex> Gender; 0: Unknown; 1: Male; 2: Female <nation> Nationality; 0: Unknown; 10000: Minority <birthday> Birthday: 1970-1-1 number of seconds <certType> Certificate type; 0-Unknown; 1- Certificate of officer; 2-ID card <certNum> Certificate No., 63 bits <country> Country, as per national and local ISO 3166-1 code table (see figure) <address> Address, 64 bits at most <company> Company name, 64 bits at most	

TargetAlmReq XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<targetAlmReq>
<sort><!-- req, xs: integer --></sort>
<libKeyList>
<libKey><!-- req, xs: long long --></libKey>
// Repeat <libKey>
</libKeyList>
<accuracy><!-- req, xs: integer --></accuracy>
<beginTime><!-- req, xs: datetime --></beginTime>
<endTime><!-- req, xs: datetime --></endTime>
```

```
<page><!-- req, xs: integer --></page>
<perPageCnt><!-- req, xs: integer --></perPageCnt>
</targetAlmReq>
```

TargetAlmRsp XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<targetAlmRsp>
<totalCnt><!-- req, xs: integer --></totalCnt>
<countTargetAlmMsgList>
<countTargetAlmMsg>
<almCnt><!-- req, xs: integer --></almCnt>
<libKey><!-- req, xs: long long --></libKey>
<faceKey><!-- req, xs: long long --></faceKey>
<picFileName><!-- req, xs:string --></picFileName>
<name><!-- req, xs:string --></name>
<sex><!-- req, xs: integer --></sex>
<nation><!-- req, xs: integer --></nation>
<birthday><!-- req, xs: datetime --></birthday>
<certType><!-- req, xs: integer --></certType>
<certNum><!-- req, xs:string --></certNum>
<facePicQueryResult version="2.0">
<sessionId><!—req,sx:integer--></sessionId>
<totalCount><!—req,sx:integer--></totalCount>
<pageSize><!—req,sx:integer--></pageSize>
<matchList>
<matchElement>
<index><!—req,sx:integer--></index>
<libKey><!—req,sx: integer--></libKey>
<faceKey><!—req,sx: integer--></faceKey>
<fileType><!—req,sx:integer--></fileType>
<model><!—req,sx:integer--></model>
<name><!—req,sx:integer--></name>
<sex><!—req,sx:integer--></sex>
<timeSpanList>
<timeSpan>
<birthdayt><!-- req, xs: datetime --></birthday>
</timeSpan>
</timeSpanList>
<nation><!—req,sx:integer--></nation>
<province><!—req,sx:integer--></province>
<city><!—req,sx:integer--></city>
<certType><!—req,sx:integer--></certType>
<certNum><!—dep,sx: string--></certNum>
</matchElement>
</matchList>
<country><!-- req, xs: integer --></country>
<address ><!-- req, xs: string --></address>
<company ><!-- req, xs: string --></company>
</countTargetAlmMsg>
// Repeat countTargetAlmMsg
</countTargetAlmMsgList>
</targetAlmRsp>
```

Test cases

POST /CGI/Smart/FaceCount/TargetAlm

Request XML: TargetAlmReq>

Response XML: <TargetAlmRsp>

```
<?xml version="1.0" encoding="UTF-8"?>
<targetAlmReq>
<sort>1</sort>
<libKeyList>
<libKey>1234567890</libKey>
….
<libKey>9876543210</libKey>
</libKeyList>
<accuracy>1</accuracy>
<beginTime>2018-07-10T12:00:00Z</beginTime>
<endTime>2018-07-10T13:00:00Z</endTime>
<page>0</page>
<perPageCnt>10</perPageCnt>
</targetAlmReq>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<targetAlmRsp>
<totalCnt>5000</totalCnt>
<countTargetAlmMsgList>
<countTargetAlmMsg>
<almCnt>155</almCnt>
<libKey>1234567890</libKey>
<faceKey>1111111111</faceKey>
<picFileName>/tmp/face/0.jpg</picFileName>
<name> Zhang San</name>
<sex>1</sex>
<nation>55</nation>
<birthday>2018-07-10T12:00:00Z</birthday>
<certType>2</certType>
<certNum>120105196407051154</certNum>
<country >0</country>
<address >huake</address>
<company >Tiandy</company>
</countTargetAlmMsg>
<countTargetAlmMsg>
…
</countTargetAlmMsg>
</countTargetAlmMsgList>
</targetAlmRsp>
```

2.7.63/CGI/Smart/FaceCount/TargetMsg

/CGI/Smart/FaceCount/TargetMsg	
POST	
Description	Details of face statistics and target alarm
Query	None
Inbound Data	**<TargetMsgReq>**
Success Return	**<TargetMsgRsp>**
Explanations on protocol: This protocol is prepared for query of statistics of target alarms. **Explanations on key parameters:** Request: <faceKey> Key of face library <beginTime> Begin time <endTime> End time <page> Page, the first page is 0 <perPageCnt> Count per page	

```
Reply:
<targetAlmMsgList>
<targetAlmMsg>
<similarityDegree> Similarity
<picFileName> Picture path and name, 63 bits
<beginTime> Begin time
<endTime> End time, not needed in interface
<channel> Channel
```

TargetMsgReq XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<targetMsgReq>
<faceKey><!-- req, xs: long long --></faceKey>
<beginTime><!-- req, xs: datetime --></beginTime>
<endTime><!-- req, xs: datetime --></endTime>
<page><!-- req, xs: integer --></page>
<perPageCnt><!-- req, xs: integer --></perPageCnt>
</targetMsgReq>
```

TargetMsgRsp XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<targetMsgRsp>
<targetAlmMsgList>
<targetAlmMsg>
<similarityDegree><!-- req, xs: integer --></similarityDegree>
<picFileName><!-- req, xs:string --></picFileName>
<beginTime><!-- req, xs: datetime --></beginTime>
<endTime><!-- req, xs: datetime --></endTime>
<channel><!-- req, xs: integer --></channel>
</targetAlmMsg>
// Repeat targetAlmMsg
</targetAlmMsgList>
</targetMsgRsp>
```

Test cases

POST /CGI/Smart/FaceCount/TargetMsg

Request XML: <TargetMsgReq>

Response XML: <TargetMsgRsp>

```
<?xml version="1.0" encoding="UTF-8"?>
<targetMsgReq>
<faceKey>1234567890</faceKey>
<beginTime>2018-07-10T12:00:00Z</beginTime>
<endTime>2018-07-10T13:00:00Z</endTime>
<page>0</page>
<perPageCnt>10</perPageCnt>
</targetMsgReq>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<TargetMsgRsp>
<targetAlmMsgList>
<targetAlmMsg>
<similarityDegree>95</similarityDegree>
<picFileName>/tmp/face/0.jpg</picFileName>
<beginTime>2018-07-10T12:00:00Z</beginTime>
<endTime>2018-07-10T12:00:10Z</endTime>
<channel>1</channel>
</targetAlmMsg>
<targetAlmMsg>
…
```

```
</targetAlmMsg>
</targetAlmMsgList>
</TargetMsgRsp>
```

2.7.64 /CGI/Smart/FaceCount/ChannelAlm

/CGI/Smart/FaceCount/ChannelAlm	
POST	
Description	Alarm statistics of face statistics channel
Query	None
Inbound Data	**<ChannelAlmReq>**
Success Return	**<ChannelAlmRsp>**

Explanations on protocol:
This protocol is prepared for statistics of channel alarms
Explanations on key parameters:
Request:
<channelList>
<channel>
<eventType> Event type; 0: All; 1: Face; 2: Comparison alarm; 3: Stranger alarm; 4: Frequency alarm; 5: Detention alarm
<accuracy> Accuracy; 0: Day; 1: Week; 2: Month; 3: Year
<beginTime> Begin time format: (Y-M-D T Hour: Minute: Second Z), for example, 2018-07-10T12:00:00Z
<endTime> End time format (Y-M-D T Hour: Minute: Second Z), for example, 2018-07-10T23:59:59Z
Reply：
<channelAlmList>
<channelAlm>
<channel> Channel
<almCnt> Alarm count

ChnAlmReq XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<channelAlmReq>
<channelList>
<channel><!-- req, xs:integer --></channel>
// Repeat <channel>
</channelList>
<eventType><!-- req, xs: integer --></eventType>
<accuracy><!-- req, xs: integer --></accuracy>
<beginTime><!-- req, xs: datetime --></beginTime>
<endTime><!-- req, xs: datetime --></endTime>
</channelAlmReq>
```

ChnAlmRsp XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<channelAlmRsp>
<channelAlmList>
<channelAlm>
<channel><!-- req, xs: integer --></channel>
<almCnt><!-- req, xs: integer --></almCnt>
</channelAlm>
// Repeat channelAlm
</channelAlmList>
```

```
</chanelAlmRsp>
```

Test cases
POST /CGI/Smart/FaceCount/ChannelAlm/
Request XML: <ChannelAlmReq>
Response XML: <ChannelAlmRsp>

```
<?xml version="1.0" encoding="UTF-8"?>
<channelAlmReq>
<channelList>
<channel>1</channel>
…
<channel>5</channel>
</channelList>
<eventType>2</eventType>
<accuracy>1</accuracy>
<beginTime>2018-07-10T12:00:00Z</beginTime>
<endTime>2018-07-10T13:00:00Z</endTime>
</channelAlmReq>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<channelAlmRsp >
<channelAlmList>
<channelAlm>
<channel>1</channel>
<almCnt>152</almCnt>
</channelAlm>
…
<channelAlm>
<channel>5</channel>
<almCnt>75</almCnt>
</channelAlm>
</channelAlmList>
</channelAlmRsp>
```

2.7.65 /CGI/Smart/FaceDiscern/channels/<ID>/capabilities

/CGI/Smart/FaceDiscern/channels/<ID>/capabilities	
GET	
Description	Acquire frontend face recognition capability set of single channel
Query	None
Inbound Data	None
Success Return	< FaceDiscernCap>
Explanations on protocol: This protocol is prepared for acquiring frontend face recognition capability set of single channel **Explanations on key parameters:** <support> True: Supported; false: Not supported	

FaceDiscernCap XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<FaceDiscernCap>
<support><!—req,xs:Boolean--></support>
</FaceDiscernCap>
```

Test cases
GET /CGI/Smart/FaceDiscern/channels/4/capabilities
Request XML： none
Response XML: <FaceDiscernCap>

```
<?xml version="1.0" encoding="UTF-8"?>
<FaceDiscernCap>
<support>true</support>
</FaceDiscernCap>
```

2.7.66 /CGI/Smart/Property/Dev/<ID>/Channels/<ID>/Scene/<ID>/

/CGI/Smart/Property/Dev/<ID>/Channels/<ID>/Scene/<ID>/	
GET	
Description	Acquire NVR performance
Query	None
Inbound Data	None
Success Return	<Property>

Explanations on protocol:
This protocol is prepared for acquiring the NVR performance. Dev: Device No., reserved, 0 as default; device type: 0 nvr 1 ipc.

Explanations on key parameters:
<total> Total device performance, 16 as default
<itemList>
<item>
<type> Type: 1. NVR face detection; 2. NVR face recognition; 3: IPC face detection; 4. IPC face recognition
<algtype> Algorithm type: Behavior: Behavior analysis; face: Face recognition; Human: Human detection; Pept: Oilfield monitoring; PeopleNumAlarm: People number error alarm; Audio: Audio diagnosis; Video: Video diagnosis; Group: Group; OnDuty: On-duty detection; person amount statistics, PlatLicense: Place recognition; ParkGuard: Park guard; IllegalPark: Illegal park; IntelliTrace: Intelligent traction; structurization: Structuration; Helmet: Helmet; Prctduty: Single interrogation/unattended; Sleep: Sleep; NewFight: New fight; GetUp: Get up; HeightLimit: Height limit; NewDuty: New duty; Stranded: Stranded; Alone: Alone; Delivergoods: Deliver goods; FaceMosaic: Face mosaic; ColorTrack: Color traction; Loitering: Loitering; AttendedBaggage: Attended baggage; UnattendedBaggage: Unattended baggage
<everyProperty> Performance of every circuit
<cnt> Enabling amount
<maxCnt> Max. enabling amount

Property XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<Property>
<total><!-- req, xs: integer --></total>
<itemList>
<item>
<type><!-- req, xs: integer --></type>
<algType>
   <!--req,xs:string"Behavior,Face,Human,Pept,Prctduty,Sleep,NewFight,GetUp,HeightLimit,N
         ewDuty,Stranded,Alone,Delivergoods,FaceMosaic,ColorTrack,Loitering,AttendedBag
         gage,UnattendedBaggage,PeopleNumAlarm,Audio,Video,Group,OnDuty,PlatLicense,
         Demographics,ParkGuard, IllegalPark, IntelliTrace" -->
</algType>
<everyProperty><!-- req, xs: integer --></everyProperty>
<cnt><!-- req, xs: integer --></cnt>
<maxCnt><!-- req, xs: integer --></maxCnt>
</item>
</itemList>
</Property>
```

Test cases
GET /CGI/Smart/Property/Dev/0
Request XML: none

Response XML: <Property>

```
<?xml version="1.0" encoding="UTF-8"?>
<Property>
<total>16</total>
<itemList>
<item>
<type>1</type>
<everyProperty>1</everyProperty>
<cnt>1</cnt>
</item>
<item>
<type>2</type>
<everyProperty>1</everyProperty>
<cnt>1</cnt>
</item>
</itemList>
</Property>
```

2.7.67 /CGI/Smart/AlertSoundCnt/Channels/<ID>

/CGI/Smart/AlertSoundCnt/Channels/<ID>	
GET	
Description	Acquire amount of new alarm sound
Query	None
Inbound Data	None
Success Return	<AlertSound>
Explanations on protocol: This protocol is prepared for acquiring the amount of new alarm sounds **Explanations on key parameters:** <total> Total number of sound record, max. value is 100 <sample> Amount of fixed audio, max. value is 100 <custom> Amount of customized audio (total amount of audio file – fixed audio amount) <tts> tts audio amount (total amount of audio file – fixed audio amount – customized audio amount) (frontend audio broadcast)	

Property XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<AlertSound>
<total><!-- req, xs: integer --></total>
<sample><!-- req, xs: integer --></sample>
<custom><!-- req, xs: integer --></custom>
<tts><!-- req, xs: integer --></tts>
</AlertSound>
```

Test cases

GET /CGI/Smart/AlertSoundCnt/Channels/1

Request XML： none

Response XML: <AlertSound>

```
<?xml version="1.0" encoding="UTF-8"?>
<AlertSound>
<total>5</total>
<sample>3</sample>
<custom>1</custom>
<tts>1</tts>
</AlertSound>
```

2.7.68 /CGI/Smart/IpcFaceLib/Manage/Channels/<ID>

/CGI/Smart/IpcFaceLib/Manage/Channels/<ID>

POST	
Description	Acquire parameters of frontend face recognition library
Query	None
Inbound Data	**<IpcFaceLibReq>**
Success Return	**<ipcFaceLibRspList>**

Explanations on protocol:
Acquire parameters of frontend face recognition library
Explanations on key parameters:
Request:
<type> Type; 0: NVR local; 1: Frontend (send 1 only)
<pageNo> Page (send 0)
<pageSize> Count per page (send 32)
Reply:
<pageNo> Page >=0
<index> Page No.>=0
<key> key value of face library
<name> Face library name, 64 bits at most
<threshold> Threshold >=0
<descripInfo> Description information, 64 bits at most
<alarmType> Deployment type; 0: No deployment; 1: Blacklist; 2: Black and white list; 3: Black and white list

IpcFaceLibReq XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<ipcFaceLibReq>
<type><!-- req, xs: integer --></type>
<pageNo><!-- req, xs: integer --></pageNo>
<pageSize><!-- req, xs:integer --></pageSize>
</ipcFaceLibReq>
```

IpcFaceLibRsp XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<ipcFaceLibRspList>
<ipcFaceLibRsp>
<pageNo><!-- req, xs: integer --></pageNo>
<index><!-- req, xs: integer --></index>
<key><!-- req, xs: integer --></key>
<name><!-- req, xs:string --></name>
<threshold><!-- req, xs: integer --></threshold>
<descripInfo><!-- req, xs:string --></descripInfo>
<alarmType><!-- req, xs: integer --></alarmType>
</ipcFaceLibRsp>
//…Repeat <ipcFaceLibRsp> Structure
</ipcFaceLibRspList>
```

Test cases

POST /CGI/Smart/IpcFaceLib/Manage/Channels/1

Request XML: <ipcFaceLibReq>

Response XML: <ipcFaceLibRspList>

```
<?xml version="1.0" encoding="UTF-8"?>
<ipcFaceLibReq>
<type>1</type>
<pageNo>0</pageNo>
<pageSize>32</pageSize>
</ipcFaceLibReq>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<ipcFaceLibRspList>
<ipcFaceLibRsp>
<pageNo>0</pageNo>
<index>0</index>
<key>2</key>
<name> R&D library</name>
<threshold>11</threshold>
<descripInfo> R&D staff library</descripInfo>
<alarmType>0</alarmType>
</ipcFaceLibRsp>
…
</ipcFaceLibRspList>
```

2.7.69 /CGI/Smart/Face/Reset/Model

/CGI/Smart/Face/Reset/Model	
PUT	
Description	Remodel face library
Query	None
Inbound Data	**<ResetFaceModel>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Remodel face library, reserve protocol parameters; send 1 to do remodeling completely; send 0 for libKey and faceKey **Explanations on key parameters:** <libKey> Face library key, 0: Invalid <faceKey> Face library key; 0: Invalid <resetOpt> Remodeling type; 1: Remodel all; 2: Designated faceKey; 3. Designated libKey	

ResetFaceModel XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<resetFaceModel>
<libKey><!-- req, xs: long long --></libKey>
<faceKey><!-- req, xs: long long --></faceKey>
<resetOpt><!-- req, xs:integer --></resetOpt>
</resetFaceModel>
```

Test cases

PUT /CGI/Smart/Face/Reset/Model

Request XML: <ResetFaceModel>

Response XML: <ResponseStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<resetFaceModel>
<libKey>0</libKey>
<faceKey>0</faceKey>
<resetOpt>1</resetOpt>
</resetFaceModel>
```

2.7.70/CGI/Smart/TargetPicture/channels/<ID>/Scene/<ID>

/CGI/Smart/TargetPicture/channels/<ID>/Scene/<ID> General Resource v2.0	
GET	
Description	Acquire target picture parameters
Query	None
Inbound Data	None

Success Return	**<TargetPicture>**
PUT	
Description	Set target picture parameters
Query	None
Inbound Data	**<TargetPicture>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of target picture parameters, helping client or IE query and set the target picture parameters via CGI protocol, including target picture type, width, face height and body height. **Explanations on key parameters:** <targetPictureType> means target picture type, custom-Customized, bigHeadPhoto- Big head photo, halfBody-Half body picture, fullBodyPicture-Full body picture <pictureWidth> means picture width, range: 1-5. Settable if target picture type is customizable <faceHeight> Face height, range: 1-3. Settable if target picture type is customizable <bodyHeight> Body height, range: 0-10. Settable if target picture type is customizable	

TargetPicture XML Block

```
<TargetPicture version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<targetPictureType><!-- req, xs:string --></targetPictureType>
<pictureWidth><!-- req, xs:string --></pictureWidth><!-- dep-->
<faceHeight><!-- req, xs:string --></faceHeight><!-- dep-->
<bodyHeight><!-- req, xs:string --></bodyHeight><!-- dep-->
</TargetPicture>
```

Test cases

GET /CGI/Smart/TargetPicture/channels/1/Scene/0

Request XML: none

Response XML: <TargetPicture>

PUT /CGI/Smart/TargetPicture/channels/1/Scene/0

Response XML: <ResponseStatus>

Request XML: as below

```
<TargetPicture version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<targetPictureType>custom</targetPictureType>
<pictureWidth>2</pictureWidth>
<faceHeight>3</faceHeight>
<bodyHeight>5</bodyHeight>
</TargetPicture>
```

2.7.71/CGI/Smart/MixedTargetDetect/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/MixedTargetDetect/<ID>/channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire mixed target detection parameters
Query	None
Inbound Data	None
Success Return	**<MixedTargetDetect>**
PUT	
Description	Set mixed target parameters
Query	None
Inbound Data	**<MixedTargetDetect>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of mixed target detection functions. explanations on important parameters: <enabled> Whether enable mixed target detection; true: Enabled; false: Disabled.	

<structureMode> Structuration algorithm mode; face-Face; pedestrian-Pedestrian; plate-Plate; vehicle-Vehicle; noMotor-Non-motor vehicle
<modeEnabled> Enable structuration algorithm mode; True: Enable
<minObjectSize> Min. face size; 1~10000 picture width ten-thousandth, 10000 means the entire screen width. Not handled if this field is 0.
<sensitivityLevel> Sensitivity: 0-5; IE presentation form is 0-100, 60 as default
<alarmRule> Alarm rule; true: Enabled; false: Disabled
<dispalyTarget> Display target; true: Displayed; false: Not displayed
<licensePlateSize> Plate size. 1~10000 picture width ten-thousandth, 10000 means the entire screen width. Not handled if this field is 0.
<faceQuality> Face quality, [0-100]
<humanQuality> Pedestrian quality, [0-100]
<plateQuality> Plate quality, [0-100]
<vehicleQuality> Non-motor vehicle quality, [0-100]
<cycleQuality> Non-motor vehicle quality, [0-100]
<backgroundQPvalue> Background picture quality,[0-100]
<featurePictureQPvalue> Feature picture quality,[0-100]
<exposureBright> Exposure brightness, 0-255
<pushMode> Picture push strategy; 0: Reserved; 1: Fastest; 2: Optimal; 3: Customized; 4: Timing; 5: Collision line
<pushLevel> Picture push level; Valid when pushMode is 3; 0: Reserved; 1: Fast; 2: Intermediate; 3: Slow
<pushTimeSpace> Picture push interval; valid when picture push strategy is timing; unit: Frame
<snapMode> Snapshot strategy; 0: Reserved; 1: Full snapshot mode; 2: High-quality mode; 3: Customization mode
<snapSpace> Snapshot interval, interval frame, valid when pushMode is 4
<snapTimes> Snapshot times, 1-8

MixedTargetDetect XML Block

```
<MixedTargetDetect version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id/><!-- req, xs:string, id --> Mixed target detection id, this value is 1
<enabled><!-- req, xs:boolean --></enabled>
<StructureList>
<StructureItem>
<structureMode><!--req,xs:string--><structureMode>
<modeEnabled><!-- req, xs:boolean --></modeEnabled>
</StructureItem>
</StructureList>
<minObjectSize>
<!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<alarmRule><!-- req, xs:boolean --></alarmRule>// Whether display alarm rule
<dispalyTarget><!-- req, xs:boolean --></dispalyTarget>// Display target
<licensePlateSize opt=""><!—opt, xs:integer ="1,2…"></licensePlateSize>
<RegionCoordinatesList>
<RegionCoordinates>
    <positionX>
        <!--req-->
        <!--req,xs:integer-->
    </positionX>
    <positionY>
        <!--req-->
        <!--req,xs:integer-->
    </positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<sensitivityLevel><!-- req, xs:integer --> </sensitivityLevel>// Sensitivity, 0-5, IE presentation form is 0-100
```

```
<snapSpace><!-- opt, xs:integer--></snapSpace> // Snapshot interval, enabled when picture push strategy is timing
<snapTimes><!-- opt, xs:integer"1-8"--></snapTimes> // Snapshot times
<displayRule><!-- req, xs:Boolean"true,false"--></ displayRule> // Whether display rule frame
<pushMode opt =" fastest,optimal,custom,timing,collisionLine">
<!-- opt, xs:string" fastest,optimal,custom,timing,collisionLine"-->
</ pushMode> // Picture push level option will occur when picture push strategy is custom; draw collision line when collisionLine occurs
<pushLevel opt = "hspeed,mspeed,lspeed">
<!-- opt, xs:string "hspeed,mspeed,lspeed"-->
</ pushLevel> // Picture push level is valid when picture push strategy is custom
<CollisionLineList>
  <CollisionLineItem>
     <positionX>
           <!--req-->
           <!--req,xs:integer-->
     </positionX>
     <positionY>
          <!--req-->
          <!--req,xs:integer-->
     </positionY>
  </CollisionLineItem>
</CollisionLineList>// Coordinates of collision line, valid when picture push strategy is collisionLine
<snapMode opt="all, highquality,custom">
<!-- opt, xs:string "all, highquality,custom">
</ snapMode> // Snapshot strategy; Snapshot level will display only if snapshot strategy is custom
</MixedTargetDetect>
```

Test cases

GET /CGI/Smart/MixedTargetDetect/1/channels/1/Scene/0

Request XML: none

Response XML: <MixedTargetDetect>

PUT /CGI/Smart/MixedTargetDetect/1/channels/1/Scene/0

Response XML: <ResponseStatus>

Request XML: as below

```
<MixedTargetDetect version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id>1</id>
<enabled>true</enabled>
<StructureList>
<StructureItem>
<structureMode>face<structureMode>
<modeEnabled>ture</modeEnabled>
</StructureItem>
</StructureList>
<minObjectSize>8</minObjectSize>
<alarmRule>true</alarmRule>
<licensePlateSize>0</licensePlateSize>
<sensitivityLevel>50</sensitivityLevel>
<displayRule>true</ displayRule>
<dispalyTarget>true</dispalyTarget>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
```

```
<positionX>1000</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>1000</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1000</positionX>
<positionY>1000</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<pushMode opt ="fastest,optimal,custom,timing,collisionLine">collisionLine</ pushMode>
<CollisionLineList>
  <CollisionLineItem>
     <positionX>1000</positionX>
     <positionY>1000</positionY>
  </CollisionLineItem>
  <CollisionLineItem>
     <positionX>1200</positionX>
     <positionY>1200</positionY>
  </CollisionLineItem>
</CollisionLineList>
<snapMode opt="all, highquality,custom">custom</ snapMode>
<snapLevel>80</ snapLevel>
<snapTimes>5</snapTimes>
</MixedTargetDetect>
```

2.7.72/CGI/Smart/PlateShade/<ID>/channels/<ID>/Scene/<ID>

/CGI/Smart/PlateShade/<ID>/channels/<ID>/Scene/<ID> General Resource v2.0	
GET	
Description	Acquire parameters of shielded plate
Query	None
Inbound Data	None
Success Return	**<PlateShade>**
PUT	
Description	Set parameters of shielded plate
Query	None
Inbound Data	**<PlateShade>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of parameters of shielded plate. This protocol is reserved for further expansion and not introduced temporarily. explanations on important parameters:	

PlateShade XML Block

```
<PlateShade version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
</PlateShade>
```

Test cases

GET /CGI/Smart/PlateShade/<ID>/channels/1/Scene/0

Request XML: none

Response XML: <PlateShade>

PUT /CGI/Smart/PlateShade/<ID>/channels/1/Scene/0

Response XML: <ResponseStatus>

Request XML: as below

```
<PlateShade version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
</PlateShade>
```

2.7.73 /CGI/Smart/Export/LocalFile/<FileName>

/CGI/Smart/Export/LocalFile/<FileName> **General Resource v2.0**	
POST	
Description	Export local files of face library
Query	**None**
Inbound Data	**None**
Success Return	**File content**
Explanations on protocol: Export face library **Explanations of parameters:** <FileName> Export filename, 128 bits	

Test cases

GET /CGI/Smart/Export/LocalFile/0.jpg

Request XML: none

Response XML: File contents

2.7.74/CGI/Smart/Helmet/<ID>/Channels/<ID>/Scene/<ID>

/CGI/Smart/Helmet/<ID>/Channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of helmet detection
Query	None
Inbound Data	None
Success Return	**<Helmet>**
PUT	
Description	Set parameters of helmet detection
Query	None
Inbound Data	**<Helmet>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of helmet detection parameters via intelligent analysis, helping client or web query and set the stall parameters via CGI protocol. **Explanations on key parameters:** <monitorArea> Monitoring area: 0: Entrance/exit; 1: Construction area (default: 0) <sensitivity> Sensitivity: 0~100 (default: 80) <colorEnable> Whether detect helmet color: true: Detect; false: Not detect <colorType> Helmet color: None: 0; red: 1; blue: 2; white: 3; yellow: 4; other: Others; 31 <displayRule > Display rule; true-Display, false-Not display <displayStat > Display alarm count: true-Display; false: Not display <isplyTarget > Display target: true-Display; false: Not display <calibrationSize> Calibration frame size: 0~100 picture width percentage (default: 15, adjustment range: 10~25) <regionCoordinatesList> means list of detection area coordinates <regionCoordinates> means coordinates of detection area <positionX> means X coordinates of detection area: ten-thousandth <positionY> means Y coordinates of detection area: ten-thousandth <targetColor> Target color <alarmAreaColor> Color of alarm area <minSize> Min. size 0-100, 20 as default	

```
<maxSize> Max. size 0-100
```

Helmet XML Block

```
<helmet version="2.0" >
  <monitorArea><!-- req, xs: integer --></monitorArea>
  <sensitivity ><!-- req, xs: integer --></sensitivity>
  <colorEnable><!-- req, xs: string --></colorEnable>
  <colorTypeList>
    </colorType><!-- req, xs: integer --><colorType>
    </colorType><!-- req, xs: integer --><colorType>
  </ColorTypeList>
  <targetColor><!—opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></targerCo
lor>// Target color
  <alarmAreaColor><!—opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alar
mAreaColor>// Alarm area color
  <displayRule><!-- req, xs: string --></displayRule>
  <displayStat><!-- req, xs: string --></displayStat>
  <displyTarget><!-- req, xs: string --></displyTarget>
  <minSize><!-- opt, xs:integer,"0-100"--></minSize >// Min. size, 20 as default
  <maxSize><!-- opt, xs:integer, "0-100"--></maxSize >//maximum size
  <calibrationSize><!-- req, xs: string --></calibrationSize>
  <regionCoordinatesList>
    <regionCoordinates>
      <positionX><!-- req, xs: integer --> </positionX>
      <positionY> <!-- req, xs: integer --></positionY>
    </regionCoordinates>
    <regionCoordinates>
      <positionX><!-- req, xs: integer --> </positionX>
      <positionY> <!-- req, xs: integer --></positionY>
    </regionCoordinates>
  </regionCoordinatesList>
</helmet>
```

Test cases

GET /CGI/Smart/Helmet/<ID>/channels/<ID>/scene/<ID>

Request XML: none

Response XML: < Helmet >

PUT /CGI/Smart/ Helmet /<ID>/channels/<ID>/scene/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<helmet version="2.0">
  <monitorArea >0</monitorArea>
  <sensitivity >80</sensitivity>
  <colorEnable >true</colorEnable>
  <colorTypeList>
    <colorType >blue</colorType>
    <colorType >other</colorType>
  </colorTypeList>
  <targetColor>red</targerColor>
  <alarmAreaColor>green</alarmAreaColor>
  <displayRule >true</displayRule>
  <displayStat >false</displayStat>
  <displyTarget >false</displyTarget >
  <calibrationSize >15</calibrationSize>
  <minSize>20</minSize >
  <maxSize>50</maxSize >
  <regionCoordinatesList>
    <regionCoordinates>
      <positionX>100</positionX>
```

```
        <positionY>200</positionY>
      </regionCoordinates>
      <regionCoordinates>
        <positionX>123</positionX>
        <positionY>456</positionY>
      </regionCoordinates>
    </regionCoordinatesList>
</helmet>
```

2.7.75 /CGI/Smart/FaceLib/<key>/Del/Progress

/CGI/Smart/FaceLib/<key>/Del/Progress **General Resource v2.0**	
GET	
Description	Face library deletion progress
Query	**None**
Inbound Data	**None**
Success Return	**<Progress>**
Explanations on protocol: Deletion progress of face library **Explanations of parameters:** URL: <key>: Face library key value Reply xml: <state> State; 0-Undeleted; 1-Delete in progress; 2-Deleted; 3-Deletion fails <pro> Progress, 0-100	

Progress XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state><!—req,sx:integer--></state>
<pro><!—req,sx:integer--></pro>
</progress>
```

Test cases
GET /CGI/Smart/FaceLib/<key>/Del/Progress
Response XML: <Progress>

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state>1</state>
<pro>50</pro>
</progress>
```

2.7.76 /CGI/Smart/AIResource/channels/<ID>/Managment

/CGI/Smart/AIResource/<Key>/Manage	
GET	
Description	Intelligent resource management and switching
Query	None
Inbound Data	**<aiList>**
Success Return	**<responseStatus>**
PUT	
Description	Intelligent resource management and switching
Query	None
Inbound Data	**<aiList>**
Success Return	**<responseStatus>**

Explanations on protocol:
Realize intelligent management and switching of resources.
Introduction to key parameters: URL
<ID> Channel No.
Response xml
<ID> Channel No.; 1-Failure
<aiName> means resource type: IVS –Intelligent monitoring; FaceDetect-Face snapshot; FaceRecognition-Face recognition; WaterMode-Water monitoring, WaterAlertStation- Water alert station; TrafficFlow-Traffic flow; ControlCommission-Intelligent supervision; PublicSecurity-Intelligent security; Education-Intelligent education; Discipline-Intelligent discipline; RoadMonitor-Road monitoring; MixedDetect-Mixed detection
<aiEnable> Whether enable; false-Disable; true-Enable

FaceLibParas XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<aiList>
  <aiElement>
    <aiName>
      <!-- req, xs:string -->
    </aiName>
    <aiEnable>
      <!--req, xs:boolean-->
    </aiEnable >
  </aiElement >
</aiList >
```

Test cases

PUT /CGI/Smart/AIResource/channels/0/Managment

Request XML: <aiList >

```
<?xml version="1.0" encoding="UTF-8"?>
<aiList>
  <aiElement>
    <aiName>IVS</aiName>
    <aiEnable>ture</aiEnable >
  </aiElement >
  <aiElement>
    <aiName>FaceDetect</aiName>
    <aiEnable>false</aiEnable >
  </aiElement >
  <aiElement>
    <aiName>FaceRecognition</aiName>
    <aiEnable>false</aiEnable >
  </aiElement >
  <aiElement>
    <aiName>WaterMode</aiName>
    <aiEnable>false</aiEnable >
  </aiElement >
  <aiElement>
    <aiName>WaterAlertStation</aiName>
    <aiEnable>false</aiEnable >
  </aiElement >
  <aiElement>
    <aiName>TrafficFlow</aiName>
    <aiEnable>false</aiEnable >
  </aiElement >
  <aiElement>
    <aiName> RoadMonitor </aiName>
    <aiEnable>false</aiEnable >
  </aiElement >
```

```
    <aiElement>
        <aiName> MixedDetect </aiName>
        <aiEnable>false</aiEnable >
    </aiElement >
</aiList>
```

Response XML: <responseStatus>

2.7.77 /CGI/Smart/Face/Unmode/libKey/<ID>/Model

/CGI/Smart/Face/Unmode/Model	
PUT	
Description	Do modeling of unmolded picture in face library
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: Set modeling of unmolded picture in face library **Explanations on key parameters:** <libKey> Face library key; 0: Invalid; 0x7fffffff: All libraries	

Test cases
PUT /CGI/Smart/Face/Unmode/libKey/<ID>/Model
Response XML: <ResponseStatus>

2.7.78/CGI/Smart/QueryFaceHeatMap/channels/<ID>/sence/<senceID>

/CGI/Smart/QueryFaceHeatMap/channels/<ID>/sence/<senceID>General Resource v2.0	
POST	
Description	Query spatial heat map of face
Query	None
Inbound Data	**<QueryFaceHeatMap >**
Success Return	**<QueryFaceHeatMapResult>**
Explanations on protocol: This protocol is prepared for query of spatial heat map of face **Explanations on key parameters:** iQueryType// Query type: 0: Statistics of passenger flow; 1: Time heat map; 2: Spatial heat map; 3: Face - Age bracket; 4: Face - Gender; 5: Face - Person amount; 6: Face - Nationality; 7: Feature statistics: Glasses; 8: Feature statistics: Mask; 9: Target alarm statistics; 10: Channel alarm statistics - All types; 11: Face detection; 12: Comparison alarm; 13: Stranger alarm; 14: Frequency alarm; 15: Detention alarm; 16: Pedestrian - Gender; 17: Pedestrian - Motion direction; 18: Pedestrian - Person amount; 19: Vehicle - Vehicle type; 20; Vehicle - Motion direction typeValue// Type value; means age (upper limit of age: Lower limit of age) when iQueryType is 3; means gender when iQueryType is 4 (0-All, 1-Male, 2-Female)	

QueryFaceHeatMap XML Block

```
<QueryFaceHeatMap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
<queryTypeList>
    <queryTypeElement>
      <queryType><!-- req, xs: integer --></queryType>// Type
      <typeValue ><!-- req, xs: string --></typeValue>// Type value
    </queryTypeElement>
```

```
  …
 </queryTypeList>
</QueryFaceHeatMap>
```

QueryHeatMapResultResult

```
<QueryFaceHeatMapResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
 <faceHeatMapUrl ><!-- req, xs:string--></faceHeatMapUrl >//url address
</QueryFaceHeatMapResult >
```

Test cases

PUT/ISAPI/Smart/QueryFaceHeatMap /<ID>/channels/<ID>

Response XML: <QueryFaceHeatMapResult>

```
<QueryFaceHeatMapResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
 <faceHeatMapUrl >http://10.30.31.233:80/heatmap.jpg</faceHeatMapUrl >
</QueryFaceHeatMapResult >
```

Request XML： as below

```
<QueryFaceHeatMap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
<queryTypeList>
  <queryTypeElement>
    <queryType>3</queryType>// Type
    <typeValue >0</typeValue>// Type value
  </queryTypeElement>
  <queryTypeElement>
    <queryType>4</queryType>// Type
    <typeValue >0</typeValue>// Type value
  </queryTypeElement>
  …
</queryTypeList>
</QueryFaceHeatMap>
```

2.7.79/CGI/Smart/ReportFaceData/channels/<ID>/export/<FileName>

/CGI/Smart/ReportData/channels/<ID>General Resource v2.0	
POST	
Description	Export report of face spatial heat map
Query	None
Inbound Data	**<QueryReport>**
Success Return	**File content**

Explanations on protocol:

This protocol is prepared for exporting report, sending 0x7fffffff as url of target alarm and channel alarm, and analyzing library and channel in xml

Explanations on key parameters:

iReportType// Query type: 0: Statistics of passenger flow; 1: Time heat map; 2: Spatial heat map; 3: Face - Age bracket; 4: Face - Gender; 5: Face - Person amount; 6: Face - Nationality; 7: Feature statistics: Glasses; 8: Feature statistics: Mask; 9: Target alarm statistics; 10: Channel alarm statistics - All types; 11: Face detection; 12: Comparison alarm; 13: Stranger alarm; 14: Frequency alarm; 15: Detention alarm; 16: Pedestrian - Gender; 17: Pedestrian - Motion direction; 18: Pedestrian - Person amount; 19: Vehicle - Vehicle type; 20; Vehicle - Motion direction

typeValue// Type value; means age (upper limit of age: Lower limit of age) when iQueryType is 3; means gender when iQueryType is 4 (0-All, 1-Male, 2-Female)

language// Means language; 2: English; 1: Chinese

QueryReport XML Block

```
<QueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportTypeList>
    <reportTypeElement>
      <reportType><!-- req, xs: integer --></reportType>// Type
      <typeValue ><!-- req, xs: string --></typeValue>// Type value
    </reportTypeElement>
    …
  </reportTypeList>
  <reportPre ><!-- req, xs: integer -->
  </reportPre >// Report type; 0: Daily report; 1: Weekly report; 2: Monthly report; 3: Yearly report
  < language><!-- req, xs: integer -->
  </language >// Means language; 2: English; 1: Chinese
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
<faceLibList>
<faceLib><!-- dep, xs: integer --></faceLib>
// Repeat faceLib
</faceLibList>
<channelList>
<channel><!-- dep, xs: integer --></channel>
// Repeat channel
</channelList>
</QueryReport >
```

Test cases

POST/ISAPI/Smart/ReportData/channels/<ID>/export/<FileName>

Request XML： as below

```
<QueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < reportTypeList>
      <reportType >3</reportType >// Type
      <typeValue >0</typeValue>// Type value
      <reportType >4</reportType >// Type
      <typeValue >0</typeValue>// Type value
  <\reportTypeList >
  <reportPre >1</ reportPre >
  < language>0</language >
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
<faceLibList>
<faceLib>1234567890</faceLib>
…
</faceLibList>
<channelList>
<channel>1</channel>
…
</channelList>
</QueryReport >
```

2.7.80 /CGI/Smart/FaceLib/Model/Progress

/CGI/Smart/FaceLib/<key>/Model/Progress	
	General Resource v2.0

GET	
Description	Modeling progress of face library base map
Query	**None**
Inbound Data	**None**
Success Return	**<Progress>**

Explanations on protocol:
Modeling progress of face library base map
Explanations of parameters:
URL:
<key>: Face library key value
Reply xml:
<state> State; 0-Unmodeled; 1-Modeling in progress; 2-Modeling completed; 3-Modeling fails
<pro> Progress, 0-100
<sum> Total amount of modeling pictures
<pos> Amount of modeled pictures
<okcnt> Amount of pictures with successful modeling
<errcnt> Amount of pictures with failed modeling

Progress XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state><!—req,sx:integer--></state>
<pro><!—req,sx:integer--></pro>
<sum><!—req,sx:integer--></sum>
<pos><!—req,sx:integer--></pos>
<okcnt><!—req,sx:integer--></okcnt>
<errcnt><!—req,sx:integer--></errcnt>
</progress>
```

Test cases
GET /CGI/Smart/FaceLib/Model/Progress
Response XML: <Progress>

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
   <state>1</state>
   <pro>50</pro>
   <sum>5000</sum>
   <pos>2500</pos>
   <okcnt>1500</okcnt>
   <errcnt>1000</errcnt>
</progress>
```

2.7.81/CGI/Smart/DetectExParam/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/DetectExParam/<ID>/channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire snapshot expansion parameters
Query	None
Inbound Data	None
Success Return	**<DetectExParam>**
PUT	
Description	Set snapshot expansion parameters
Query	None
Inbound Data	**<DetectExParam >**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of snapshot expansion parameters; Model: Face detection mode; 0 nvr 1 ipc.
explanations on important parameters:
<BigPicEnable> Enabling of uploaded background picture (big)
<BigPicQp> Quality of background picture (big)
<BigPicOSD> Whether OSD is added in background picture (big)
<SmallPicEnable> Enabling of uploaded feature picture (small)
<SmallPicQp> Quality of feature picture (small)
<BigPicFaceMark> Whether face frame is overlapped in background picture (big)

DetectExParam XML Block

```
<DetectExParam version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <BigPicEnable><!-- req, xs:boolean --></BigPicEnable>
    <BigPicQp><!-- opt, xs:integer--></ BigPicQp >
    <BigPicOSD><!-- req, xs:boolean --></BigPicOSD>
    <SmallPicEnable><!-- req, xs:boolean --></SmallPicEnable>
    <SmallPicQp ><!-- opt, xs:integer--></SmallPicQp>
    <BigPicFaceMark><!-- req, xs: boolean --></BigPicFaceMark>
</DetectExParam >
```

Test cases
GET /CGI/Smart/DetectExParam/1/channels/1/scenes/0
Request XML: none
Response XML: <DetectExParam>
PUT /CGI/Smart/DetectExParam/1/channels/1/scenes/0
Response XML: <ResponseStatus>
Request XML: as below

```
<DetectExParam version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <BigPicEnable>true</BigPicEnable>
    <BigPicQp>50</ BigPicQp >
    <BigPicOSD>false</BigPicOSD>
    <SmallPicEnable>true</SmallPicEnable>
    <SmallPicQp >85</SmallPicQp>
    <BigPicFaceMark>true</BigPicFaceMark>
</DetectExParam>
```

2.7.82/CGI/Smart/VerifylockFaceLib/<key>

/CGI/Smart/VerifylockFaceLib/<key>	
PUT	
Description	Unlock face library password
Query	None
Inbound Data	**<FaceLibPasswordParas>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Unlock the face recognition library **Explanations of parameters:** URL <key> key value of face library XML <access> Random information, for calibration use; 32 bits <password > Face library password, encrypted transmission of 16 bits at most	

Test cases
PUT
/CGI/Smart/VerifylockFaceLib/123
Request XML: < faceLibPasswordParas > As follows

```
<?xml version="1.0" encoding="UTF-8"?>
<faceLibPasswordParas version="1.0">
<access>94AAABB419A9820DC171B43240CEEF41</access>
<password>/T6g05arqzu4=</password>
</faceLibPasswordParas>
```

Response XML: <ResponseStatus>

Successful return statusCode:1

statusString:"OK"

subStatusCode:"ok"

Failed return statusCode:9

statusString:"Securitycode Failed"

subStatusCode:"CodeError"

2.7.83/CGI/Smart/FaceDetectAreaPara/channels/<ID>/Scene/<ID>

/CGI/Smart/FaceDetectAreaPara/channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of face detection area
Query	None
Inbound Data	None
Success Return	**<FaceDetectAreaPara >**
PUT	
Description	Set parameters of face detection area
Query	None
Inbound Data	**<FaceDetectAreaPara>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of parameters of face detection area.

explanations on important parameters:

<detectLoop> Loop of detection area: 1~128

<detectTime> Stay period of detection area: 1~3600 (unit: Second)

<detectPTZMode> Set preset mode of detection area; 0: Manual; 1: Auto

FaceDetectAreaPara XML Block

```
<FaceDetectAreaPara version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <detectLoop ><!-- req, xs: integer --></detectLoop>
    <detectTime ><!-- req, xs:integer--></detectTime>
    <detectPTZMode><!-- req, xs:integer--></detectPTZMode>
</FaceDetectAreaPara>
```

Test cases

GET /CGI/Smart/FaceDetectAreaPara/channels/1/scene/0

Request XML: none

Response XML: <FaceDetectAreaPara>

PUT /CGI/Smart/FaceDetectAreaPara/channels/1/scene/0

Response XML: <ResponseStatus>

Request XML: <FaceDetectAreaPara>

```
<FaceDetectAreaPara version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
   <detectLoop >50</detectLoop>
   <detectTime >55</detectTime>
     <detectPTZMode>1</detectPTZMode>
</FaceDetectAreaPara>
```

2.7.84/CGI/Smart/FaceDetectAreaList/channels/<ID>/Scene/<ID>

/CGI/Smart/FaceDetectAreaList/channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire list of face detection area
Query	None
Inbound Data	None
Success Return	**<FaceDetectAreaList>**
PUT	
Description	Set/call/delete face detection area
Query	None
Inbound Data	**<FaceDetectAreaList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for setting/call/deletion and acquisition of face ball detection area.

explanations on important parameters:

<detectAreaNum> Total amount of detection area (set/call/delete face detection area; assignment is 1; it means the total amount of acquired detection area when face detection area list is acquired)

<areaNum> Detection area No. 0~47

<operationType> Operation type; 1: Set detection area; 2-Call detection area; 3-Delete detection area (attention not attached to this parameter when acquiring detection area list IE; coordinate parameter is not attached with attention in main procedure when calling/deleting detection area)

FaceDetectAreaList XML Block

```
<FaceDetectAreaList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <detectAreaNum ><!-- req, xs: integer --></detectAreaNum >
    <detectAreaList >
        <detectArea>
            <areaNum ><!-- req, xs: integer --></areaNum >
            <operationType ><!-- req, xs: integer --></ operationType >
            <RegionCoordinatesList>
                <RegionCoordinates>
                    <positionX><!-- req, xs:integer --></positionX>
                    <positionY><!-- req, xs:integer --></positionY>
                </RegionCoordinates>
                …
            </RegionCoordinatesList>
        </detectArea>
        …
    </detectAreaList >
</FaceDetectAreaList>
```

Test cases

GET /CGI/Smart/FaceDetectAreaList/channels/1/scene/0

Request XML: none

Response XML: <FaceDetectAreaList>

```
<FaceDetectAreaList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <detectNum >2</detectNum >
    <detectAreaList >
        <detectArea >
            <areaNum >2</areaNum >
            <operationType >0</ operationType >// (attention not attached to this parameter
when acquiring detection area list IE)
            <RegionCoordinatesList>
                <RegionCoordinates>
```

```
                <positionX>0</positionX>
                <positionY>0</positionY>
            </RegionCoordinates>
            <RegionCoordinates>
                <positionX>0</positionX>
                <positionY>1000</positionY>
            </RegionCoordinates>
            <RegionCoordinates>
                <positionX>1000</positionX>
                <positionY>0</positionY>
            </RegionCoordinates>
            <RegionCoordinates>
                <positionX>1000</positionX>
                <positionY>1000</positionY>
            </RegionCoordinates>
        </RegionCoordinatesList >
    </detectArea >
    <detectArea >
        <areaNum >45</areaNum >
        <operationType >0</ operationType >// (attention not attached to this parameter when acquiring detection area list IE)
        <RegionCoordinatesList >
            <RegionCoordinates >
                <positionX>0</positionX>
                <positionY>0</positionY>
            </RegionCoordinates >
            <RegionCoordinates >
                <positionX>0</positionX>
                <positionY>1000</positionY>
            </RegionCoordinates >
            <RegionCoordinates >
                <positionX>1000</positionX>
                <positionY>0</positionY>
            </RegionCoordinates >
            <RegionCoordinates >
                <positionX>1000</positionX>
                <positionY>1000</positionY>
            </RegionCoordinates >
        </RegionCoordinatesList>
    </detectArea >
</detectAreaList>
</FaceDetectAreaList>
```

PUT /CGI/Smart/FaceDetectAreaList/channels/1/scene/0

Response XML: <ResponseStatus>

Request XML: <FaceDetectAreaList>

```
<FaceDetectAreaList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <detectNum >1</DetectNum >
    <detectAreaList >
        <detectArea >
            <areaNum >2</areaNum >
            <operationType >1</ operationType >
            <RegionCoordinatesList >
                <RegionCoordinates >
                    <positionX>0</positionX>
                    <positionY>0</positionY>
                </RegionCoordinates >
                <RegionCoordinates >
```

```
                <positionX>0</positionX>
                <positionY>1000</positionY>
            </RegionCoordinates >
            <RegionCoordinates >
                <positionX>1000</positionX>
                <positionY>0</positionY>
            </RegionCoordinates >
            <RegionCoordinates >
                <positionX>1000</positionX>
                <positionY>1000</positionY>
            </RegionCoordinates >
        </RegionCoordinatesList >
    </detectArea >
  </detectAreaList>
</FaceDetectAreaList
```

2.7.85/CGI/Smart/SceneRecoveryTime/channels/<ID>

/CGI/Smart/SceneRecoveryTime/channels/<ID> **General Resource v2.0**	
GET	
Description	Acquire the recovery time of intelligent analysis scene
Query	None
Inbound Data	None
Success Return	**<SceneRecoveryTime>**
PUT	
Description	Set the recovery time of intelligent analysis scene
Query	None
Inbound Data	**<SceneRecoveryTime>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for setting and acquiring the recovery time of intelligent analysis scene.

explanations on important parameters:

<recoveryTime> Scene recovery time: 0~3600s; 10s as default

SceneRecoveryTime XML Block

```
<SceneRecoveryTime version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <recoveryTime><!-- req, xs: integer --></recoveryTime>
</SceneRecoveryTime>
```

Test cases

GET /CGI/Smart/SceneRecoveryTime/channels/1

Request XML: none

Response XML: <SceneRecoveryTime>

PUT /CGI/Smart/SceneRecoveryTime/channels/1

Request XML: < SceneRecoveryTime >

Response XML: <ResponseStatus>

2.7.86/CGI/Smart/SmartCuriseType/channels/<ID>

/CGI/Smart/SmartCuriseType/channels/<ID> **General Resource v2.0**	
GET	
Description	Acquire enabling type of intelligent analysis cruise

Query	None
Inbound Data	None
Success Return	**<SmartCuriseType>**
PUT	
Description	Set enabling type of intelligent analysis cruise
Query	None
Inbound Data	**<SmartCuriseType>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting and acquiring the enabling type of intelligent analysis cruise.
explanations on important parameters:
<enableType> Cruise enabling type; 1-Timing enabling; 2-Time frame enabling; 3-Timing cruise of time bracket

SmartCuriseType XML Block

```
<SmartCuriseType version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    < enableType ><!-- req, xs: integer --></ enableType >
</SmartCuriseType >
```

Test cases
GET /CGI/Smart/ SmartCuriseType /channels/1
Request XML: none
Response XML: < SmartCuriseType >
PUT /CGI/Smart/ SmartCuriseType /channels/1
Request XML: < SmartCuriseType >
Response XML: <ResponseStatus>

2.7.87/CGI/Smart/SmartCuriseMould/channels/<ID>/CuriseType/<ID>

/CGI/Smart/SmartCuriseMould/channels/<ID>/CuriseType/<ID> **General Resource v2.0**	
GET	
Description	Acquire the cruise template of intelligent analysis
Query	None
Inbound Data	None
Success Return	**<SmartCuriseMould>**
PUT	
Description	Set the cruise template of intelligent analysis
Query	None
Inbound Data	**<SmartCuriseMould>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting and acquiring cruise template of intelligent analysis.
curiseType: Cruise type; 1-Timing cruise; 2-Time frame cruise; 3-Timing cruise in time frame
explanations on important parameters:
<curiseWeekday > Week; from Sunday to Saturday: 0~6; this parameter is neglected when value is 100
<startTime> Start time of time frame cruise
<endTime> End time of time frame cruise; StartTime is 00:00 during timing cruise, v is 23: 59
<curiseNum> Timing cruise means cruise No. (cruise sequence); time frame cruise means cruise time frame No., range: 0-15
<sceneType> Scene type, intelligent analysis: 0; alert: 1;
<sceneId> Scene No., intelligent analysis; range: 0-31; alert; range: 0-3
<curiseTime> Timing cruise, period of timing cruise in time frame: 15-3600s (this parameter is

neglected in time frame cruise)
Note: 8 timing cruises are supported in one time frame of timing cruise at most, which means, a maximum of 8 <ClockItem> is supported

SmartCuriseMould XML Block

```
<SmartCuriseMould version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <curiseWeekday><!-- req, xs: integer --></CuriseWeekday>
    <sectionList>
        <sectionItem>
            <startTime><!-- req, xs: string --><startTime/>
            <endTime><!-- req, xs: string --><endTime/>
            <clockList>
                <clockItem>
                    <curiseNum><!-- req, xs: integer --></curiseNum>
                    <sceneType><!-- req, xs: integer --></sceneType>
                    <sceneId><!-- req, xs: integer --></sceneId>
                    <curiseTime><!-- req, xs: integer --></curiseTime>
                </clockItem>
                ...
            </clockList>
        </sectionItem>
        ...
    </sectionList>
</SmartCuriseMould>
```

Test cases

GET /CGI/Smart/ SmartCuriseMould/channels/1/CuriseType/1

Request XML: none

Response XML: <SmartCuriseMould>

```
<SmartCuriseMould version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <curiseWeekday>100</curiseWeekday>
    <sectionlist>
        <sectionItem>
            <startTime>00:00<startTime/>
            <endTime>23:59<endTime/>
            <clockList>
                <clockItem>
                    <curiseNum>0</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>1</sceneId>
                    <curiseTime>50</curiseTime>
                </clockItem>
                <clockItem>
                    <curiseNum>1</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>5</sceneId>
                    <curiseTime>600</curiseTime>
                </clockItem >
                ...
            </clockList>
        </sectionItem>
    </sectionlist>
</SmartCuriseMould>
```

GET /CGI/Smart/ SmartCuriseMould/channels/1/CuriseType/2

Request XML: none

Response XML: <SmartCuriseMould>

```
<SmartCuriseMould version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <curiseWeekday>100</curiseWeekday>
    <sectionList>
        <sectionItem>
            <startTime>00:00<startTime/>
            <endTime>08:59<endTime/>
            <clockList>
                <clockItem>
                    <curiseNum>0</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>2</sceneId>
                    <curiseTime>0</curiseTime>
                </clockItem>
            </clockList>
        </sectionItem>
        <sectionItem>
            <startTime>10:00<startTime/>
            <endTime>15:59<endTime/>
            <clockList>
                <clockItem>
                    <curiseNum>1</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>9</sceneId>
                    <curiseTime>0</curiseTime>
                </clockItem>
            </clockList>
        </sectionItem>
        ...
    </sectionList>
</SmartCuriseMould>
```


GET /CGI/Smart/ SmartCuriseMould/channels/1/CuriseType/3

Request XML： none

Response XML: <SmartCuriseMould>


```
<SmartCuriseMould version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <curiseWeekday>100</curiseWeekday>
    <sectionList>
        <sectionItem>
            <startTime>02:00<startTime/>
            <endTime>09:59<endTime/>
            <cockList>
                <clockItem>
                    <curiseNum>0</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>3</sceneId>
                    <curiseTime>60</curiseTime>
                </clockItem>
                <clockItem>
                    <curiseNum>1</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>4</sceneId>
                    <curiseTime>80</curiseTime>
                </clockItem>
                <clockItem>
                    <curiseNum>2</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>5</sceneId>
                    <curiseTime>90</curiseTime>
```

```
                </clockItem>
                ...
            </clockList>
        </sectionItem>
        <sectionItem>
            <startTime>12:00<startTime/>
            <endTime>16:59<endTime/>
            <clockList>
                <clockItem>
                    <curiseNum>0</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>1</sceneId>
                    <curiseTime>120</curiseTime>
                </clockItem>
                <clockItem>
                    <curiseNum>1</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>6</sceneId>
                    <curiseTime>500</curiseTime>
                </clockItem>
                <clockItem>
                    <curiseNum>2</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>8</sceneId>
                    <curiseTime>2000</curiseTime>
                </clockItem>
                ...
            </clockList>
        </sectionItem>
        ...
    </sectionList>
</SmartCuriseMould>
```


PUT /CGI/Smart/ SmartCuriseMould /channels/1/CuriseType/1

Response XML: <ResponseStatus>

Request XML: <SmartCuriseMould>


```
<SmartCuriseMould version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <curiseWeekday>100</curiseWeekday>
    <sectionList>
        <sectionItem>
            <startTime>00:00<startTime/>
            <endTime>23:59<endTime/>
            <clockList>
                <clockItem>
                    <curiseNum>0</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>1</sceneId>
                    <curiseTime>50</curiseTime>
                </clockItem>
                <clockItem>
                    <curiseNum>1</curiseNum>
                    <sceneType>0</sceneType>
                    <sceneId>5</sceneId>
                    <curiseTime>600</curiseTime>
                </clockItem>
            </cockList>
        </sectionItem>
    </sectionList>
```

```
</SmartCuriseMould>
```

2.7.88/CGI/Smart/MaskArea/channels/<ID>/scene/<ID>/rule/<ID>/type/<ID>

/CGI/Smart/MaskArea/channels /<ID>/ scene/<ID> General Resource v2.0	
GET	
Description	Acquire parameters of shielded area
Query	None
Inbound Data	None
Success Return	<MaskArea>
PUT	
Description	Set parameters of shielded area
Query	None
Inbound Data	<MaskArea>
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of shielded area, helping client or IE query and set the parameters of shielded parameters of device via CGI protocol.
Explanations on key parameters:
<channelID> Channel No.
<sceneID> means scene No., 1-32
<ruleID> means rule 0-16; 0: All parameters of rules are consistent; 1-16: Means special rule No.
<type> means scene type; 0-Common intelligent analysis; 1-Alert intelligent analysis
<enabled> Whether enable shielded area; true: Enable; false: Disable
<color> Line color of shielded area
<display> Whether display line; true: Display; false: Not display
<RegionList> means list of shielded area, 8 areas at most
<RegionCoordinatesList> means coordinate list of shielded area, 8 points in 1 area at most
<RegionCoordinates> means coordinates of shielded area
<positionX> means X coordinates of coordinate point
<positionY> means Y coordinates of coordinate point

MaskArea XML Block

```
<MaskArea version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<enabled> <!-- req, xs:boolean -->    </enabled>Valid: true: Enable; false: Disabled
<color><!-- req, xs:string "green"--></color>// Line color
<display ><!-- req, xs:boolean --> </display>// Line display; true: Display; false: Not display
<normalizedScreenSize>
      <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
      <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
   </normalizedScreenSize>
< RegionList > <!-- opt -->
      // List of shielded area
<RegionCoordinatesList> <!-- opt -->                                    // Coordinate
list of shielded area
<RegionCoordinates> <!-- opt, -->                                       // Coordinates
of shielded area
<positionX> <!-- req, xs:integer;coordinate --> </positionX>            // X coordinates
<positionY> <!-- req, xs:integer;coordinate --> </positionY>            // Y coordinates
</RegionCoordinates>
</RegionCoordinatesList>
< /RegionList>                                  // Leave shielded area
</MaskArea>
```

Test cases

GET /CGI/Smart/MaskArea/channels/<ID>/scene/<ID>

Request XML： none

Response XML: <MaskArea>

PUT /CGI/Smart/MaskArea/channels/<ID>/scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<MaskArea>
<enabled>true</enabled>
<color>red</color>
<display>false</display>
<RegionList>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>2848</positionX>
<positionY>5037</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7083</positionX>
<positionY>2388</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8312</positionX>
<positionY>9037</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1395</positionX>
<positionY>8166</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</RegionList>
</MaskArea>
```

2.7.89/CGI/Smart/ZoomRate/channels/<ID>/Scene/<ID>

/CGI/Smart/ZoomRate/channels/<ID>/Scene/<ID> **General Resource v2.0**	
PUT	
Description	Calibrate traction multiplying power
Query	None
Inbound Data	**<ZoomRate>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for calibrating traction multiplying power. **Explanations on key parameters:** <sceneType> Scene type, intelligent analysis: 0; alert: 1; <boundary> Boundary; 0-Reserved; 1-Near-end; 2-Far-end <deviceID> Device No.: 0~1	

ResetFaceModel XML Block

```
<ZoomRate version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <sceneType><!-- req, xs: integer --></sceneType>
    <boundary><!-- req, xs: integer --></boundary>
    <deviceID><!-- req, xs:integer--></deviceID>
</ZoomRate>
```

Test cases

PUT /CGI/Smart/ZoomRate/channels/1/Scene/0
Request XML: <ZoomRate>
Response XML: <ResponseStatus>

```
<ZoomRate version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <sceneType>1</sceneType>
    <boundary>0</boundary>
    <deviceID>0</deviceID>
</ZoomRate>
```

2.7.90/CGI/Smart/HumanDetect/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/HumanDetect/<ID>/channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire human detection parameters
Query	None
Inbound Data	None
Success Return	**<HumanDetect>**
PUT	
Description	Set human detection parameters
Query	None
Inbound Data	**<HumanDetect>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of human detection functions. Model: Human detection mode, 0 nvr 1 ipc.
explanations on important parameters:
enabled: Human detection enabling
dispalyTarget: Whether display target frame (reserved)
minSizeEx: Min. human size
maxSizeEx: Max. human size (reserved)

HumanDetect XML Block

```
<HumanDetect version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
<dispalyTarget><!-- req, xs:boolean --></dispalyTarget>// Display target; true: Displayed; false: Not displayed
<minSizeEx><!-- opt, xs:integer--></ minSizeEx> //1~10000 picture width ten-thousandth, 10000 means the entire screen width. Not handled if this field is 0.
<maxSizeEx><!-- opt, xs:integer--></ maxSizeEx>// 1~10000 picture width ten-thousandth, 10000 means the entire screen width. Not handled if this field is 0.
</HumanDetect>
```

Test cases
GET /CGI/Smart/HumanDetect/1/channels/1/scenes/0/Model/1
Request XML: none
Response XML: <HumanDetect>
PUT /CGI/Smart/ HumanDetect /1/channels/1/scenes/0/Model/1
Response XML: <ResponseStatus>
Request XML: as below

```
<HumanDetect version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled>true</enabled>
<dispalyTarget>false</dispalyTarget>
<minSizeEx>423</ minSizeEx>
<maxSizeEx>1600</ maxSizeEx>
</HumanDetect>
```

2.7.91 /CGI/Smart/Pept/<ID>/Channels/<ID>/Scene/<ID>

/CGI/Smart/Pept/<ID>/Channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire oilfield monitoring parameters
Query	None
Inbound Data	None
Success Return	**<Pept>**
PUT	
Description	Set oilfield monitoring parameters
Query	None
Inbound Data	**<Pept>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for setting and query of oilfield monitoring parameters, helping client or web query and set the oilfield control parameters via CGI protocol.

Explanations on key parameters:

<mode> Detection mode; intrusion: Defense area intrusion; residence: Abnormal lingering
<residenceTime> Detection alarm time; 0~60s; 15 as default
<sensitivity> Sensitivity: 0~100 (default: 80)
<TargetTypeList> Detection target type: 1-Pedestrian; 2-Passenger car; 3-SUV; 4-pickup truck; 5-Tanker; 6-Van; 7-Truck; 8-Forklift; 9-Excavator; 10-Engineering truck; 11-Cart; 12-Tricycle; 13-Motor bus; 14-Minibus; 32-Other types
<targetColor> Target color
<alarmAreaColor> Color of alarm area
<maxTargetSize> Max. size: 5-100; 15 as default
<minTargetSize> Min. size: 1-5-; 3 as default
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display
<regionCoordinatesList> means list of detection area coordinates
<regionCoordinates> means coordinates of detection area
<positionX> means X coordinates of detection area: ten-thousandth
<positionY> means Y coordinates of detection area: ten-thousandth

Pept XML Block

```
<Pept version="2.0" >
<enabled><!--req, xs:boolean--></enabled>
  <mode>
      <intrusion><!--req, xs:boolean--></intrusion>
      <resident><!--req, xs:boolean--></resident>
  </mode>
  <residenceTime><!-- req, xs: integer --></residenceTime>
  <maxTargetSize><!-- req, xs: integer --></maxTargetSize>
  <minTargetSize><!-- req, xs: integer --></minTargetSize>
  <sensitivity><!-- req, xs: integer --></sensitivity>
 <targetColor><!—opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></targetColor>
<alarmAreaColor><!—opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmAre
aColor>
  <displayRule><!--req, xs:boolean--></displayRule>
```

```
  <displayStat><!--req, xs:boolean--></displayStat>
  <displayTarget><!--req, xs:boolean--></displayTarget>
  <TargetTypeList>
    <TargetType><!-- req, xs: integer --></TargetType>
    <TargetType><!-- req, xs: integer --></TargetType>
  </TargetTypeList>
  <RegionCoordinatesList>
    <RegionCoordinates>
      <positionX><!-- req, xs: integer --></positionX>
      <positionY><!-- req, xs: integer --></positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</Pept>
```

Test cases

GET /CGI/Smart/Pept/<ID>/channels/<ID>/scene/<ID>

Request XML： none

Response XML:<Pept>

PUT /CGI/Smart/Pept/<ID>/channels/<ID>/scene/<ID>

Response XML： <ResponseStatus>

Request XML： as below

```
<Pept>
  <enabled>true</enabled>
  <mode>
      <intrusion>true</intrusion>
      <resident>true</resident>
  </mode>
  <residenceTime>3</residenceTime>
  <maxTargetSize>15</maxTargetSize>
  <minTargetSize>3</minTargetSize>
  <sensitivity>80</sensitivity>
  <targetColor>green</targetColor>
  <alarmAreaColor>red</alarmAreaColor>
  <displayRule>true</displayRule>
  <displayStat>false</displayStat>
  <displayTarget>true</displayTarget>
  <TargetTypeList>
    <TargetType>1</TargetType>
    <TargetType>11</TargetType>
  </TargetTypeList>
  <RegionCoordinatesList>
    <RegionCoordinates>
      <positionX>90</positionX>
      <positionY>90</positionY>
    </RegionCoordinates>
    <RegionCoordinates>
      <positionX>90</positionX>
      <positionY>90</positionY>
    </RegionCoordinates>
    <RegionCoordinates>
      <positionX>90</positionX>
      <positionY>90</positionY>
    </RegionCoordinates>
    <RegionCoordinates>
      <positionX>90</positionX>
      <positionY>90</positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
```

```
</Pept>
```

2.7.92/CGI/Smart/SceneSnap/channels/<ID>/

/CGI/Smart/SceneSnap/channels/<ID>/ **General Resource v2.0**	
GET	
Description	Acquire scene snapshot parameters
Query	None
Inbound Data	None
Success Return	**<SceneSnap>**
PUT	
Description	Set scene snapshot parameters
Query	None
Inbound Data	**<SceneSnap>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of switched scene snapshot.

explanations on important parameters:

<SnapEnable> Enabling of switching scene enabling; true; Enable scene snapshot; false: Disable scene snapshot

<SnapType> Types of switching scene snapshot (reserved); all: All; in: Snapshot after entering scene; out: Snapshot before leaving scene

<SnapCount> Count of switching scene snapshot (reserved)

<SnapDelay> Delay of switching scene snapshot (reserved)

SceneSnap XML Block

```
<SceneSnap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SnapEnable><!-- req, xs:boolean --></SnapEnable>
  <SnapType><!—opt,xs:string"all,in,out"--></SnapType>
  <SnapCount><!-- opt, xs:integer--></SnapCount>
  <SnapDelay><!-- opt, xs:integer--></SnapDelay>
</SceneSnap>
```

Test cases

GET /CGI/Smart/SceneSnap/channels/1/

Request XML: none

Response XML: <SceneSnap>

PUT /CGI/Smart/SceneSnap/channels/1/

Response XML: <ResponseStatus>

Request XML: as below

```
<SceneSnap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SnapEnable>true</SnapEnable>
  <SnapType>all</SnapType>
  <SnapCount>1</SnapCount>
  <SnapDelay>1</SnapDelay>
</SceneSnap>
```

2.7.93/CGI/Smart/LiveBody/Channels/<ID>/ Model/<ID>

/CGI/Smart/LiveBody/Channels/<ID>/ **General Resource v2.0**	
GET	
Description	Acquire living body detection enabling/disabling of face NVR
Query	None

Inbound Data	None
Success Return	**< LiveBody >**
PUT	
Description	Set living body detection enabling/disabling of face NVR
Query	None
Inbound Data	**< LiveBody >**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of living body detection enabling/disabling of face NVR.
Channels/<ID>: <ID> means channel No.
Model/<ID>: <ID> means device type; 0 nvr 1 ipc.
explanations on important parameters:
< livingbodyEnable > Living body detection enabling/disabling; true: Enabled; false: Disabled

LiveBody XML Block

```
<LiveBody version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
< livingbodyEnable ><!-- req, xs:Boolean"true,false"--></livingbodyEnable>// Whether enable living body detection
</LiveBody>
```

Test cases
GET /CGI/Smart/LiveBody/Channels/1/
Request XML: none
Response XML: <LiveBody>
PUT /CGI/Smart/LiveBody/Channels/1/
Response XML: <ResponseStatus>
Request XML: as below

```
<LiveBody version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <livingbodyEnable>true</livingbodyEnable>
</LiveBody>
```

2.7.94 /CGI/Smart/FaceBasePic/FaceLib/<Key>/SessionId/<ID>/Export/<FileName>

/CGI/Smart/FaceBasePic/LibKey/<ID>/SessionId/<ID>/Export/<FileName> General Resource v2.0	
PUT	
Description	Conditions for compression and export of face base map
Query	**<FaceBasePicList>**
Inbound Data	**None**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for compression and export of face base map, helping client or IE export the face base map of device via CGI protocol.

Explanations on key parameters:
FaceLib/<Key> Key value of face library
SessionId/<ID> Interaction ID of client and device, see attached table 1
<FileName> Package name of exported base map, with suffix of zip and length of 32 bits
facePicCnt Amount of exported face base map; export all base maps of this face library when value is 0
picKeys: Key value of face base map

FaceBasePicList XML Block

```
<FaceBasePicList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <facePicCnt><!-- req, xs: integer --></facePicCnt>
    <picKeys><!—req,sx:string--></picKeys>
</FaceBasePicList>
```

Test cases

PUT /CGI/Smart/FaceBasePic/FaceLib/2/SessionId/6668/Export/<FileName>

Request XML: <FaceBasePicList> As follows

```
<FaceBasePicList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <facePicCnt>2</facePicCnt>
    <picKeys>23,24,66</picKeys>
</FaceBasePicList>
```

Response XML: <ResponseStatus>

2.7.95 /CGI/Smart/FaceBasePic/FaceLib/<Key>/SessionId/<ID>Import/<FileName>

/CGI/Smart/FaceBasePic /FaceLib/<Key>/SessionId/<ID>/Import/<FileName> General Resource v2.0	
PUT	
Description	Compression and import of face base map
Query	**None**
Inbound Data	**File content**
Success Return	**<ResponseStatus>**
Explanations on protocol: Compression and import of face base map **Explanations of parameters:** <Key> key value of face library <SessionId> Interaction ID of client and device, see attached Table 1 <FileName> Package name of exported base map, with suffix of zip and length of 32 bits	

Test cases

PUT /CGI/Smart/FaceBasePic/FaceLib/2/SessionId/6668/Import/<FileName>

Request XML: none

Response XML: <ResponseStatus>

2.7.96 /CGI/Smart/Import/FaceBasePic/FaceLib/<Key>/SessionId/<ID>/

/CGI/Smart/Import/Face BasePic/FaceLib/<Key>/SessionId/<ID>/ General Resource v2.0	
POST	
Description	Compression and import of face base map
Query	**None**
Inbound Data	**File content**
Success Return	**<ResponseStatus>**
Explanations on protocol: Import of face library **Explanations of parameters:** FaceLib/<Key> Key value of face library SessionId/<ID> Interaction ID of client and device, see attached table 1	

Test cases

PUT /CGI/Smart/Import/FaceBasePic/FaceLib/123/SessionId/666/

Request XML: none

Response XML: <ResponseStatus>

2.7.97 /CGI/Smart/PeopleNumAlarm/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/PeopleNumAlarm/<ID>/channels/<ID>/Scene/<ID>/Model/<ID> General Resource v2.0	
GET	
Description	Acquire the parameters of person amount error alarm
Query	None
Inbound Data	None
Success Return	**<PeopleNumAlarm>**
PUT	
Description	Acquire the parameters of person amount error alarm
Query	None
Inbound Data	**<PeopleNumAlarm>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of human detection function. Model: Person amount error mode, 0 nvr 1 ipc.

explanations on important parameters:
enabled: Enabling of Person error alarm
<color>: Region color; “green” as default
<alarmcolor>: Alarm color, “red” as default
<displayRule>: Whether display rule; 0: Not display; 1: Display
<displatStat>: Whether display alarm count; 0: Not display; 1: Display
<displayTarget> Whether display target frame; 0: Not display; 1: Display
<miniSize> Min. width of target (head and shoulder) [1, 50], 8% as default
<maxSize> Max. width of target (head and shoulder) [1, 50], 25% as default
<sensitivity> Sensitivity [0, 100], 50 as default
<peopleNumber> People number, 0-8
<judgeMode> Judgment mode; greater: Higher than; less: Lower than; equal: Equal to; unequal: Unequal to
<levelTime> Allowed leave time [0, 1000], 10s as default
<regionList> means list of detection region, 1~8
<maskRgList> means list of shielded regions, 0~8
<RegionCoordinatesList>//detection region coordinate list
<RegionCoordinates><!-- req, -->//detection region coordinates
<positionX><!-- req, xs:integer;coordinate --></positionX>// X coordinates
<positionY><!-- req, xs:integer;coordinate --></positionY>// Y coordinates
</RegionCoordinates>

PeopleNumAlarm XML Block

```
<PeopleNumAlarm version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
<color><!-- req, xs:string"green" --></color>
<alarmcolor>!-- req, xs:string"red" --></alarmcolor>
<displayRule><!-- opt, xs:integer --></displayRule>
<displatStat><!-- opt, xs:integer --></displatStat>
<displayTarget><!-- opt, xs:integer --></displayTarget>
<miniSize><!-- opt, xs:integer --></miniSize>
<maxSize><!-- opt, xs:integer --></maxSize>
<displayRule><!-- opt, xs:integer --></displayRule>
<peopleNumber opt = "0,1,2,3,4,5,6,7,8">
<!-- opt, xs:string "0,1,2,3,4,5,6,7,8"--></peopleNumber> // People number
<judgeMode opt = "greater,less,equal,unequal">
<!-- opt, xs:string "greater,less,equal,unequal"-->
</judgeMode>// Judgment mode
<levelTime><!-- opt, xs:integer --></levelTime>
```

```
<regionList size="8" >
<RegionCoordinatesList size="10" >
<RegionCoordinates>
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</regionList>
<maskRgList size="8" >
<RegionCoordinatesList size="10" >
<RegionCoordinates>
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</maskRgList>
</PeopleNumAlarm>
```

Test cases

GET /CGI/Smart/PeopleNumAlarm/1/channels/1/scenes/0/Model/1

Request XML： none

Response XML: <PeopleNumAlarm>

PUT /CGI/Smart/PeopleNumAlarm/1/channels/1/scenes/0/Model/1

Response XML： <ResponseStatus>

Request XML： as below

```
<PeopleNumAlarm version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled>true</enabled>
<color>green</color>
<alarmcolor>red</alarmcolor>
<displayRule>0</displayRule>
<displatStat>0</displatStat>
<displayTarget>0</displayTarget>
<miniSize>8</miniSize>
<maxSize>25</maxSize>
<displayRule>0</displayRule>
<peopleNumber opt = “0,1,2,3,4,5,6,7,8”> 1</peopleNumber> // People number
<judgeMode opt = "greater,less,equal,unequal">greater</judgeMode> // Judgment mode
<levelTime>10</levelTime>
<regionList size="8">
<RegionCoordinatesList size="10">
<RegionCoordinates>
<positionX>2656</positionX>
<positionY>1302</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>951</positionX>
<positionY>5468</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>752</positionX>
<positionY>8906</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3806</positionX>
<positionY>9548</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>7357</positionX>
```

```
<positionY>9548</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>8940</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>9375</positionX>
<positionY>5381</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>8480</positionX>
<positionY>2013</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</regionList>
<maskRgList size="8">
<RegionCoordinatesList size="10">
<RegionCoordinates>
<positionX>8480</positionX>
<positionY>2013</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</maskRgList>
</PeopleNumAlarm>
```


2.7.98 /CGI/Smart/Async/QueryReport/Start/SessionId/<ID>/Channels/<ID>

/CGI/Smart/Async/QueryReport/Start/Channels/<ID> **General Resource v2.0**	
POST	
Description	Request of asynchronous query report
Query	None
Inbound Data	**<AsyncQueryReport>**
Success Return	**<AsyncQueryReportResult>**

Explanations on protocol:
This protocol is prepared for asynchronous query report
Explanations on key parameters:
SessionId/<ID>: Interaction ID of client and device, see attached Table 1
Channels/<ID>: <ID> means channel No.
iReportType// Query type: 0: Time heat map; 1: Age bracket; 2: Gender; 3: Person amount; 6: Nationality; 7: Glasses; 8: Mask; 12: Pedestrian - Gender; 13: Pedestrian - Amount; 14: Pedestrian - Motion direction; 15: Vehicle - Type; 16: Vehicle - Motion direction

logContent// Max. length of query content is 128 bits
When iReportType=0, format is "%d", it means the target duration; unit: Second
When iReportType=1, format is "%d:%d:%d:%d", it means the juvenile, youth, middle-aged person, the aged; unit: Person
When iReportType=2, format is "%d:%d:%d", it means the male, female, unidentified person; unit: Person
When iReportType=3, format is "%d", it means the person amount; unit: Person
When iReportType=4, format is "%d", it means temperature
When iReportType=5, format is "%d", it means humidity
When iReportType=6, format is "%d:%d", it means [Han nationality, minority]; unit: Person
When iReportType=7, format is "%d:%d", it means [Wear glasses, not wear glasses]; unit: Person
When iReportType=8, format is "%d:%d", it means [Wear mask, not wear mask]; unit: Person

When iReportType=12, format is "%d:%d:%d", it means the male, female, unidentified person; unit: Person
When iReportType=13, format is "%d", it means person amount; unit: Person
When iReportType=14, format is "%d:%d:%d:%d:%d", it means unknown, up, down, left, right; unit: Person
When iReportType=15, format is "%d:%d:%d", it means [unknown, motor vehicle and non-motor vehicle]; unit: Vehicle
When iReportType=16, format is "%d:%d:%d:%d:%d", it means unknown, up, down, left, right; unit: Vehicle

AsyncQueryReport XML Block

```
<asyncQueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType ><!-- req, xs: integer -->
  </reportType >// Type; 0: Time heat map; 1: Age bracket; 2: Gender; 3: Person amount; 6: Nationality; 7: Glasses; 8: Mask
  <reportPre ><!-- req, xs: integer -->
  </reportPre >// Report type; 0: Daily report; 1: Weekly report; 2: Monthly report; 3: Yearly report
  <timeSpan>
  <startTime>2017-07-18T00:00:00Z</startTime>
  <endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
</asyncQueryReport>
```

AsyncQueryReportResult XML Block

```
<asyncQueryReportResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <sessionId><!-- req, xs: long long --></sessionId> // Affair ID
    <retState><!-- req, xs: integer --></retState>    // Return type; 0-Success; 1-Failure
</asyncQueryReportResult>
```

Test cases

POST /CGI/Smart/Async/QueryReport/Start/SessionId/65535/channels/1

Request XML： as below

```
<asyncQueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>0</reportType>
  <reportPre>1</reportPre>
<timeSpan>
<startTime>2017-07-18T00:00:00Z</startTime>
<endTime> 2017-07-18T23:59:59Z</endTime>
</timeSpan>
</asyncQueryReport >
```

Response XML： as below

```
<asyncQueryReportResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sessionId>65535</sessionId>
  <retState>0</retState>
</asyncQueryReportResult>
```

2.7.99 /CGI/Smart/Async/QueryReport/Result/SessionId/<ID>/channels/<ID>

/CGI/Smart/Async/QueryReport/Result/SessionId/<ID>/channels/<ID> **General Resource v2.0**	
GET	
Description	Result of asynchronous query report
Query	None
Inbound Data	**NONE**
Success Return	**<AsyncReportResult>**

Explanations on protocol:
This protocols is prepared for query of result of asynchronous query report
Explanations on key parameters:
ReportType// Result type: 0: Time heat map; 1: Age bracket; 2: Gender; 3: Person amount; 6: Nationality; 7: Glasses; 8: Mask; 12: Pedestrian - Gender; 13: Pedestrian - Amount; 14: Pedestrian - Motion direction; 15: Vehicle - Type; 16: Vehicle - Motion direction

logContent// Max. length of result: 128 bits
When ReportType=0, format is "%d", it means the target duration; unit: Second
When ReportType=1, format is "%d:%d:%d:%d", it means the juvenile, youth, middle-aged person, the aged; unit: Person
When ReportType=2, format is "%d:%d:%d", it means the male, female, unidentified person; unit: Person
When ReportType=3, format is "%d", it means the person amount; unit: Person
When ReportType=4, format is "%d", it means temperature
When ReportType=5, format is "%d", it means humidity
When ReportType=6, format is "%d:%d", it means [Han nationality, minority]; unit: Person
When ReportType=7, format is "%d:%d", it means [Wear glasses, not wear glasses]; unit: Person
When ReportType=8, format is "%d:%d", it means [Wear mask, not wear mask]; unit: Person
When ReportType=12, format is "%d:%d:%d", it means the male, female, unidentified person; unit: Person
When ReportType=13, format is "%d", it means person amount; unit: Person
When ReportType=14, format is "%d:%d:%d:%d:%d", it means unknown, up, down, left, right; unit: Person
When ReportType=15, format is "%d:%d:%d", it means [unknown, motor vehicle and non-motor vehicle]; unit: Vehicle
When ReportType=16, format is "%d:%d:%d:%d:%d", it means unknown, up, down, left, right; unit: Vehicle

AsyncReportResultXML Block

```
<asyncReportResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType><!-- req, xs: integer -->
  </reportType>//0: Time heat map; 1: Age bracket; 2: Gender; 3: Person amount; 6: Nationality; 7: Glasses; 8: Mask
  <showNum><!-- req, xs: integer --></showNum> // Max. item should not exceed 80
  <queryResultList> // List of query results
  <queryResult>
  <logContent><!-- req, xs:string--></ logContent>    // Contents
  <channelNo><!-- req, xs: integer --></channelNo>    // Channel No.
  <time>2013-05-18T10:31.26</time>
    </queryResult>
  < /queryResultList >
</asyncReportResult >
```

Test cases
GET /ISAPI/Smart/Async/QueryReport/Result/SessionId/65535/channels/1
Response XML: <AsyncReportResult >

```
<asyncReportResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>0</reportType>
  <showNum>7</showNum>
  <queryResultList>
  <queryResult>
<logContent>0
</logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T10:31.26</time>
    </queryResult>
    <queryResult>
```

```
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T11:35.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T11:39.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T12:31.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T13:31.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T14:31.26</time>
    </queryResult>
    <queryResult>
<logContent>0</ logContent>
  <channelNo>240</channelNo>
  <time>2017-07-18T15:31.26</time>
    </queryResult>
  < /queryResultList >
</asyncReportResult >
```


2.7.100 /CGI/Smart/Async/FaceCount/ChannelAlm/Start/SessionId/<ID>

/CGI/Smart/Async/FaceCount/ChannelAlm/Start/SessionId/<ID>	
POST	
Description	Request for alarm of asynchronous face statistics channel
Query	None
Inbound Data	**<AsyncChannelAlmReq>**
Success Return	**<AsyncChannelAlmRsp>**
Explanations on protocol: This protocol is prepared for request of statistics of asynchronous face statistics channel **Explanations on key parameters:** Request: <channelList> <channel> <eventType> Event type; 0: All; 1: Face; 2: Comparison alarm; 3: Stranger alarm; 4: Frequency alarm; 5: Detention alarm <accuracy> Accuracy; 0: Day; 1: Week; 2: Month; 3: Year <beginTime> Begin time format: (Y-M-D T Hour: Minute: Second Z), for example, 2018-07-10T12:00:00Z <endTime> End time format (Y-M-D T Hour: Minute: Second Z), for example, 2018-07-10T23:59:59Z Reply:	

```
<sessionId> Affair ID
<retState> Return type – 0: Success; 1: Failure
```

AsyncChannelAlmReq XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncChannelAlmReq>
<channelList>
<channel><!-- req, xs:integer --></channel>
// Repeat <channel>
</channelList>
<eventType><!-- req, xs: integer --></eventType>
<accuracy><!-- req, xs: integer --></accuracy>
<beginTime><!-- req, xs: datetime --></beginTime>
<endTime><!-- req, xs: datetime --></endTime>
</asyncChannelAlmReq>
```

ChnAlmRsp XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncChannelAlmRsp>
   <sessionId><!-- req, xs: long long --></sessionId> // Affair ID
   <retState><!-- req, xs: integer --></retState>    // Return type; 0-Success; 1-Failure
</asyncChanelAlmRsp>
```

Test cases

POST /CGI/Smart/Async/FaceCount/Start/ChannelAlm/SessionId/65535

Request XML: <AsyncChannelAlmReq>

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncChannelAlmReq>
<channelList>
<channel>1</channel>
…
<channel>5</channel>
</channelList>
<eventType>2</eventType>
<accuracy>1</accuracy>
<beginTime>2018-07-10T12:00:00Z</beginTime>
<endTime>2018-07-10T13:00:00Z</endTime>
</asyncChannelAlmReq>
```

Response XML: <AsyncChannelAlmRsp>

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncChannelAlmRsp >
  <sessionId>65535</sessionId>
  <retState>0</retState>
</asyncChannelAlmRsp>
```

2.7.101 /CGI/Smart/Async/FaceCount/ChannelAlm/Result/SessionId/<ID>

/CGI/Smart/Async/FaceCount/ChannelAlm/Result/SessionId/<ID>	
GET	
Description	Acquire the statistics result of alarm of asynchronous face statistics channel
Query	None
Inbound Data	**NONE**
Success Return	**<AsyncChannelAlmResult>**

Explanations on protocol:
This protocol is prepared for acquiring the statistics result of channel alarm
Explanations on key parameters:
Reply:
<channelAlmList>
<channelAlm>
<channel> Channel
<almCnt> Alarm count

AsyncChannelAlmResult XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncChannelAlmResult>
<channelAlmList>
<channelAlm>
<channel><!-- req, xs: integer --></channel>
<almCnt><!-- req, xs: integer --></almCnt>
</channelAlm>
// Repeat channelAlm
</channelAlmList>
</asyncChanelAlmResult>
```

Test cases
GET /CGI/Smart/Async/FaceCount/ChannelAlm/Result/SessionId/65535
Response XML: <AsyncChannelAlmResult>

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncChannelAlmResult>
<channelAlmList>
<channelAlm>
<channel>1</channel>
<almCnt>152</almCnt>
</channelAlm>
…
<channelAlm>
<channel>5</channel>
<almCnt>75</almCnt>
</channelAlm>
</channelAlmList>
</asyncChannelAlmResult>
```

2.7.102 /CGI/Smart/Async/FaceCount/TargetAlm/Start/SessionId/<ID>

/CGI/Smart/FaceCount/TargetAlm/Start/SessionId/<ID>	
POST	
Description	Request for alarm of asynchronous face statistics target
Query	None
Inbound Data	**<AsyncTargetAlmReq>**
Success Return	**<AsyncTargetAlmRsp>**

Explanations on protocol:
Make request for alarm of asynchronous face statistics target
Explanations on key parameters:
Request:
<sort> Sort type; 1: Positive; 2: Reverse
<libKey> Library key, unique
<accuracy> Accuracy; 0: Day; 1: Week; 2: Month; 3: Year
<beginTime> Begin time
<endTime> End time
<page> Page, the first page is 0

```
<perPageCnt> Count per page
Reply:
<sessionId> Affair ID
<retState> Return type – 0: Success; 1: Failure
```

TargetAlmReq XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<targetAlmReq>
<sort><!-- req, xs: integer --></sort>
<libKeyList>
<libKey><!-- req, xs: long long --></libKey>
// Repeat <libKey>
</libKeyList>
<accuracy><!-- req, xs: integer --></accuracy>
<beginTime><!-- req, xs: datetime --></beginTime>
<endTime><!-- req, xs: datetime --></endTime>
<page><!-- req, xs: integer --></page>
<perPageCnt><!-- req, xs: integer --></perPageCnt>
</targetAlmReq>
```

AsyncTargetAlmRsp XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncTargetAlmRsp>
   <sessionId><!-- req, xs: long long --></sessionId> // Affair ID
   <retState><!-- req, xs: integer --></retState>    // Return type; 0-Success; 1-Failure
</asyncTargetAlmRsp>
```

Test cases

POST /CGI/Smart/Async/FaceCount/TargetAlm/Start/SessionId/65535

Request XML: <AsyncTargetAlmReq>

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncTargetAlmReq>
<sort>1</sort>
<libKeyList>
<libKey>1234567890</libKey>
….
<libKey>9876543210</libKey>
</libKeyList>
<accuracy>1</accuracy>
<beginTime>2018-07-10T12:00:00Z</beginTime>
<endTime>2018-07-10T13:00:00Z</endTime>
<page>0</page>
<perPageCnt>10</perPageCnt>
</asyncTargetAlmReq>
```

Response XML: <AsyncTargetAlmRsp>

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncTargetAlmRsp>
  <sessionId>65535</sessionId>
  <retState>0</retState>
</asyncTargetAlmRsp>
```

2.7.103 /CGI/Smart/Async/FaceCount/TargetAlm/Result/SessionId/<ID>

/CGI/Smart/Async/FaceCount/TargetAlm/Result/SessionId/<ID>	
GET	
Description	Asynchronous acquisition of alarm result of face statistics target
Query	None
Inbound Data	**NONE**

Success Return	<AsyncTargetAlmResult>

Explanations on protocol:
Realize asynchronous acquisition of alarm result of face statistics target
Explanations on key parameters:
Reply：
<totalCnt> Total count, calculate the total pages
<countTargetAlmMsgList>
<countTargetAlmMsg>
<almCnt> Total alarm count
<libKey> Key of face library
<faceKey> Key of face library
<picFileName> Base map path and name, 63 bits
<name> Name, 63 bits
<sex> Gender; 0: Unknown; 1: Male; 2: Female
<nation> Nationality; 0: Unknown; 10000: Minority
<birthday> Birthday: 1970-1-1 number of seconds
<certType> Certificate type; 0-Unknown; 1- Certificate of officer; 2-ID card
<certNum> Certificate No., 63 bits
<country> Country, as per national and local ISO 3166-1 code table (see figure)
<address> Address, 64 bits at most
<company> Company name, 64 bits at most

AsyncTargetAlmResult XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncTargetAlmResult>
<totalCnt><!-- req, xs: integer --></totalCnt>
<countTargetAlmMsgList>
<countTargetAlmMsg>
<almCnt><!-- req, xs: integer --></almCnt>
<libKey><!-- req, xs: long long --></libKey>
<faceKey><!-- req, xs: long long --></faceKey>
<picFileName><!-- req, xs:string --></picFileName>
<name><!-- req, xs:string --></name>
<sex><!-- req, xs: integer --></sex>
<nation><!-- req, xs: integer --></nation>
<birthday><!-- req, xs: datetime --></birthday>
<certType><!-- req, xs: integer --></certType>
<certNum><!-- req, xs:string --></certNum>
<facePicQueryResult version="2.0">
<sessionId><!—req,sx:integer--></sessionId>
<totalCount><!—req,sx:integer--></totalCount>
<pageSize><!—req,sx:integer--></pageSize>
<matchList>
<matchElement>
<index><!—req,sx:integer--></index>
<libKey><!—req,sx: integer--></libKey>
<faceKey><!—req,sx: integer--></faceKey>
<fileType><!—req,sx:integer--></fileType>
<model><!—req,sx:integer--></model>
<name><!—req,sx:integer--></name>
<sex><!—req,sx:integer--></sex>
<timeSpanList>
<timeSpan>
<birthdayt><!-- req, xs: datetime --></birthday>
</timeSpan>
</timeSpanList>
<nation><!—req,sx:integer--></nation>
<province><!—req,sx:integer--></province>
```

```
<city><!—req,sx:integer--></city>
<certType><!—req,sx:integer--></certType>
<certNum><!—dep,sx: string--></certNum>
</matchElement>
</matchList>
<country><!-- req, xs: integer --></country>
<address ><!-- req, xs: string --></address>
<company ><!-- req, xs: string --></company>
</countTargetAlmMsg>
// Repeat countTargetAlmMsg
</countTargetAlmMsgList>
</asyncTargetAlmResult>
```

Test cases

GET /CGI/Smart/Async/FaceCount/TargetAlm/Result/SessionId/65535

Response XML: <AsyncTargetAlmResult>

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncTargetAlmResult>
<totalCnt>5000</totalCnt>
<countTargetAlmMsgList>
<countTargetAlmMsg>
<almCnt>155</almCnt>
<libKey>1234567890</libKey>
<faceKey>1111111111</faceKey>
<picFileName>/tmp/face/0.jpg</picFileName>
<name> Zhang San</name>
<sex>1</sex>
<nation>55</nation>
<birthday>2018-07-10T12:00:00Z</birthday>
<certType>2</certType>
<certNum>120105196407051154</certNum>
<country >0</country>
<address >huake</address>
<company >Tiandy</company>
</countTargetAlmMsg>
<countTargetAlmMsg>
…
</countTargetAlmMsg>
</countTargetAlmMsgList>
</asyncTargetAlmResult>
```

2.7.104 /CGI/Smart/AsyncTaskControl/SessionId/<ID>

/CGI/Smart/AsyncTaskControl/SessionId/<ID>	
PUT	
Description	Request for state control of asynchronous task
Query	None
Inbound Data	**<AsyncTaskCtlReq>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Realize state control of asynchronous task **Explanations on key parameters:** Send: <progressType> 1: Export face base map; 2: Face retrieval – total query amount; 3: Asynchronous statistics of heat map; 4: Asynchronous statistics of target alarm; 5: Asynchronous statistics of channel alarm <sessionCtlOpt> 1: Start; 2: Stop; 3: Pause; 4: Recover	

AsyncTaskCtlReq XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncTaskCtlReq>
<progressType><!-- req, xs: integer --></progressType>
<sessionCtlOpt><!-- req, xs: integer --></sessionCtlOpt>
</asyncTaskCtlReq>
```

Test cases

PUT /CGI/Smart/AsyncTaskControl/SessionId/65535

Send XML: <AsyncTaskCtlReq>

```
<?xml version="1.0" encoding="UTF-8"?>
<asyncTaskCtlReq>
<progressType>3</progressType>
<sessionCtlOpt>2</sessionCtlOpt>
</asyncTaskCtlReq>
```

Response XML: <ResponseStatus>

2.7.105/CGI/Smart/Prctduty/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/Prctduty/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire single interrogation/unattended parameters
Query	None
Inbound Data	None
Success Return	**<Prctduty>**
PUT	
Description	Set single interrogation/unattended parameters
Query	None
Inbound Data	**<Prctduty>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on single interrogation/unattended parameters. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true: start, false: not start
<leaveTime> Allowed leave time; unit: Second; 0~3600 seconds; 10 s as default
<sensitivity> Sensitivity: 0~100; default: 50
<maxSize> Max. size: 8-100; 25 as default
<minSize> Min. size: 1-50; 8 as default
<validRgList> means detection region list, region number: 1~8
<maskRgList> means list of shielded regions, 0~8
<suspectRgList> means suspected region list; region number: 1
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<positionX> means X coordinates of region: Ten-thousandth
<positionY> means Y coordinates of region: Ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display

Prctduty XML Block

```
<Prctduty version="2.0" >
<enabled><!-- req, xs:boolean --></enabled>
<leaveTime><!-- req, xs:integer --> </leaveTime>
<sensitivity><!-- req, xs: integer --></sensitivity>
<displayRule><!--req, xs:boolean--></displayRule>
<displayStat><!--req, xs:boolean--></displayStat>
```

```
    <displayTarget><!--req, xs:boolean--></displayTarget>
    <minSize><!-- req, xs:integer --></minSize>
    <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
    <validRgList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX><!-- req, xs: integer --> </positionX>
            <positionY> <!-- req, xs: integer --></positionY>
        </RegionCoordinates>
        </RegionCoordinatesList>
    </validRgList>
    <maskRgList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX><!-- req, xs: integer --> </positionX>
            <positionY> <!-- req, xs: integer --></positionY>
        </RegionCoordinates>
        </RegionCoordinatesList>
    </maskRgList>
    <suspectRgList size="1">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX><!-- req, xs: integer --> </positionX>
            <positionY> <!-- req, xs: integer --></positionY>
        </RegionCoordinates>
        </RegionCoordinatesList>
    </suspectRgList>
</Prctduty>
```

Test cases

GET /CGI/Smart/Prctduty/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Request XML: none

Response XML: <Prctduty>

PUT /CGI/Smart/Prctduty/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<Prctduty version="2.0">
    <enabled>true</enabled>
    <leaveTime>10</leaveTime>
    <sensitivity>80</sensitivity>
    <displayRule>true</displayRule>
    <displayStat>true</displayStat>
    <displayTarget>true</displayTarget>
    <minSize>8</minSize>
    <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
    <validRgList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX>100 </positionX>
            <positionY>200</positionY>
        </RegionCoordinates>
    </RegionCoordinatesList>
    </validRgList>
```

```
    <maskRgList size="8">
    <RegionCoordinatesList size="10">
      <RegionCoordinates>
        <positionX>100</positionX>
        <positionY>200</positionY>
      </RegionCoordinates>
    </RegionCoordinatesList>
    </maskRgList>
    <suspectRgList size="1">
    <RegionCoordinatesList size="10">
      <RegionCoordinates>
        <positionX>100</positionX>
        <positionY>200</positionY>
      </RegionCoordinates>
      </RegionCoordinatesList>
    </suspectRgList>
</Prctduty>
```

2.7.106/CGI/Smart/Sleep/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/Sleep/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of sleep
Query	None
Inbound Data	None
Success Return	**<Sleep>**
PUT	
Description	Set parameters of sleep
Query	None
Inbound Data	**<Sleep>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on sleep parameters. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true: start, false: not start
<sleepTime> Allowed max. sleep time; unit: Second; 1~3600s; 30s as default
<sensitivity> Sensitivity: 0~100 (default: 50)
<maxSize> Max. size: 8-100; 25 as default
<minSize> Min. size: 1-50; 8 as default
<validRgList> means detection region list, region number: 1~8
<maskRgList> means list of shielded regions, 0~8
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<positionX> means X coordinates of region: Ten-thousandth
<positionY> means Y coordinates of region: Ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display

Sleep XML Block

```
<Sleep version="2.0" >
    <enabled><!-- req, xs:boolean --></enabled>
    <sleepTime><!-- req, xs:integer --> </sleepTime>
    <sensitivity><!-- req, xs: integer --></sensitivity>
    <displayRule><!--req, xs:boolean--></displayRule>
    <displayStat><!--req, xs:boolean--></displayStat>
```

```
    <displayTarget><!--req, xs:boolean--></displayTarget>
    <minSize><!-- req, xs:integer --></minSize>
    <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
    <validRgList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX><!-- req, xs: integer --> </positionX>
            <positionY> <!-- req, xs: integer --></positionY>
        </RegionCoordinates>
    </RegionCoordinatesList>
    </validRgList>
    <maskRgList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX><!-- req, xs: integer --> </positionX>
            <positionY> <!-- req, xs: integer --></positionY>
        </RegionCoordinates>
    </RegionCoordinatesList>
    </maskRgList>
</Sleep>
```

Test cases

GET /CGI/Smart/Sleep/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Request XML: none

Response XML: <Sleep>

PUT /CGI/Smart/Sleep/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<Sleep version="2.0">
    <enabled>true</enabled>
    <SleepTime>30</SleepTime>
    <sensitivity>80</sensitivity>
    <displayRule>true</displayRule>
    <displayStat>true</displayStat>
    <displayTarget>true</displayTarget>
    <minSize>8</minSize>
    <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
    <validRgList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX>100 </positionX>
            <positionY>200</positionY>
        </RegionCoordinates>
    </RegionCoordinatesList>
    </validRgList>
    <maskRgList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX>100</positionX>
            <positionY>200</positionY>
        </RegionCoordinates>
    </RegionCoordinatesList>
    </maskRgList>
```

```
</Sleep>
```

2.7.107/CGI/Smart/NewFight/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/NewFight/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of new fight
Query	None
Inbound Data	None
Success Return	**<NewFight>**
PUT	
Description	Set parameters of new fight
Query	None
Inbound Data	**<NewFight>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on new fight. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true: start, false: not start
<timeMin> Min. alarm interval; unit: Second; 0~1000s, 300s as default
<sensitivity> Sensitivity: 0~100 (default: 50)
<maxSize> Max. size: 8-100; 25 as default
<minSize> Min. size: 1-50; 8 as default
<validRgList> means detection region list, region number: 1~8
<maskRgList> means list of shielded regions, 0~8
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<positionX> means X coordinates of region: Ten-thousandth
<positionY> means Y coordinates of region: Ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display

NewFight XML Block

```
<NewFight version="2.0" >
   <enabled><!-- req, xs:boolean --></enabled>
   <timeMin><!-- req, xs:integer --> </timeMin>
   <sensitivity><!-- req, xs: integer --></sensitivity>
   <displayRule><!--req, xs:boolean--></displayRule>
   <displayStat><!--req, xs:boolean--></displayStat>
   <displayTarget><!--req, xs:boolean--></displayTarget>
   <minSize><!-- req, xs:integer --></minSize>
   <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
   <validRgList size="8">
   <RegionCoordinatesList size="10">
      <RegionCoordinates>
         <positionX><!-- req, xs: integer --> </positionX>
         <positionY> <!-- req, xs: integer --></positionY>
      </RegionCoordinates>
      </RegionCoordinatesList>
```

```
  </validRgList>
  <maskRgList size="8">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX><!-- req, xs: integer --> </positionX>
      <positionY> <!-- req, xs: integer --></positionY>
    </RegionCoordinates>
    <RegionCoordinatesList>
  </maskRgList>
</NewFight>
```

Test cases

GET /CGI/Smart/NewFight/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Request XML: none

Response XML: <NewFight>

PUT /CGI/Smart/NewFight/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<NewFight version="2.0">
  <enabled>true</enabled>
  <TimeMin>30</SleepTime>
  <sensitivity>80</sensitivity>
  <displayRule>true</displayRule>
  <displayStat>true</displayStat>
  <displayTarget>true</displayTarget>
  <minSize>8</minSize>
  <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
  <validRgList size="8">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX>100 </positionX>
      <positionY>200</positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  </validRgList>
  <maskRgList size="8">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX>100</positionX>
      <positionY>200</positionY>
    </RegionCoordinates>
    </RegionCoordinatesList>
  </maskRgList>
</NewFight>
```

2.7.108/CGI/Smart/GetUp/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/GetUp/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire get up parameters
Query	None
Inbound Data	None
Success Return	**<GetUp>**
PUT	
Description	Set getup parameters

Query	None
Inbound Data	**<GetUp>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on getup. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true: start, false: not start
<sensitivity> Sensitivity: 0~100 (default: 50)
<maxSize> Max. size: 8-100; 25 as default
<minSize> Min. size: 1-50; 8 as default
<regionList> means list of detection region, 1~8
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<LineList> means list of detection line
<LineCoordinatesList> means coordinates of detection line
<LineCoordinates> means coordinates of detection line
<positionX> means X coordinates of detection area: ten-thousandth
<positionY> means Y coordinates of detection area: ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display

GetUp XML Block

```
<GetUp version="2.0" >
   <enabled><!-- req, xs:boolean --></enabled>
   <sensitivity><!-- req, xs: integer --></sensitivity>
   <displayRule><!--req, xs:boolean--></displayRule>
   <displayStat><!--req, xs:boolean--></displayStat>
   <displayTarget><!--req, xs:boolean--></displayTarget>
   <minSize><!-- req, xs:integer --></minSize>
   <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
<regionList size="1-8">
   <RegionCoordinatesList size="3-10">
      <RegionCoordinates>
         <positionX><!-- req, xs: integer --> </positionX>
         <positionY> <!-- req, xs: integer --></positionY>
      </RegionCoordinates>
   </RegionCoordinatesList>
</regionList>
<LineList>
   <LineCoordinatesList>
      <LineCoordinates>
         <positionX><!-- req, xs:integer;--></positionX>
         <positionY><!-- req, xs:integer; --></positionY>
      </LineCoordinates>
   </LineCoordinatesList>
</LineList>
</GetUp>
```

Test cases

GET /CGI/Smart/GetUp/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>
Request XML: none
Response XML: <GetUp>
PUT /CGI/Smart/GetUp/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>
Response XML: <ResponseStatus>

Request XML： as below

```
<GetUp version="2.0">
   <enabled>true</enabled>
   <sensitivity>80</sensitivity>
   <displayRule>true</displayRule>
   <displayStat>true</displayStat>
   <displayTarget>true</displayTarget>
   <minSize>8</minSize>
   <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
<regionList size="8">
   <RegionCoordinatesList size="10">
      <RegionCoordinates>
         <positionX>100</positionX>
         <positionY>200</positionY>
      </RegionCoordinates>
   </RegionCoordinatesList>
</regionList>
<LineList>
   <LineCoordinatesList>
      <LineCoordinates>
         <positionX>1800</positionX>
         <positionY>2800</positionY>
      </LineCoordinates>
      <LineCoordinates>
         <positionX>6800</positionX>
         <positionY>7800</positionY>
      </LineCoordinates>
   </LineCoordinatesList>
</LineList>
</GetUp>
```

2.7.109/CGI/Smart/HeightLimit/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/HeightLimit/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire height limit parameters
Query	None
Inbound Data	None
Success Return	**<HeightLimit>**
PUT	
Description	Set height limit parameters
Query	None
Inbound Data	**<HeightLimit>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on height limit. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective， true：start, false：not start

<limitTime> Max. limit time; unit: Second; 0~100s; 3s as default

<sensitivity> Sensitivity: 0~100 (default: 50)

<maxSize> Max. size: 8-100; 25 as default

<minSize> Min. size: 1-50; 8 as default

<regionList> means list of detection region, 1~8

```
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<positionX> means X coordinates of detection area: ten-thousandth
<positionY> means Y coordinates of detection area: ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display
```

HeightLimit XML Block

```
<HeightLimit version="2.0" >
  <enabled><!-- req, xs:boolean --></enabled>
  <limitTime><!-- req, xs:integer --> </limitTime>
  <sensitivity><!-- req, xs: integer --></sensitivity>
  <displayRule><!--req, xs:boolean--></displayRule>
  <displayStat><!--req, xs:boolean--></displayStat>
  <displayTarget><!--req, xs:boolean--></displayTarget>
  <minSize><!-- req, xs:integer --></minSize>
  <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
<regionList size="8">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX><!-- req, xs: integer --> </positionX>
      <positionY> <!-- req, xs: integer --></positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  </regionList>
</HeightLimit>
```

Test cases

GET /CGI/Smart/HeightLimit/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Request XML: none

Response XML: <HeightLimit>

PUT /CGI/Smart/HeightLimit/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<HeightLimitversion="2.0">
  <enabled>true</enabled>
  <limitTime>3</limitTime>
  <sensitivity>80</sensitivity>
  <displayRule>true</displayRule>
  <displayStat>true</displayStat>
  <displayTarget>true</displayTarget>
  <minSize>8</minSize>
  <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
<regionList size="8">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX>100</positionX>
      <positionY>200</positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  </regionList>
</HeightLimit>
```

2.7.110/CGI/Smart/NewDuty/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/NewDuty/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> General Resource v2.0	
GET	
Description	Acquire leave parameters
Query	None
Inbound Data	None
Success Return	**<NewDuty>**
PUT	
Description	Set leave parameters
Query	None
Inbound Data	**<NewDuty>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on new leaves. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true: start, false: not start
<leaveTime> Allowed leave time; unit: Second; 1~1000s; 10s as default
<dutyNum> Duty number, range: 1-2; 1 as default
<sensitivity> Sensitivity: 0~100 (default: 50)
<maxSize> Max. size: 8-100; 25 as default
<minSize> Min. size: 1-50; 8 as default
<regionList> means list of detection region, 1~8
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<positionX> means X coordinates of detection area: ten-thousandth
<positionY> means Y coordinates of detection area: ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display

NewDuty XML Block

```
<NewDuty version="2.0" >
   <enabled><!-- req, xs:boolean --></enabled>
   <leaveTime><!-- req, xs:integer --> </leaveTime>
   <dutyNum><!-- req, xs:integer --> </dutyNum>
   <sensitivity><!-- req, xs: integer --></sensitivity>
   <displayRule><!--req, xs:boolean--></displayRule>
   <displayStat><!--req, xs:boolean--></displayStat>
   <displayTarget><!--req, xs:boolean--></displayTarget>
   <minSize><!-- req, xs:integer --></minSize>
   <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
<regionList size="8">
   <RegionCoordinatesList size="10">
      <RegionCoordinates>
         <positionX><!-- req, xs: integer --> </positionX>
         <positionY> <!-- req, xs: integer --></positionY>
      </RegionCoordinates>
   </RegionCoordinatesList>
</regionList>
</NewDuty>
```

Test cases

GET /CGI/Smart/NewDuty/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Request XML： none
Response XML: <NewDuty>
PUT /CGI/Smart/NewDuty/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>
Response XML： <ResponseStatus>
Request XML： as below

```
<NewDuty version="2.0">
  <enabled>true</enabled>
  <leaveTime>10</leaveTime>
  <dutyNum>1</dutyNum>
  <sensitivity>80</sensitivity>
  <displayRule>true</displayRule>
  <displayStat>true</displayStat>
  <displayTarget>true</displayTarget>
  <minSize>8</minSize>
  <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
<regionList size="8">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX>100</positionX>
      <positionY>200</positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</regionList>
</NewDuty>
```

2.7.111/CGI/Smart/Stranded/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/Stranded/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire detention parameters
Query	None
Inbound Data	None
Success Return	**<Stranded>**
PUT	
Description	Set detention parameters
Query	None
Inbound Data	**<Stranded>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of intelligent analysis on detention. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:
<enabled> represents whether it is effective， true：start, false：not start
<alarmTime> Allowed leave time; unit: Second; 0~100s; 3s as default
<sensitivity> Sensitivity: 0~100 (default: 50)
<maxSize> Max. size: 8-100; 25 as default
<minSize> Min. size: 1-50; 8 as default
<regionList> means list of detection region, 1~8
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<positionX> means X coordinates of detection area: ten-thousandth
<positionY> means Y coordinates of detection area: ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display

```
<displayTarget > Display target: true-Display; false-Not display
```

Stranded XML Block

```
<Stranded version="2.0" >
  <enabled><!-- req, xs:boolean --></enabled>
  <alarmTime><!-- req, xs:integer --> </leaveTime>
  <sensitivity><!-- req, xs: integer --></sensitivity>
  <displayRule><!--req, xs:boolean--></displayRule>
  <displayStat><!--req, xs:boolean--></displayStat>
  <displayTarget><!--req, xs:boolean--></displayTarget>
  <minSize><!-- req, xs:integer --></minSize>
  <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
<regionList size="8">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX><!-- req, xs: integer --> </positionX>
      <positionY> <!-- req, xs: integer --></positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  </regionList>
</Stranded>
```

Test cases

GET /CGI/Smart/Stranded/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Request XML: none

Response XML: <Stranded>

PUT /CGI/Smart/Stranded/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<Stranded version="2.0">
  <enabled>true</enabled>
  <alarmTime>10</leaveTime>
  <sensitivity>80</sensitivity>
  <displayRule>true</displayRule>
  <displayStat>true</displayStat>
  <displayTarget>true</displayTarget>
  <minSize>8</minSize>
  <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
<regionList size="8">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX>100</positionX>
      <positionY>200</positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  </regionList>
</Stranded>
```

2.7.112/CGI/Smart/Alone/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/Alone/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

	General Resource v2.0
GET	
Description	Acquire parameters of alone
Query	None
Inbound Data	None
Success Return	**<Alone>**
PUT	
Description	Set parameters of alone
Query	None
Inbound Data	**<Alone>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on alone. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true: start, false: not start
<alarmTime> Alone time; unit: Second; 1~1000s; 30s as default
<sensitivity> Sensitivity: 0~100 (default: 50)
<maxSize> Max. size: 8-100; 25 as default
<minSize> Min. size: 1-50; 8 as default
<regionList> means list of detection region, 1~8
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<positionX> means X coordinates of detection area: ten-thousandth
<positionY> means Y coordinates of detection area: ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display

Alone XML Block

```
<Alone version="2.0" >
   <enabled><!-- req, xs:boolean --></enabled>
   <alarmTime><!-- req, xs:integer --> </leaveTime>
   <sensitivity><!-- req, xs: integer --></sensitivity>
   <displayRule><!--req, xs:boolean--></displayRule>
   <displayStat><!--req, xs:boolean--></displayStat>
   <displayTarget><!--req, xs:boolean--></displayTarget>
   <minSize><!-- req, xs:integer --></minSize>
   <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
<regionList size="8">
   <RegionCoordinatesList size="10">
      <RegionCoordinates>
         <positionX><!-- req, xs: integer --> </positionX>
         <positionY> <!-- req, xs: integer --></positionY>
      </RegionCoordinates>
   </RegionCoordinatesList>
   </regionList>
</Alone>
```

Test cases

GET /CGI/Smart/Alone/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>
Request XML: none
Response XML: <Alone>
PUT /CGI/Smart/Alone/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<Alone version="2.0">
   <enabled>true</enabled>
   <alarmTime>10</leaveTime>
   <sensitivity>80</sensitivity>
   <displayRule>true</displayRule>
   <displayStat>true</displayStat>
   <displayTarget>true</displayTarget>
   <minSize>8</minSize>
   <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
<regionList size="8">
   <RegionCoordinatesList size="10">
      <RegionCoordinates>
         <positionX>100</positionX>
         <positionY>200</positionY>
      </RegionCoordinates>
   </RegionCoordinatesList>
</regionList>
</Alone>
```

2.7.113/CGI/Smart/Delivergoods/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/Delivergoods/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of delivering goods
Query	None
Inbound Data	None
Success Return	**<Delivergoods>**
PUT	
Description	Set parameters of delivering goods
Query	None
Inbound Data	**<Delivergoods>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on delivering goods. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true: start, false: not start
<sensitivity> Sensitivity: 0~5 (default: 2)
<maxSize> Max. size: 1-100; 30 as default
<minSize> Min. size: 0-100; 0 as default
<regionList> means list of detection region, 1~8
<RegionCoordinatesList> means coordinate list of detection area; coordinate number: 3~10
<RegionCoordinates> represents detection region coordinate
<positionX> means X coordinates of detection area: ten-thousandth
<positionY> means Y coordinates of detection area: ten-thousandth
<displayRule > Display rule; true-Display, false-Not display
<displayStat > Display alarm count: true-Display; false: Not display
<displayTarget > Display target: true-Display; false-Not display

Delivergoods XML Block

```
<Delivergoods version="2.0" >
   <enabled><!-- req, xs:boolean --></enabled>
   <sensitivity><!-- req, xs: integer --></sensitivity>
   <displayRule><!--req, xs:boolean--></displayRule>
```

```
    <displayStat><!--req, xs:boolean--></displayStat>
    <displayTarget><!--req, xs:boolean--></displayTarget>
    <minSize><!-- req, xs:integer --></minSize>
    <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
<regionList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX><!-- req, xs: integer --> </positionX>
            <positionY> <!-- req, xs: integer --></positionY>
        </RegionCoordinates>
    </RegionCoordinatesList>
    </regionList>
</Delivergoods>
```

Test cases

GET /CGI/Smart/Delivergoods/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Request XML: none

Response XML: <Delivergoods>

PUT /CGI/Smart/Delivergoods/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<Delivergoods version="2.0">
    <enabled>true</enabled>
    <sensitivity>80</sensitivity>
    <displayRule>true</displayRule>
    <displayStat>true</displayStat>
    <displayTarget>true</displayTarget>
    <minSize>8</minSize>
    <maxSize>80</maxSize>
<color>green</color>
<alarmColor>red</alarmColor>
<regionList size="8">
    <RegionCoordinatesList size="10">
        <RegionCoordinates>
            <positionX>100</positionX>
            <positionY>200</positionY>
        </RegionCoordinates>
    </RegionCoordinatesList>
    </regionList>
</Delivergoods>
```

2.7.114/CGI/Smart/FaceMosaic/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/FaceMosaic/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of face mosaic algorithm
Query	None
Inbound Data	None
Success Return	**<FaceMosaic>**
PUT	
Description	Set parameters of face mosaic algorithm
Query	None
Inbound Data	**<FaceMosaic>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on face mosaic algorithm parameters. Model is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true: start, false: not start
<mosaicEnabled> means whether enable mosaic; true: Enabled; false: Disabled
<picScal> means picture scaling proportion: 1-10
<level> means operation level
<mosaicLevel> means mosaic level: 0-100
<sensitivity> Sensitivity: 0~5
<maxSize> Max. size 0-100
<minSize> Min. size: 0-100
<validRgList> Detection region list; region number: 1
<protectRgList> Coordinate list of protection region; region number: 1
<RegionCoordinatesList> means list of region coordinates; coordinate number: 3~10
<RegionCoordinates> means region coordinates
<positionX> means X coordinates of detection area: ten-thousandth
<positionY> means Y coordinates of detection area: ten-thousandth
<displayRule > Display rule; true-Display, false-Not display

FaceMosaic XML Block

```
<FaceMosaic version="2.0" >
  <enabled><!-- req, xs:boolean --></enabled>
  <mosaicEnabled><!-- req, xs:boolean --></mosaicEnabled>
  <picScal><!-- req, xs: integer --></picScal>
  <level><!-- req, xs: integer --></level>
  <mosaicLevel><!-- req, xs: integer --></mosaicLevel>
  <sensitivity><!-- req, xs: integer --></sensitivity>
  <displayRule><!--req, xs:boolean--></displayRule>
  <minSize><!-- req, xs:integer --></minSize>
  <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
  <validRgList size="1">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX><!-- req, xs: integer --> </positionX>
      <positionY> <!-- req, xs: integer --></positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  </validRgList>
  <protectRgList size="1">
  <RegionCoordinatesList size="10">
    <RegionCoordinates>
      <positionX><!-- req, xs: integer --> </positionX>
      <positionY> <!-- req, xs: integer --></positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  </protectRgList>
</FaceMosaic>
```

Test cases

GET /CGI/Smart/FaceMosaic/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>
Request XML: none
Response XML: <FaceMosaic>
PUT /CGI/Smart/FaceMosaic/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<FaceMosaic version="2.0">
   <enabled>true</enabled>
   <mosaicEnabled>true</mosaicEnabled>
   <picScal>0</picScal>
   <level>2</level>
   <mosaicLevel>0</mosaicLevel>
   <sensitivity>80</sensitivity>
   <displayRule>true</displayRule>
   <minSize>8</minSize>
   <maxSize>80</maxSize>
<color>green</color>
   <validRgList size="1">
   <RegionCoordinatesList size="10">
      <RegionCoordinates>
         <positionX>100 </positionX>
         <positionY>200</positionY>
      </RegionCoordinates>
   </RegionCoordinatesList>
   </validRgList>
   <protectRgList size="1">
   <RegionCoordinatesList size="10">
      <RegionCoordinates>
         <positionX>100</positionX>
         <positionY>200</positionY>
      </RegionCoordinates>
   </RegionCoordinatesList>
   </protectRgList>
</FaceMosaic>
```

2.7.115/CGI/Smart/ColorTrack/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID>

/CGI/Smart/ColorTrack/<ID>/Channels/<ID>/Scene/<ID>/Model/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of color traction algorithm
Query	None
Inbound Data	None
Success Return	**<ColorTrack>**
PUT	
Description	Set parameters of color traction algorithm
Query	None
Inbound Data	**<ColorTrack>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for query and setting of intelligent analysis on color traction algorithm parameters. Model mode is 0 nvr 1 ipc.

Explanations on key parameters:

<enabled> represents whether it is effective, true：start, false：not start

<calibrationSize> means calibration frame size; default; 15; adjustment range: 10~25

<targetColor> means target color: 0: Others (confirm target by hue, saturation and lightness); 1: Red; 2: Green; 3: Yellow

<hue> means hue, this value is valid when targetColor=0;

<saturation> means saturation, this value is valid when targetColor=0;

<lightness> means lightness; this value is valid when targetColor=0;

<zoomRate> means zoom rate of traction

<searchTime> means search time of each preset bit; unit: Second; by default time if value is 0

<searchLoop> means auto search of loop; this value is valid if it is not 0; by default if value is

```
            0
    <sensitivity> Sensitivity: 0~100 (default: 80)
    <maxSize> Max. size: 0-100; 15 as default
    <minSize> Min. size: 0-100; 5 as default
    <displayRule > Display rule; true-Display, false-Not display
    <displayStat > Display alarm count: true-Display; false: Not display
    <displayTarget > Display target: true-Display; false-Not display
```

ColorTrack XML Block

```
<ColorTrack version="2.0" >
    <enabled><!-- req, xs:boolean --></enabled>
    <calibrationSize><!-- req, xs: integer --></calibrationSize>
    <targetColor><!-- req, xs: integer --></targetColor>
    <hue><!-- req, xs: integer --></hue>
    <saturation><!-- req, xs: integer --></saturation>
    <lightness><!-- req, xs: integer --></lightness>
    <zoomRate><!-- req, xs: integer --></zoomRate>
    <searchTime><!-- req, xs: integer --></searchTime>
    <searchLoop><!-- req, xs: integer --></searchLoop>
    <sensitivity><!-- req, xs: integer --></sensitivity>
    <displayRule><!--req, xs:boolean--></displayRule>
    <displayStat><!--req, xs:boolean--></displayStat>
    <displayTarget><!--req, xs:boolean--></displayTarget>
    <minSize><!-- req, xs:integer --></minSize>
    <maxSize><!-- req, xs:integer --></maxSize>
<color><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></color>
<alarmColor><!--opt,xs:string"red,green,yellow,blue,purple,cyan,black,white"--></alarmColor
>
</ColorTrack>
```

Test cases

GET /CGI/Smart/ColorTrack/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Request XML: none

Response XML: <ColorTrack>

PUT /CGI/Smart/ColorTrack/<ID>/channels/<ID>/Scene/<ID>/Model/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<ColorTrack version="2.0">
    <enabled>true</enabled>
    <calibrationSize>15</calibrationSize>
    <targetColor>1</targetColor>
    <hue>1</hue>
    <saturation>1</saturation>
    <lightness>1</lightness>
    <zoomRate>1</zoomRate>
    <searchTime>1</searchTime>
    <searchLoop>1</searchLoop>
    <sensitivity>80</sensitivity>
    <displayRule>true</displayRule>
    <displayStat>true</displayStat>
    <displayTarget>true</displayTarget>
    <minSize>8</minSize>
    <maxSize>80</maxSize>
    <color>green</color>
    <alarmColor>red</alarmColor>
</ColorTrack>
```

2.7.116 /CGI/Smart/AIResource/channels/<ID>/Timing

/CGI/Smart/AIResource/channels/<ID>/Timing	
GET	
Description	Intelligent and timing switching management of resources
Query	None
Inbound Data	None
Success Return	**<aiTiming>**
PUT	
Description	Intelligent and timing switching management of resources
Query	None
Inbound Data	**<aiTiming>**
Success Return	**<responseStatus>**
Explanations on protocol: Realize intelligent and timing switching management of resources Introduction to key parameters: <enabled> means whether intelligent and timing switching of resource is enabled; true: Enabled; false: Disabled <aiName> means resource type: IVS –Intelligent monitoring; FaceDetect-Face snapshot; FaceRecognition-Face recognition; WaterMode-Water monitoring, WaterAlertStation- Water alert station; TrafficFlow-Traffic flow; ControlCommission-Intelligent supervision; PublicSecurity-Intelligent security; Education-Intelligent education; Discipline-Intelligent discipline <dayOfWeek> means day of week <TimeRange> means time range; time range number: 1~8; format: 19:35:00 (hour: minute: second; assignment 00)	

aiTiming XML Block

```
<aiTiming>
<enabled><!-- rsp, xs:boolean; --></enabled>
<TimeBlockList>
<TimeBlock size="1-8”>
   <dayOfWeek><!-- rsp, xs:integer; --></dayOfWeek>
   <TimeRange>
      <beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
      <endTime><!-- req, xs:time, ISO8601 time --></endTime>
      <aiName><!-- req, xs:string --></aiName>
   </TimeRange>
   <TimeRange>
      <beginTime><!-- req, xs:time, ISO8601 time --></beginTime>
      <endTime><!-- req, xs:time, ISO8601 time --></endTime>
      <aiName><!-- req, xs:string --></aiName>
   </TimeRange>
</TimeBlock>
</TimeBlockList>
</aiTiming>
```

Test cases

GET /CGI/Smart/AIResource/channels/0/Timing

Request XML： none

Response XML: <aiTiming>

PUT /CGI/Smart/AIResource/channels/0/Timing

Request XML: <aiTiming>

Response XML: <responseStatus>

```xml
<?xml version="1.0" encoding="UTF-8"?>
<aiTiming>
  <enabled>true</enabled>
  <TimeBlockList>
    <TimeBlock size="4”>
      <dayOfWeek>1</dayOfWeek>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>23:59:00</endTime>
        <aiName>IVS</aiName>
      </TimeRange>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>00:00:00</endTime>
        <aiName>IVS</aiName>
      </TimeRange>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>00:00:00</endTime>
        <aiName>FaceDetect</aiName>
      </TimeRange>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>00:00:00</endTime>
        <aiName>FaceDetect</aiName>
      </TimeRange>
    </TimeBlock>
    <TimeBlock size="4”>
      <dayOfWeek>2</dayOfWeek>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>23:59:00</endTime>
        <aiName>FaceDetect</aiName>
      </TimeRange>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>00:00:00</endTime>
        <aiName>FaceDetect</aiName>
      </TimeRange>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>00:00:00</endTime>
        <aiName>FaceDetect</aiName>
      </TimeRange>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>00:00:00</endTime>
        <aiName>FaceDetect</aiName>
      </TimeRange>
    </TimeBlock>
    <TimeBlock size="4”>
      <dayOfWeek>3</dayOfWeek>
      <TimeRange>
        <beginTime>00:00:00</beginTime>
        <endTime>23:59:00</endTime>
        <aiName>FaceDetect</aiName>
      </TimeRange>
      <TimeRange>
```

```
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
              <aiName>FaceDetect</aiName>
        </TimeRange>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
    </TimeBlock>
    <TimeBlock size="4”>
        <dayOfWeek>4</dayOfWeek>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>23:59:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
    </TimeBlock>
    <TimeBlock size="4”>
        <dayOfWeek>5</dayOfWeek>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>23:59:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
        </TimeRange>
        <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
```

```
            <aiName>FaceDetect</aiName>
          </TimeRange>
        </TimeBlock>
        <TimeBlock size="4”>
          <dayOfWeek>6</dayOfWeek>
          <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>23:59:00</endTime>
            <aiName>FaceDetect</aiName>
          </TimeRange>
          <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
          </TimeRange>
          <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
          </TimeRange>
          <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceDetect</aiName>
          </TimeRange>
        </TimeBlock>
        <TimeBlock size="4”>
          <dayOfWeek>7</dayOfWeek>
          <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>23:59:00</endTime>
            <aiName>FaceRecognition</aiName>
          </TimeRange>
          <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceRecognition</aiName>
          </TimeRange>
          <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceRecognition</aiName>
          </TimeRange>
          <TimeRange>
            <beginTime>00:00:00</beginTime>
            <endTime>00:00:00</endTime>
            <aiName>FaceRecognition</aiName>
          </TimeRange>
        </TimeBlock>
      </TimeBlockList>
    </aiTiming>
```


2.7.117/CGI/Smart/FacePicMap/Import/Progress/SessionId/<ID>/

/CGI/Smart/FacePicMap/Import/Progress/SessionId/<ID>/ General Resource v2.0
GET

Description	Import progress of base map of face library
Query	**None**
Inbound Data	**None**
Success Return	**<Progress>**

Explanations on protocol:
Import progress of base map of face library
Explanations of parameters:
URL:
SessionId/<ID>: Interaction ID of client and device, see attached Table 1
Reply xml:
<state> State; 0-Unexecuted; 1-Executed in progress; 2-Execution success; 3-Execution failure
<sum> Total amount of picture
<okcnt> Amount of pictures with successful adding
<errcnt> Amount of pictures with failed adding

Progress XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
<state><!—req,sx:integer--></state>
<sum><!—req,sx:integer--></sum>
<okcnt><!—req,sx:integer--></okcnt>
<errcnt><!—req,sx:integer--></errcnt>
</progress>
```

Test cases
GET /CGI/Smart/FacePicMap/Import/Progress/SessionId/66666/
Response XML: <Progress>

```
<?xml version="1.0" encoding="UTF-8"?>
<progress version="1.0">
   <state>1</state>
   <sum>5000</sum>
   <okcnt>1500</okcnt>
   <errcnt>1000</errcnt>
</progress>
```

2.7.118/CGI/Smart/AsyncReportData/channels/<ID>/export/<FileName>

/CGI/Smart/AsyncReportData/channels/<ID>/export/<FileName> **General Resource v2.0**	
POST	
Description	Request for asynchronous export of report
Query	None
Inbound Data	**<AsyncQueryReport>**
Success Return	**<AsyncQueryReportResult>**

Explanations on protocol:
This protocol is prepared for asynchronous export of report
Explanations on key parameters:
sessionId/<ID>: Interaction ID of client and device
reportType: Query type: 0: Statistics of passenger flow; 1: Time heat map; 2: Spatial heat map; 3: Face - Age bracket; 4: Face - Gender; 5: Face - Person amount; 6: Face - Nationality; 7: Feature statistics: Glasses; 8: Feature statistics: Mask; 9: Target alarm statistics; 10: Channel alarm statistics - All types; 11: Face detection; 12: Comparison alarm; 13: Stranger alarm; 14: Frequency alarm; 15: Detention alarm; 16: Pedestrian - Gender; 17: Pedestrian - Motion direction; 18: Pedestrian - Person amount; 19: Vehicle - Vehicle type; 20; Vehicle - Motion direction

AsyncQueryReport XML Block

```
<AsyncQueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<sessionId><!-- req, xs: long long --></sessionId> // Affair ID
<reportType><!-- req, xs: integer --></reportType>// Type
</AsyncQueryReport >
```

AsyncQueryReportResult **XML Block**

```
<AsyncQueryReportResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <retState><!-- req, xs: integer --></retState>    // Return type – 0: Success; 1: Failure; 2: Data timeout
</AsyncQueryReportResult>
```

Test cases

POST/ISAPI/Smart/ReportData/channels/<ID>/export/<FileName>

Request XML： as below

```
<AQueryReport version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<sessionId>65535</sessionId>
<reportType>0</reportType>
</AQueryReport>
```

Response XML： as below

```
<AsyncQueryReportResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
 <retState>0</retState>
</AsyncQueryReportResult>
```

2.7.119/CGI/Smart/AsyncReportData/Result/ export/<FileName>

/CGI/Smart/AsyncReportData/Result/export/<FileName> General Resource v2.0	
POST	
Description	Asynchronous export of report acquisition report
Query	None
Inbound Data	**None**
Success Return	**File content**
Explanations on protocol: This protocol is prepared for asynchronous export of report	

Test cases

/CGI/Smart/AsyncReportData/Result/export/chn_all_day_allalarm_20191017.xls

2.7.120/CGI/Smart/CuriseLock/channels/<ID>

/CGI/Smart/CuriseLock/channels/<ID> **General Resource v2.0**	
GET	
Description	Acquire the remaining time of cruise lock
Query	None
Inbound Data	**None**
Success Return	**<LockInfo>**
PUT	
Description	Set lock period of cruise
Query	None
Inbound Data	**<LockInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for helping client acquire or set the cruise lock period of intelligent analysis scene via CGI protocol. **Explanations on key parameters:** time: Lock period; 0-Unlocked; higher than 0: Lock period; unit: Second	

LockInfo Block

```
< LockInfo >
   < time ><!--req, xs:integer--></time >
</LockInfo >
```

Test cases
GET /CGI/Smart/CuriseLock/channels/<ID>
Request XML: none
Response XML: < LockInfo >
PUT /CGI/Smart/CuriseLock/channels/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
< LockInfo >
   < time >600</scene>
</ LockInfo >
```

2.8/CGI/Event

2.8.1/CGI/Event/notification/alertState

/CGI/Event/notification/alertState	**General Resource v2.0**
GET	
Description	Acquire alarm state
Query	None
Inbound Data	None
Success Return	**<AlertStateList>**

Explanations on protocol:
This protocol is prepared for query of alarm state, helping client or IE query the device alarm state via CGI protocol, including channel/alarm time/alarm type/alarm time ID/alarm state.
Explanations on key parameters:
<channelID> means channel
<dateTime> means alarm time
<eventType> means alarm type
<eventID> means alarm time ID, for example: Alarm is given out if alarm input is 1; this value is 1
<eventState> means alarm state; state is active by now
<eventType> Event type: faceDetect: Frontend face detection; ipcComPare: Frontend comparison; ipcStranger: Frontend stranger; nvrDetect: Backend face detection; nvrComPare: Backend comparison; nvrStranger: Backend stranger; nvrFrequerncy: Backend frequency; nvrHold: Backend delay; plateShade: Plate shading: shm: Seagate disk health state detection; ftpException-FTP: Server error; temhum: Temperature & humidity alarm; PeptIntrusion oilfield monitoring – Defense alarm intrusion alarm; PeptResident oilfield monitoring - Abnormal lingering alarm; peopleNumAlarm: Person number error alarm; PrctdutySingle: Single interrogation; PrctdutyNone: Unattended; Sleep: Sleep; NewFight: New fight; GetUp: Getup; HeightLimit: Height limit; NewDuty: New duty; Stranded: Stranded; Alone: Alone; Delivergoods: Deliver goods; loitering: Loitering; AttendedBaggage: Attended baggage; unattendedBaggage: Unattended baggage

AlertStateListXML Block

```
<AlertStateList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<AlertState>
<channelID><!-- req, xs: integer --></channelID>
<dateTime><!--opt, xs:string--></dateTime>
<eventType>"inputs, outputs,VMD,videoloss, tamperdetection,
,linedetection,doublelinedetection,fielddetection,regionEntrance,regionExiting,loitering,group
,rapidMove,parking,unattendedBaggage,attendedBaggage, alert,heatMap,faceDetect,
platLicenseRecog, audioDetection, vedioDetection, group, onDutyDetection, demographics,
illegalPark,parkGuard, diskFull, diskError, noDisk, noMirrorHDD, arrayError, spareExpcetion,
```

```
nicBroken, ipConflict, illAccess, recordingFailure, smartDetection, diskOverFlow, macConflict,
psePowerOverLoad, diskTemperatureError,alert, periAlert, tripAlert, illegalPark, parkGuard,
safetyHelmet ipcComPare, ipcStranger, nvrDetect, nvrComPare, nvrStranger, nvrFrequerncy,
nvrHold,shm,ftpException,PeptIntrusion,PeptResiden,peopleNumALarm,
PrctdutySingle,PrctdutyNon,Sleep,NewFight,GetUp,HeightLimit,NewDuty,Stranded,Alone,Del
ivergoods "</eventType>
< eventID ><!--opt, xs:string; id --></ eventID >
<eventState><!--opt, xs:string--></eventState>
</ AlertState >
</AlertStateList >
```

Test cases

GET/CGI/Event/notification/alertState

Request XML： none

Response XML: <AlertStateList>

```
<?xml version="1.0" encoding="UTF-8"?>
<AlertStateList>
<AlertState>
<channelID>1</channelID>
<dateTime>Mon, 26 Dec 2016 14:32:36 GMT</dateTime>
<eventType>VMD</eventType>
<eventID>0</eventID>
<eventState>active</eventState>
</AlertState>
<AlertState>
<channelID>1</channelID>
<dateTime>Mon, 26 Dec 2016 14:32:36 GMT</dateTime>
<eventType>tamperdetection</eventType>
<eventID>0</eventID>
<eventState>active</eventState>
</AlertState>
</AlertStateList>
```

2.8.2/CGI/Event/ClearAllInfo

/CGI/Event/ClearAllInfo	**General Resource v2.0**
PUT	
Description	Clear all parameters of alarm information
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for clearing all alarm information, helping client or IE clear all alarm information of device via CGI protocol.	

Test cases

PUT/CGI/Event/ClearAllInfo

Response XML： <ResponseStatus>

Request XML： None

2.8.3/CGI/Event/channels/<ID>/Clear/type/<ID>

/CGI/Event /channels/<ID>/Clear/type/<ID>	**General Resource v2.0**
PUT	
Description	Clear alarm

Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for clearing alarm by type, helping client or IE clear the remote alarm via CGI protocol. Type introduction: 0: Video loss; 1: Port alarm; 2: Motion detection; 3: Video shielding; 4: Intelligent analysis; 5: Audio loss; 6: Temperature & humidity alarm; 7: Local port alarm (for decoder); 10: Upper limit alarm of analog quantity; 11: Lower limit alarm of analog quantity; 13: Lower limit alarm of temperature; 14: Upper limit alarm of humidity; 15: Lower limit alarm of humidity 100, error; 255, clear all information (including error)	

Test cases
PUT/CGI/Event /channels/0/Clear/type/255
Response XML: <ResponseStatus>
Request XML: None

2.8.4 /CGI/Event/PlayAudio

/CGI/Event/PlayAudio	**General Resource v2.0**
PUT	
Description	Send notice to frontend to play the voice of designated number
Query	None
Inbound Data	**<PlayAudioInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for clearing all alarm information, helping client or IE clear all alarm information of device via CGI protocol. channelID: Character string type; all: All channels; figure means certain channel; protocol needs multiple adjustment to play multiple channels instead of all channels type: 0: Alert sound sampleNo: 0-100 action: -2: Stop; -1: Infinite loop; >0 Detailed loop times	

PlayAudioInfo XML Block

```
<PlayAudioInfo version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <channelID><!--req, xs:string; id --></channelID>
  <type><!-- req, xs: integer --></type>
  <sampleNo><!-- req, xs: integer --></sampleNo>
  <action><!-- req, xs: integer --></action>
</PlayAudioInfo>
```

Test cases
PUT/CGI/Event/PlayAudio
Response XML: <ResponseStatus>
Request XML: <PlayAudioInfo>

```
<PlayAudioInfo version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <channelID>all</channelID>
  <type>0</type>
  <sampleNo>1</sampleNo>
  <action>1</action>
</PlayAudioInfo>
```

2.8.5 /CGI/Event/shmAlertState/details

/CGI/Event/shmAlertState/details	
GET	
Description	Acquire details of shm error
Query	None
Inbound Data	None
Success Return	**<shmDetails>**
Explanations on protocol: Acquire details of shm error **Explanations on key parameters:** <shmType> shm error; 0: High temperature; 1: Excessive shaking of disk; 2: Excessive shake of drive; 3: Disk connection error 4: Host reset; 5: Disk error	

FaceLibParas XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<shmDetails>
<shmInfo>
<shmType><!-- dep, xs: integer --></shmType>
</shmInfo>
//…Repeat <shmInfo> Structure

</shmDetails>
```

Test cases

GET /CGI/Event/shmAlertState/details

Request XML: none

Response XML: <shmDetails>

```
<?xml version="1.0" encoding="UTF-8"?>
<shmDetails>
<shmInfo>
<shmType>0</shmType>
</shmInfo>
<shmInfo>
<shmType>1</shmType>
</shmInfo>
</shmDetails>
```

2.9/CGI/FileUpload

2.9.1/CGI/FileUpload/ImportLocalData

/CGI/FileUpload/ImportLocalData	**General Resource v2.0**
POST	
Description	Local import
Query	None
Inbound Data	File content
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for calling this interface by uploading files via webpage. Upon receiving the file, the server will return it to webpage via HTTP, analyze webpage, call the CGI setting parameters and display them on interface.	

2.9.2/CGI/FileUpload/updateFirmware

/CGI/FileUpload/updateFirmware	**General Resource v2.0**
POST	
Description	Device upgrade
Query	None
Inbound Data	File content
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is to realize the equipment upgrading, and realize the equipment upgrading of the client sides or IE through the CGI protocol.	

2.9.3/CGI/FileUpload/configData/import

/CGI/FileUpload/configData/import	**General Resource v2.0**
POST	
Description	Parameter import
Query	None
Inbound Data	File content
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for importing device parameters, helping client or IE import parameters of device via CGI protocol.	

2.9.4/CGI/FileUpload/Video/inputs/channels/<ID>/LogoUpLoad

/CGI/FileUpload/Video/inputs/channels/<ID>/LogoUpLoad	**General Resource v2.0**
POST	
Description	LOGO upload
Query	None
Inbound Data	LOGO file
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for uploading device LOGO, helping client or IE upload device LOGO via CGI protocol.	

2.9.5/CGI/FileUpload/CommConfigData/channels/<ID>/type/<ID>/import

/CGI/FileUpload/CommconfigData/channels/<ID>/type/<ID>/import **General Resource v2.0**	
POST	
Description	Import common parameters
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for importing common parameters, helping client or IE import the designated parameters of device via CGI protocol.	

Explanations on protocol: This protocol is prepared for importing common parameters. **Explanations on key parameters:** channels/<ID> Channel type/<ID> means file type: 1: Channel parameter; 2: Black and white license plate; 3: Bayonet parameters; 4: Stall whitelist

Test cases
/CGI/System/CommConfigData/channels/0/type/1/import/<FileName>
/CGI/System/CommConfigData/channels/1/type/2/import/<FileName>

2.9.6 /CGI/FileUpload/updateFirmware/channels/<ID>

/CGI/FileUpload/updateFirmware/channels/<ID> **General Resource** **v2.0**	
POST	
Description	Upgrade certain frontend accessed to certain channel
Query	None
Inbound Data	File content
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for helping client or webpage upgrade the frontends accessed to devices via CGI protocol. Query and reuse upgrade progress /CGI/UpdateProgress/<ID> Protocol.	

2.10/CGI/UploadCheck

2.10.1/CGI/UploadCheck

/CGI/UploadCheck **General Resource** **v2.0**	
GET	
Description	Make request for file uploading
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for make request for file uploading, helping client or IE make request for file uploading via CGI protocol. Send this protocol before file uploading for calibration.	

2.11/CGI/UpdateProgress

2.11.1/CGI/UpdateProgress/<ID>

/CGI/UpdateProgress/ID **General Resource** **v2.0**	
GET	
Description	Query upgrade progress
Query	None
Inbound Data	None
Success Return	**<UpdateProgress>**

Explanations on protocol:
This protocol is prepared for query of device upgrade progress, helping client or IE query the device upgrade progress via CGI protocol.
Explanations on key parameters:
<status> means device upgrade status; meaning of number; 0: System upgrade in progress; 1: System upgrade completes; 2: System upgrade error

UpdateProgressXML Block

```
<UpdateProgress version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<updateId>!--req, xs:interger; id --></updateId>
<status>!--req, xs:interger; id --></status>
<progress>!--req, xs:interger; id --></progress >
</UpdateProgress >
```

Test cases
GET/CGI/UpdateProgress/ID
Request XML: none
Response XML: <UpdateProgress>

```
<?xml version="1.0" encoding="UTF-8"?>
<UpdateProgress>
<updateId>0</updateId>
<status>0</status>
<progress>90</progress>
</UpdateProgress>
```

2.12/CGI/PTZCtrl

2.12.1/CGI/PTZCtrl/channels/<ID>/manuallaser

/CGI/PTZCtrl/channels/<ID>/manuallaser	**General Resource v2.0**
PUT	
Description	Enable laser manually
Query	None
Inbound Data	**<LaserData>**
Success Return	**<ResponseStatus>**
GET	
Description	Acquire status of enabled laser
Query	None
Inbound Data	None
Success Return	**<LaserData>**
Explanations on protocol: This protocol is prepared for enabling laser manually and remotely and acquiring the enabling/disabling status of current laser	

LaserData XML Block

```
<LaserData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<LaserEnable><!-- req, xs:intger --></LaserEnable> // Whether enable laser 0/1
</LaserData>
```

Test cases
PUT/CGI/PTZCtrl/channels/<ID>/manuallaser
Request XML: <LaserData>

```
<LaserData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<LaserEnable>1</LaserEnable> // Whether enable laser 0/1
</LaserData>
```

Response XML: <ResponseStatus>

2.12.2/CGI/PTZCtrl/channels/<ID>/manualwhitelight

/CGI/PTZCtrl/channels/<ID>/manualwhitelight General Resource v2.0	
PUT	
Description	Enable white light manually
Query	None
Inbound Data	**<WhiteLightData>**
Success Return	**<ResponseStatus>**
GET	
Description	Acquire status of enabled white light
Query	None
Inbound Data	None
Success Return	**<WhiteLightData>**
Explanations on protocol: This protocol is prepared for enabling white light remotely and manually and acquiring the enabling/disabling status of current white light.	

WhiteLightData XML Block

```
<WhiteLightData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<WhiteLightEnable><!-- req, xs:intger --></WhiteLightEnable> // Whether enable white light 0/1
</WhiteLightData>
```

Test cases

GET /CGI/PTZCtrl/channels/1/manualwhitelight

Request XML: none

Response XML: <WhiteLightData>

PUT /CGI/PTZCtrl/channels/<ID>/manualwhitelight

Request XML: <WhiteLightData>

```
<WhiteLightData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<WhiteLightEnable>1</WhiteLightEnable>
</WhiteLightData>
```

Response XML: <ResponseStatus>

2.12.3/CGI/PTZCtrl/channels/<ID>/position3D

/CGI/PTZCtrl/channels/<ID>/position3D General Resource v2.0	
PUT	
Description	3D locating control
Query	None
Inbound Data	**<position3D>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for realizing 3D locating function.	

position3DXML Block

```
<Position3D version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<Resolution><!--opt--> // Resolution
<screenX><!--req, xs:integer --></screenX >
<screenY><!--req, xs:integer --></screenY>
</Resolution>
<StartPoint><!-- 0-255 -->// Start point
<positionX><!-- req, xs:integer --></positionX>
<positionY><!-- req, xs:integer --></positionY>
</StartPoint>
<EndPoint> // End point
```

```
<positionX><!-- req, xs:integer --></positionX>
<positionY><!-- req, xs:integer --></positionY>
</EndPoint>
</Position3D>
```

Test cases

PUT /CGI/PTZCtrl/channels/0/Position3D

Request XML: <Position3D>

```
<Position3D version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<Resolution><!--opt--> // Resolution
<screenX>1280</screenX >
<screenY>720</screenY>
</Resolution>
<StartPoint><!-- 0-255 -->// Start point, ten-thousandth
<positionX>4000</positionX>
<positionY>4000</positionY>
</StartPoint>
<EndPoint> // End point
<positionX>5000</positionX>
<positionY>5000</positionY>
</EndPoint>
</Position3D>
```

Response XML: <ResponseStatus>

2.12.4/CGI/PTZCtrl/channels/<ID>/presets

/CGI/PTZCtrl/channels/<ID>/presets	**General Resource v2.0**
GET	
Description	Acquire list of preset bit
Query	None
Inbound Data	None
Success Return	**<PTZPresetList>**

PTZPresetList XML Block

```
<PTZPreset version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>
    <!-- req, xs:boolean -->
  </enabled>
  <id>
    <!-- req, xs:string;id -->
  </id>
  <presetName>
    <!-- req, xs:string -->
  </presetName>
</PTZPreset>
```

Test cases

GET /CGI/PTZCtrl/channels/1/presets

Request XML: none

Response XML: <PTZPresetList>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PTZPresetList>
<PTZPreset>
<enabled>true</enabled>
<id>65</id>
```

```
<presetName>65</presetName>
<presetMode>0</presetMode>
</PTZPreset>
<PTZPreset>
<enabled>true</enabled>
<id>66</id>
<presetName>66</presetName>
<presetMode>0</presetMode>
</PTZPreset>
<PTZPreset>
<enabled>true</enabled>
<id>67</id>
<presetName>67</presetName>
<presetMode>0</presetMode>
</PTZPreset>
</PTZPresetList>
```

2.12.5 /CGI/PTZCtrl/channels/<ID>/presets/<ID>

/CGI/PTZCtrl/channels/<ID>/presets/<ID>	**General Resource v2.0**
PUT	
Description	Set preset bit
Query	None
Inbound Data	<PTZPreset>
Success Return	**<ResponseStatus>**
DELETE	
Description	Delete preset bit
Query	None
Inbound Data	<PTZPreset>
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting and deleting preset bit function, helping IE set preset bit, sending preset bit to device via http protocol and setting preset bit of device; helping IE delete preset bit, sending preset bit to device via http protocol, deleting preset bit of device. **Explanations on key parameters:** <id> means preset bit No., range: 1-256 <presetName> means preset bit name (assignment presetName1…, CGI is not analyzed temporarily)	

PTZPreset XML Block

```
<PTZPreset version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>
    <!-- req, xs:boolean -->
  </enabled>
  <id>
    <!-- req, xs:string;id -->
  </id>
  <presetName>
    <!-- req, xs:string -->
  </presetName>
</PTZPreset>
```

Test cases

PUT /CGI/PTZCtrl/channels/1/presets/1

Response XML： <ResponseStatus>

Request XML： as below

```
<PTZPreset version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>1</enabled>
  <id>8</id>
  <presetName>1 </presetName>
</PTZPreset>
```

DELETE /CGI/PTZCtrl/channels/1/presets/1

Response XML： <ResponseStatus>

Request XML： none

2.12.6 /CGI/PTZCtrl/channels/<ID>/presets/<ID>/goto

/CGI/PTZCtrl/channels/<ID>/presets/<ID>/goto	**General Resource v2.0**
PUT	
Description	Call preset bit
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for calling preset bit. **Explanations on key parameters:** presets/<ID> ID value; 99: Auto cruise start; 0: Auto cruise stop; other values means the number of corresponding preset bit	

presets XML Block

```
PUT case: (only PUT)
/CGI/PTZCtrl/channels/1/presets/1/goto
/CGI/PTZCtrl/channels/1/presets/99/goto
/CGI/PTZCtrl/channels/1/presets/0/goto
```

Test cases

PUT /CGI/PTZCtrl/channels/1/presets/1/goto

Response XML： <ResponseStatus>

Request XML： none

2.12.7 /CGI/PTZCtrl/channels/<ID>/patrols/<ID>

/CGI/PTZCtrl/channels/<ID>/patrols/<ID>	**General Resource v2.0**
GET	
Description	Acquire auto cruise parameters
Query	None
Inbound Data	None
Success Return	**<PTZPatrol>**
PUT	
Description	Set auto cruise
Query	None
Inbound Data	**<PTZPatrol>**
Success Return	**<ResponseStatus>**
DELETE	
Description	Delete auto cruise
Query	None
Inbound Data	**<PTZPatrol>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquiring, setting and deleting the auto cruise parameters.
Explanations on key parameters:
<id> means ID No.; no ID is set for shared memory is fully set.
<patrolName> means the shared memory name; no name is set in the shared memory

PTZPatrol XML Block

```
<PTZPatrol version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>
    <!-- req, xs:string;id -->                    // No ID is set for shared memory is fully set.
  </id>
  <patrolName>
    <!-- req, xs:string -->                       // No name is set in the shared memory
  </patrolName>
  <PatrolSequenceList>
    <!-- req, at least one entry -->
    <PatrolSequence>
      <!-- req -->
      <presetID>
        <!-- req, xs:string;id -->          //m_iPointId
      </presetID>
      <seqSpeed>
        <!-- req, xs:string;id -->          //m_iSpeed
      </seqSpeed>
      <delay>
        <!-- req, xs:integer, seconds --> //m_iDelay
      </delay>
    </PatrolSequence>
  </PatrolSequenceList>
</PTZPatrol>
```

Test cases

GET /CGI/PTZCtrl/channels/<ID>/patrols/<ID>

Request XML: none

Response XML: <PTZPatrol>

PUT /CGI/PTZCtrl/channels/<ID>/patrols/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<PTZPatrol>
<enabled>ture</enabled>
<id>1</id>
<patrolName>1</patrolName>
<PatrolSequenceList>
<PatrolSequence>
<presetID>1</presetID>
<seqSpeed>0</seqSpeed>
<delay>5</delay>
</PatrolSequence>
<PatrolSequence>
<presetID>2</presetID>
<seqSpeed>0</seqSpeed>
<delay>5</delay>
</PatrolSequence>
<PatrolSequence>
<presetID>3</presetID>
<seqSpeed>0</seqSpeed>
<delay>5</delay>
</PatrolSequence>
</PatrolSequenceList>
```

</PTZPatrol>

DELETE /CGI/PTZCtrl/channels/<ID>/patrols/<ID>
Request XML： none
Response XML： <ResponseStatus>

2.12.8 /CGI/PTZCtrl/channels/<ID>/patterns/<ID>/recordstart

/CGI/PTZCtrl/channels/<ID>/patterns/<ID>/recordstart	**General Resource v2.0**
PUT	
Description	Start pattern scanning and recording
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for starting mode and path recording via CGI and shared memory protocol. **Explanations on key parameters:** None	

patterns XML Block
None
Test cases
PUT /CGI/PTZCtrl/channels/<ID>/patterns/<ID>/recordstart
Request XML： none
Response XML： <ResponseStatus>

2.12.9 /CGI/PTZCtrl/channels/<ID>/patterns/<ID>/recordstop

/CGI/PTZCtrl/channels/<ID>/patterns/<ID>/recordstart	**General Resource v2.0**
PUT	
Description	Stop pattern scanning and recording
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for stopping mode and path recording via CGI and shared memory protocol. **Explanations on key parameters:** None	

patterns XML Block
None
Test cases
PUT /CGI/PTZCtrl/channels/<ID>/patterns/<ID>/recordstop
Request XML： none
Response XML： <ResponseStatus>

2.12.10/CGI/PTZCtrl/channels/<ID>/autoPan

/CGI/PTZCtrl/channels/<ID>/autoPan	**General Resource v2.0**
PUT	
Description	Auto scanning
Query	None
Inbound Data	**<autoPanData>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for starting/stopping auto scanning function via CGI and shared memory protocol.
Explanations on key parameters:
<autoPan> means auto scanning speed

autoPanData XML Block

```
<autoPanData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <autoPan>
    <!-- req, xs:integer, 0..100 -->
  </autoPan> //m_iScanSpeed
</autoPanData>
```

Test cases
PUT /CGI/PTZCtrl/channels/<ID>/autoPan
Response XML: <ResponseStatus>
Request XML: as below

```
<autoPanData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <autoPan>60</autoPan>
</autoPanData>
```

2.12.11/CGI/PTZCtrl/channels/<ID>/parkaction

/CGI/PTZCtrl/channels/<ID>/parkaction	**General Resource v2.0**
GET	
Description	Acquire parameters of standby action
Query	None
Inbound Data	None
Success Return	**</ParkAction>**
PUT	
Description	Set parameters of standby action
Query	None
Inbound Data	**</ParkAction>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for enabling/disabling/setting guard function via CGI and shared memory protocol.
Note: As a protocol for frontend item, this protocol is not supported by backend kernel, but it will return 400 for the same path is used by both CGI code and protocol.

Explanations on key parameters:
<enabled> means enabling
<Parktime> means execution waiting time
<ActionType> means action type

</ParkAction> XML Block

```
<ParkAction version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled> <!-- req, xs:boolean --> </enabled> //m_blEnable
<Parktime> <!-- req, xs:integer, seconds --> </Parktime> //m_iWaitTimeSec
<Action>
<ActionType>
<!-- req, xs:strings, "atuoscan ,patrol,pattern, preset" --> //m_iActionType
</ActionType>
<ActionNum> <!-- opt xs:integer, 0..255--> </ActionNum>//m_iActionTypeId
</Action>
</ParkAction>
```

Test cases

GET /CGI/PTZCtrl/channels/<ID>/parkaction

Request XML： none

Response XML: <ParkAction>

PUT /CGI/PTZCtrl/channels/<ID>/parkaction

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ParkAction>
<enabled>true</enabled>
<Parktime>30</Parktime>
<Action>
<ActionType>autoscan</ActionType>
<ActionNum>1</ActionNum>
</Action>
</ParkAction>
```

2.12.12/CGI/PTZCtrl/channels/<ID>/continuous

/CGI/PTZCtrl/channels/<ID>/continuous	**General Resource v2.0**
PUT	
Description	PTZ control
Query	None
Inbound Data	< PTZData >
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for realizing rotation control, zoom setting and rotating ball camera.

Explanations on key parameters:

<pan> means horizontal movement Range -100 100; 0 means stop; speed increases along with the increasing values.

<tilt> means longitudinal movement; value range-100 100; 0 means stop, speed increases along with the increasing values.

PTZData XML Block

```
<PTZData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<pan> <!-- opt, xs:integer, -100..100 --> </pan> // Horizontal movement; value range-100 100;
0 means stop, speed increases along with the increasing values.
<tilt> <!-- opt, xs:integer, -100..100 --> </tilt> // Longitudinal movement; value range-100 100;
0 means stop, speed increases along with the increasing values.
<zoom> <!-- opt, xs:integer, -100,100--> </zoom> // Zoom 100: Zoom increase -100:
Zoom decrease
</PTZData>
```

Test cases

PUT /CGI/PTZCtrl/channels/<ID>/continuous

Response XML： <ResponseStatus>

Request XML： as below

```
<PTZData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <pan>100</pan>
  <tilt> 100 </tilt>
  <zoom> 100 </zoom>
</PTZData>
```

2.12.13/CGI/PTZCtrl/channels/<ID>/timetasks

/CGI/PTZCtrl/channels/<ID>/timetasks	**General Resource v2.0**
GET	
Description	Acquire the timing call of preset bit

	parameters.
Query	None
Inbound Data	None
Success Return	**< TimeTaskList >**
PUT	
Description	Set timing call of preset bit parameters
Query	None
Inbound Data	**< TimeTaskList >**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for sending the timing call of preset bit control commands via CGI and shared memory protocol.
Explanations on key parameters:
<enabled> means enabling/disabling
<Parktime> means detention time
<beginTime> means begin time
<endTime> represents end time
<TaskType> means task type
<TaskNum> means preset bit No.

TimeTaskList XML Block

```
<TimeTaskList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <enabled> <!-- opt, xs:boolean --> </enabled> // Enabling/disabling
    <Parktime> <!-- opt, xs:integer, seconds --> </Parktime>    // Detention time
    <TimeTaskBlock /> <!-- opt -->
</TimeTaskList>
<TimeTaskBlock version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <dayOfWeek> <!-- req, xs:integer, ISO8601 weekday number, 1=Monday, … -->
</dayOfWeek>                                                    // Week
    <enabled> <!-- req, xs:boolean --> </enabled> // Enabling (day)
    <TimeTaskRange>
        <TaskID><!-- req, xs: integer;id --></TaskID>                    // Task id
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime> // Begin time
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>    // End time
        <Task>
            <TaskType> <!-- req, xs:strings, "disable, atuoscan, framescan, randomscan,
            panoramascan, scan,patrol,pattern,preset,tiltscan,periodreboot,periodadjust,auxoutput"
            -> </TaskType>                                          // Task type, send scan during
            scanning
            <TaskNum><!-- dep, xs:integer, 0.8--></TaskNum>      // Preset bit No.
        </Task>
    </TimeTaskRange>
</TimeTaskBlock>
```

Test cases
GET /CGI/PTZCtrl/channels/<ID>/timetasks
Request XML: none
Response XML: <TimeTaskList>
PUT /CGI/PTZCtrl/channels/<ID>/timetasks
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TimeTaskList>
<TimeTaskBlock>
<dayOfWeek>1</dayOfWeek>
<enabled>false</enabled>
<TimeTaskRange>
<TaskID>0</TaskID>
```

```
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>1</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>2</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>3</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>4</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>5</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>6</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
```

```
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>7</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
</TimeTaskBlock>
<TimeTaskBlock>
<dayOfWeek>2</dayOfWeek>
<enabled>false</enabled>
<TimeTaskRange>
<TaskID>0</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>1</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>2</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>3</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>4</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
```

```
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>5</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>6</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>7</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
</TimeTaskBlock>
<TimeTaskBlock>
<dayOfWeek>3</dayOfWeek>
<enabled>true</enabled>
<TimeTaskRange>
<TaskID>0</TaskID>
<beginTime>0:0</beginTime>
<endTime>10:0</endTime>
<Task>
<TaskType>preset</TaskType>
<TaskNum>1</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>1</TaskID>
<beginTime>10:1</beginTime>
<endTime>10:57</endTime>
<Task>
<TaskType>preset</TaskType>
<TaskNum>2</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>2</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
```

```
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>3</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>4</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>5</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>6</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>7</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
</TimeTaskBlock>
<TimeTaskBlock>
<dayOfWeek>4</dayOfWeek>
<enabled>false</enabled>
<TimeTaskRange>
<TaskID>0</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
```

```
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>1</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>2</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>3</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>4</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>5</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>6</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
```

```
<TaskID>7</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
</TimeTaskBlock>
<TimeTaskBlock>
<dayOfWeek>5</dayOfWeek>
<enabled>false</enabled>
<TimeTaskRange>
<TaskID>0</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>1</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>2</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>3</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>4</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
```

```
<TaskID>5</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>6</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>7</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
</TimeTaskBlock>
<TimeTaskBlock>
<dayOfWeek>6</dayOfWeek>
<enabled>false</enabled>
<TimeTaskRange>
<TaskID>0</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>1</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>2</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
```

<TaskID>3</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>4</TaskID>
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<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>5</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
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<endTime>0:0</endTime>
<Task>
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<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
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<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
</TimeTaskBlock>
<TimeTaskBlock>
<dayOfWeek>7</dayOfWeek>
<enabled>false</enabled>
<TimeTaskRange>
<TaskID>0</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>

<TaskID>1</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>2</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>3</TaskID>
<beginTime>0:0</beginTime>
<endTime>0:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>4</TaskID>
<beginTime>-2068726384:1286656</beginTime>
<endTime>-2068726592:0</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>-2068726592</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>5</TaskID>
<beginTime>-2068726384:8</beginTime>
<endTime>7725:-65521</endTime>
<Task>
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>6</TaskID>
<beginTime>1350016:1361952</beginTime>
<endTime>159920128:35938304</endTime>
<Task>
<TaskType>preset</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
<TimeTaskRange>
<TaskID>7</TaskID>
<beginTime>0:174</beginTime>
<endTime>0:2090764</endTime>
<Task>

```
<TaskType>disable</TaskType>
<TaskNum>0</TaskNum>
</Task>
</TimeTaskRange>
</TimeTaskBlock>
</TimeTaskList>
```

2.12.14/CGI/PTZCtrl/channels/<ID>/manualtrace

/CGI/PTZCtrl/channels/<ID>/manualtrace	**General Resource v2.0**
PUT	
Description	Set manual traction parameters
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting manual traction. Note: Manual traction will be disabled, unless intelligent analysis is enabled and linkage traction is ticked, or intelligent analysis is disabled.	

Test cases

PUT /CGI/PTZCtrl/channels/<ID>/manualtrace

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TraceData>
<TraceEnable>1</TraceEnable>
<LaserX>256</LaserX>
<LaserY>10</LaserY>
</TraceData>
```

2.12.15/CGI/PTZCtrl/channels/<ID>/manualtalk

/CGI/PTZCtrl/channels/<ID>/manualtalk	**General Resource v2.0**
PUT	
Description	Set manual call parameters
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting manual call.	

Test cases

PUT /CGI/PTZCtrl/channels/<ID>/manualtalk

Response XML: <ResponseStatus>

Request XML: as below

```
<TalkData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TalkEnable>1 </TalkEnable>
  <AudioType>0</AudioType>
  <AudioNo>0</AudioNo>
</TalkData>
```

2.12.16/CGI/PTZCtrl/channels/<ID>/patrols/<ID>/start

/CGI/PTZCtrl/channels/<ID>/patrols/<ID>/	**General Resource v2.0**

start	
PUT	
Description	Call auto cruise
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for calling auto cruise function via CGI and shared memory protocol. **Explanations on key parameters:** None	

patrols XML Block

None

Test cases

PUT/CGI/PTZCtrl/channels/<ID>/patrols/<ID>/start

Response XML: <ResponseStatus>

Request XML: none

2.12.17/CGI/PTZCtrl/channels/<ID>/patrols/<ID>/stop

PUT	
Description	Set auto cruise stop
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for stopping auto cruise via CGI and shared memory protocol. **Explanations on key parameters:** None	

patrols XML Block

None

Test cases

PUT /CGI/PTZCtrl/channels/<ID>/patrols/<ID>/stop

Response XML: <ResponseStatus>

Request XML: none

2.12.18/CGI/PTZCtrl/channels/<ID>/patterns/<ID>/start

/CGI/PTZCtrl/channels/<ID>/patterns/<ID>/start	**General Resource v2.0**
PUT	
Description	Call mode path
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for calling mode path operation via CGI and shared memory protocol. **Explanations on key parameters:** None	

patterns XML Block

None

Test cases

PUT /CGI/PTZCtrl/channels/<ID>/patterns/<ID>/start

Request XML： none
Response XML： <ResponseStatus>

2.12.19/CGI/PTZCtrl/channels/<ID>/patterns/<ID>/stop

/CGI/PTZCtrl/channels/<ID>/patterns/<ID>/stop	General Resource v2.0
PUT	
Description	Stop pattern scanning
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for stopping mode path operation via CGI and shared memory protocol. **Explanations on key parameters:** None	

patterns XML Block
None
Test cases
PUT /CGI/PTZCtrl/channels/<ID>/patterns/<ID>/stop
Request XML： none
Response XML： <ResponseStatus>

2.12.20 /CGI/PTZCtrl/channels/<ID>/PTZInfo

/CGI/PTZCtrl/channels/<ID>/PTZInfo	General Resource v2.0
GET	
Description	Acquire information of calibration coordinates
Query	None
Inbound Data	None
Success Return	**<PTZInfo>**
PUT	
Description	Set information of calibration coordinates
Query	None
Inbound Data	**<PTZInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring functions of PTZ coordinate information. **Explanations on key parameters:** <pan> X coordinates, range: 0~36000, corresponding to 0-360°, be accurate to 0.01. <tilt> Y coordinates, range: 1000~19000, corresponding to -90-90°, be accurate to 0.01. <zoom> Zoom, range: 0~100000, corresponding to 0-1000 times, be accurate to 0.01	

PTZInfo XML Block

```
<PTZInfo version="2.0">
  <pan><!-- req, xs:integer --></pan>
  <tilt><!-- req, xs:integer --></tilt>
  <zoom><!-- req, xs:integer --></zoom>
</PTZInfo>
```

Test cases
PUT /CGI/PTZCtrl/channels/<ID>/PTZInfo
Response XML： <ResponseStatus>
Request XML： as below

```
<PTZInfo version="2.0">
    <pan>12000</pan>
    <tilt>12100</tilt>
    <zoom>12200</zoom>
</PTZInfo >
```

2.12.21 /CGI/PTZCtrl/channels/<ID>/CalibrateInfo/Scene/<ID>

/CGI/PTZCtrl/channels/<ID>/CalibrateInfo /Scene/<ID>	**General Resource v2.0**
GET	
Description	Acquire information of calibration coordinates
Query	None
Inbound Data	None
Success Return	**<CalibrateInfo>**
PUT	
Description	Set information of calibration coordinates
Query	None
Inbound Data	**<CalibrateInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquiring and setting function of calibration coordinate information.
Explanations on key parameters:
<calibrateList> means calibrated list; calibration number: 0~6
<ItemId> means calibration item ID; range: 1~6
<enabled> represents whether it is effective, true: start, false: not start
<posX> means X coordinates of calibration points; range: 0~10000
<posY> means Y coordinates of calibration points; range: 0~10000
<pan> X coordinates, range: 0~36000, corresponding to 0-360°, be accurate to 0.01.
<tilt> Y coordinates, range: 1000~19000, corresponding to -90-90°, be accurate to 0.01.
<zoom> Zoom, range: 0~100000, corresponding to 0-1000 times, be accurate to 0.01

CalibrateInfo XML Block

```
<calibrateInfo version="2.0">
    <calibrateList size="0-6”>
        <calibrates>
            <ItemId><!-- req, xs:integer --></ItemId>
            <enabled><!-- req, xs:boolean --></enabled>
            <posX><!-- req, xs:integer --></posX>
            <posY><!-- req, xs:integer --></posY>
            <pan><!-- req, xs:integer --></pan>
            <tilt><!-- req, xs:integer --></tilt>
            <zoom><!-- req, xs:integer --></zoom>
        </calibrates>
    </calibrateList>
</calibrateInfo>
```

Test cases
PUT /CGI/PTZCtrl/channels/<ID>/CalibrateInfo/Scene/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<calibrateInfo version="2.0">
  <calibrateList size="2">
        <calibrates>
            <ItemId>1</ItemId>
              <enabled>true</enabled>
              <posX>6000</posX>
```

```
            <posY>6000</posY>
            <pan>10000</pan>
            <tilt>11000</tilt>
            <zoom>12000</zoom>
        </calibrates>
        <calibrates>
            <ItemId>2</ItemId>
            <enabled>true</enabled>
            <posX>6200</posX>
            <posY>6200</posY>
            <pan>12000</pan>
            <tilt>12100</tilt>
            <zoom>12200</zoom>
        </calibrates>
    </calibrateList>
</calibrateInfo>
```

2.13/CGI/Device

2.13.1/CGI/Device/AllCapabilities/<type>

/CGI/Device/AllCapabilities/<type>	**General Resource v2.0**
GET	
Description	Acquire capability set of device curing information
Query	None
Inbound Data	None
Success Return	**<[xx]Cap>**
Explanations on protocol: This protocol is prepared for acquiring capability set of device curing information by means of: :<type> Send certain type of <[xx]Cap>, returned content is also <[xx]Cap> Type is any of AllCapabilities AudioVideoCap, DigitalChannelCap, EventCap, NetWorkCap, PTZCap, StorageCap, SystemCap, VCACap, UserGroupPermission AllCapabilities and UserGroupPermission are realized.	

[xx]Cap XML Block

```
<[xx]Cap>
<xxEnable><!-- req, xs:Boolean --></xxEnable>
…
</[xx]Cap>
```

Test cases

GET/CGI/Device/AllCapabilities/AudioVideoCap

Request XML: none

Response XML: <AudioVideoCap>

```
<?xml version="1.0" encoding="UTF-8" ?>
<AudioVideoCap>
    <VideoCap>
        <Enable>true</Enable>
        <Stream>
            <Enable> true </Enable>
        </Stream>
        <ROI>
            <Enable> true </Enable>
        </ROI>
        <Image>
            <Enable> true </Enable>
        </Image>
```

```
            <ImageSchedule>
                <Enable> true </Enable>
            </ImageSchedule>
            <DaynightSchedule>
                <Enable> true </Enable>
            </DaynightSchedule>
            <DayNight>
                <Enable> true </Enable>
                <InfraredLampPower> true </InfraredLampPower>
            </DayNight>
            <Snapshot>
                <Enable> true </Enable>
                <PicCodecType> true</PicCodecType>
                <AlarmSnapshot>false</AlarmSnapshot>
                <SnapshotIntervalMode> true</SnapshotIntervalMode>
                <SnapshotSchduleMode>false</SnapshotSchduleMode>
            </Snapshot>
            <OSD>
                <Enable> true </Enable>
            </OSD>
            <Logo>
                <Enable> true </Enable>
            </Logo>
            <VideoMask><!-- Video mask -->
                <Enable> true </Enable>
            </VideoMask>
            <PrivacyMask><!-- Privacy mask -->
                <Enable> true </Enable>
            </PrivacyMask>
        </VideoCap>
        <AudioCap>
            <Enable> true </Enable>
        </AudioCap>
</AudioVideoCap>
```

2.13.2/CGI/Device/DevControl/channels/<ID>/type/<ID>

/CGI/Device/ DevControl/channels/<ID>/type/<ID> General Resource v2.0	
GET	
Description	Acquire status of manually controlled device
Query	None
Inbound Data	None
Success Return	<DevControl>
PUT	
Description	Control device manually
Query	None
Inbound Data	<DevControl>
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for controlling manual devices. type means different device types; 1: PIR; 2: Temperature; 3: Door magnetic; 4: Smoke; 5: Emergency button; 6: White light; 7: Infrared light Device supports white light presently Explanations on key parameters: <Enable > Means enabling; 0: Disabled; 1: Enabled	

DevControl XML Block

```
<DevControl version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<Enable><!-- req, xs:intger --></Enable> //0: Disabled; 1: Enabled
</ DevControl >
```

Test cases

GET /CGI/Device**/DevControl/channels/<ID>/type/<ID>**

Request XML： none

Response XML: < DevControl >

PUT /CGI/Device**/DevControl/channels/<ID>/type/<ID>**

Response XML： <ResponseStatus>

Request XML： as below

```
< DevControl version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
< Enable >1</ Enable > // Whether enable 0/1
</ DevControl >
```

2.14/CGI/ITS

2.14.1 type explanations

Type of snapshot illegal actions in lane <trafficWarnType>	Bayonet: Bayonet, retrograde: Retrogradation, redlightrunning: Red light running, telephone: Making and receiving calls, notdirected: Undirected driving, vehicle: Vehicle occupies bicycle lane, turnaround: Illegal turnaround, lanechange: Illegal lane change, safetybelt: Fail to belt up, forbiddenmarking: Violation of marking line, reversing: Reversing, overspeed: Overspeed, speciallane: Enter special lane, Illegalparking: Illegal parking, prohibitionsign: Violation of prohibition signs; leftturn: Prohibit left turn; rightturn: Prohibit right turn; yellowline: Press yellow line; straight: Prohibit straight driving; waitarearedlight: Run a red light at turn waiting area; againstpark: Violating parking; comitypedestrain: Fail to give way to pedestrian; comitystraight: Left turn vehicle fails to give way to straight driving vehicles; overtakeInzebracrossing: Overspeed at zebra crossing; inserttrafficjam: illegal insertion; greenlightparking: Parking during green light; abnormalplate: Abnormal plate; prohibitiondangerouscar: Prohibit dangerous chemicals; specialoverspeed: Video snapshot overspeed enabling under mixed trigger; linesnapped: Snap line (line snap snapshot), throughban: Crossing of prohibited area; driveintojamcross: Crossing of jammed area; mismatchedplate: Mismatch of plate; noalternatepass: No alternate pass; nokeepsafedos: Fail to keep safe distance
Device model <deviceType>	0, // Unknown device 1, // 704 red light signal detector 2, // 324 vehicle detector 3, // CSR radar 4, // ANDORAY radar 5, //550 LED 6, // Radar controller 7, //XG01 LED 8, //svac protocol extension 9, //BK docking vehicle detector 10, // Hikvision vehicle detector 11, // Hikvision red light signal detector 12, // Huichang radar 13, // Beijing GTRANSI (applied at site) 14, // HangZhou Spooly (applied at site) 15, // HangZhou Eboy (applied at site) 16, //STJ1 Fixed-angle radar

2.14.2/CGI/ITS/LaneRun/BasicChannelPara/channels/<ID>/scenes/<ID>/lanes/<ID>

/CGI/ITS/LaneRun/BasicChannelPara/channels/<ID>/scenes/<ID>/lanes/<ID> General Resource v2.0	
GET	
Description	Acquire basic parameters of lane (single lane)
Query	None
Inbound Data	None
Success Return	**<BasicChannelPara>**
PUT	
Description	Set basic parameters of lane (single lane)
Query	None
Inbound Data	**<BasicChannelPara>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting basic parameters of lane
scenes/<ID> Means scene No.; 1-16
lanes/<ID> Means lane No.; 1-6
<channelName> Means channel name, with length not above 63 bits
<customNum> Means customized number, with length not above 63 bits
<driveAspect> Means driving direction, with length not above 63 bits
<channelType> Means lane type; 0-Left turn lane; 1-Right turn lane; 2-Straight lane; 3-Left turn straight lane; 4-Right turn straight lane; 5-Non-motor lane – reserved; 6-Left/right turn lane; 7- Left turn lane and turn waiting lane; 8-Straight + Left turn + Right turn lane.
<channelUpdown> Means up/down lane; 0-Up; 1-Down
<shotDirect> Means snapshot direction; 1-Snapshot vehicle head; 2-Snapshot vehicle tail (applies to crossing of bayonet, red light, retrograding and overspeed)
<borderEnable> Means left/right border; 0: Disabled; 1: Left border enabling; 2: Right border enabling; 3: Left/right border enabling
<channelUse> Means lane application; 0-Common lane; 1-Non-motor lane; 2-Bus lane; 3-Passenger car lane; 4-Emergency lane; 5-One-way lane; 6-Truck-prohibited lane; 7-Dangerous chemical vehicle lane
<linkCamchannelID> Lane No., range: 1-6
<flashLampType> Control flash lamp; 0: Linkage flash; 1: Alternative flash;
<idNum> Means IO name; range: 1-8
<enableIO> Whether enable IO; true: Enabled; false: Disabled
<outEquipType> Type of peripheral device, with length not above 63 bits; 0-Unknown device; 1- 704 red light signal detector; 2- 324 vehicle detector; 3- CSR radar; 4- ANDORAY radar; 5. 550 LED; 6- Radar controller; 7- XG01 LED; 8-svac protocol suspension; 9-BK docking vehicle detector; 10- Hikvision vehicle detector; 11- Hikvision red light signal detector; 12- Huichang radar; 13- Beijing GTRANSI; 14- HangZhou Spooly; 15- HangZhou Eboy; 16- STJ1 Fixed-angle radar; 17-Weighing instrument
<radarNum> Means radar No.
<cameraComNum> Means camera port No. COM1 -1 COM2 – 2 The rest should be analogized in the same way

BasicChannelPara XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<BasicChannelPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<basicChannelParaInfo>
<basicChannelParaData>
<channelName><!-- req, xs:string--></channelName>
<customNum><!-- req, xs:string--></customNum>
<driveAspect><!-- req, xs:string--></driveAspect>
<channelType><!-- req, xs:integer--></channelType><!—Lane type -->
<channelUpdown><!-- req, xs:integer--></channelUpdown><!-- Up/down lane -->
```

```
<shotDirect><!-- req, xs:integer--></shotDirect>
<borderEnable><!-- req, xs:integer--></borderEnable>
<channelUse><!-- req, xs:integer--></channelUse><!—Lane application -->
<linkCamchannelID><!-- req, xs:integer--></linkCamchannelID><!-- Link lane No. -->
<flashLampType><!-- req, xs:integer--></flashLampType><!-- Control mode of flash lamp -->
<flashEnableList>
<idDataInfo>
<idNum><!-- req, xs:integer--></idNum>
<enableIO><!-- req, xs:boolean --></enableIO>
</idDataInfo>
</flashEnableList>
<outEquipType><!-- req, xs:string--></outEquipType><!-- Type of peripheral device -->
<radarNum><!-- req, xs:string--></radarNum><!-- Radar No. -->
<cameraComNum><!-- req, xs:integer--></cameraComNum><!-- Camera port No. -->
</basicChannelParaData>
</basicChannelParaInfo>
</BasicChannelPara>
```

Test cases

GET /CGI/ITS/LaneRun/BasicChannelPara/channels/1/scenes/1/lanes/1

Request XML: none

Response XML: <BasicChannelPara>

PUT /CGI/ITS/LaneRun/BasicChannelPara/channels/1/scenes/1/laness/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<BasicChannelPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<basicChannelParaInfo>
<basicChannelParaData>
<channelName> Lane 1</channelName>
<customNum>3</customNum>
<driveAspect> From east to west </driveAspect>
<channelType>8</channelType>
<channelUpdown>1</channelUpdown>
<shotDirect>0</shotDirect>
<borderEnable>1</borderEnable>
<channelUse>6</channelUse>
<linkCamchannelID>4</linkCamchannelID>
<flashLampType>0</flashLampType>
<flashEnableList>
<idDataInfo>
<idNum>1</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>2</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>3</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>4</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>5</idNum>
```

```
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>6</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>7</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>8</idNum>
<enableIO>true</enableIO>
</idDataInfo>
</flashEnableList>
<outEquipType>CSR_AD</outEquipType>
<radarNum>3</radarNum>
<cameraComNum>1</cameraComNum>
</basicChannelParaData>
</basicChannelParaInfo>
</BasicChannelPara>
```


2.14.3/CGI/ITS/LaneRun/BasicChannelPara/channels/<ID>/scenes/<ID>/lanes

/CGI/ITS/LaneRun/BasicChannelPara/channels/<ID>/scenes/<ID>/lanes **General Resource v2.0**	
GET	
Description	Acquire basic parameters of lane (all lanes)
Query	None
Inbound Data	None
Success Return	**<BasicChannelParaList>**
PUT	
Description	Set basic parameters of lane (all lanes)
Query	None
Inbound Data	**<BasicChannelParaList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting basic parameters of lane
<channelNO> Means lane No.; information of all lanes can be sent, range: 1-6
<channelName> Means channel name, with length not above 63 bits
<customNum> Means customized number, with length not above 63 bits
<driveAspect> Means driving direction, with length not above 63 bits
<channelType> Means lane type; 0-Left turn lane; 1-Right turn lane; 2-Straight lane; 3-Left turn straight lane; 4-Right turn straight lane; 5-Non-motor lane – reserved; 6-Left/right turn lane; 7- Left turn lane and turn waiting lane; 8-Straight + Left turn + Right turn lane.
<shotDirect> Means snapshot direction; 1-Snapshot vehicle head; 2-Snapshot vehicle tail (applies to crossing of bayonet, red light, retrograding and overspeed)
<channelUpdown> Means up/down lane; 0-Up; 1-Down
<borderEnable> Means left/right border; 0: Disabled; 1: Left border enabling; 2: Right border enabling; 3: Left/right border enabling
<channelUse> Means lane application; 0-Common lane; 1-Non-motor lane; 2-Bus lane; 3-Passenger car lane; 4-Emergency lane; 5-One-way lane; 6-Truck-prohibited lane; 7-Dangerous chemical vehicle lane
<linkCamchannelID> Lane No., range: 1-6

```
<flashLampType> Control flash lamp; 0: Linkage flash; 1: Alternative flash;
<idNum> Means IO name; range: 1-8
<enableIO> Whether enable IO; true: Enabled; false: Disabled
<outEquipType> Means type of peripheral device, with length not above 63 characters
<radarNum>    Means radar No.
<cameraComNum> Means camera port No. COM1 -1 COM2 – 2 The rest should be
analogized in the same way
```

BasicChannelPara XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<BasicChannelParaList version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<basicChannelParaData>
<channelNO><!-- opt, xs:integer--></channelNO>
<channelName><!-- req, xs:string--></channelName>
<customNum><!-- req, xs:string--></customNum>
<driveAspect><!-- req, xs:string--></driveAspect>
<channelType><!-- req, xs:integer--></channelType><!—Lane type -->
<channelUpdown><!-- req, xs:integer--></channelUpdown><!-- Up/down lane -->
<shotDirect><!-- req, xs:integer--></shotDirect>
<borderEnable><!-- req, xs:integer--></borderEnable>
<channelUse><!-- req, xs:integer--></channelUse><!—Lane application -->
<linkCamchannelID><!-- req, xs:integer--></linkCamchannelID><!-- Link lane No. -->
<flashLampType><!-- req, xs:integer--></flashLampType><!-- Control mode of flash lamp -->
<flashEnableList>
<idDataInfo>
<idNum><!-- req, xs:integer--></idNum>
<enableIO><!-- req, xs:boolean --></enableIO>
</idDataInfo>
</flashEnableList>
<outEquipType><!-- req, xs:string--></outEquipType><!-- Type of peripheral device -->
<radarNum><!-- req, xs:string--></radarNum><!-- Radar No. -->
<cameraComNum><!-- req, xs:integer--></cameraComNum><!-- Camera port No. -->
</basicChannelParaData>
</BasicChannelParaList>
```

Test cases

GET /CGI/ITS/LaneRun/BasicChannelPara/channels/1/scenes/1/lanes

Request XML: none

Response XML: <BasicChannelParaList>

PUT /CGI/ITS/LaneRun/BasicChannelPara/channels/1/scenes/1/lanes

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<BasicChannelParaList version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<basicChannelParaData>
<channelNO>1</channelNO>
<channelName> Lane 1</channelName>
<customNum>3</customNum>
<driveAspect> From east to west </driveAspect>
<channelType>8</channelType>
<channelUpdown>1</channelUpdown>
<shotDirect>0</shotDirect>
<borderEnable>1</borderEnable>
<channelUse>6</channelUse>
<linkCamchannelID>4</linkCamchannelID>
<flashLampType>0</flashLampType>
<flashEnableList>
<idDataInfo>
<idNum>1</idNum>
```

```
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>2</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>3</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>4</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>5</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>6</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>7</idNum>
<enableIO>true</enableIO>
</idDataInfo>
<idDataInfo>
<idNum>8</idNum>
<enableIO>true</enableIO>
</idDataInfo>
</flashEnableList>
<outEquipType>CSR_AD</outEquipType>
<radarNum>3</radarNum>
<cameraComNum>1</cameraComNum>
</basicChannelParaData>
</BasicChannelParaList>
```


2.14.4/CGI/ITS/LaneRun/LimitSpeedSet/channels/<ID>/scenes/<ID>/lanes/<ID>

/CGI/ITS/LaneRun/LimitSpeedSet/channels/<ID>/scenes/<ID>/lanes/<ID> **General Resource v2.0**	
GET	
Description	Acquire speed limit of lane (single lane)
Query	None
Inbound Data	None
Success Return	**<LimitSpeedSetInfo>**
PUT	
Description	Set speed limit of lane (single lane)
Query	None
Inbound Data	**<LimitSpeedSetInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of lane speed limit, helping client or IE query and set the lane speed limit parameters of device via CGI protocol. **Explanations on key parameters:** channels/<ID> Means channel No. scenes/<ID> Means scene No. (1~32)	

lanes/<ID> Means lane No.; 1-6
<speedAmendPara> Means speed correction value; unit: km/h
<smallCarSpeedLowerLimit> Means lower limit of small car speed; unit: km/h
<smallCarSpeedUpperLimit> Means upper limit of small car speed; unit: km/h
<smallCarLowerTetherPercent> Means percentage of law enforcement to low-speed small cars, 0%-100%
<smallCarUpperTetherPercent> Means percentage of law enforcement to high-speed small cars, 0%-100%
<smallCarAbnormOverSpeed> Means abnormal overspeed of small car; unit: km/h
<smallCarAbnormUnderSpeed> Means abnormal underspeed of small car; unit: km/h
<bigCarSpeedLowerLimit> Means lower limit of big car; unit: km/h
<bigCarSpeedUpperLimit> Means upper limit of big car; unit: km/h
<bigCarLowerTetherPercent> Means percentage of law enforcement to low-speed big cars, 0%-100%
<bigCarUpperTetherPercent> Means percentage of law enforcement to high-speed big cars, 0%-100%
<bigCarAbnormOverSpeed> Means abnormal overspeed of big car; unit: km/h
<bigCarAbnormUnderSpeed> Means abnormal underspeed of big car; unit: km/h

LimitSpeedSetInfo XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<LimitSpeedSetInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<channelNO><!-- opt, xs:integer --></channelNO>
<speedAmendPara><!-- req, xs:integer, km/h --></speedAmendPara>
<smallCarSpeedLowerLimit><!-- req, xs:integer, km/h --></smallCarSpeedLowerLimit>
<smallCarSpeedUpperLimit><!-- req, xs:integer, km/h --></smallCarSpeedUpperLimit>
<smallCarLowerTetherPercent><!-- req, xs:string--></smallCarLowerTetherPercent>
<smallCarUpperTetherPercent><!-- req, xs:string--></smallCarUpperTetherPercent>
<smallCarAbnormOverSpeed><!-- req, xs:integer, km/h --></smallCarAbnormOverSpeed>
<smallCarAbnormUnderSpeed><!-- req, xs:integer, km/h --></smallCarAbnormUnderSpeed>
<bigCarSpeedLowerLimit><!-- req, xs:integer, km/h --></bigCarSpeedLowerLimit>
<bigCarSpeedUpperLimit><!-- req, xs:integer, km/h --></bigCarSpeedUpperLimit>
<bigCarLowerTetherPercent><!-- req, xs:string--></bigCarLowerTetherPercent>
<bigCarUpperTetherPercent><!-- req, xs:string--></bigCarUpperTetherPercent>
<bigCarAbnormOverSpeed><!-- req, xs:integer, km/h --></bigCarAbnormOverSpeed>
<bigCarAbnormUnderSpeed><!-- req, xs:integer, km/h --></bigCarAbnormUnderSpeed>
s</LimitSpeedSetInfo>
```

Test cases

GET /CGI/ITS/LaneRun/LimitSpeedSet/channels/1/scenes/1/lanes/1

Request XML： none

Response XML: <LimitSpeedSetInfo>

PUT /CGI/ITS/LaneRun/LimitSpeedSet/channels/1/scenes/1/lanes/1

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="2.0" encoding="UTF-8"?>
<LimitSpeedSetInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<speedAmendPara>100</speedAmendPara>
<smallCarSpeedLowerLimit>1</smallCarSpeedLowerLimit>
<smallCarSpeedUpperLimit>100</smallCarSpeedUpperLimit>
<smallCarLowerTetherPercent>10</smallCarLowerTetherPercent>
<smallCarUpperTetherPercent>50</smallCarUpperTetherPercent>
<smallCarAbnormOverSpeed>1</smallCarAbnormOverSpeed>
<smallCarAbnormUnderSpeed>100</smallCarAbnormUnderSpeed>
<bigCarSpeedLowerLimit>1</bigCarSpeedLowerLimit>
<bigCarSpeedUpperLimit>100</bigCarSpeedUpperLimit>
<bigCarLowerTetherPercent>10</bigCarLowerTetherPercent>
<bigCarUpperTetherPercent>50</bigCarUpperTetherPercent>
<bigCarAbnormOverSpeed>1</bigCarAbnormOverSpeed>
```

```
<bigCarAbnormUnderSpeed>100</bigCarAbnormUnderSpeed>
</LimitSpeedSetInfo>
```

2.14.5/CGI/ITS/LaneRun/LimitSpeedSet/channels/<ID>/scenes/<ID>/lanes

/CGI/ITS/LaneRun/LimitSpeedSet/channels/<ID>/scenes/<ID>/lanes **General Resource v2.0**	
GET	
Description	Acquire speed limit of lane (all lanes)
Query	None
Inbound Data	None
Success Return	**<LimitSpeedSetList>**
PUT	
Description	Set speed limit of lane (all lanes)
Query	None
Inbound Data	**<LimitSpeedSetList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of lane speed limit, helping client or IE query and set the lane speed limit parameters of device via CGI protocol.
Explanations on key parameters:
channels/<ID> Means channel No.
scenes/<ID> Means scene No. (1~32)
<channelNO> Means lane No.; information of all lanes can be sent, range: 1-6
<speedAmendPara> Means speed correction value; unit: km/h
<smallCarSpeedLowerLimit> Means lower limit of small car speed; unit: km/h
<smallCarSpeedUpperLimit> Means upper limit of small car speed; unit: km/h
<smallCarLowerTetherPercent> Means percentage of law enforcement to low-speed small cars, 0%-100%
<smallCarUpperTetherPercent> Means percentage of law enforcement to high-speed small cars, 0%-100%
<smallCarAbnormOverSpeed> Means abnormal overspeed of small car; unit: km/h
<smallCarAbnormUnderSpeed> Means abnormal underspeed of small car; unit: km/h
<bigCarSpeedLowerLimit> Means lower limit of big car; unit: km/h
<bigCarSpeedUpperLimit> Means upper limit of big car; unit: km/h
<bigCarLowerTetherPercent> Means percentage of law enforcement to low-speed big cars, 0%-100%
<bigCarUpperTetherPercent> Means percentage of law enforcement to high-speed big cars, 0%-100%
<bigCarAbnormOverSpeed> Means abnormal overspeed of big car; unit: km/h
<bigCarAbnormUnderSpeed> Means abnormal underspeed of big car; unit: km/h

LimitSpeedSetList XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<LimitSpeedSetList version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<limitSpeedSetData>
<channelNO><!-- opt, xs:integer --></channelNO>
<speedAmendPara><!-- req, xs:integer, km/h --></speedAmendPara>
<smallCarSpeedLowerLimit><!-- req, xs:integer, km/h --></smallCarSpeedLowerLimit>
<smallCarSpeedUpperLimit><!-- req, xs:integer, km/h --></smallCarSpeedUpperLimit>
<smallCarLowerTetherPercent><!-- req, xs:string--></smallCarLowerTetherPercent>
<smallCarUpperTetherPercent><!-- req, xs:string--></smallCarUpperTetherPercent>
<smallCarAbnormOverSpeed><!-- req, xs:integer, km/h --></smallCarAbnormOverSpeed>
<smallCarAbnormUnderSpeed><!-- req, xs:integer, km/h --></smallCarAbnormUnderSpeed>
```

```
<bigCarSpeedLowerLimit><!-- req, xs:integer, km/h --></bigCarSpeedLowerLimit>
<bigCarSpeedUpperLimit><!-- req, xs:integer, km/h --></bigCarSpeedUpperLimit>
<bigCarLowerTetherPercent><!-- req, xs:string--></bigCarLowerTetherPercent>
<bigCarUpperTetherPercent><!-- req, xs:string--></bigCarUpperTetherPercent>
<bigCarAbnormOverSpeed><!-- req, xs:integer, km/h --></bigCarAbnormOverSpeed>
<bigCarAbnormUnderSpeed><!-- req, xs:integer, km/h --></bigCarAbnormUnderSpeed>
</limitSpeedSetData>
</LimitSpeedSetList>
```

Test cases

GET /CGI/ITS/LaneRun/LimitSpeedSet/channels/1/scenes/1/lanes

Request XML: none

Response XML: <LimitSpeedSetList>

PUT /CGI/ITS/LaneRun/LimitSpeedSet/channels/1/scenes/1/lanes

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<LimitSpeedSetList version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<limitSpeedSetData>
<channelNO>1</channelNO>
<speedAmendPara>100</speedAmendPara>
<smallCarSpeedLowerLimit>1</smallCarSpeedLowerLimit>
<smallCarSpeedUpperLimit>100</smallCarSpeedUpperLimit>
<smallCarLowerTetherPercent>10</smallCarLowerTetherPercent>
<smallCarUpperTetherPercent>50</smallCarUpperTetherPercent>
<smallCarAbnormOverSpeed>1</smallCarAbnormOverSpeed>
<smallCarAbnormUnderSpeed>100</smallCarAbnormUnderSpeed>
<bigCarSpeedLowerLimit>1</bigCarSpeedLowerLimit>
<bigCarSpeedUpperLimit>100</bigCarSpeedUpperLimit>
<bigCarLowerTetherPercent>10</bigCarLowerTetherPercent>
<bigCarUpperTetherPercent>50</bigCarUpperTetherPercent>
<bigCarAbnormOverSpeed>1</bigCarAbnormOverSpeed>
<bigCarAbnormUnderSpeed>100</bigCarAbnormUnderSpeed>
</limitSpeedSetData>
</LimitSpeedSetList>
```

2.14.6/CGI/ITS/LaneRun/ManageChannelPara/scenes/<ID>

/CGI/ITS/LaneRun/ManageChannelPara/scenes/<ID>	**General Resource v2.0**
GET	
Description	Acquire traffic setting and lane parameters
Query	None
Inbound Data	None
Success Return	**<ManageChannelPara>**
PUT	
Description	Set traffic setting and lane parameters
Query	None
Inbound Data	**<ManageChannelPara>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting basic parameters of lane <channelName> Means intersection name, with length not above 93 characters <channelNum> Means intersection No., with length not above 63 characters <channelSum> Means total channel number; range: 1-6 <channelProperty> Means road property; 1. Highway; 2. City expressway; 3. Other roads;	

default as 3. Other roads
<runSpeed> Means run speed; range: 0-200; unit: km/h

ManageChannelPara XML Block

```
<?xml version="2 .0" encoding="UTF-8"?>
<ManageChannelPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<manageChannelParaInfo>
<channelNum><!-- req, xs:string--></channelNum>
<channelName><!-- req, xs:string--></channelName>
<channelSum><!-- req, xs:integer--></channelSum>
<channelProperty opt=""><!-- opt, xs:string,"1,2,3"--></channelProperty>
<runSpeed><!-- req, xs:integer--></runSpeed>
</manageChannelParaInfo>
</ManageChannelPara>
```

Test cases

GET /CGI/ITS/LaneRun/ManageChannelPara/scenes/<ID>

Request XML: none

Response XML: <ManageChannelPara>

PUT /CGI/ITS/LaneRun/ManageChannelPara/scenes/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<ManageChannelPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<manageChannelParaInfo>
<channelNum>0001</channelNum>
<channelName> intersection name </channelName>
<channelSum>2</channelSum>
<runSpeed>30</runSpeed>
</manageChannelParaInfo>
</ManageChannelPara>
```

2.14.7/CGI/ITS/ShotPara/SnapPicPlus/channels/<ID>/scenes/<ID>

/CGI/ITS/ShotPara/SnapPicPlus/channels/<ID>/scenes/<ID> General Resource v2.0	
GET	
Description	Acquire synthesis parameter of capture parameter picture.
Query	None
Inbound Data	None
Success Return	**<SnapPicPlusInfo>**
PUT	
Description	Set synthesis parameter of capture parameter picture
Query	None
Inbound Data	**<SnapPicPlusInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for getting and setting of synthesis parameter of capture parameter picture. <plusEnable>-- means whether synthesis is enabled. True: Enabled; false: Disabled <picPlusPercent>--means picture synthesis ratio. For ratio of original picture after synthesis, 100 means original ratio and 25 means scaling 1/4 (scope: 0-100)	

<featureArea>-- means close-up block diagram range as the denominator value. For example, 4 means matting map range is 1/4 of original picture and 16 means 1/16.
<picNum>-- means number of picture synthesis. 1 - synthesis of one picture; 2 - synthesis of two pictures; 3- synthesis of three pictures; 4- synthesis of four pictures
<plusType>--means corresponding synthesis type. Non-synthesis 1000 synthesis mode of one picture: 0-transverse original picture plus close-up synthesis. 1-longitudinal original picture plus close-up synthesis. 2-transverse close-up plus original picture synthesis. 3. Longitudinal close-up plus original synthesis.
synthesis of two pictures: 0-vertical synthesis mode; 1-horizontal synthesis mode; 2-horizontal arrangement of two pictures plus close-up; 3-vertical arrangement of two pictures plus close-up.
synthesis of three pictures: 0-stagger arrangement, one at upper part and two at lower part; 1-stagger arrangement, two at upper part and one at lower part; 2-two at left part and one at right part; 3-one at left part and two at right part; 4-vertical arrangement; 5-horizontal arrangement; 6-four-quarter arrangement -close-up at left lower; 10-four-quarter arrangement -close-up at right upper; 11-four-quarter arrangement -close-up at left upper.
synthesis of four pictures: 0-vertical synthesis; 1-horizonall synthesis; 2-four-quarter synthesis.
<featureOriginNO> -- means original picture close-up: 0 excellent picture selection; 1-the first picture; 2-the second picture; 3-the third picture

SnapPicPlusInfo XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<SnapPicPlusInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<!--synthesis enabled or not-->
<plusEnable><!-- req, xs:boolean --></plusEnable>
<!--picture synthesis ratio-->
<picPlusPercent><!-- req, xs:integer--></picPlusPercent>
<!--close-up block diagram range -->
<featureArea><!-- dep, xs:integer--></featureArea>
<snapPicList>
<snapPicData>
<!--number of synthesis pictures-->
<picNum><!-- req, xs:integer--></picNum>
<!--synthesis type-->
<plusType><!-- req, xs:integer--></plusType>
<!--close-up picture->
<featureOriginNO><!-- opt, xs:integer--><featureOriginNO>
</snapPicData>
</snapPicList>
</SnapPicPlusInfo>
```

Test cases

GET /CGI/ITS/ShotPara/SnapPicPlus/channels/<ID>/scenes/<ID>

Request XML: none

Response XML: <SnapPicPlusInfo>

PUT /CGI/ITS/ShotPara/SnapPicPlus/channels/<ID>/scenes/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<SnapPicPlusInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<plusEnable>true</plusEnable>
<picPlusPercent>25</picPlusPercent>
<featureArea>4</featureArea>
<snapPicList>
<snapPicData>
<picNum>1</picNum>
<plusType>0</plusType>
<featureOriginNO>0<featureOriginNO>
```

```
</snapPicData>
<snapPicData>
<picNum>2</picNum>
<plusType>1</plusType>
</snapPicData>
</snapPicList>
</SnapPicPlusInfo>
```

2.14.8/CGI/ITS/ImagePara/FillinLight/channels/<ID>/scenes/<ID>

/CGI/ITS/ImagePara/FillinLight/channels/<ID>/scenes/<ID> **General Resource v2.0**	
GET	
Description	Acquire fill light status
Query	None
Inbound Data	None
Success Return	**<FillinlightInfo>**
PUT	
Description	Set fill light status
Query	None
Inbound Data	**<FillinlightInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This proposal is prepared for setting of fill light. Page includes flash lamp enabling and strobe lamp enabling. Are the above two lamps controlled automatically?
<manual>--means time bucket, range: 1-8
<flashLampEnable>--means flash lamp enabling, true: enabled; false: disabled
<strobLampEnable>--means strobe lamp enabling, true: enabled; false: disabled
< flashStrobLampEnable >--means strobe lamp enabling, true: enabled; false: disabled
<autoFlashLampEnable>--means automatic control of flash lamp, true: enabled; false: disabled
<autoStrobLampEnable>--means automatic control of strobe lamp, true: enabled; false: disabled
< autoFlashStrobLampEnable >--means automatic control of flash strobe, true: enabled; false: disabled

FillinlightInfo XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<FillinlightInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<fillinLightList>
<fillinLightData>
<!--time bucket-->
<manual><!-- req, xs:integer--></manual>
<!--flash lamp enabling-->
<flashLampEnable><!-- req, xs:boolean --></flashLampEnable>
<!--automatic control of flash lamp is dependent on flash lamp enabling -->
<autoFlashLampEnable><!-- dep, xs:boolean --></autoFlashLampEnable>
<!--strobe lamp enabling-->
<strobLampEnable><!-- req, xs:boolean --></strobLampEnable>
<!--automatic control of strobe lamp is dependent on flash lamp enabling -->
<autoStrobLampEnable><!-- dep, xs:boolean --></autoStrobLampEnable>
<!--strobe lamp enabling-->
<flashStrobLampEnable><!-- req, xs:boolean --></ flashStrobLampEnable >
<!-- automatic control of flash strobe is dependent on flash strobe enabling -->
<autoFlashStrobLampEnable ><!-- dep, xs:boolean --></ autoFlashStrobLampEnable >
```

```
</fillinLightData>
</fillinLightList>
</FillinlightInfo>
```

Test cases
GET /CGI/ITS/ImagePara/FillinLight/channels/<ID>/scenes/<ID>
Request XML: none
Response XML: <FillinlightInfo>
PUT /CGI/ITS/ImagePara/FillinLight/channels/<ID>/scenes/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<FillinlightInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<fillinLightList>
<fillinLightData>
<manual>1</manual>
<flashLampenable>true</flashLampenable>
<autoFlashlampEnable>false</autoFlashlampEnable>
<strobLampenable>true</strobLampenable>
<autoStroblampEnable>false</autoStroblampEnable>
</fillinLightData>
</fillinLightList>
</FillinlightInfo>
```

2.14.9/CGI/ITS/SystemRun/TabSystem

/CGI/ITS/SystemRun/TabSystem/	**General Resource v2.0**
GET	
Description	System switching
Query	None
Inbound Data	None
Success Return	**<TabSystemInfo>**
PUT	
Description	System switching
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This proposal is prepared for system type switching. <type> value: 0-bayonet; 1-electronic police	

TabSystemInfo XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<TabSystemInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<type><!-- req, xs:integer --></type>
</TabSystemInfo>
```

Test cases
GET /CGI/ITS/SystemRun/TabSystem
Request XML: none
Response XML: <TabSystemInfo>
PUT/CGI/ITS/SystemRun/TabSystem
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<TabSystemInfo version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<type>0</type>
</TabSystemInfo>
```

2.14.10/CGI/ITS/ImagePara/AddLightPara/channels/<ID>/template/<ID>/type/<ID>

/CGI/ITS/ImagePara/AddLightPara/channels/<ID>/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire fill light status of snapshot plate number
Query	None
Inbound Data	None
Success Return	**<AddLightParaInfo>**
PUT	
Description	Set fill light status of snapshot plate number
Query	None
Inbound Data	**<AddLightParaInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This proposal is prepared for parameter setting and acquirement of plate number fill light. type means different image parameter types; 0-Monitoring image; 1-Snapshot image; 2-Analysis image <lightEnable>--means fill light enabling, true: enabled; false: disabled; default: true <obeyLight>--means front-lighting benchmark, range: 0-100; default: 50 <backlighting>--means backlight benchmark, range: 0-100; default: 50 <delicacyLimit>--means delicacy, range: 0-100; default: 50	

AddLightParaInfo XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<AddLightParaInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<!-fill light enabling-->
<lightEnable><!-- req, xs:boolean --></lightEnable>
<!--front lighting benchmark-->
<obeyLight><!-- req, xs:integer    --></obeyLight>
<!--backlight benchmark-->
<backlighting><!-- dep, xs:integer    --></backlighting>
<!--delicacy-->
<delicacyLimit><!-- req, xs:integer    --></delicacyLimit>
</AddLightParaInfo>
```

Test cases

GET /CGI/ITS/ImagePara/AddLightPara/channels/<ID>/template/<ID>/type/<ID>

Request XML: none

Response XML: <AddLightParaInfo>

PUT /CGI/ITS/ImagePara/AddLightPara/channels/<ID>/template/<ID>/type/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<AddLightParaInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<lightEnable>true</lightEnable>
<obeyLight>50</obeyLight>
<backlighting>50</backlighting>
<delicacyLimit>50</delicacyLimit>
</AddLightParaInfo>
```

2.14.11/CGI/ITS/ImagePara/channels/<ID>/JPEGQuality/template/<ID>/type/<ID>

/CGI/ITS/ImagePara/channels/<ID>/JPEGQuality/template/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire quality of JPEG picture
Query	None
Inbound Data	None
Success Return	**<JPEGQuality>**
PUT	
Description	Set quality of JPEG picture
Query	None
Inbound Data	**<JPEGQuality>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This proposal is prepared for acquirement presetting of JPEG picture.
Explanations on key parameters:
template means template No.: 0-7-template No.; 255-temporary template; 0x7ff--all templates
type means different image parameter types; 0-Monitoring image; 1-Snapshot image; 2-Analysis image
<characterJPEG> means quality of JPEG picture, range: 10-100 ; default: 85
<pictureUpperLimit> means upper limit of picture size, range: 200-8192; default: 2048

JPEGQuality XML Block

```
<JPEGQuality version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<characterJPEG><!--opt, xs:integer --></characterJPEG>
<pictureUpperLimit><!--opt, xs:integer --></pictureUpperLimit>
</JPEGQuality>
```

Test cases
GET /CGI/ITS/ImagePara/channels/<ID>/JPEGQuality/templates/<ID>/type/<ID>
Request XML: none
Response XML: <JPEGQuality>
PUT/CGI/ITS/ImagePara/channels/<ID>/JPEGQuality/templates/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<JPEGQuality version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<characterJPEG>60</characterJPEG>
<pictureUpperLimit>6000</pictureUpperLimit>
</JPEGQuality>
```

2.14.12/CGI/ITS/LaneRun/RadarParameter/channels/<ID>/Scene/<ID>/lanes/<ID>

/CGI/ITS/LaneRun/TriggerParameter/channels/<ID>/Scene/<ID>/lanes/<ID> **General Resource v2.0**	
GET	
Description	Acquire lane radar parameter
Query	None
Inbound Data	None
Success Return	**<RadarParameter>**
PUT	
Description	Set lane radar parameter
Query	None
Inbound Data	**<RadarParameter>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting and enquiry function of lane radar parameter and setting and enquiry of client or IE for equipment lane radar parameter through CGI protocol, including speed matching time and minimum time slice parameter.
Explanations on key parameters:
<speedMatchingTime> means speed matching time, unit: ms, range: 0-5,000
<loopMinTime> means minimum time slice, unit: ms, range: 0-5,000; default: 50
<radarMinSpeed> means minimum triggering speed, unit: m/h, range: 10~240
<radarMaxSpeed> means maximum triggering speed, unit: m/h, range: 10~240

RadarParameter XML Block

```
<RadarParameter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<speedMatchingTime ><!-- req, xs:integer, milliseconds --></speedMatchingTime >
<loopMinTime><!-- req, xs:integer, milliseconds --></loopMinTime>
<radarMinSpeed<!-- req, xs:integer, km/h --></radarMinSpeed>
<radarMaxSpeed><!-- req, xs:integer, km/h --></radarMaxSpeed>
</RadarParameter>
```

Test cases
GET /CGI/ITS/ LaneRun/RadarParameter/channels/<ID>/Scene/<ID>/lanes/<ID>
Request XML: none
Respond XML: <RadarParameter>
PUT /CGI/ITS/ LaneRun/ RadarParameter/channels/<ID>/Scene/<ID>/lanes/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<RadarParameter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<speedMatchingTime>1200</speedMatchingTime>
<loopMinTime>50</loopMinTime>
<radarMinSpeed>10</radarMinSpeed>
<radarMaxSpeed>200</radarMaxSpeed>
</RadarParameter>
```

2.14.13/CGI/ITS/LaneRun/RadarParameter/channels/<ID>/Scene/<ID>/lanes

/CGI/ITS/LaneRun/TriggerParameter/channels/<ID>/Scene/<ID>/lanes **General Resource v2.0**	
GET	
Description	Acquire lane radar parameter in batch
Query	None
Inbound Data	None
Success Return	**<RadarParameterList>**
PUT	
Description	Set lane radar parameter in batch
Query	None
Inbound Data	**<RadarParameterList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for batch setting and enquiry function of lane radar parameter and batch setting and enquiry of client or IE for equipment lane radar parameter through CGI protocol, including speed matching time and minimum time slice parameter.
Explanations on key parameters:
<laneID> means lane No.; five lanes (No. 1-5) are supported.
<speedMatchingTime> means speed matching time, unit: ms, range: 0-5,000
<loopMinTime> means minimum time slice, unit: ms, range: 0-5,000; default: 50
<radarMinSpeed> means minimum triggering speed, unit: m/h, range: 10~240
<radarMaxSpeed> means maximum triggering speed, unit: m/h, range: 10~240

RadarParameterList XML Block

```
<RadarParameterList    version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<radarParameter>
<laneID><!-- req, xs:integer --></laneID>
<speedMatchingTime ><!-- req, xs:integer, milliseconds --></speedMatchingTime >
<loopMinTime><!-- req, xs:integer, milliseconds --></loopMinTime>
<radarMinSpeed<!-- req, xs:integer, km/h --></radarMinSpeed>
<radarMaxSpeed><!-- req, xs:integer, km/h --></radarMaxSpeed>
</radarParameter>
</RadarParameterList>
```

Test cases

GET /CGI/ITS/LaneRun/RadarParameter/channels/<ID>/Scene/<ID>/lanes

Request XML: none

Response XML: <RadarParameterList>

PUT /CGI/ITS/LaneRun/RadarParameter/channels/<ID>/Scene/<ID>/lanes

Response XML: <ResponseStatus>

Request XML: as below

```
<RadarParameterList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<radarParameter>
<laneID>1</laneID>
<speedMatchingTime>1200</speedMatchingTime>
<loopMinTime>50</loopMinTime>
<radarMinSpeed>10</radarMinSpeed>
<radarMaxSpeed>200</radarMaxSpeed>
</radarParameter>
</RadarParameterList>
```

2.14.14/CGI/ITS/LaneRun/VehicleInspection/channels/<ID>/Scene/<ID>/lanes/<ID>

/CGI/ITS/LaneRun/VehicleInspection/channels/<ID>/Scene/<ID>/lanes/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameter of lane vehicle check device.
Query	None
Inbound Data	None
Success Return	**<VehicleInspection>**
PUT	
Description	Set parameter of lane vehicle check device.
Query	None
Inbound Data	**<VehicleInspection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting and enquiry function of lane check device and setting and enquiry of client or IE for equipment vehicle check device parameter through CGI protocol, including speed matching time and minimum time slice parameter, including loop mode and loop No. parameters.

Explanations on key parameters:

<loopMode> means loop work mode. singleLoop: Single loop; doubleLoop: Two loops; threeLoop: Three loops; default: doubleLoop

<firstLoopNo> means No. of the first loop (1-12)

<secondLoopNo> means No. of the second loop (1-12)

<thirdLoopNo> means No. of the third loop (1-13)

< loopMaxTime> Maximum time slice, unit: ms, range: 10~10,000; default: 2,000

<loopDistance> means loop distance. Unit: m (divided by 100 in case of analysis, converted into float type with 3 decimals retained), range: 0.5~6.0, default 3.0

VehicleInspection XML Block

```
<VehicleInspection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<loopMode opt=""><!--opt, xs:string,"singleLoop, doubleLoop, threeLoop" --></loopMode>
<firstLoopNo><!-- dep, xs:integer--></firstLoopNo>
<secondLoopNo><!-- dep, xs:integer--></secondLoopNo>
<thirdLoopNo><!-- dep, xs:integer--></thirdLoopNo>
< loopMaxTime ><!-- req, xs:integer, milliseconds --></loopMaxTime >
<loopDistance><!-- req, xs:integer, meter --></loopDistance>
</VehicleInspection>
```

Test cases

GET /CGI/ITS/LaneRun/VehicleInspection/channels/1/Scene/1/lanes/1

Request XML: none

Response XML: <VehicleInspection>

PUT /CGI/ITS/LaneRun/VehicleInspection/channels/1/Scene/1/lanes/1

Response XML: <ResponseStatus>

Request XML: as below

```
<VehicleInspection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<loopMode>singleLoop</loopMode>
<firstLoopNo>4</firstLoopNo>
<secondLoopNo>12</secondLoopNo>
<thirdLoopNo>6</thirdLoopNo>
<loopMaxTime >2000</loopMaxTime>
<loopDistance>3.0</loopDistance>
</VehicleInspection>
```

2.14.15/CGI/ITS/LaneRun/VehicleInspection/channels/<ID>/Scene/<ID>/lanes

/CGI/ITS/LaneRun/VehicleInspection/channels/<ID>/Scene/<ID>/lanes **General Resource v2.0**	
GET	
Description	Acquire paramete of lane vehicle check device
Query	None
Inbound Data	None
Success Return	**<VehicleInspectionList>**
PUT	
Description	Set parameter of lane vehicle check device
Query	None
Inbound Data	**<VehicleInspectionList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for batch setting and enquiry function of lane vehicle check parameter and batch setting and enquiry of client or IE for equipment vehicle check device parameter through CGI protocol, including loop mode and loop No. parameters.

Explanations on key parameters:

<laneID> means lane No. Five lanes (No. 1-5) are supported.

<loopMode> means loop work mode. singleLoop: Single loop; doubleLoop: Two loops; threeLoop: Three loops; default: doubleLoop

<firstLoopNo> means No. of the first loop (1-12)

<secondLoopNo> means No. of the second loop (1-12)

<thirdLoopNo> means No. of the third loop (1-13)

< loopMaxTime> Maximum time slice, unit: ms, range: 10~10,000; default: 2,000

<loopDistance> means loop distance. Unit: m (divided by 100 in case of analysis, converted into float type with 3 decimals retained), range: 0.5~6.0, default 3.0

VehicleInspectionList XML Block

```
<VehicleInspectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<vehicleInspection>
<laneID><!-- req, xs:integer--></laneID>
<loopMode opt=""><!--opt, xs:string,"singleLoop, doubleLoop, threeLoop" --></loopMode>
<firstLoopNo><!-- dep, xs:integer--></firstLoopNo>
<secondLoopNo><!-- dep, xs:integer--></secondLoopNo>
<thirdLoopNo><!-- dep, xs:integer--></thirdLoopNo>
< loopMaxTime ><!-- req, xs:integer, milliseconds --></loopMaxTime >
<loopDistance><!-- req, xs:integer, meter --></loopDistance>
</vehicleInspection>
</VehicleInspectionList>
```

Test cases

GET /CGI/ITS/LaneRun/VehicleInspection/channels/1/Scene/1/lanes

Request XML: none

Response XML: <VehicleInspectionList>

PUT /CGI/ITS/LaneRun/VehicleInspection/channels/1/Scene/1/lanes

Response XML: <ResponseStatus>

Request XML: as below

```
<VehicleInspectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<vehicleInspection>
<laneID>1</laneID>
<loopMode>singleLoop</loopMode>
<firstLoopNo>4</firstLoopNo>
<secondLoopNo>12</secondLoopNo>
<thirdLoopNo>6</thirdLoopNo>
< loopMaxTime >2000</ loopMaxTime >
<loopDistance>3.0</loopDistance>
</vehicleInspection>
</VehicleInspectionList>
```

2.14.16/CGI/ITS/LaneRun/VideoDetection/channels/<ID>/Scene/<ID>/lanes/<ID>

/CGI/ITS/LaneRun/VideoDetection/channels/<ID>/Scene/<ID>/lanes/<ID> **General Resource v2.0**	
GET	
Description	Acquire lane video trigger parameter.
Query	None
Inbound Data	None
Success Return	**<VideoDetection>**
PUT	
Description	Set lane video trigger parameter.
Query	None
Inbound Data	**<VideoDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:

This protocol is prepared for setting and enquiry function of lane video trigger parameter and setting and enquiry of client or IE for equipment lane video trigger parameter through CGI protocol, including parameters of parking time judgment and parking prohibition time.

Explanations on key parameters:

<checkParkTime> means parking judgment time, unit: s, range: 1-120, default: 1

<iIllegalParkTime> means parking prohibition time, unit: s, range: 1-120, default: 5

<carLineRatio> means car line pressing sensitivity, unit: pixel, range: 1-100, default: 100; it is required to convert webpage into permillage type.

<cartLineRatio> means truck line pressing sensitivity, unit: pixel, range: 1-100, default: 100; it is required to convert webpage into permillage type.

<redLightSnap> means snapshot mode of running the red light. Snapshot as per direction

(default): capByDirection; snapshot as per lane: capByLane; snapshot as per direction + lane: capByAll
<compelRedlight> means compulsory red light or not. False: Non-compulsory red light; true: Compulsory red light, default: False
<trailCapPlace> means second-line snapshot enabled or not. True-Enabled; false-disabled.

VideoDetection XML Block

```
<VideoDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<videoDetection><!-- opt-->
<checkParkTime><!-- req, xs:integer, seconds --></checkParkTime>
<iIllegalParkTime><!-- req, xs:integer, seconds --></iIllegalParkTime>
<carLineRatio><!-- req, xs:integer, pixel --></carLineRatio>
<cartLineRatio><!-- req, xs:integer, pixel --></cartLineRatio>
<redLightSnap opt="">
<!--opt, xs:string,"capByDirection, capByLane, capByAll" -->
</redLightSnap>
<compelRedlight><!-- opt, xs:boolean "true, false" --></compelRedlight>
<trailCapPlace><!-- opt, xs:boolean "true, false" --></trailCapPlace>
</VideoDetection>
```

Test cases

GET /CGI/ITS/LaneRun/VideoDetection/channels/1/Scene/1/lanes/1

Request XML: none

Response XML: <VideoDetection>

PUT /CGI/ITS/LaneRun/VideoDetection/channels/1/Scene/1/lanes/1

Response XML: <ResponseStatus>

Request XML: as below

```
<VideoDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<checkParkTime>1</checkParkTime>
<iIllegalParkTime>5</iIllegalParkTime>
<carLineRatio>100<carLineRatio>
<cartLineRatio>50<cartLineRatio>
<redLightSnap>capByDirection<redLightSnap>
<compelRedlight>true<compelRedlight>
<trailCapPlace>true</trailCapPlace>
</VideoDetection>
```

2.14.17/CGI/ITS/LaneRun/VideoDetection/channels/<ID>/Scene/<ID>/lanes

/CGI/ITS/LaneRun/VideoDetection/channels/<ID>/Scene/<ID>/lanes **General Resource v2.0**	
GET	
Description	Acquire lane video trigger parameter in batch
Query	None
Inbound Data	None
Success Return	**<VideoDetectionList>**
PUT	
Description	Set lane video trigger parameter in batch
Query	None
Inbound Data	**<VideoDetectionList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for batch setting and enquiry function of lane video trigger parameter and batch setting and enquiry of client or IE for equipment lane video trigger parameter through CGI protocol, including parameters of parking time judgment and parking prohibition time.
Explanations on key parameters:
<laneID> means lane No. Five lanes (No. 1-5) are supported.
<checkParkTime> means parking judgment time, unit: s, range: 1-120, default: 1
<iIllegalParkTime> means parking prohibition time, unit: s, range: 1-120, default: 5
<carLineRatio> means car line pressing sensitivity, unit: pixel, range: 1-100, default: 100; it is required to convert webpage into permillage type.
<cartLineRatio> means truck line pressing sensitivity, unit: pixel, range: 1-100, default: 100; it is required to convert webpage into permillage type.
<redLightSnap> means snapshot mode of running the red light. Snapshot as per direction (default): capByDirection; snapshot as per lane: capByLane; snapshot as per direction + lane: capByAll
<compelRedlight> means compulsory red light or not. False: Non-compulsory red light; true: Compulsory red light, default: False
<trailCapPlace> means second-line snapshot enabled or not. True-Enabled; false-disabled.

VideoDetectionList XML Block

```
<VideoDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<videoDetection>
<laneID><!-- req, xs:integer --></laneID>
<checkParkTime><!-- dep, xs:integer, seconds --></checkParkTime>
<iIllegalParkTime><!-- dep, xs:integer, seconds --></iIllegalParkTime>
<carLineRatio><!-- dep, xs:integer, pixel --></carLineRatio>
<cartLineRatio><!-- dep, xs:integer, pixel --></cartLineRatio>
<redLightSnap opt="">
<!-- dep ,opt, xs:string,"capByDirection, capByLane, capByAll" -->
</redLightSnap>
<compelRedlight><!-- dep ,opt, xs:boolean "true, false" --></compelRedlight>
<trailCapPlace><!-- dep ,opt, xs:boolean "true, false" --></trailCapPlace>
</videoDetection>
</VideoDetectionList>
```

Test cases
GET /CGI/ITS/LaneRun/VideoDetection/channels/1/Scene/1/lanes
Request XML: none
Respond XML: <VideoDetectionList>
PUT /CGI/ITS/LaneRun/VideoDetection/channels/1/Scene/1/lanes
Respond XML: <ResponseStatusList>
Request XML: as below

```
<VideoDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<videoDetection>
<laneID>1</laneID>
<checkParkTime>1</checkParkTime>
<iIllegalParkTime>5</iIllegalParkTime>
<carLineRatio>100<carLineRatio>
<cartLineRatio>50<cartLineRatio>
<redLightSnap>capByDirection<redLightSnap>
<compelRedlight>true<compelRedlight>
<trailCapPlace>true</trailCapPlace>
</videoDetection>
</VideoDetectionList>
```

2.14.18/CGI/ITS/LaneRun/ChnlCarCapType/channels/<ID>/Scene/<ID>/lanes/<ID>

/CGI/ITS/LaneRun/ChnlCarCapType/channels/<ID>/Scene/<ID>/lanes<ID>
General Resource v2.0

GET	
Description	Acquire advanced parameter bound with vehicle type and snapshot type
Query	None
Inbound Data	None
Success Return	**<CarCapTypeList>**
PUT	
Description	Set advanced parameter bound with vehicle type and snapshot type
Query	None
Inbound Data	**<CarCapTypeList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting and enquiry of advanced parameter bound with vehicle type and snapshot type and batch setting and enquiry of client or IE for corresponding illegal snapshot of every kind of vehicle through CGI protocol.
Explanations on key parameters:
Scene/<ID> means scenario No. (1-32)
lanes/<ID> means lane No. (1-5), five lanes are supported.
<carType> means vehicle type. unknownCar-- car type unknown, coach--coach (change bus and motor coach into coach), car-car (change sedan car into car), truck --truck, including truck and pickup truck , van-minibus, bigTruck--heavy medium-sized truck (change big truck into heavy medium-sized truck), minivan-light mini truck (change minivan into light mini truck), motorcycle--motorbike (change non-motor vehicle into motorbike), pedestrian-- pedestrian, suv—SUV, midsizeBus--medium bus, trailer--trailer, dangerousCar--vehicle of hazardous chemicals
< trafficWarnType > see 2.14.0 Type description.
<capTypeEnable> means illegal type enabled. true-enabled, false-disabled

CarCapTypeList XML Block

```
<CarCapTypeList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<carCapType>
<carType opt=""><!-- opt, xs:string,"unknownCar,…"--></carType>
<capTypeList><!--dep,-->
<capType>
< trafficWarnType ><!--req, xs:integer--></ trafficWarnType >
<capTypeEnable><!-- req, xs:boolean --></capTypeEnable>
</capType>
</capTypeList>
</carCapType>
</CarCapTypeList>
```

Test cases
GET /CGI/ITS/LaneRun/ChnlCarCapType/channels/1/Scene/1/lanes/1
Request XML: none
Respond XML:<CarCapTypeList>
PUT /CGI/ITS/LaneRun/ChnlCarCapType/channels/1/Scene/1/lanes/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<CarCapTypeList version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<carCapType>
<carType>coach</carType>
<capTypeList>
<capType>
<trafficWarnType>Bayonet</trafficWarnType>
<capTypeEnable>true</capTypeEnable>
</capType>
</capTypeList>
```

```
</carCapType>
</CarCapTypeList>
```

2.14.19/CGI/ITS/LaneRun/ChnlCapSet/channels/<ID>/Scene/<ID>/lanes/<ID>

/CGI/ITS/LaneRun/ChnlCapSet/channels/<ID>/Scene/<ID>/lanes/<ID> General Resource v2.0	
GET	
Description	Acquire advanced configuration of time bucket bound with snapshot type
Query	None
Inbound Data	None
Success Return	**<ChnlCapSetList>**
PUT	
Description	Set advanced configuration of time bucket bound with snapshot type
Query	None
Inbound Data	**<ChnlCapSetList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting and enquiry of advanced configuration time bucket bound with snapshot type and setting and enquiry of client or IE for lane illegal snapshot type under every time bucket through CGI protocol.
Explanations on key parameters:
Scene/<ID> means scenario No. (1-32)
Lanes/<ID> means lane No. Six (No. 1-6) lanes are supported.
<scheduleID> means time bucket ID. Eight time buckets are supported.
<beginTime> means starting time. Format example: 19:35:00 (values of hour, minute and second are 00.)
<endTime> means end time. Format example: 19:35:00 (values of hour, minute and second are 00.)
< trafficWarnType > see 2.14.0 Type description.
<carTypeEnable> means illegal snapshot type enabled or not, true-enabled, false-disabled

ChnlCapSetList XML Block

```
<ChnlCapSetList ="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<chnlCapSetItem>
<scheduleID><!-- req, xs:integer; id --></scheduleID>
<beginTime><!-- dep, xs:time, ISO8601 time --></beginTime>
<endTime><!-- dep, xs:time, ISO8601 time --></endTime>
<capTypeList><!-- dep -->
<trafficWarnType><!-- req, xs:string --></trafficWarnType>
<carTypeEnable><!-- req, xs:boolean --></carTypeEnable>
</capTypeList>
</chnlCapSetItem>
</ChnlCapSetList>
```

Test cases
GET /CGI/ITS/LaneRun/ChnlCapSet/channels/<ID>/Scene/<ID>/lanes/1
Request XML: none
Respond XML: <ChnlCapSetList>
PUT /CGI/ITS/LaneRun/ChnlCapSet/channels/<ID>/Scene/<ID>/lanes/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ChnlCapSetList>
<chnlCapSetItem>
<scheduleID>1</scheduleID>
<beginTime>00:00:00</beginTime>
<endTime>19:35:00</endTime>
<capTypeList>
<trafficWarnType>Bayonet</trafficWarnType>
<carTypeEnable>true</carTypeEnable>
</capTypeList>
</chnlCapSetItem>
</ChnlCapSetList>
```

2.14.20/CGI/ITS/LaneRun/ChnlCarCapType/channels/<ID>/Scene/<ID>/lanes

/CGI/ITS/LaneRun/ChnlCarCapType/channels/<ID>/Scene/<ID>/lanes **General Resource v2.0**	
GET	
Description	Acquire advanced parameter bound with vehicle type and snapshot type in batch
Query	None
Inbound Data	None
Success Return	**<CarCapTypeList>**
PUT	
Description	Set advanced parameter bound with vehicle type and snapshot type in batch
Query	None
Inbound Data	**<CarCapTypeList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for setting and enquiry of advanced parameter bound with vehicle type and snapshot type and batch setting and enquiry of client or IE for corresponding illegal snapshot of every kind of vehicle through CGI protocol.
Explanations on key parameters:
<laneID> means lane No. (1~5)
<carType> means vehicle type. unknownCar-- car type unknown, coach--coach (change bus and motor coach into coach), car-car (change sedan car into car), truck --truck, including truck and pickup truck , van-minibus, bigTruck--heavy medium-sized truck (change big truck into heavy medium-sized truck), minivan-light mini truck (change minivan into light mini truck), motorcycle--motorbike (change non-motor vehicle into motorbike), pedestrian-- pedestrian, suv—SUV, midsizeBus--medium bus, trailer--trailer, dangerousCar--vehicle of hazardous chemicals
< trafficWarnType > see 2.14.0 Type description.
<capTypeEnable> means illegal type enabled. true-enabled, false-disabled

CarCapTypeList XML Block

```
<CarCapTypeList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneCarCapTpye>
<laneID><!--req, xs:integer--></laneID>
<laneCarCapList>
<carCapType>
<carType opt=""><!-- opt, xs:string,"unknownCar,…"--></carType>
<capTypeList><!--dep,-->
<capType>
<trafficWarnType><!-- req, xs:string --></trafficWarnType>
<capTypeEnable><!-- req, xs:boolean --></capTypeEnable>
</capType>
</capTypeList>
```

```
</carCapType>
</laneCarCapList>
</laneCarCapTpye>
</CarCapTypeList>
```

Test cases
GET /CGI/ITS/LaneRun/ChnlCarCapType/channels/1/Scene/1/lanes
Request XML: none
Respond XML:<CarCapTypeList>
PUT /CGI/ITS/LaneRun/ChnlCarCapType/channels/1/Scene/1/lanes
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<CarCapTypeList version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneCarCapTpye>
<laneID>1</laneID>
<laneCarCapList>
<carCapType>
<carType>coach</carType>
<capTypeList>
<capType>
<trafficWarnType>Bayonet</trafficWarnType>
<capTypeEnable>true</capTypeEnable>
</capType>
</capTypeList>
</carCapType>
</laneCarCapList>
</laneCarCapTpye>
</CarCapTypeList>
```

2.14.21/CGI/ITS/LaneRun/ChnlCapSet/channels/<ID>/Scene/<ID>/lanes

/CGI/ITS/LaneRun/ChnlCapSet/channels/<ID>/Scene/<ID>/lanes General Resource v2.0	
GET	
Description	Acquire advanced configuration of time bucket bound with lane snapshot type in batch
Query	None
Inbound Data	None
Success Return	**<ChnlCapSetList>**
PUT	
Description	Set advanced configuration of time bucket bound with lane snapshot type in batch
Query	None
Inbound Data	**<ChnlCapSetList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for batch setting and enquiry of advanced configuration of time bucket bound with lane snapshot type and batch setting and enquiry of client or IE for lane illegal snapshot type under every time bucket through CGI protocol
Explanations on key parameters:
<laneID> means lane No. (1-6)
<scheduleID> means time bucket ID. Eight time buckets are supported.
<beginTime> means starting time. Format example: 19:35:00 (values of hour, minute and second are 00.)
<endTime> means end time. Format example: 19:35:00 (values of hour, minute and second are

00.)
< trafficWarnType > see 2.14.0 Type description.
<carTypeEnable> means illegal snapshot type enabled or not, true-enabled, false-disabled

ChnlCapSetList XML Block

```
<ChnlCapSetList ="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<chnlCapSetItem>
<laneID><!-- opt, xs:integer; id --></laneID>
<laneCapSetIist>
<laneCapSetItem>
<scheduleID><!-- req, xs:integer; id --></scheduleID>
<beginTime><!-- dep, xs:time, ISO8601 time --></beginTime>
<endTime><!-- dep, xs:time, ISO8601 time --></endTime>
<capTypeList><!-- dep -->
<trafficWarnType><!-- req, xs:string --></trafficWarnType>
<carTypeEnable><!-- req, xs:boolean --></carTypeEnable>
</capTypeList>
</laneCapSetItem>
</laneCapSetIist>
<chnlCapSetItem>
</ChnlCapSetList>
```

Test cases

GET /CGI/ITS/LaneRun/ChnlCapSet/channels/<ID>/Scene/<ID>/lanes

Request XML: none

Respond XML: <ChnlCapSetList>

PUT /CGI/ITS/LaneRun/ChnlCapSet/channels/<ID>/Scene/<ID>/lanes

Respond XML: <ChnlCapSetList>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ChnlCapSetList>
<chnlCapSetItem>
<laneID>1</laneID>
<laneCapSetIist>
<laneCapSetItem>
<scheduleID>1</scheduleID>
<beginTime>00:00:00</beginTime>
<endTime>19:35:00</endTime>
<capTypeList>
<trafficWarnType>Bayonet</trafficWarnType>
<carTypeEnable>true</carTypeEnable>
</capTypeList>
</laneCapSetItem>
</laneCapSetIist>
</chnlCapSetItem>
</ChnlCapSetList>
```

2.14.22/CGI/ITS/LaneRun/DelaySnap/channels/<ID>/Scene/<ID>/lanes/<ID>

/CGI/ITS/LaneRun/DelaySnap/channels/<ID>/Scene/<ID> General Resource v2.0	
GET	
Description	Acquire delay snapshot parameter
Query	None

Inbound Data	None
Success Return	**<DelaySnap>**
PUT	
Description	Set delay snapshot parameter
Query	None
Inbound Data	**<DelaySnap>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for enquiry and setting of delay snapshot parameter and enquiry and setting of client or IE for delay snapshot parameter through CGI protocol, including channel No./scenario/delay mode/snapshot distance.

Explanations on key parameters:
<delayMode> means delay mode, distance means delay distance and time means delay time.
apIntervalID> means No. of delay snapshot picture (1-5)
<snapInterval> means interval of delay snapshot
When it means delay snapshot time, unit is ms and range is 0-2,000.
<snapPositionID> means position ID of snapshot picture, five picture positions (1-5) are supported
<snapPosition>
It means the first snapshot position when vehicle runs over loop. notsnap-no snapshot, firstLoopEnter-entry of the first loop; secondLoopEnter: entry of the second loop; secondLoopLeave-departure of the second loop; delay-delay.
It means the second snapshot position when vehicle runs over loop. firstLoopLeave: departure of the first coil; secondLoopEnter: entry of the second loop; secondLoopLeave-departure of the second loop; delay-delay
It means the third snapshot position when vehicle runs over loop. secondLoopEnter: entry of the second loop; secondLoopLeave-departure of the second loop; delay-delay
It means the fourth snapshot position when vehicle runs over loop. secondLoopLeave-departure of the second loop; delay-delay
It means the fifth snapshot position when vehicle runs over loop. delay-delay
<recognizePlace> Means recognition strategy. 0--recognize the first picture; 1--recognize the second picture; 2--recognize the first picture and then recognize the second picture, and the one with higher confidence coefficient shall apply. 3--recognize the second picture. If failure to recognize result, recognize the first picture; 4-recognize the first picture; if failure to recognize result, recognize the second picture. 5-recognize the third picture.
<loopDelayTime> means loop delay time, unit: ms

DelaySnap XML Block

```
<DelaySnap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<delayMode><!--opt, xs:string," distance,time" --></delayMode>
<snapIntervalList><!-- dep-->
<snapIntervalItem>
<snapIntervalID><!-- opt, xs:integer,--></snapIntervalID>
<snapInterval><!-- opt, xs:integer, meter--></snapInterval>
</snapIntervalItem>
</snapIntervalList>
<snapPositionList><!-- dep-->
<snapPositionItem>
<snapPositionID><!-- req, xs:integer--></snapPositionID>
<snapPosition><!—dep,opt,xs:string,"firstLoopEnter,firstLoopLeave,secondLoopEnter,second
LoopLeave,delay" --></snapPosition>
</snapPositionItem>
</snapPositionList>
<recognizePlace><!-- req, xs:string--></recognizePlace>
<loopDelayTime><!-- req, xs:integer, milliseconds--></loopDelayTime>
</DelaySnap>
```

Test cases
GET /CGI/ITS/LaneRun/DelaySnap/channels/1/Sce ne/1/lanes/1
Request XML: none
Respond XML: <DelaySnap>
PUT /CGI/ITS/LaneRun/DelaySnap/channels/1/Scene/1/lanes/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DelaySnap>
<delayMode>0</delayMode>
<snapIntervalList>
<snapIntervalItem>
<snapIntervalNO>1</snapIntervalNO>
<snapInterval>10</snapInterval>
</snapIntervalItem>
</snapIntervalList>
<snapPositionList>
<snapPositionItem>
<snapPositionID>1</snapPositionID>
<snapPosition>firstLoopEnter</snapPosition>
</snapPositionItem>
</snapPositionList>
<recognizePlace>0</recognizePlace>
<loopDelayTime>100</loopDelayTime>
</DelaySnap>
```

14.23/CGI/ITS/LaneRun/DelaySnap/channels/<ID>/Scene/<ID>/lanes

/CGI/ITS/LaneRun/DelaySnap/channels/<ID>/Scene/<ID>/lanes General Resource v2.0	
GET	
Description	Acquire delay snapshot parameter in batch
Query	None
Inbound Data	None
Success Return	**<DelaySnapList>**
PUT	
Description	Set delay snapshot parameter in batch
Query	None
Inbound Data	**<DelaySnapList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for batching enquiry and setting of delay snapshot and batch enquiry and setting of client or IE for delay snapshot parameter through CGI protocol, including channel No./scenario/delay mode/snapshot distance.
Explanations on key parameters:
<laneID> means lane No. Five lanes (No. 1-5) are supported.
<delayMode> means delay mode, distance means delay distance and time means delay time.
apIntervalID> means No. of delay snapshot picture (1-5)
<snapInterval> means interval of delay snapshot
When it means delay snapshot time, unit is ms and range is 0-2,000.
<snapPositionID> means position ID of snapshot picture, five picture positions (1-5) are supported
<snapPosition>
It means the first snapshot position when vehicle runs over loop. notsnap-no snapshot, firstLoopEnter-entry of the first loop; secondLoopEnter: entry of the second loop; secondLoopLeave-departure of the second loop; delay-delay.
It means the second snapshot position when vehicle runs over loop. firstLoopLeave: departure of the first coil; secondLoopEnter: entry of the second loop;

secondLoopLeave-departure of the second loop; delay-delay
It means the third snapshot position when vehicle runs over loop. secondLoopEnter: entry of the second loop; secondLoopLeave-departure of the second loop; delay-delay
It means the fourth snapshot position when vehicle runs over loop. secondLoopLeave-departure of the second loop; delay-delay
It means the fifth snapshot position when vehicle runs over loop. delay-delay
<recognizePlace> Means recognition strategy. 0--recognize the first picture; 1--recognize the second picture; 2--recognize the first picture and then recognize the second picture, and the one with higher confidence coefficient shall apply. 3--recognize the second picture. If failure to recognize result, recognize the first picture; 4-recognize the first picture; if failure to recognize result, recognize the second picture. 5-recognize the third picture.
<loopDelayTime> means loop delay time, unit: ms

DelaySnapList XML Block

```
<DelaySnapList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<delaySnap>
<laneID><!-- req, xs:integer--></laneID>
<delayMode><!—dep,opt, xs:string," distance,time" --></delayMode>
<snapIntervalList><!-- dep-->
<snapIntervalItem>
<snapIntervalID><!-- dep ,opt, xs:integer,--></snapIntervalID>
<snapInterval><!—dep, opt, xs:integer, meter--></snapInterval>
</snapIntervalItem>
</snapIntervalList>
<snapPositionList><!-- dep-->
<snapPositionItem>
<snapPositionID><!-- dep, xs:integer--></snapPositionID>
<snapPosition><!—dep,opt,xs:string,"firstLoopEnter,firstLoopLeave,secondLoopEnter,second
LoopLeave,delay" --></snapPosition>
</snapPositionItem>
</snapPositionList>
<recognizePlace><!-- dep, xs:string--></recognizePlace>
<loopDelayTime><!-- dep, xs:integer, milliseconds--></loopDelayTime>
</delaySnap>
</DelaySnapList>
```

Test cases

GET /CGI/ITS/LaneRun/DelaySnap/channels/1/Scene/1/lanes

Request XML: none

Response XML: <DelaySnapLsit>

PUT /CGI/ITS/LaneRun/DelaySnap/channels/1/Scene/1/lanes

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DelaySnapList>
<delaySnap>
<laneID>1</laneID>
<delayMode>0</delayMode>
<snapIntervalList>
<snapIntervalItem>
<snapIntervalNO>1</snapIntervalNO>
<snapInterval>10</snapInterval>
<snapIntervalItem>
</snapIntervalList>
<snapPositionList>
<snapPositionItem>
<snapPositionID>1</snapPositionID>
```

```
<snapPosition>firstLoopEnter</snapPosition>
</snapPositionItem>
</snapPositionList>
<recognizePlace>0</recognizePlace>
<loopDelayTime>100</loopDelayTime>
</delaySnap>
<DelaySnapList>
```

2.14.24/CGI/ITS/DataRun/PicRevInfo

/CGI/ITS/DataRun/PicRevInfo	**General Resource v2.0**
GET	
Description	Acquire picture receiving information
Query	None
Inbound Data	None
Success Return	**<PicRevInfoList>**
PUT	
Description	Set picture receiving information
Query	None
Inbound Data	**<PicRevInfoList>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for the query and setting of photo stream receiving information, and equipment photo stream receiving information at client or IE via CGI protocol.
Explanations on key parameters:
<ip> means the client IP of receiving photo stream, character string format-- supports IPv6 address
<picStreamEnable> means the enabling status of photo stream channel, true-enabled; false-disabled.
<revDataEnable> means whether the photo stream data is being received; true- receiving, false-not receiving
<revSocket> means socket No. of client of the receiving photo stream; the interface is concealed and is not displayed.

PicRevInfoList XML Block

```
<PicRevInfolist version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<picRevInfo>
<ip><!-- req, xs:string --></ip>
<picStreamEnable><!-- req, xs:boolean --></picStreamEnable>
<revDataEnable><!-- req, xs:boolean --></revDataEnable>
<revSocket><!-- opt, xs:interger --></revSocket>
<picRevInfo>
</PicRevInfoList>
```

GET /CGI/ITS/DataRun/PicRevInfo
Request XML: none
Response XML: < PicRevInfoList>
PUT /CGI/ITS/DataRun/PicRevInfo
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PicRevInfoList>
<picRevInfo>
<ip>10.30.41.59</ip>
<picStreamEnable>true</picStreamEnable>
<revDataEnable>true</revDataEnable>
<revSocket>1000</revSocket>
<picRevInfo>
</PicRevInfoList>
```

2.14.25/CGI/ITS/DataRun/TrafficFlowByCar

/CGI/ITS/DataRun/TrafficFlowByCar General Resource v2.0	
GET	
Description	Acquire the statistical information of vehicle traffic (statistics made based on the vehicle type)
Query	None
Inbound Data	None
Success Return	**<TraFlowByCarList>**

Explanations on protocol:
This protocol is prepared for the query of vehicle traffic statistics and the statistical information of vehicle traffic at client or IE via CGI protocol.
Explanations on key parameters:
<laneID> means lane number. 5 lanes (1~5) are supported at present.
<laneName> means lane name.
<carType> means vehicle type. unknownCar-- Unknown car, coach-- Coach (bus and passenger bus are changed into passenger bus), car--Car (car is changed into passenger car), truck--Truck, including big and small ones, van--Van, bigTruck-- Medium-sized heavy truck (big truck is changed into heavy medium-sized truck), van--Light truck (small truck is changed into minor truck), motorcycle-- Motorcycle (non-motor vehicle is changed into motorcycle), pedestrian--Pedestrian, suv—SUV, midsizeBus-- Medium-sized bus, trailer-- Trailer, dangerousCar--Hazardous chemical truck.
<beginTime> means begin time
<endTime> represents end time
<vehicleFlow> means vehicle traffic, unit: Vehicle/time interval
<carQueueLength> means vehicle queuing length

TraFlowByCarList XML Block

```
<TraFlowByCarList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<trafficFlowByCar>
<laneID><!-- req, xs:integer --></laneID>
<laneName><!-- dep, xs:string --></laneName>
<carType opt=""><!-- opt, xs:string,"unknownCar,…"--></carType>
<beginTime><!—dep, xs:dateTime></beginTime>
<endTime><!—dep, xs:dateTime></endTime>
<vehicleFlow><!-- dep, xs:integer --></vehicleFlow>
<carQueueLength><!-- dep, xs:integer --></ carQueueLength >
</trafficFlowByCar>
</TraFlowByCarList>
```

Test cases
GET /CGI/ITS/DataRun/TrafficFlowByCar
Request XML: none
Response XML: <TraFlowByCarList>
Response XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<TraFlowByCarList>
<trafficFlowByCar>
<laneID>1</laneID>
<laneName>111</laneName>
<carType>coach</carType>
<beginTime>2017-07-07T01:04:47Z </beginTime>
<endTime>2017-07-07T09:04:47Z </endTime>
<headWay>2</headWay>
<carQueueLength>200</carQueueLength>
</trafficFlowByCar>
</TraFlowByCarList>
```

2.14.26/CGI/ITS/DataRun/TrafficFlow

/CGI/ITS/DataRun/TrafficFlow	**General Resource v2.0**
GET	
Description	Acquire the statistical information of vehicle traffic
Query	None
Inbound Data	None
Success Return	**<TrafficFlowList>**

Explanations on protocol:
This protocol is prepared for the query of vehicle traffic statistics and the statistical information of vehicle traffic at client or IE via CGI protocol.
Explanations on key parameters:
<laneID> means lane number. 5 lanes (1~5) are supported at present.
<laneName> means lane name.
<beginTime> means begin time
<endTime> represents end time
<vehicleFlow> means vehicle traffic, unit: Vehicle/time interval
<holdRate> means time occupancy (%). True value needs converting by dividing 100 for webpage.
<averageSpeed> means average speed (in km/h). True value needs converting by dividing 100 for webpage.
<headWay> means time headway (in s/vehicle). True value needs converting by dividing 100 for webpage.
<vehicleType> means vehicle type. It is displayed when ticking "when statistics are made based on vehicle type" on webpage. 32 varieties supported at maximum. 30 varieties supported at present. 0 Unknown vehicle; 1 Two-compartment vehicle; 2 Car; 3 Speedster; 4 Small car; 5 Minicar; 6. MPV; 7 SUV; 8 Large bus; 9 Medium-sized bus; 10 Van; 11. Mini van; 12 Large truck; 13 Medium-sized truck; 14 Oil tank truck; 15 Crane; 16 Slag car; 17 Small truck; 18 Pick-up 19 Mini pick-up; 20 Two-wheeled vehicle; 21 Three-wheeled vehicle; 22 Pedestrian; 23 License plate deviation; 24 License plate detection; 25 Headstock; 26 Tailstock; 27 Car lamp; 28 SUV/ MPV; 29 Trailer
<vehicleNum> means the number of vehicles. It is displayed when ticking "when statistics are made based on vehicle type" on webpage.
<carQueueLength> means vehicle queuing length
<headDistance> means head distance: Distance between the front and back vehicles, in mm
<roomRate> means space occupancy (%). True value needs converting by dividing 100 for webpage.
<runState> means running state: 0- Unknown; 1-Driving stop; 2-Slow driving; 3- No vehicle; 4-Smooth

TrafficFlowList XML Block

```
<TrafficFlowList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<trafficFlow>
<laneID><!-- req, xs:integer --></laneID>
<laneName><!-- dep, xs:string --></laneName>
<beginTime><!—dep, xs:dateTime></beginTime>
<endTime><!—dep, xs:dateTime></endTime>
<vehicleFlow><!-- dep, xs:integer --></vehicleFlow>
<holdRate><!-- dep, xs:integer --></holdRate>
<averageSpeed><!-- dep, xs:integer,km/h --></averageSpeed>
<headWay><!-- dep, xs:integer --></headWay>
<vehicleTypeList><!-- dep,opt -->
<vehicleTypeItem>
<vehicleType><!-- dep, xs:integer --><vehicleType>
<vehicleNum><!-- dep, xs:integer --><vehicleNum>
</vehicleTypeItem>
</vehicleTypeList>
```

```
<carQueueLength><!-- dep, xs:integer --></ carQueueLength >
<hardDistance><!-- dep, xs:integer --></hardDistance>
<roomRate><!-- dep, xs:integer --></roomRate>
<runState><!-- dep, xs:integer --></runState>
</trafficFlow>
</TrafficFlowList>
```

Test cases
GET /CGI/ITS/DataRun/TrafficFlow
Request XML： none
Response XML: <TrafficFlowList>
The answer is as below:

```
<?xml version="1.0" encoding="UTF-8"?>
<TrafficFlowList>
<trafficflow>
<laneID>1</laneID>
<laneName>111</laneName>
<beginTime>2017-07-07T01:04:47Z</beginTime>
<endTime>2017-07-07T09:04:47Z</endTime>
<vehicleFlow>2</vehicleFlow>
<holdRate>80</holdRate>
<averageSpeed>70</averageSpeed>
<headWay>2</headWay>
<vehicleTypeList>
<vehicleTypeItem>
<vehicleType>1<vehicleType>
<vehicleNum>2<vehicleNum>
</vehicleTypeItem>
</vehicleTypeList>
<carQueueLength>200</ carQueueLength >
<hardDistance>5</hardDistance>
<roomRate>3000</roomRate >
<runState>0</runState>
</trafficflow>
</TrafficFlowList>
```

2.14.27/CGI/ITS/ShotPara/RecoDetectingPara/channels/<ID>

/CGI/ITS/ShotPara/RecoDetectingPara/channels/<ID> General Resource v2.0	
GET	
Description	Acquire identification and detection parameters
Query	None
Inbound Data	None
Success Return	**<RecoDetectingPara>**
PUT	
Description	Set identification and detection parameters
Query	None
Inbound Data	**<RecoDetectingPara>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for the acquiring and setting of detection setting parameters in identification parameters and the device identification and detection setting parameters at client or IE via CGI protocol. **Explanations on key parameters:** <type> means function type: powersync--Power synchronization function, manualmode--	

Enable manual mode, CRCcheck--CRC check function, videospeed-- Video speed measurement function, redlightgain--Red light gain enabling, ftp--ftp,imagesynthesis-- Image synthesis function, maindriverfacedetect-- Main driver face detection function, carLogorec-- Car logo recognition enabling, safetybelt-- Safety belt recognition enabling, carplatedetect-- Vehicle type recognition enabling, secpilotdetect-- Copilot face recognition function, pictureputput-- Picture output switch, licenseplateoutput-- License plate photo output enabling, maindriverfaceoutput-- Pilot face recognition photo output enabling, secpilotdetecoutput-- Copilot face photo output enabling, quickshot-- Quick shot enabling, closeshot-- Continuous close shot capturing, listeningphone-- Phone receiving and calling recognition enabling, sunvisor- Sun shield recognition enabling, comitypeople- No pedestrian comity enabling, leftcomitystraight- Enabling of no avoidance for left turn and going straight, branddetect- Vehicle brand and model recognition function, agriculdetect- Agricultural vehicle recognition, electromobiledetect- Electromobile recognition, highangledetect - Large-angle license plate recognition, yellowlabelcar- Yellow label car detection, abnormallicenseplate- Abnormal license plate detection, nomotordetect- Non-motor vehicle and pedestrian detection, pendant- Pendant detection, tissuebox- Tissue box detection, annualinspectionlabel- Annual label detection, highbeam- High beam detection, outtopwindow- Sunroof people standing detection, latheparabolic- Detection of things throwing through car window, dangerouscardetect- Hazardous chemical recognition, checkcarhead- head stock and tailstock detection, motorvehicle- Motor vehicle detection, nonmotorvehicle- Non-motor vehicle detection, , pedestriandetect- Pedestrian detection
<enabled> means if the corresponding function has been enabled; true- started; false- closed.

RecoDetectingPara XML Block

```
<RecoDetectingPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<carFeatureList>
<carFeature>
<type><!-- opt, xs:string--></type>
<enabled><!-- opt, xs:boolean --></enabled>
</carFeature>
</carFeatureList>
<behaviorFeatureList>
<behaviorFeature>
<type><!-- opt, xs:string--></type>
<enabled><!-- opt, xs:boolean --></enabled>
</behaviorFeature>
</behaviorFeatureList>
</RecoDetectingPara>
```

Test cases

GET/CGI/ITS/ShotPara/RecoDetectingPara/channels/1

Request XML： none

Response XML: <RecoDetectingPara>

PUT/CGI/ITS/ShotPara/RecoDetectingPara/channels/1

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="2.0" encoding="UTF-8"?>
<RecoDetectingPara>
<carFeatureList>
<carFeature>
<type>agriculdetect</type>
<enabled>true</enabled>
</carFeature>
<carFeature>
<type>yellowlabelcar</type>
<enabled>true</enabled>
</carFeature>
</carFeatureList>
<behaviorFeatureList>
```

```
<behaviorFeature>
<type>abnormallicenseplate</type>
<enabled>true</enabled>
</behaviorFeature>
<behaviorFeature>
<type>nomotordetect</type>
<enabled>true</enabled>
</behaviorFeature>
</behaviorFeatureList>
</RecoDetectingPara>
```

2.14.28/CGI/ITS/ShotPara/BasicSetting/channels/<ID>

/CGI/ITS/ShotPara/BasicSetting/channels/<ID> General Resource v2.0	
GET	
Description	Acquire basic setting parameters
Query	None
Inbound Data	None
Success Return	**<BasicSetting>**
PUT	
Description	Set basic setting parameters
Query	None
Inbound Data	**<BasicSetting>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for the acquiring and setting of the basic settings in recognition parameters and query and setting of basic setting parameters at client or IE via CGI protocol, including the first Chinese character, the first letter, Chinese characters to be retrieved, unbelievable first Chinese character, confidence of recognition algorithm, license plate size, analysis frames, reliability threshold value, etc.
Explanations on key parameters:
<firstCharacters> means first Chinese character.
<firstAlphabet> means first letter.
<waitRetrieveCharacters> means Chinese characters to be retrieved (a total of 8 characters can be input at most)
<unbelieveFirstCharacters> means unbelievable first Chinese character (a total of 8 characters can be input at most)
<recognitionAlgorithmConfid> means confidence of recognition algorithm (value range: 0-28).
<licenseSize> means license plate size; 0- Retained; 1- Small license plate; 2- Large license plate; 3- Micro license plate; small license plate is defaulted.
<analyzeFrameNum> means analysis frames (value range: 0-25; defaulted value: 8).
<reliabilityThreshold> means reliability threshold value (value range: 0-10; defaulted value: 7).

BasicSetting XML Block

```
<BasicSetting version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<firstCharacters><!-- req, xs:string --></firstCharacters>
<firstAlphabet><!-- req, xs:string --></firstAlphabet>
<waitRetrieveCharactersList>
<waitRetrieveCharactersData>
<waitRetrieveCharacters><!-- req, xs:string --></waitRetrieveCharacters>
</waitRetrieveCharactersData>
</waitRetrieveCharactersList>
<unbelieveCharactersList>
```

```
<unbelieveCharactersData>
<unbelieveFirstCharacters><!-- req, xs:string --></unbelieveFirstCharacters>
</unbelieveCharactersData>
</unbelieveCharactersList>
<recognitionAlgorithmConfid><!-- req, xs:integer --></recognitionAlgorithmConfid>
<licenseSize><!-- req, xs:integer --></licenseSize>
<analyzeFrameNum><!-- req, xs:integer --></analyzeFrameNum>
<reliabilityThreshold><!-- req, xs:integer --></reliabilityThreshold>
</BasicSetting>
```

Test cases

GET /CGI/ITS/ShotPara/BasicSetting/channels/1

Request XML: none

Response XML: <BasicSetting>

PUT /CGI/ITS/ShotPara/BasicSetting/channels/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<BasicSetting>
<firstCharacters>Tianjin </firstCharacters>
<firstAlphabet>A</firstAlphabet>
<waitRetrieveCharactersList>
<waitRetrieveCharactersData>
<waitRetrieveCharacters>Hebei</waitRetrieveCharacters>
</waitRetrieveCharactersData>
<waitRetrieveCharactersData>
<waitRetrieveCharacters>Beijing</waitRetrieveCharacters>
<waitRetrieveCharactersData>
</waitRetrieveCharactersList>
<unbelieveCharactersList>
<unbelieveCharactersData>
<unbelieveFirstCharacters>Guangdong</unbelieveFirstCharacters>
</unbelieveCharactersData>
<unbelieveCharactersData>
<unbelieveFirstCharacters>Shanghai</unbelieveFirstCharacters>
</unbelieveCharactersData>
</unbelieveCharactersList>
<recognitionAlgorithmConfid>20</recognitionAlgorithmConfid>
<licenseSize>1</licenseSize>
<analyzeFrameNum>8</analyzeFrameNum>
<reliabilityThreshold>7</reliabilityThreshold>
</BasicSetting>
```

2.14.29/CGI/ITS/ShotPara/LicenseSetting/channels/<ID>

/CGI/ITS/ShotPara/LicenseSetting/channels/<ID> General Resource v2.0	
GET	
Description	Acquire license plate setting parameters
Query	None
Inbound Data	None
Success Return	**<LicenseSetting>**
PUT	
Description	Set license plate setting parameters
Query	None
Inbound Data	**<LicenseSetting>**

Success Return	<ResponseStatus>

Explanations on protocol:
This protocol is prepared for the acquiring and setting of the license plate setting parameters in recognition parameters and query and setting of detection region parameters at client or IE via CGI protocol, including the first Chinese character, the first letter, the second letter or number, vehicle brand, etc.
Explanations on key parameters:
<optimId> means the serial number of license plate optimization (value range: 0-15)
<enabled> means if the corresponding function has been enabled; true- started; false- closed.
<firstCharacters> means the first Chinese character.
<firstLetter> means the first letter
<secondLetter> means the second letter or number.
<logoType> means vehicle logo type.
<licenseRuleEnable> means the value of license plate rule; 0- Chinese character; 1- Letter; 2- Number; 3- Letter or number.

LicenseSetting XML Block

```
<LicenseSetting version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<LicenseSettingList>
<LicenseSettingData>
<optimId><!-- req, xs:string --></optimId>
<enabled><!-- req, xs:boolean --></enabled>
<firstCharacters><!-- req, xs:string --></firstCharacters>
<firstLetter><!-- req, xs:string --></firstLetter>
<secondLetter><!-- req, xs:string --></secondLetter>
<logoType><!-- req, xs:string --></logoType>
</LicenseSettingData>
</LicenseSettingList>
<LicenseRuleList>
<LicenseRuleData>
<licenseRuleEnable><!-- opt, xs:integer--></licenseRuleEnable>
</LicenseRuleData>
</LicenseRuleList>
</LicenseSetting>
```

Test cases
GET /CGI/ITS/ShotPara/LicenseSetting/channels/1
Request XML: none
Response XML: <LicenseSetting>
PUT /CGI/ITS/ShotPara/LicenseSetting/channels/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<LicenseSetting>
<LicenseSettingList>
<LicenseSettingData>
<optimId>2</optimId>
<enabled>true</enabled>
<firstCharacters>Beijing</firstCharacters>
<firstLetter>A</firstLetter>
<secondLetter>C</secondLetter>
<logoType>25</logoType>
</LicenseSettingData>
<LicenseSettingData>
<optimId>4</optimId>
<enabled>true</enabled>
<firstCharacters>Tianjin </firstCharacters>
<firstLetter>A</firstLetter>
```

```
<secondLetter>C</secondLetter>
<logoType>25</logoType>
</LicenseSettingData>
</LicenseSettingList>
<LicenseRuleList>
<LicenseRuleData>
<licenseRuleEnable>0</licenseRuleEnable>
</LicenseRuleData>
<LicenseRuleData>
<licenseRuleEnable>1</licenseRuleEnable>
</LicenseRuleData>
</LicenseRuleList>
</LicenseSetting>
```

2.14.30/CGI/ITS/ExFixture/SightLightSync/channels/<ID>

/CGI/ITS/ExFixture/SightLightSync/channels/<ID> General Resource v2.0	
GET	
Description	Acquire signal lamp synchronization parameters
Query	None
Inbound Data	None
Success Return	**<SightLightSync>**
PUT	
Description	Set signal lamp synchronization parameters
Query	None
Inbound Data	**<SightLightSync>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for the acquiring and setting of signal lamp synchronization parameters of signal lamp and query and setting of signal lamp synchronization parameters at client or IE via CGI protocol, including the detection mode, corrected value of red light running time, red light gain enabling, red light gain grade, signal lamp synchronization enabling, phase position, signal frequency, etc.
Explanations on key parameters:
<detectMode> means detection mode; 0- Outer trigger; 1- Video detection; 2- Automatic switch.
<lightTimeAcceptDiff> means the corrected value of red light running time (value range: 0-3 s).
<lightDetectTimeOut> means the time of connection loss overtime detection time of signal light (value range: 1-30 s).
<lightPhase> means phase position (value range: 0-360); defaulted value: 0.
<redLightEnhanceEnabled> means gain enabling of red light; enabling is defaulted.
<redLightEnhanceLevel> means gain grade of red light (value range: 0-10).
<sightSyncEnabled> means synchronization enabling of red light; enabling is defaulted.
<signalFrequency> means signal frequency; defaulted value: 50.

SightLightSync XML Block

```
<SightLightSync version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<detectMode><!-- req, xs:integer --></detectMode>
<lightTimeAcceptDiff><!-- req, xs:integer --></lightTimeAcceptDiff>
< lightDetectTimeOut ><!-- req, xs:integer --></lightDetectTimeOut >
<lightPhase><!-- req, xs:integer --></lightPhase>
<redLightEnhanceEnabled><!-- req, xs:boolean --></redLightEnhanceEnabled>
<redLightEnhanceLevel><!--dep, depends on <redLightEnhanceEnabled>,
xs:string --></redLightEnhanceLevel>
```

```
<sightSyncEnabled><!-- req, xs:boolean --></sightSyncEnabled>
<signalFrequency><!--dep, depends on <sightSyncEnabled>, xs:string --></signalFrequency>
</SightLightSync>
```

Test cases

GET /CGI/ITS/ExFixture/SightLightSync/channels/1

Request XML: none

Response XML: <SightLightSync>

PUT /CGI/ITS/ExFixture/SightLightSync/channels/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<SightLightSync>
<detectMode>0</detectMode>
<lightTimeAcceptDiff>2</lightTimeAcceptDiff>
<lightDetectTimeOut>20</lightDetectTimeOut>
<lightPhase>120</lightPhase>
<redLightEnhanceEnabled>true</redLightEnhanceEnabled>
<redLightEnhanceLevel>5</redLightEnhanceLevel>
<sightSyncEnabled>true</sightSyncEnabled>
<signalFrequency>50</signalFrequency>
</SightLightSync>
```

2.14.31/CGI/ITS/DayToNightThreshold/channels/<ID>

/CGI/ITS/DayToNightThreshold/channels/<ID> General Resource v2.0	
GET	
Description	Acquire the threshold value parameters of daytime and night
Query	None
Inbound Data	None
Success Return	**<DayToNightThreshold>**
PUT	
Description	Set the threshold value parameters of daytime and night
Query	None
Inbound Data	**<DayToNightThreshold>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for the query and setting of daytime and night threshold value and daytime and night threshold value parameters at client or IE via CGI protocol.
Explanations on key parameters:
<colorToGrayDay> means daytime threshold value. If the relative brightness is higher than the value, switch to daytime (0-100).
<colorToGrayNight> means night threshold value. If the relative brightness is lower than the value, switch to night (0-100) (the daytime brightness is higher than night brightness).

SyncSignalOutputList XML Block

```
<DayToNightThreshold version="2.0" xmlns="http://www.isapi.com/ver20/XMLSchema">
<colorToGrayDay><!-- req, xs:integer --></colorToGrayDay>
<colorToGrayNight><!-- req, xs:integer --></colorToGrayNight>
</DayToNightThreshold>
```

Test cases

GET /CGI/ITS/DayToNightThreshold/channels/<ID>
Request XML： none
Response XML: <DayToNightThreshold>
PUT /CGI/ITS/DayToNightThreshold/channels/<ID>
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DayToNightThreshold>
<colorToGrayDay>90</colorToGrayDay>
<colorToGrayNight>80</colorToGrayNight>
</DayToNightThreshold>
```

2.14.32/CGI/ITS/ExFixture/DevStatus/channels/<ID>

/CGI/ITS/ExFixture/DevStatus/channels/<ID> General Resource v2.0	
GET	
Description	Acquire device state information.
Query	None
Inbound Data	None
Success Return	**<DevStatus>**

Explanations on protocol:
This protocol is prepared for the query of device state at client or IE via CGI protocol.
Explanations on key parameters:
<vehicleStatus> means the state of vehicle detector; online- Online; outline- Offline; fault- Fault.
<cameraTem> means camera temperature (value range: -100-100) (the precision is 0.1 after the software is valued, deducted with 1,000 and then divided by 10) -50.5℃ (-50.5×10 + 1000 = 495). Send 495 online.
<redCheckStatus> means the state of red light signal monitor; online- Online; outline- Offline; fault- Fault.
<pictureBrightness> means image brightness (0-255)
<signalSyncStatus> means power synchronization state; true- Synchronized; fault- Not synchronized.
<redLightID> means red light number. 1~16 are supported at present.
<redLightStatus> means the state of red light; 0—Green light; 1—Red light; 2—Yellow light; 3—Unknown
<redLightID> means loop number. 1~10 are supported at present.
<loopStatus> means loop state; online- Online; outline- Offline; fault- Fault.

DevStatus XML Block

```
<DevStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<vehicleStatus><!—req,xs:string-- ></vehicleStatus>
<cameraTem><!—req,xs:string-- ></cameraTem>
<redCheckStatus><!—req,xs:string-- ></redCheckStatus>
<pictureBrightness><!—req,xs:string-- ></pictureBrightness>
<signalSyncStatus><!—req,xs:boolean -- ></signalSyncStatus>
<redLightList><!—opt-- >
<redLight>
<redLightID><!-- req, xs:integer; id --></redLightID>
<redLightStatus><!—dep,xs:integer-- ></redLightStatus>
</redLight>
</redLightList>
<loopList><!—opt-- >
<loop>
<loopID><!-- req, xs:integer; id --></loopID>
<loopStatus><!—dep,xs:string-- ></loopStatus>
```

```
</loop>
</loopList>
</DevStatus>
```

Test cases
GET /CGI/ITS/DevStatus/channels/1
Request XML: none
Response XML: <DevStatus>
Response XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DevStatus>
<vehicleStatus>online</vehicleStatus>
<cameraTem>495</cameraTem>
<redCheckStatus>online</redCheckStatus>
<pictureBrightness>100</pictureBrightness>
<signalSyncStatus>true</signalSyncStatus>
<redLightList>
<redLight>
<redLightID>1</redLightID>
<redLightStatus>1</redLightStatus>
</redLight>
</redLightList>
<loopList>
<loop>
<loopID>1</loopID>
<loopStatus>online</loopStatus>
</loop>
</loopList>
</DevStatus>
```

2.14.33/CGI/ITS/ExFixture/LoopTrigStatus/channels/<ID>

/CGI/ITS/ExFixture/LoopTrigStatus/channels/<ID> General Resource v2.0	
GET	
Description	Acquire coil trigger information
Query	None
Inbound Data	None
Success Return	**<LoopTrigStatusList>**
Explanations on protocol: This protocol is prepared for the query of loop trigger information at at client or IE via CGI protocol. **Explanations on key parameters:** <IOID> means IO number. 1~10 are supported at present. <trigTime> means loop trigger time. <trigState> means loop trigger state; 0-- Empty; 1-- Enter; 2--Leave	

LoopTrigStatusList XML Block

```
<LoopTrigStatusList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<loopTrigStatusItem>
<IOID><!-- dep, xs:integer; id --></IOID>
<trigTime><!—dep, xs:dateTime></trigTime>
<trigState><!—dep,sx:integer-- ></trigState>
</loopTrigStatusItem>
</LoopTrigStatusList>
```

Test cases
GET /CGI/ITS/ExFixture/LoopTrigStatus/channels/1

Request XML： none
Response XML: <LoopTrigStatusList>
Response XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<LoopTrigStatusList>
<loopTrigStatusItem>
<IOID>1</IOID>
<trigTime>2017-07-07T01:04:47Z </trigTime>
<trigState>1</trigState>
</loopTrigStatusItem>
</LoopTrigStatusList>
```

2.14.34/CGI/ITS/ExFixture/LoopTrigStatus/channels/<ID>/lanes

/CGI/ITS/ExFixture/LoopTrigStatus/channels/<ID>/lanes General Resource v2.0	
GET	
Description	Acquire coil trigger information in batch
Query	None
Inbound Data	None
Success Return	**<LoopTrigStatusList>**
Explanations on protocol: This protocol is prepared for the query of loop trigger information in batch at at client or IE via CGI protocol. **Explanations on key parameters:** <laneID> means lane No. (1~5) <loopID> means loop number. 1~10 are supported at present (0~10). <IOID> means IO number. 1~10 are supported at present. <trigTime> means loop trigger time. <trigState> means loop trigger state; 0-- Empty; 1-- Enter; 2--Leave	

LoopTrigStatusList XML Block

```
<LoopTrigStatusList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<loopTrigStatusItem>
<laneID><!-- req, xs:integer; id --></laneID>
<laneLoopList><!-- dep -->
<laneLoopItem>
<loopID><!-- dep, xs:integer; id --></loopID>
<IOID><!-- dep, xs:integer; id --></IOID>
<trigTime><!—dep, xs:dateTime></trigTime>
<trigState><!—dep,sx:integer-- ></trigState>
</laneLoopItem>
</laneLoopList>
</loopTrigStatusItem>
</LoopTrigStatusList>
```

Test cases
GET /CGI/ITS/ExFixture/LoopTrigStatus/channels/1/lanes
Request XML： none
Response XML: <LoopTrigStatusList>
Response XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<LoopTrigStatusList>
<loopTrigStatusItem>
<laneID>1</laneID>
<laneLoopList><!-- dep -->
<laneLoopItem>
<loopID>1</loopID>
<IOID>1</IOID>
<trigTime>2017-07-07T01:04:47Z </trigTime>
```

```
<trigState>1</trigState>
</laneLoopItem>
</laneLoopList>
</loopTrigStatusItem>
</LoopTrigStatusList>
```

2.14.35/CGI/ITS/SystemRun/DeviceInfo/channels/<ID>

/CGI/ITS/SystemRun/DeviceInfo/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire device parameters.
Query	None
Inbound Data	None
Success Return	**<DeviceInfo>**
PUT	
Description	Set device parameters.
Query	None
Inbound Data	**<DeviceInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for the query and setting of device information at client or IE via CGI protocol, including device number, device type number, authority code, etc.
Explanations on key parameters:
<deviceID> means device number, the length of which should be no longer than 63 characters.
<deviceTypeID> means device type number (1 or 2).
<deviceCode> means authority code, the length of which should be no longer than 63 characters.
<securityCodePos> means start bit of anti-counterfeiting code (value range: 0-64).
<securityCodeLen> means length of anti-counterfeiting code (value range: 0-64).
<waterMarkEnabled> means whether water mark is enabled; false: Disabled; true: Enabled.
<vitualAlarmEnable> means whether virtual alarm is enabled; false: Disabled; true: Enabled.
<vitualAlarmThreshold> means flexibility of virtual alarm (range: 0~100); defaulted value: 50.

DeviceInfo XML Block

```
<DeviceInfo version="2.0"       xmlns="http://www.isapi.org/ver20/XMLSchema">
<deviceID> <!-- req, xs:string --><deviceID>
<deviceTypeID><!-- req, xs: string --></deviceTypeID>
<deviceCode> <!-- req, xs:string --><deviceCode>
<securityCodePos><!-- req, xs:integer --></securityCodePos>
<securityCodeLen><!-- req, xs:integer --></securityCodeLen>
<waterMarkEnabled><!-- req, xs:boolean --></waterMarkEnabled>
<vitualAlarmEnable><!-- req, xs:boolean --></vitualAlarmEnable>
<vitualAlarmThreshold><!-- dep, xs:integer --></vitualAlarmThreshold>
</DeviceInfo>
```

Test cases
GET /CGI/ITS/SystemRun/DeviceInfo/channels/1
Request XML: none
Response XML: <DeviceInfo>
PUT /CGI/ITS/SystemRun/DeviceInfo/channels/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DeviceInfo>
<deviceID>10000</deviceID>
<deviceTypeID>1</deviceTypeID>
<deviceCode> 00001</deviceCode>
<securityCodePos>64</securityCodePos>
<securityCodeLen>64</securityCodeLen>
<waterMarkEnabled>true</waterMarkEnabled>
<vitualAlarmEnable>true</vitualAlarmEnable>
<vitualAlarmThreshold>10</vitualAlarmThreshold>
</DeviceInfo>
```

2.14.36/CGI/ITS/SystemRun/FilterPlate/channels/<ID>/Scene/<ID>

CGI/ITS/SystemRun/FilterPlate/channels/<ID>/Scene/<ID> General Resource v2.0	
GET	
Description	Acquire screening license plate parameters
Query	None
Inbound Data	None
Success Return	**<FilterPlate>**
PUT	
Description	Set screening license plate parameters
Query	None
Inbound Data	**<FilterPlate>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for the query and setting of screening license plate parameters at client or IE via CGI protocol, including treatment type of screening license plate, statistics interval, number and interval of analog triggers, etc.
Explanations on key parameters:
<noLicenceEnabled> means whether the screened vehicle with no license plate is enabled; true- Enabled; false- Disabled.
<repLicenceEnabled> means whether the screening repetitive vehicle is enabled; true- Enabled; false- Disabled.
<statisticsTime> means interval of statistical time, unit: s; range: 1~300
<analogTriggerCount> means number of analog triggers; 1~5 are supported at present.
<analogTriggerInterval> means interval of analog triggers, unit: ms; range: 200~2,000

FilterPlate XML Block

```
<FilterPlate version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<noLicenceEnabled><!-- req, xs:boolean --><noLicenceEnabled>
<repLicenceEnabled><!-- req, xs:boolean --></repLicenceEnabled>
<statisticsTime><!-- dep, xs:integer,seconds --></statisticsTime>
<analogTriggerCount opt="1,2,3,4,5"><!-- opt, xs:integer --></analogTriggerCount>
<analogTriggerInterval><!-- req, xs:integer, milliseconds --></analogTriggerInterval>
</FilterPlate>
```

Test cases
GET /CGI/ITS/SystemRun/FilterPlate/channels/1/Scene/1
Request XML: none
Response XML: <FilterPlateList>
PUT /CGI/ITS/SystemRun/FilterPlate/channels/1/Scene/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<FilterPlate>
<noLicenceEnabled>true</noLicenceEnabled>
<repLicenceEnabled>true</repLicenceEnabled>
<statisticsTime>60</statisticsTime>
<analogTriggerCount>5</analogTriggerCount>
<analogTriggerInterval>1000</analogTriggerInterval>
</FilterPlate>
```

2.14.37/CGI/ITS/SystemRun/SnapshotDetection/channels/<ID>/Scene/<ID>

CGI/ITS/SystemRun/SnapshotDetection/channels/<ID>/Scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire snapshot detection parameters
Query	None
Inbound Data	None
Success Return	**<SnapshotDetection>**
PUT	
Description	Set snapshot detection parameters
Query	None
Inbound Data	**<SnapshotDetection>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for the query and setting of snapshot detection parameters and the query and setting of device snapshot detection parameters at client or IE via CGI protocol, including whether front and back snapshots are used, snapshot mode, mode switch interval, bayonet and number of illegal snapshots, etc.
Explanations on key parameters:
<enabled> means whether the front and back snapshots are enabled; true- started; false- closed.
<relationCameraIP> means the IP of related cameras.
<verticalSnapEnabled> means whether vertical snapshot is enabled; true- started; false- closed.
<peopleRedSnapEnable> means whether pedestrian's runs the red light is enabled; 0: Not supported; 1: Supported and closed; 2: Supported and started.
<snapMode> means snapshot mode; 0- Video detection; 1-External trigger; 2-Automatic; 3-Trace tracking (video trigger mode); 4- Hybrid trigger mode; 5- License plate trigger mode (second beats).
<switchTime> means the switch time between video and external trigger mode, unit: min
<bayonetCount> means the number of bayonet snapshots, range: 1~8: means number of snapshots;
9: Special use, means exporting one superior one; Note: 9 was used before illegally. For any special use in the future, an application should be made in advance and backward extension cannot be simply made.
< trafficWarnType > see 2.14.0 Type description.
<snapCount> means the number of illegal snapshots, range: 1~8: means number of snapshots;
9: Special use, means exporting one superior one; Note: 9 was used before illegally. For any special use in the future, an application should be made in advance and backward extension cannot be simply made.
<snapPictureEnable> means whether export of snapshot photo is enabled; True: Enabled; false: Disabled.
<licensePlateEnable> means whether export of license plate photo is enabled; True: Enabled; false: Disabled.
<facePlateEnable> means whether export of face photo is enabled; True: Enabled; false: Disabled.

SnapshotDetection XML Block

```
< SnapshotDetection    version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!--req, xs:boolean></enabled>
<relationCameraIP><!--dep, xs:string --></relationCameraIP>
< verticalSnapEnabled ><!--req, xs:boolean></ verticalSnapEnabled >
< peopleRedSnapEnable ><!-- opt, xs:integer></ peopleRedSnapEnable >
<snapMode    opt="0,1,2,3.."><!--opt, xs:integer--></snapMode>
<switchTime><!--dep, xs:integer--></switchTime>
<bayonetCount    opt="1,2,3,9"><!--opt, xs:integer--></bayonetCount>
<illegalSnapCountList><!-- req, -->
<illegalSnapCountItem>
<trafficWarnType><!--req, xs:string --></trafficWarnType>
<snapCount    opt="1,2,3,9"><!--opt, xs:integer--></snapCount>
</illegalSnapCountItem>
</illegalSnapCountList>
<snapPictureEnable><!--req, xs:boolean></snapPictureEnable>
<licensePlateEnable> <!--req, xs:boolean></licensePlateEnable>
<facePlateEnable><!--req, xs:boolean></facePlateEnable>
</SnapshotDetection>
```

Test cases

GET /CGI/ITS/SystemRun/SnapshotDetection/channels/1/Scene/1

Request XML： none

Response XML: <SnapshotDetection>

PUT /CGI/ITS/SystemRun/SnapshotDetection/channels/1/Scene/1

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<SnapshotDetection>
<enabled>true</enabled>
<relationCameraIP>10.30.41.60</relationCameraIP>
<verticalSnapEnabled >false</verticalSnapEnabled>
<peopleRedSnapEnable>0</peopleRedSnapEnable>
<snapMode>2</snapMode>
<switchTime>10</switchTime>
<bayonetCount >1</bayonetCount>
<illegalSnapCountList>
<illegalSnapCountItem>
<trafficWarnType>abnormallicenseplate</trafficWarnType>
<snapCount>3</snapCount>
</illegalSnapCountItem>
</illegalSnapCountList>
<snapPictureEnable>true</snapPictureEnable>
<licensePlateEnable> true</licensePlateEnable>
<facePlateEnable>true</facePlateEnable>
</SnapshotDetection>
```

2.14.38/CGI/ITS/ShotPara/PictureOverlay/channels/<ID>/Type/<type>/Mode/<mode>

/CGI/ITS/ShotPara/PictureOverlay/channels/<ID>/Type/<type>/Mode/<mode> **General Resource v2.0**	
GET	
Description	Acquire photo overlay parameters
Query	None
Inbound Data	None
Success Return	**<PictureOverlay>**
PUT	
Description	Set overlay parameters
Query	None

Inbound Data	<PictureOverlay>
Success Return	<ResponseStatus>

Explanations on protocol:
This protocol is prepared for the query and setting of photo overlay parameters and device photo overlay parameters at client or IE via CGI protocol, including font size and color, overlay position, etc.

Explanations on key parameters:
Type/<type> means data type; 0- Bayonet; 1- Illegal; 2- Intelligent snapshot
Mode/<mode> means photo pattern; 0-Single photo; 1- Camera composition
<composePictureType> means whether photo composition is enabled; true: Enabled; false: Disabled. It is applicable to camera composition.
<singlePictureType> means the original pattern maintained for single photo; true: Enabled; false: Disabled. It is applicable to camera composition.
<fontSize> means the font size of overlay information; 0: Self-adaptation, 1:16*16, 2:24*24, 3: 32*32, 4: 48*48, 5:64*64, 6:96*96
<osdColor> means font color; the low 24 of the 32 bits are used to represent color rgb and digital mode bgr.
<overlayPosition> means overlay position; 0- Overlay inside photo; 1- Overlay in the black frame under photo; 2- Overlay in black frame on photo.
<digitNum> means zeroizing of overlay number.
<autoLine> means whether automatic sorting is made; 1- Automatic; 0- Non-automatic.
<charEnhance> means whether shade is enabled; 1- Enabled; 0- Disabled
<yearFormatSymbol> means the format character after year with its length no longer than 7 bits.
<monthFormatSymbol> means the format character after month with its length no longer than 7 bits.
<dayFormatSymbol> means the format character after day with its length no longer than 7 bits.
<hourFormatSymbol> means the format character after hour with its length no longer than 7 bits.
<miniteFormatSymbol>means the format character after minute with its length no longer than 7 bits.
<secondFormatSymbol> means format character behind second, with length not above 7 bits
<millisecond1> means format character behind ms 1, with length not above 7 bits
<millisecond2> means format character behind ms 2, with length not above 7 bits
<plusType> means type of overlay information; see 2.14.78 for details
<plusEnable> Whether display overlay contents; true-Display; false-Not display
<plusPosNo> means number of character overlay position, sorted in turns from zero
<plusInfo> means characters of overlay contents
<enterString> means line feed character
<beginSpaceNum> means number of spaces after line feed
<positionX> means X coordinates
<positionY> means Y coordinates
<plusPicType> means type of overlay picture; 0-Small picture of plate; 1-Face picture of driver; 2-Face picture of co-driver; 3-Small picture of face (mode when pedestrian runs a red light)
<plusPicEnable> Whether enable overlay picture
<facePicZoomArea> means zoom ratio of face picture; range: 0-500; 100 means no change
<picIndex> Number of picture in composite picture; 1-Overlaid on the first picture; 2- Overlaid on the second picture (applies to composite mode).
<facePicSize> Cutout size; 1-Small; 2-Intermediate; 3-Large
<faceTargetFrame> Whether overlay target frame of small face picture; true: Enabled; false: Disabled
<backgroundPicShowSmallPic> Whether display position of small face picture on background picture; true: Enabled; false: Disabled

PictureOverlay XML Block

```
<PictureOverlay ="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<composePictureType><!-- opt, xs:boolean --></composePictureType>
<singlePictureType><!-- opt, xs:boolean --></composePictureType>
<fontSize><!—req,sx:integer--></fontSize>
<osdColor><!—req,sx:integer--></osdColor>
<overlayPosition><!—req,sx:integer--></overlayPosition>
<digitNum><!—dep,sx:integer--></digitNum>
<autoLine><!—dep,sx:integer--></autoLine>
<charEnhance><!—dep,sx:integer--></charEnhance>
<yearFormatSymbol><!-- req, xs: string --></yearFormatSymbol>
<monthFormatSymbol><!-- req, xs: string --></monthFormatSymbol>
<dayFormatSymbol><!-- req, xs: string --></dayFormatSymbol>
<hourFormatSymbol><!-- req, xs: string --></hourFormatSymbol>
<miniteFormatSymbol><!-- req, xs: string --></miniteFormatSymbol>
<secondFormatSymbol><!-- req, xs: string --></secondFormatSymbol>
<millisecond1><!-- req, xs: string --></millisecond1>
<millisecond2><!-- req, xs: string --></millisecond2>
<backgroundPicShowSmallPic><!-- req, xs:boolean --></backgroundPicShowSmallPic>
<picturePlusTypeList>
<picturePlusTypeData>
<plusType><!-- req, xs:integer--></plusType>
<plusEnable><!-- req, xs:boolean --></plusEnable>
<plusPosNo><!-- req, xs:integer--></plusPosNo>
<plusInfo><!-- req, xs:string--></plusInfo>
<enterString><!-- req, xs:string--></enterString>
<beginSpaceNum><!-- req, xs:string--></beginSpaceNum>
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</picturePlusTypeData>
</picturePlusTypeList>
<topSettingList>
<topSettingInfo>
<plusPicType><!-- req, xs:integer --></plusPicType>
<plusPicEnable><!-- req, xs:boolean --></plusPicEnable>
<facePicZoomArea><!-- opt, xs:integer --></facePicZoomArea>
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
< picIndex><!-- opt, xs:integer --></ picIndex>
<facePicSize><!-- req, xs:integer --></ facePicSize>
<faceTargetFrame><!-- opt xs:integer --></ faceTargetFrame>
</topSettingInfo>
</topSettingList>
</PictureOverlay>
```

Test cases

GET /CGI/ITS/ShotPara/PictureOverlay/channels/1/Type/1/Mode/1

Request XML： none

Response XML: <PictureOverlay>

PUT /CGI/ITS/ShotPara/PictureOverlay/channels/1/Type/1/Mode/1

Response XML： <ResponseStatus>

Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PictureOverlay>
<composePictureType>true</composePictureType>
<singlePictureType>false</singlePictureType>
<fontSize>2</fontSize>
<osdColor>0</osdColor>
<overlayPosition>0</overlayPosition>
```

```
<digitNum>1</digitNum>
<autoLine>1</autoLine>
<CharEnhance>1</CharEnhance>
<yearFormatSymbol>-</yearFormatSymbol>
<monthFormatSymbol>-</monthFormatSymbol>
<dayFormatSymbol>/</dayFormatSymbol>
<hourFormatSymbol>/</hourFormatSymbol>
<miniteFormatSymbol>/</miniteFormatSymbol>
<secondFormatSymbol>/</secondFormatSymbo>
<millisecond1>/</millisecond1>
<millisecond2>/</millisecond2>
<backgroundPicShowSmallPic> true </backgroundPicShowSmallPic>
<picturePlusTypeList>
<plusType>0</plusType>
<plusEnable>true</plusEnable>
<plusPosNo>0</plusPosNo>
<plusInfo> Time </plusInfo>
<enterString>128</enterString>
<beginSpaceNum>0</beginSpaceNum>
<positionX>1571</positionX>
<positionY>2072</positionY>
</picturePlusTypeList>
<topSettingList>
<topSettingInfo>
<plusPicType>0</plusPicType>
<plusPicEnable>true</plusPicEnable>
<facePicZoomArea>25</facePicZoomArea>
<positionX>525</positionX>
<positionY>727</positionY>
</topSettingInfo>
<topSettingInfo>
<plusPicType>2</plusPicType>
<plusPicEnable>true</plusPicEnable>
<facePicZoomArea>25</facePicZoomArea>
<positionX>525</positionX>
<positionY>727</positionY>
<picIndex>1</picIndex>
<facePicSize>3</facePicSize>
<faceTargetFrame>true</faceTargetFrame>
</topSettingInfo>
</topSettingList>
</PictureOverlay>
```


2.14.39/CGI/ITS/LaneRun/ReferenceLines/channels/<ID>/scene/<ID>/lanes/<ID>/type/<ID>

/CGI/ITS/LaneRun/ReferenceLines/channels/<ID>/scene/<ID>/lanes/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire lane line parameters
Query	None
Inbound Data	None
Success Return	**<ReferenceLines>**
PUT	
Description	Set lane line parameters
Query	None
Inbound Data	**<ReferenceLines>**

Success Return	<ResponseStatus>

Explanations on protocol:
This protocol is prepared for query and setting of lane parameters, helping client or IE query and set the lane parameters via CGI protocol, including lane number/lane No./lane enabling/lane type/lane coordinates/speed measurement and calibration distance.
Explanations on key parameters:
<lineNum> means lane number
<type> means whether it is recommended value; 0: No; 1: Yes
<lineId> means lane No.; range: 1-14
<enabled> means lane enabling; true: Enabled; false: Disabled
<lineType> means lane type, including: 1-Left lane; 2-Right lane; 3-Yellow line; 4-Retrogradation line; 5-Left turn judgment line; 6-Right turn judgment line; 7-Park line; 8-Speed measurement line 1; 9-Speed measurement line 2; 10-Snapshot line 1; 11-Snapshot line 2; 12-Park line of turn waiting area; 13-Straight driving judgment line; 14-U-turn line 1; 15-U-turn judgment line (U-turn line 2); 16-U-turn line 3; 17-Third snapshot line of illegal behaviors
<RegionCoordinatesList> means coordinate list of lane
<RegionCoordinates> means lane coordinates
[1]<testSpeedEnabled> means speed measurement enabling; true: Enabled; false: Disabled
<distance> means calibration distance of speed measurement; unit: mm; range: 500-10000; use modified field if lane type is 8 and 9

ReferenceLines XML Block

```
<ReferenceLines version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<lineNum><!-- req, xs:integer --></lineNum>
<referenceLineList>
<lineItem>
<lineId><!-- req, xs:integer--></lineId>
<enabled><!-- req, xs:boolean --></enabled>
<lineType><!-- req, xs:integer--></lineType>
<RegionCoordinatesList>
<RegionCoordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<testSpeedEnabled><!--dep, depends on <lineType>, xs: boolean --></testSpeedEnabled>
<distance><<!--dep, depends on <lineType>, xs:integer --></distance>
</lineItem>
</referenceLineList>
</ReferenceLines>
```

Test cases
GET /CGI/ITS/LaneRun/ReferenceLines/channels/<ID>/scene/<ID>/lanes/<ID>/type/<ID>
Request XML: none
Response XML: <ReferenceLines>
PUT /CGI/ITS/LaneRun/ReferenceLines/channels/<ID>/scene/<ID>/lanes/<ID>/type/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<ReferenceLines>
<lineNum>2</lineNum>
<referenceLineList>
<lineItem>
<lineId>13</lineId>
<enabled>true</enabled>
<lineType>16</lineType>
```

[1]

```
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1377</positionX>
<positionY>103</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>805</positionX>
<positionY>103</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<testSpeedEnabled>true</testSpeedEnabled>
<distance>50</distance>
</lineItem>
<lineItem>
<lineId>14</lineId>
<enabled>true</enabled>
<lineType>14</lineType>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1325</positionX>
<positionY>836</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>799</positionX>
<positionY>2007</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<testSpeedEnabled>true</testSpeedEnabled>
<distance>50</distance>
</lineItem>
</referenceLineList>
</ReferenceLines>
```


2.14.40/CGI/ITS/LaneRun/ReferenceLines/channels/<ID>/scene/<ID>/lanes/type/<ID>

/CGI/ITS/LaneRun/ReferenceLines/channels/<ID>/scene/<ID>/lanes/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire lane line parameters
Query	None
Inbound Data	None
Success Return	**<ReferenceLines>**
PUT	
Description	Set lane line parameters
Query	None
Inbound Data	**<ReferenceLines>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of lane parameters, helping client or IE query and set the lane parameters via CGI protocol, including lane No./lane quantity/lane line No./lane enabling/lane type/lane coordinates/calibration distance of speed measurement.
Explanations on key parameters:
<lanes> means lane No.; range: 1-6; 1 as default
<lineNum> means lane number
<type> means whether it is recommended value; 0: No; 1: Yes
<lineId> means lane No.; range: 1-14

<enabled> means lane enabling; true: Enabled; false: Disabled
<lineType> means lane type, including: 1-Left lane; 2-Right lane; 3-Yellow line; 4-Retrogradation line; 5-Left turn judgment line; 6-Right turn judgment line; 7-Park line; 8-Speed measurement line 1; 9-Speed measurement line 2; 10-Snapshot line 1; 11-Snapshot line 2; 12-Park line of turn waiting area; 13-Straight driving judgment line; 14-U-turn line 1; 15-U-turn judgment line (U-turn line 2); 16-U-turn line 3; 17-Third snapshot line of illegal behaviors
<RegionCoordinatesList> means coordinate list of lane
<RegionCoordinates> means lane coordinates
[2]<testSpeedEnabled> means speed measurement enabling; true: Enabled; false: Disabled
<distance> means calibration distance of speed measurement; unit: mm; range: 500-10000; default: 3500; use modified field if lane type is 8 and 9

ReferenceLines XML Block

```
<ReferenceLines version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneList>
<laneitem>
<lanes><!-- req, xs:integer --></lanes>
<lineNum><!-- req, xs:integer --></lineNum>
<referenceLineList>
<lineItem>
<lineId><!-- req, xs:integer--></lineId>
<enabled><!-- req, xs:boolean --></enabled>
<lineType><!-- req, xs:integer--></lineType>
<RegionCoordinatesList>
<RegionCoordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<testSpeedEnabled><!--dep, depends on <lineType>, xs: boolean --></testSpeedEnabled>
<distance><<!--dep, depends on <lineType>, xs:integer --></distance>
</lineItem>
</referenceLineList>
</laneitem>
</laneList>
</ReferenceLines>
```

Test cases

GET /CGI/ITS/LaneRun/ReferenceLines/channels/<ID>/scene/<ID>/lanes/type/<ID>

Request XML: none

Response XML: <ReferenceLines>

PUT /CGI/ITS/LaneRun/ReferenceLines/channels/<ID>/scene/<ID>/lanes/type/<ID>

Response XML: <ResponseStatus>

Request XML: as below

[2]

```
<?xml version="2.0" encoding="UTF-8"?>
<ReferenceLines>
<laneList>
<laneitem>
<lanes>1</lanes>
<lineNum>2</lineNum>
<referenceLineList>
<lineItem>
<lineId>13</lineId>
<enabled>true</enabled>
<lineType>16</lineType>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1377</positionX>
<positionY>103</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>805</positionX>
<positionY>103</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
<testSpeedEnabled>true</testSpeedEnabled>
<distance>50</distance>
</lineItem>
<lineItem>
<lineId>14</lineId>
<enabled>true</enabled>
<lineType>14</lineType>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1325</positionX>
<positionY>836</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>799</positionX>
<positionY>2007</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</lineItem>
</referenceLineList>
<testSpeedEnabled>true</testSpeedEnabled>
<distance>50</distance>
</laneitem>
</laneList>
</ReferenceLines>
```


2.14.41/CGI/ITS/LaneRun/DetectArea/channels/<ID>/scene/<ID>/type/<ID>

/CGI/ITS/LaneRun/DetectArea/channels/<ID>/scene/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of detection region
Query	None
Inbound Data	None
Success Return	**<DetectArea>**
PUT	

Description	Set parameters of detection region
Query	None
Inbound Data	**<DetectArea>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of parameters of detection region, helping client or IE query and set the parameters of detection region via CGI protocol, including region No./area enabling/coordinate number in detection region/coordinates of detection region.
Explanations on key parameters:
<regionId> means region No.; 1-Detection region; 2-Straight driving region; 3-Zebra crossing region; 4-Traction region
<type> means whether it is recommended value; 0: No; 1: Yes
<enabled> means region enabling; true: Enabled; false: Disabled
<coordinatesNum> means coordinate number in detection region; range: 4-15
<RegionCoordinatesList> represents detection region coordinate list
<RegionCoordinates> means coordinate of detection region; range: 0-10000; unit: Ten-thousandth

DetectArea XML Block

```
<DetectArea version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<detectAreaItemList>
<detectAreaItem>
<regionId><!-- req, xs:integer --></regionId>
<enabled><!-- req, xs:boolean --></enabled>
<coordinatesNum><!-- req, xs:integer --></coordinatesNum>
<RegionCoordinatesList>
<RegionCoordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</detectAreaItem>
</detectAreaItemList>
</DetectArea>
```

Test cases
GET /CGI/ITS/LaneRun/DetectArea/channels/1/scene/1/type/1
Request XML: none
Response XML: <DetectArea>
PUT /CGI/ITS/LaneRun/DetectArea/channels/1/scene/1/type/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<DetectArea>
<detectAreaItemList>
<detectAreaItem>
<regionId>0</regionId>
<enabled>true</enabled>
<coordinatesNum>6</coordinatesNum>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>207</positionX>
<positionY>1206</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3229</positionX>
<positionY>1206</positionY>
</RegionCoordinates>
<RegionCoordinates>
```

```
<positionX>3314</positionX>
<positionY>1605</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3391</positionX>
<positionY>2007</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>2007</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>103</positionX>
<positionY>1605</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</detectAreaItem>
</detectAreaItemList>
</DetectArea>
```

2.14.42/CGI/ITS/ImagePara/channels/<ID>/ICR/template/<ID>

/CGI/ITS/ImagePara/channels/<ID>/ICR/template/<ID>	**General Resource v2.0**
GET	
Description	Acquire ICR parameters
Query	None
Inbound Data	None
Success Return	**<ICR>**
PUT	
Description	Set ICR parameters
Query	None
Inbound Data	**<ICR>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of ICR parameters, helping client or IE query and set the ICR parameters via CGI protocol, including enabling value/auto control enabling.
Explanations on key parameters:
<enabled> means polarizer enabling; true: Enabled; false: Disabled;
<autoControlEnable> means whether enable auto control, depending on the enabling of polarizer; true: Enabled; false: Disabled

ICR XML Block

```
<ICR version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!-- req, xs:boolean --></enabled>
<autoControlEnable><!--dep, depends on <enabled>, xs:boolean --></autoControlEnable>
</ICR>
```

Test cases
GET /CGI/ITS/ImagePara/channels/<ID>/ICR/template/<ID>
Request XML: none
Response XML: <ICR>
PUT /CGI/ITS/ImagePara/channels/<ID>/ICR/template/<ID>
Response XML: <ICR>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<ICR>
<enabled>true</enabled>
<autoControlEnable>true</autoControlEnable>
</ICR>
```

2.14.43/CGI/ITS/LaneRun/ChnlReco/channels/<ID>/scenes/<ID>/lanes/<ID>/type/<ID>

/CGI/ITS/LaneRun/ChnlReco/channels/<ID>/scenes/<ID>/lanes/<ID>/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of lane recognition region
Query	None
Inbound Data	None
Success Return	**<ChnlReco>**
PUT	
Description	Set parameters of lane recognition region
Query	None
Inbound Data	**<ChnlReco>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of parameters of lane recognition region, helping client or IE query and set the parameters in lane recognition region.
Explanations on key parameters:
<type> means whether it is recommended value; 0: No; 1: Yes
<positionX> means coordinates of lane recognition region; range: Ten-thousandth 0-10000
<positionY> means coordinates of lane recognition region; range: Ten-thousandth 0-10000

ChnlReco XML Block

```
<ChnlReco version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<chnlRecoItemList>
<chnlRecoItem>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX><!—req,xs:integer--></positionX>
<positionY><!—req,xs:integer--></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</chnlRecoItem>
</chnlRecoItemList>
</ChnlReco>
```

Test cases
GET /CGI/ITS/LaneRun/ChnlReco/channels/1/scenes/1/lanes/1/type/1
Request XML: none
Response XML: <ChnlReco>
PUT /CGI/ITS/LaneRun/ChnlReco/channels/1/scenes/1/lanes/1/type/1
Response XML: <ResponseStatus>
Request XML: as below

```
<ChnlReco version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<chnlRecoItemList>
<chnlRecoItem>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>8</positionX>
<positionY>100</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>51</positionX>
<positionY>57</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>0</positionY>
```

```
</RegionCoordinates>
<RegionCoordinates>
<positionX>100</positionX>
<positionY>100</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</chnlRecoItem>
</chnlRecoItemList>
</ChnlReco>
```

2.14.44/CGI/ITS/LaneRun/ChnlReco/channels/<ID>/scene/<ID>/lanes/type/<ID>

/CGI/ITS/LaneRun/ChnlReco/channels/<ID>/scene/<ID>/lanes/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameters of lane recognition region
Query	None
Inbound Data	None
Success Return	**<ChnlReco>**
PUT	
Description	Set parameters of lane recognition region
Query	None
Inbound Data	**<ChnlReco>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of parameters in lane recognition region, helping client or IE query and set the parameters of lane recognition region via CGI protocol, including lane No./X coordinates at upper left corner of recognition region /X coordinates at lower left corners of recognition region/X coordinates at upper right corner of recognition region/X coordinates at lower right corner of recognition region.
Explanations on key parameters:
<type> means whether it is recommended value; 0: No; 1: Yes
<lanes> means lane No.; range: 1-6; 1 as default
<positionX> means coordinates of lane recognition region; range: 0-10000; unit: Ten-thousandth
<positionY> means coordinates of lane recognition region; range: 0-10000; unit: Ten-thousandth

ChnlReco XML Block

```
<ChnlReco version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneList>
<laneitem>
<lanes><!-- req, xs:integer --></lanes>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX><!—req,xs:integer--></positionX>
<positionY><!—req,xs:integer--></positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</laneitem>
</laneList>
</ChnlReco>
```

Test cases
GET /CGI/ITS/LaneRun/ChnlReco/channels/1/scene/1/lanes/type/1
Request XML: None
Response XML: <ChnlReco>
PUT/CGI/ITS/LaneRun/ChnlReco/channels/1/scene/<ID>/lanes/type/1

Response XML: <ResponseStatus>
Request XML: as below

```
<ChnlReco version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneList>
<laneitem>
<lanes>1</lanes>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>8</positionX>
<positionY>100</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>51</positionX>
<positionY>57</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>0</positionX>
<positionY>0</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>100</positionX>
<positionY>100</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</laneitem>
</laneList>
</ChnlReco>
```

2.14.45/CGI/ITS/LaneRun/IllegalPark/<ID>/channels/<ID>/scene/<ID>/lanes/<ID>/type/<ID>

/CGI/ITS/LaneRun/IllegalPark/<ID>/channels/<ID>/scene/<ID>/lanes/<ID>/**type/<ID>** **General Resource v2.0**	
GET	
Description	Acquire illegal parking parameters
Query	None
Inbound Data	None
Success Return	**<IllegalPark>**
PUT	
Description	Set illegal parking parameters
Query	None
Inbound Data	**<IllegalPark>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of illegal parking, helping client or IE query and set the illegal parking parameters via CGI protocol, including region No./detection time of illegal parking/enabling time frame/coordinates of illegal parking region/parking judgment time/sensitivity level/region name/region enabling/rule ID/whether this event is valid/region coordinate/region point coordinate/snapshot enabling/park warning enabling/park warning time.
Explanations on key parameters:
<type> means whether it is recommended value; 0: No; 1: Yes
<illegalParkTime> means detection time of illegal parking; unit: Second
<RegionCoordinatesList> means coordinate list
<RegionCoordinates> means coordinate of illegal parking region; ten-thousandth
<checkParkTime> means parking judgment time; min. value: 1
<sensitivity> means sensitivity level; 0: Low; 1: Intermediate; 2: High
<areaName> means region name; 31 characters

```
<areaEnable> means region enabling; true-Enabled; false-Disabled
<ruleId> means rule ID 0-10
<pointCounts> means region coordinate, fixed value: 4
<capEnable> means snapshot enabling; true-Enabled; false-Disabled
<parkWarningEnable> means park warning enabling; true-Enabled; false-Disabled
<parkWarningTime> means park warning time; unit: Second; range: 0-300
```

IllegalPark XML Block

```
<IllegalPark version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<IllegalParkRegion>
<illegalParkTime><!-- req, xs: integer --></illegalParkTime>
<checkParkTime><!-- req, xs:integer --></checkParkTime>
<sensitivity><!-- req, xs: integer --></sensitivity>
<areaName><!-- req, xs:string--></areaName>
<areaEnable><!-- req, xs:Boolean"true,false"--></areaEnable>
<ruleId><!-- req, xs: integer --></ruleId>
<pointCounts><!-- req, xs:integer --></pointCounts>
<capEnable><!-- req, xs:Boolean"true,false" --></capEnable>
<parkWarningEnable><!--req,xs:Boolean"true,false"--></parkWarningEnable>
<parkWarningTime><!-- req, xs:integer"0-300" --></parkWarningTime>
< RegionCoordinatesList >
< RegionCoordinates ><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates >
</RegionCoordinatesList >
</IllegalParkRegion>
</IllegalPark>
```

Test cases

GET /CGI/ITS/LaneRun/IllegalPark/1/channels/1/scene/1/lanes/1/type/1

Request XML: none

Response XML: <IllegalPark>

PUT /CGI/ITS/LaneRun/IllegalPark/1/channels/1/scene/1/lanes/1/type/1

Response XML: <ResponseStatus>

Request XML: as below

```
<IllegalPark version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<IllegalPark>
<IllegalParkRegion>
<illegalParkTime>5000</illegalParkTime>
<checkParkTime>1000</checkParkTime>
<sensitivity>0</sensitivity>
<areaName></areaName>
<areaEnable>false</areaEnable>
<ruleId>0</ruleId>
<pointCounts>0</pointCounts>
<capEnable>false</capEnable>
<parkWarningEnable>false</parkWarningEnable>
<parkWarningTime>0</parkWarningTime>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>3333</positionX>
<positionY>3333</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>6667</positionX>
<positionY>3333</positionY>
```

```
</RegionCoordinates>
<RegionCoordinates>
<positionX>6875</positionX>
<positionY>5000</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>3125</positionX>
<positionY>5000</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IllegalParkRegion>
</IllegalPark>
```

2.14.46/CGI/ITS/ExFixture/SignalLightInfo/channels/<ID>

/CGI/ITS/ExFixture/SignalLightInfo/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire calibration information and parameters of signal lamp
Query	None
Inbound Data	None
Success Return	**<SignalLightInfo>**
PUT	
Description	Set calibration information and parameters of signal lamp
Query	None
Inbound Data	**<SignalLightInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of calibration information and parameters of signal lamp, helping client or IE query and set calibration information and parameters of signal lamp via CGI protocol, including region type, signal lamp No., enabling mark, coordinate list of calibration region, coordinate list of correction region, signal lamp type, lane type, region application, access signal, red light interval, yellow light interval, calibration level, exposure parameter level, red saturation level, sway range of signal lamp position, detection sensitivity of infrared lamp, overexposure red adjustment level, halation suppression level, numbering rules of signal lamp and smoothing enabling.

Explanations on key parameters:
<redLightId> means signal lamp No., range: 1-16
<enabled> means enabling mark; true: Enabled; false: Disabled
<positionX> means X coordinates; range: 0-10000; unit: Ten-thousandth
<positionY> means Y coordinates; range: 0-10000; unit: Ten-thousandth
<lightType> means type of signal lamp; 0-Single-lamp panel; 1-Three-lamp panel; 2-Five-lamp panel in red; 3-Five-lamp panel in green
4-Strip lamp; 5-Arrow lamp; 6-Circle lamp; 7-Digital lamp
<lanesType> means lane type; 1-Straight driving; 2-Left turn; 3-Left turn straight driving; 4-Right turn; 5-Right turn straight driving; 6-Left/right turn; 7-Straight driving left/right turn; 8-Pedestrian crossing
<enhanceUseType> means application of enhance region; 1: Enhance; 2: Detect; 3-Detect + Enhance
<detectType> means type of access signal; 0-Red lamp; 1-Green lamp; 2-Unused
<redLightTimeInterval> means time interval of red lamp; unit: Second; 60 as default
<yellowLightTimeInterval> means time interval of yellow lamp; unit: ms; 3000 as default
<lightEnhanceLevel> means calibration grade, 50 as default, range: 0-100
<exposureTimeLevel> means exposure parameter level, 50 as default, range: 0-100
<redSaturationLevel> means red saturation level, 50 as default, range: 0-100
<swayRange> means away range of signal lamp, 50 as default, range: 0-100

<lightDetectLevel> means detection sensitivity of infrared lamp, 50 as default, range: 0-100
<overExposureAdjustLevel> means overexposure red adjustment level, 50 as default, range: 0-100
<halationControlLevel> means halation suppression level, 50 as default, range: 0-100
<lightPositionRules> means rule of signal lamp change, 50 as default, range: 0-100
<smoothEnable> means smoothening enabling mark; true: Enabled; false: Disabled

RedLightAreaInfo XML Block

```
<SignalLightInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<SignalLightInfoList>
<lightInfo>
<redLightId><!-- req, xs:integer --></redLightId>
<enabled><!-- req, xs:boolean --></enabled>
<enhanceUseType><!-- req, xs:integer --></enhanceUseType>
<lightType><!-- req, xs:integer--></lightType>
<lanesType><!-- req, xs:integer --></lanesType>
<detectType><!-- req, xs:integer --></detectType>
<redLightAreaCoordinatesList>
<coordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</coordinates>
</redLightAreaCoordinatesList>
<calibrationAreaCoordinatesList>
<coordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</coordinates>
</calibrationAreaCoordinatesList>
<fixedAreaCoordinatesList>
<coordinates><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</coordinates>
</fixedAreaCoordinatesList>
<redLightTimeInterval><!-- req, xs:integer --></redLightTimeInterval>
<yellowLightTimeInterval><!-- req, xs:integer --></yellowLightTimeInterval>
<lightEnhanceLevel><!-- req, xs:integer --></lightEnhanceLevel>
<exposureTimeLevel><!-- req, xs:integer --></exposureTimeLevel>
<redSaturationLevel><!-- req, xs:integer --></redSaturationLevel>
<swayRange><!-- req, xs:integer --></swayRange>
<lightDetectLevel><!-- req, xs:integer --></lightDetectLevel>
<overExposureAdjustLevel><!-- req, xs:integer --></overExposureAdjustLevel>
<halationControlLevel><!-- req, xs:integer --></halationControlLevel>
<lightPositionRules><!-- req, xs:integer --></lightPositionRules>
<smoothEnable><!-- req, xs:boolean --></smoothEnable>
</lightInfo>
</SignalLightInfoList>
</SignalLightInfo>
```

Test cases

GET /CGI/ITS/ExFixture/SignalLightInfo/channels/1

Request XML: none

Response XML: <SignalLightInfo>

PUT /CGI/ITS/ExFixture/SignalLightInfo/channels/1

Response XML: <ResponseStatus>

Request XML: as below

```xml
<?xml version="2.0" encoding="UTF-8"?>
<SignalLightInfo>
<SignalLightInfoList>
<lightInfo>
<redLightId>1</redLightId>
<enabled>ture</enabled>
<enhanceUseType>2</enhanceUseType>
<lightType>1</lightType>
<lanesType>1</lanesType>
<detectType>0</detectType>
<calibrationAreaCoordinatesList>
<coordinates>
<positionX>1898</positionX>
<positionY>172</positionY>
</coordinates>
<coordinates>
<positionX>2523</positionX>
<positionY>373</positionY>
</coordinates>
</calibrationAreaCoordinatesList>
<calibrationAreaCoordinatesList>
<coordinates>
<positionX>1898</positionX>
<positionY>172</positionY>
</coordinates>
<coordinates>
<positionX>2523</positionX>
<positionY>373</positionY>
</coordinates>
</calibrationAreaCoordinatesList>
<fixedAreaCoordinatesList>
<coordinates>
<positionX>0</positionX>
<positionY>0</positionY>
</coordinates>
<coordinates>
<positionX>0</positionX>
<positionY>0</positionY>
</coordinates>
</fixedAreaCoordinatesList>
<redLightTimeInterval>60</redLightTimeInterval>
<yellowLightTimeInterval>3000</yellowLightTimeInterval>
<lightEnhanceLevel>50</lightEnhanceLevel>
<exposureTimeLevel>50</exposureTimeLevel>
<redSaturationLevel>50</redSaturationLevel>
<swayRange>50</swayRange>
<lightDetectLevel>50</lightDetectLevel>
<overExposureAdjustLevel>50</overExposureAdjustLevel>
<halationControlLevel>50</halationControlLevel>
<lightPositionRules>50</lightPositionRules>
<smoothEnable>true</smoothEnable>
</lightInfo>
</SignalLightInfoList>
</SignalLightInfo>
```


2.14.47/CGI/ITS/ExFixture/UartDeviceParam/channels/<ID>/ComNo/<ID>

/CGI/ITS/ExFixture/UartDeviceParam/channels/<ID>/ComNo/<ID>	General

Resource v2.0	
GET	
Description	Acquire peripheral parameters of serial port
Query	None
Inbound Data	None
Success Return	**<UartDeviceParamInfo>**
PUT	
Description	Set peripheral parameters of serial port
Query	None
Inbound Data	**<UartDeviceParamInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of peripheral device parameters of traffic serial port
<deviceType>--See 2.14.0 for details
<paramNum>-- means device parameter No. Meaning of different device model No. varies
When deviceType=16: 0-Device status; 1-Working mode; 2-Installation height; 3-Trigger distance; 4-Sensitivity; 5-Speed accuracy correction
When deviceType=4: 0-Radar control No.
<paramInfo>-- means parameter range of paramNum
When deviceType=16:
When paramNum =0, reserved
When paramNum =1, 0: Continuous mode; 1: Vehicle head trigger; 2: Vehicle tail trigger; 3: Double trigger mode
When paramNum =2, 0-255 corresponds to 0-25.5, min. unit is 0.1m; 60 (6m) as default
When paramNum =3, 0-50 corresponds to 0-50m, min. unit is 1m; 24 (24m) as default
When paramNum =4, 0-255 corresponds to 0-25.5; min. unit is 0.1; 4 (0.4) as default;
When paramNum =5, 0-100 corresponds to -50 to 50 (considered as -50 if it is valued by software; if -25 is acquired via 25-50, 10 is 60-10); 48 (-2) as default
When deviceType=4: 0-All; 1-5; 0 as default (all)
<version> Means version No. of peripheral software.
<productNumber> means product No. + main version No.

UartDeviceParamInfo XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<UartDeviceParamInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<!—Device model-->
<deviceType><!-- req, xs: integer --></deviceType>
<paramList>
<paramData>
<paramNum><!-- req, xs: integer --></paramNum>
<paramInfo><!-- req, xs: integer --></paramInfo>
</paramData>
</paramList>
<version><!-- req, xs:string --></version>
< productNumber ><!-- req, xs:string --></ productNumber >
</ UartDeviceParamInfo >
```

Test cases

GET /CGI/ITS/ExFixture/UartDeviceParam/channels/1/ComNo/1
Request XML: none
Response XML: <UartDeviceParamInfo>
PUT /CGI/ITS/ExFixture/UartDeviceParam/channels/1/ComNo/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<UartDeviceParamInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<deviceType>16</deviceType>
<paramList>
<paramData>
<paramNum>0</paramNum>
<paramInfo>1</paramInfo>
<paramNum>1</paramNum>
<paramInfo>0</paramInfo>
<paramNum>2</paramNum>
<paramInfo>1</paramInfo>
<paramNum>3</paramNum>
<paramInfo>60</paramInfo>
<paramNum>4</paramNum>
<paramInfo>240</paramInfo>
<paramNum>5</paramNum>
<paramInfo>4</paramInfo>
<paramNum>6</paramNum>
<paramInfo>48</paramInfo>
</paramData>
</paramList>
<version>5.0.3</version>
<productNumber>123456789012345678901234 5</productNumber>
</UartDeviceParamInfo>
```


2.14.48/CGI/ITS/CommonCmd/channels/<ID>/Type/<ID>/ComNo/<ID>

/CGI/ITS/ExFixture/ UartDeviceReset /channels/<ID>/Type/<ID>/ComNo/<ID> General Resource v2.0	
PUT	
Description	Recover default of peripheral device of serial port
Query	None
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for realizing common commands of traffic Type 1 recover default of peripheral device of serial port; 1 as default ComNo serial port No., starts from 1	

Test cases

PUT /CGI/ITS/CommonCmd/channels/1/Type/1/ComNo/1

Request XML：none

Response XML：<ResponseStatus>

2.14.49/CGI/ITS/ExFixture/RadarSpeedEnable/channels/<ID>/ComNo/<ID>

/CGI/ITS/ExFixture/RadarSpeedEnable/channels/<ID>/ComNo/<ID> General Resource v2.0	
GET	
Description	Acquire enabling status of radar speed
Query	None
Inbound Data	None
Success Return	**<RadarSpeedEnableInfo>**
Explanations on protocol: This protocol is prepared for acquiring the enabling status of radar speed <enable>-- means enabling; 0: Disabled; 1: Enabled	

RadarSpeedEnableInfo XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<RadarSpeedEnableInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<enable><!-- req, xs: integer --></enable>
</RadarSpeedEnableInfo>
```

Test cases
GET /CGI/ITS/ExFixture/RadarSpeedEnable/channels/<ID>/ComNo/<ID>
Request XML: none
Response XML: <RadarSpeedEnableInfo>
PUT /CGI/ITS/ExFixture/RadarSpeedEnable/channels/<ID>/ComNo/<ID>
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<RadarSpeedEnableInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<enable>0</enable>
</RadarSpeedEnableInfo>
```

2.14.50/CGI/ITS/ExFixture/RadarSpeed/channels/<ID>/ComNo/<ID>

/CGI/ITS/ExFixture/RadarSpeed/channels/<ID>/ComNo/<ID> General Resource v2.0	
GET	
Description	Acquire radar speed
Query	None
Inbound Data	None
Success Return	**<RadarSpeedInfo>**
Explanations on protocol: This protocol is prepared for acquiring radar speed <speed>-- means radar speed	

RadarSpeedInfo XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<RadarSpeedInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<speed><!-- req, xs: integer --></speed>
</RadarSpeedInfo>
```

Test cases
GET /CGI/ITS/ExFixture/RadarSpeed/channels/<ID>/ComNo/<ID>
Request XML: none
Response XML: <RadarSpeedInfo>
Response XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<RadarSpeedInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<speed>100</speed>
</RadarSpeedInfo>
```

2.14.51/CGI/ITS/SystemRun/ItsAlarmLink/channels/<ID>/scene/<ID>

/CGI/ITS/SystemRun/<ID>/channels/<ID>/scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire linkage parameters of traffic alarm
Query	None
Inbound Data	None
Success Return	**<ItsAlarmPara>**
PUT	
Description	Set linkage parameters of traffic alarm

Query	None
Inbound Data	**<ItsAlarmPara>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of linkage parameters of traffic alarm, helping client or IE query and set the linkage parameters of traffic alarm of device via CGI protocol, including linkage type/linkage output port No.
Explanations on key parameters:
<id> means input port: IO-1; Port 1; Port 2
< trafficWarnType > see 2.14.0 Type description.

EventTriggerXML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<ItsAlarmPara version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<itsAlarmPortList>
<itsAlarmPortPara>
<id><!-- req, xs:integer;id --></id>
<itsAlarmList>
<itsAlarmPortData>
<trafficWarnType><!-- req, xs:string --></trafficWarnType>
<enabled><!—req,xs:Boolean--></enabled>
</itsAlarmPortData>
</itsAlarmList>
</itsAlarmPortPara>
</itsAlarmPortList>
</ItsAlarmPara>
```

Test cases
GET /CGI/ITS/SystemRun/ItsAlarmLink/channels/1/scene/1
Request XML： none
Response XML: <ItsAlarmPara>
PUT/CGI/ITS/SystemRun/ItsAlarmLink/channels/1/scene/1
Response XML: <ItsAlarmPara>
Request XML： as below

```
<?xml version="2.0" encoding="UTF-8"?>
<ItsAlarmPara version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<itsAlarmPortList>
<itsAlarmPortPara>
<id>1</id>
<itsAlarmList>
<itsAlarmPortData>
<trafficWarnType>bayonet</trafficWarnType>
<enabled>true</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>redlightrunning</trafficWarnType>
<enabled>true</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>retrograde</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>overspeed</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>leftturn</trafficWarnType>
<enabled>false</enabled>
```

```
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>rightturn</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>yellowline</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>vehicle</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>notdirected</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>straight</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>speciallane</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>forbiddenmarking</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>waitarearedlight</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>Illegalparking</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>specialoverspeed</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>reversing</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>turnaround</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>lanechange</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>prohibitionsign</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
```

```
<trafficWarnType>safetybelt</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>telephone</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>comitypedestrain</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>comitystraight</trafficWarnType>
<enabled>true</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>overtakeInzebracrossing</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>insertfrafficjam</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>abnormalplate</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>greenlightparking</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>prohibitiondangerouscar</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>mismatchedplate</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>driveintojamcross</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>noalternatepass</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
<itsAlarmPortData>
<trafficWarnType>nokeepsafedos</trafficWarnType>
<enabled>false</enabled>
</itsAlarmPortData>
</itsAlarmList>
</itsAlarmPortPara>
</itsAlarmPortList>
</ItsAlarmPara>
```

2.14.52/CGI/ITS/Channels/<ID>/SnapShot/Type/<ID>

/CGI/ITS/Channels/<ID>/SnapShot/Type/<ID> General Resource v2.0	
PUT	
Description	Set manual snapshot to traffic frontend device
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for setting manual snapshot of traffic frontend device, helping client or IE set manual snapshot and simulating trigger of traffic device via CGI protocol. Type: 0-Simulating trigger; 1-Snapshot picture; 2-Picture of enhance debugging of manual snapshot red lamp; 3-Intelligent snapshot	

Test cases
PUT/CGI/ITS/Channels/<ID>/SnapShot/Type/<ID>
Response XML: <ResponseStatus>
Request XML: None

2.14.53/CGI/ITS/ExFixture/RaddrState/channels/<ID>/ComNo/<ID>

/CGI/ITS/ExFixture/RadarState/channels/<ID>/ComNo/<ID> General Resource v2.0	
GET	
Description	Acquire parameters of radar status
Query	None
Inbound Data	None
Success Return	**<UartDeviceParamInfo>**
PUT	
Description	Set parameters of radar status
Query	None
Inbound Data	**<UartDeviceParamInfo>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for query and setting of peripheral device parameters of traffic serial port <deviceType>--See 2.14.0 for details <paramInfo>0: Set status; 1: Speed measurement status, maintain speed measurement status as default, it is not allowed to quit interface under the setting status;	

UartDeviceParamInfo XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
< RaddrState version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<!—Device model-->
<deviceType><!-- req, xs: integer --></deviceType>
<paramData>
<paramInfo><!-- req, xs: integer --></paramInfo>
</paramData>
</ RaddrState >
```

Test cases
GET /CGI/ITS/ExFixture/UartDeviceParam/channels/<ID>/ComNo/<ID>
Request XML: none
Response XML: <UartDeviceParamInfo>
PUT /CGI/ITS/ExFixture/UartDeviceParam/channels/<ID>/ComNo/<ID>

Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<UartDeviceParamInfo version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<deviceType>16</deviceType>
<paramData>
<paramInfo>0</paramInfo>
</paramData>
</UartDeviceParamInfo>
```

2.14.54/CGI/ITS/ExFixture/LoopTrigStatusClear/channels/<ID>/IO

/CGI/ITS/ExFixture/LoopTrigStatusClear/channels/<ID>/IO General Resource v2.0	
PUT	
Description	Set default value of coil trigger information as clear status
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for clearing the default value of coil trigger information, helping client or IE query the clearing status of coil trigger information via CGI protocol.	

Test cases
PUT /CGI/ITS/ExFixture/LoopTrigStatusClear/channels/<ID>/IO
Response XML: <ResponseStatus>
Request XML: None

2.14.55/CGI/ITS/ExFixture/LoopTrigStatusClear/channels/<ID>/IO/<ID>

/CGI/ITS/ExFixture/LoopTrigStatusClear/channels/<ID>/IO/<ID> General Resource v2.0	
PUT	
Description	Set default value of single coil trigger information as clear status
Query	None
Inbound Data	None
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for clearing the default value of coil trigger information, helping client or IE query the clear status of coil trigger information via CGI protocol.	

Test cases
PUT /CGI/ITS/ExFixture/LoopTrigStatusClear/channels/<ID>/IO/<ID>
Response XML: <ResponseStatus>
Request XML: None

2.14.56/CGI/ITS/Capabilities/Channels/<ID>

/CGI/ITS/Capabilities/Channels/<ID> General Resource v2.0	
POST	
Description	Acquire traffic capability set
Query	None

Inbound Data	<CapDiscription>
Success Return	<CapillegalList>

Explanations on protocol:

This protocol is prepared for acquiring the traffic capability set.

Explanations on key parameters:

<mainType> Type of capability set acquired: illegalSnapSet: Snapshot of illegal behavior; testSet: Detection setting; illegalAlarmlink: Illegal alarm link; illegalSnapNum: Snapshot number of illegal behaviors; carType: Car type; picCheck: Picture check

<subType>

Snapshot of illegal behaviors: bayonet: Bayonet; redlightrunning: Red light running; retrograde: Retrograde; overspeed: Overspeed; leftturn: Prohibit left turn; rightturn: Prohibit right turn; yellowline: Press yellow line; notdirected: Undirected driving, linesnapped: snap line; waitarearedlight: Run a red light at turn waiting area; Illegalparking: Illegal parking; specialoverspeed: Video snapshot overspeed enabling under mixed trigger; reversing: Reversing; turnaround: Illegal turnaround; lanechange: Illegal lane change; safetybelt: Fail to belt up; telephone: Making and receiving calls; comitypedestrain: Fail to give way to pedestrian; comitystraight: Left turn vehicle fails to give way to straight driving vehicles; overtakeInzebracrossing: Overspeed at zebra crossing; inserttrafficjam: illegal insertion; abnormalplate: Abnormal plate; greenlightparking: Parking during green light; prohibitiondangerouscar: Prohibit dangerous chemicals; driveintojamcross: Crossing of jammed area.

Alarm linkage of illegal behaviors: bayonet: Bayonet; redlightrunning: Red light running; retrograde: Retrogradation; overspeed: Overspeed; vehicle: Vehicle occupies bicycle lane; notdirected: Undirected driving; speciallane: Enter special lane; forbiddenmarking: Violation of marking line; Illegalparking: Illegal parking; reversing: Reversing; turnaround: Illegal turnaround; lanechange: Illegal lane change; prohibitionsign: Violation of prohibition signs; safetybelt: Fail to belt up; telephone: Making and receiving calls; comitypedestrain: Fail to give way to pedestrian; comitystraight: Left turn vehicle fails to give way to straight driving vehicles; overtakeInzebracrossing: Overspeed at zebra crossing; inserttrafficjam: illegal insertion; greenlightparking: Parking during green light; abnormalplate: Abnormal plate; greenlightparking: Parking during green light; prohibitiondangerouscar: Prohibit dangerous chemicals

Vehicle type: The same with alarm linkage of illegal behaviors

Picture search: The same with alarm linkage of illegal behaviors

Detection setting:

Vehicle: branddetect: Recognition of vehicle sub-brand and vehicle; carplatedetect: Model recognition; agriculdetect: Recognition of agricultural vehicle; electromobiledetect: Recognition of electronic vehicle; maindriverfacedetect: Detection of main driver face; secpilotdetect: Detection of co-driver face; highangledetect: Detection of large-angle plate; abnormalplatedetect: Detection of abnormal plate; dangerouscardetect: Recognition of cars carrying dangerous products; motorvehicle: Detection of motor vehicle; nonmotorvehicle: Detection of non-motor vehicle; pedestriandetect: Detection of pedestrians

Behavior: safetybelt: Detection of safety belt (linked with driver face detection) listeningphone: Detection of answering and making of call (linked with driver face detection); sunvisor: Recognition of sun shield; pendant: Pendant detection; tissuebox: Tissuebox detection; annualinspectionlabel: Detection of annual inspection label; highbeam: Detection of high beam; comitypedestrain: Fail to give way to pedestrian; leftcomitystraight: Detection of left turn without giving way to straight driving; nomotordetect:Detection of non-motor vehicle and pedestrian; outtopwindow: Detection of standing on top window; checkcarhead: Detection of vehicle head/tail.

Snapshot of illegal behaviors: redlightrunning: Red light running; retrograde: Retrograde; overspeed: Overspeed; vehicle: Vehicle occupies bicycle lane; notdirected: Undirected driving; speciallane: Enter special lane; forbiddenmarking: Violation of marking line; Illegalparking: Illegal parking; reversing: Reversing; turnaround: Illegal turnaround; lanechange: Illegal lane change; prohibitionsign: Violation of prohibition signs; safetybelt: Fail to belt up; telephone: Making and receiving calls; comitypedestrain: Fail to give way to

pedestrian; comitystraight: Left turn vehicle fails to give way to straight driving vehicles; overtakeInzebracrossing: Overspeed at zebra crossing; inserttrafficjam: illegal insertion; abnormalplate: Abnormal plate; prohibitiondangerouscar: Prohibit dangerous chemicals

CapDiscription XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<CapDiscription>
    <mainType><!--req,xs:string,"illegalSnapSet,testSet ,illegalAlarmlink ,illegalSnapNum ,al
armLinkByCar" -->
    </mainType>
</CapDiscription>
```

CapillegalList XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<CapillegalList>
  <CapTypeItem>
    <mainType>
      <!--req,xs:string,"illegalSnapSet,testSet,illegalAlarmlink,illegalSnapNum,alarmLi
nkByCar" -->
    </mainType>
    <support><!-- req, xs:bool,"true,false" --></support>
    <subTypeList>
      <subTypeItem>
        <subType><!--req,xs:string></subType>
        <support><!-- req, xs: boolean --> </support>
      </subTypeItem>
      <subTypeItem>
        <subType> <!--req,xs:string></subType>
        <support> <!-- req, xs: boolean --></support>
      </subTypeItem>
     </subTypeList>
  </CapTypeItem>
</CapillegalList>
```

Test cases

POST/CGI/ITS/channels/1/capabilities

Request XML: <CapDiscription>

Response XML: <CapillegalList>

CapDiscriptionXML as follows:

```
<?xml version="2.0" encoding="UTF-8"?>
<CapDiscription>
    <mainType>illegalSnapSet</mainType>
</CapDiscription>
```

CapillegalList XML As follows:

```
<?xml version="2.0" encoding="UTF-8"?>
<CapillegalList>
  <CapTypeItem>
    <mainType>illegalSnapSet</mainType>
    <support>true</support>
    <subTypeList>
      <subTypeItem>
        <subType>bayonet </subType>
        <support>true </support>
      </subTypeItem>
      <subTypeItem>
        <subType>leftturn </subType>
        <support>true </support>
      </subTypeItem>
     </subTypeList>
```

```
    </CapTypeItem>
</CapillegalList>
```

2.14.57/CGI/ITS/LaneRun/IllegalPark/<ID>/channels/<ID>/scene/<ID>/lanes/type/<ID>

/CGI/ITS/LaneRun/IllegalPark/<ID>/channels/<ID>/scene/<ID>/lanes/type/<ID> **General Resource v2.0**	
GET	
Description	Acquire parameter of illegal parking at multiple lanes
Query	None
Inbound Data	None
Success Return	**<IllegalPark>**
PUT	
Description	Set parameter of illegal parking at multiple lanes
Query	None
Inbound Data	**<IllegalPark>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for query and setting of illegal parking at multiple lanes, helping client or IE query and set the parameters of illegal parking via CGI protocol, including region No./detection time of illegal parking/enabling time frame/coordinates of illegal parking region/parking judgment time/sensitivity level/region name/region enabling/rule ID/whether this event is valid/region coordinate/region point coordinate/snapshot enabling/park warning enabling/park warning time.

Explanations on key parameters:
<type> means whether it is recommended value; 0: No; 1: Yes
<illegalParkTime> means detection time of illegal parking; unit: Second
<RegionCoordinatesList> means coordinate list
<RegionCoordinates> means coordinates of illegal parking region; range: 0-10000; unit: Ten-thousandth
<checkParkTime> means park judgment time; min. value 1; unit: Second
<sensitivity> means sensitivity level; 0: Low; 1: Intermediate; 2: High
<areaName> means region name; 31 characters
<areaEnable> means region enabling; true: Enabled; false: Disabled
<ruleId> means rule ID
<pointCounts> means region coordinate, fixed value: 4
<capEnable> means snapshot enabling; true: Enabled; false: Disabled
<parkWarningEnable> means park warning enabling; true: Enabled; false: Disabled
<parkWarningTime> means park warning time; unit: Second; range: 0-300

IllegalPark XML Block

```
<IllegalPark version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneList>
<laneitem>
<lanes><!-- req, xs:integer --></lanes>
<IllegalParkRegion>
<illegalParkTime><!-- req, xs: integer --></illegalParkTime>
<checkParkTime><!-- req, xs:integer --></checkParkTime>
<sensitivity><!-- req, xs: integer --></sensitivity>
<areaName><!-- req, xs:string--></areaName>
<areaEnable><!-- req, xs:Boolean"true,false"--></areaEnable>
<ruleId><!-- req, xs: integer --></ruleId>
```

```
<pointCounts><!-- req, xs:integer --></pointCounts>
<capEnable><!-- req, xs:Boolean"true,false" --></capEnable>
<parkWarningEnable><!--req,xs:Boolean"true,false"--></parkWarningEnable>
<parkWarningTime><!-- req, xs:integer"0-300" --></parkWarningTime>
< RegionCoordinatesList >
< RegionCoordinates ><!-- req, -->
<positionX><!-- req, xs:integer;coordinate --></positionX>
<positionY><!-- req, xs:integer;coordinate --></positionY>
</RegionCoordinates >
</RegionCoordinatesList >
</IllegalParkRegion>
</laneitem>
</laneList>
</IllegalPark>
```

Test cases

GET /CGI/ITS/LaneRun/IllegalPark/1/channels/1/scene/1/lanes/type/1

Request XML： none

Response XML: <IllegalPark>

PUT /CGI/ITS/LaneRun/IllegalPark/1/channels/1/scene/1/lanes/type/1

Response XML： <ResponseStatus>

Request XML： as below

```
<IllegalPark version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<laneList>
<laneitem>
<lanes>1</lanes>
<IllegalParkRegion>
<illegalParkTime>1000</illegalParkTime>
<checkParkTime>1000</checkParkTime>
<sensitivity>0</sensitivity>
<areaName>NULL</areaName>
<areaEnable>false</areaEnable>
<ruleId>1</ruleId>
<pointCounts>4</pointCounts>
<capEnable>false</capEnable>
<parkWarningEnable>false</parkWarningEnable>
<parkWarningTime>100</parkWarningTime>
<RegionCoordinatesList>
<RegionCoordinates>
<positionX>1021</positionX>
<positionY>780</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1526</positionX>
<positionY>780</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1021</positionX>
<positionY>1500</positionY>
</RegionCoordinates>
<RegionCoordinates>
<positionX>1526</positionX>
<positionY>1500</positionY>
</RegionCoordinates>
</RegionCoordinatesList>
</IllegalParkRegion>
</laneitem>
</laneList>
```

```
</IllegalPark>
```

2.14.58 /CGI/ITS/SimTrigger/RoadWay/channel/<ID>

/CGI/ITS/SimTrigger/RoadWay/channel/<ID>	**General Resource v2.0**
GET	
Description	Acquire simulating trigger lane
Query	None
Inbound Data	None
Success Return	**<RoadWay>**
PUT	
Description	Set simulating trigger lane
Query	None
Inbound Data	**<RoadWay>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for selecting simulating trigger lane.
Explanations on key parameters:
<roadNum > means lane No., starts from 1
<enable > means enabling/disabling; true-Enabled; false-Disabled

RoadWay XML Block

```
<RoadWay version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<roadList>
<roadPara>
<roadNum><!-- req, xs: integer --></roadNum>
<enable><!-- req, xs:Boolean"true,false" --></enable>
</roadPara>
</roadList>
</RoadWay >
```

Test cases
GET /CGI/ITS/SimTrigger/RoadWay/channel/1
Request XML: none
Response XML: <RoadWay>
PUT /CGI/ITS/SimTrigger/RoadWay/channel/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<RoadWay>
<roadList>
<roadPara>
<roadNum>1</roadNum>
<enable>true</enable>
</roadPara>
<roadPara>
<roadNum>2</roadNum>
<enable>false</enable>
</roadPara>
</roadList>
</RoadWay>
```

2.14.59 /CGI/ITS/CameraParam/Channels/<ID>

/CGI/ITS/CameraParam/Channels/<ID>	
GET	
Description	Acquire parameters of bayonet device
Query	None
Inbound Data	None
Success Return	**<ItsCameraParam>**
POST	
Description	Set parameters of bayonet device
Query	None
Inbound Data	**<ItsCameraParam>**
Success Return	**<ItsCameraOrder>**

Explanations on protocol:
This protocol is prepared for acquiring and setting interface parameters of bayonet device.
Explanations on key parameters:
<action> Operation; 0: Add; 1: Edit; 2: Delete (ignored if get); corresponding device numbers, names and ID are free form changes; once changed, other parameters should be edited before operation
<chnId> Channel No.
<chnName> Channel Name
<ipAddr>ip address
<itsEnable> Whether enable bayont
<orderId> Table No., send 0 before adding, or send acquired values in other cases
<cameraNo> Camera No.
<cameraId> Camera ID, applies in editing interface
<cameraName> Camera name
<sigPicEnable> Whether link single picture
<recordEnable> Whether link recording
<outPutEnable> Whether link output
<outPutList> Port linkage list
<outPut>
<id> Port No.
<idEnable> Port enabling

ItsDevParam XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<ItsCameraParam>
<action><!-- dep, xs: integer --></action>
<chnId><!-- req, xs: integer --></chnId>
<chnName><!-- req, xs:string --></chnName>
<ipAddr><!-- req, xs:string --></ipAddr>
<itsEnable><!-- req, xs:Boolean"true,false" --></itsEnable>
<orderId><!-- dep, xs: integer --></orderId>
<cameraNo><!-- dep, xs:string --></cameraNo>
<cameraId><!-- dep, xs:string --></cameraId>
<cameraName><!-- dep, xs:string --></cameraName>
<sigPicEnable><!-- req, xs:Boolean"true,false" --></sigPicEnable>
<recordEnable><!-- req, xs:Boolean"true,false" --></recordEnable>
<outPutEnable><!-- req, xs:Boolean"true,false" --></outPutEnable>
<outPutList>
<outPut>
<id><!-- req, xs: integer --></id>
<idEnable><!-- req, xs: Boolean--></idEnable>
</outPut>
// Repeat 32    outPut
</outPutList>
</ItsCameraParam>
```

ItsCameraOrder XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<ItsCameraOrder>
<orderId><!-- dep, xs: integer --></orderId>    // Return number (not negative) when adding; return 0 when editing and deleting; fails if returning other values
</ItsCameraOrder>
```

Test cases

GET /CGI/ITS/CameraParam/Channels/1

Request XML: none

Response XML: <ItsCameraParam>

POST /CGI/ITS/CameraParam/Channels/1

Request XML: <ItsCameraParam>

Response XML: <ItsCameraOrder>

```
<?xml version="1.0" encoding="UTF-8"?>
<ItsCameraParam>
<action>0</action>
<chnId>1</chnId>
<chnName>Channel 14221</chnName>
<ipAddr>192.168.17.88</ipAddr>
<itsEnable>true</itsEnable>
<orderId>0</orderId>
<cameraNo>nvr1</cameraNo>
<cameraId>1</cameraId>
<cameraName>nvr1</cameraName>
<sigPicEnable>true</sigPicEnable>
<recordEnable>true</recordEnable>
<outPutEnable>true</outPutEnable>
<outPutList>
<outPut>
<id>0</id>
<idEnable>true</idEnable>
</outPut>
<outPut>
<id>1</id>
<idEnable>false</idEnable>
</outPut>
…
</outPutList>
</ItsCameraParam>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<ItsCameraOrder>
<orderId>3</orderId>
</ItsCameraOrder>
```

2.14.60 /CGI/ITS/CameraParam/Channels

/CGI/ITS/CameraParam/Channels	
GET	
Description	Acquire parameters of bayonet device in batch
Query	None
Inbound Data	None
Success Return	**<ItsCameraParamList>**

Explanations on protocol:
This protocol is prepared for acquiring the interface parameters of bayonet device in batch.
Explanations on key parameters:
<chnId> Channel No.
<chnName> Channel Name
<ipAddr>ip address
<itsEnable> Whether enable bayont
<orderId> Table No.
<cameraNo> Device No.
<cameraId> Device ID, reserved
<cameraName> Device name
<sigPicEnable> Whether link single picture
<recordEnable> Whether link recording
<outPutEnable> Whether link output
<outPutList> Port linkage list
<outPut>
<id> Port No.
<idEnable> Port enabling

ItsCamreaParamList XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<ItsCameraParamList>
<ItsCameraParam>    // Parameter structure, see protocol in item above
<chnId><!-- req, xs: integer --></chnId>
<chnName><!-- req, xs:string --></chnName>
<ipAddr><!-- req, xs:string --></ipAddr>
<itsEnable><!-- req, xs:Boolean"true,false" --></itsEnable>
<orderId><!-- req, xs: integer --></orderId>
<cameraNo><!-- dep, xs:string --></cameraNo>
<cameraId><!-- dep, xs:string --></cameraId>
<cameraName><!-- dep, xs:string --></cameraName>
<sigPicEnable><!-- req, xs:Boolean"true,false" --></sigPicEnable>
<recordEnable><!-- req, xs:Boolean"true,false" --></recordEnable>
<outPutEnable><!-- req, xs:Boolean"true,false" --></outPutEnable>
<outPutList>
<outPut>
<id><!-- req, xs: integer --></id>
<idEnable><!-- req, xs: Boolean--></idEnable>
</outPut>
// Repeat 32    outPut
</outPutList>
</ItsCameraParam>
//…Repeat <ItsCameraParam> Structure
</ItsCameraParamList>
```

Test cases

GET /CGI/ITS/CameraParam/Channels

Request XML: none

Response XML: <ItsCameraParamList>

```
<?xml version="1.0" encoding="UTF-8"?>
<ItsCameraParamList>
<ItsCameraParam>
<chnId>1</chnId>
<chnName>Channel 14221</chnName>
<ipAddr>192.168.17.88</ipAddr>
<itsEnable>true</itsEnable>
<orderId>1</orderId>
<cameraNo>nvr1</cameraNo>
<cameraId>1</cameraId>
```

```
<cameraName>nvr1</cameraName>
<sigPicEnable>true</sigPicEnable>
<recordEnable>true</recordEnable>
<outPutEnable>true</outPutEnable>
<outPutList>
<outPut>
<id>0</id>
<idEnable>true</idEnable>
</outPut>
<outPut>
<id>1</id>
<idEnable>false</idEnable>
</outPut>
…
</outPutList>
</ItsCameraParam>
<ItsCameraParam>
<chnId>2</chnId>
…
</ItsCameraParam>
</ItsCameraParamList>
```

2.14.61 /CGI/ITS/LaneRun/Manage/Places/<ID>

/CGI/ITS/LaneRun/Manage/Places/<ID>	
GET	
Description	Acquire the parameters of lane management cross/location
Query	None
Inbound Data	None
Success Return	**<LaneRunManagePlaces>**
PUT	
Description	Set the parameters of lane management cross /location
Query	None
Inbound Data	**<LaneRunManagePlaces>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring, deleting and deleting the parameters of lane management cross /location. **Explanations on key parameters:** <id> Table No., not displayed; kernel assignment, default as 0 when adding; send acquired value (start from 1) when editing and deleting <action> Operation; 0: Add; 1: Edit; 2: Delete (ignored if get) <placeNo> No. <placeName> Name	

LaneRunManagePlaces XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<LaneRunManagePlaces>
<id><!-- req, xs: integer --></id>
<action><!-- dep, xs: integer --></action>
<placeNo><!-- req, xs:string --></placeNo>
<placeName><!-- req, xs:string --></placeName>
</LaneRunManagePlaces>
```

Test cases

GET /CGI/ITS/LaneRun/Manage/Places/0

Request XML: none

Response XML: <LaneRunManagePlaces>

PUT /CGI/ITS/LaneRun/Manage/Places/0

Request XML: <LaneRunManagePlaces>

Response XML: <ResponseStatus>

DELETE /CGI/ITS/LaneRun/Manage/Places/0

Request XML: none

Response XML: <ResponseStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<LaneRunManagePlaces>
<id>0</id>
<action>0</action>
<placeNo>abc123</placeNo>
<placeName>test1</placeName>
</LaneRunManagePlaces>
```

2.14.62 /CGI/ITS/LaneRun/Manage/Places

/CGI/ITS/LaneRun/Manage/Places	
GET	
Description	Acquire parameters of lane management cross/location in batch
Query	None
Inbound Data	None
Success Return	**<LaneRunManagePlacesList>**

Explanations on protocol:
This protocol is prepared for acquiring parameters of cross/location via lane management interface.

Explanations on key parameters:
<id> Table No., not displayed; kernel assignment, default as 0 when adding; send acquired value (start from 1) when editing and deleting
<action> Operation; 0: Add; 1: Edit; 2: Delete (ignored if get)
<placeNo> No.
<placeName> Name

LaneRunManagePlacesList XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<LaneRunManagePlacesList>
<LaneRunManagePlaces>    // Parameter structure, see protocol in item above
<id><!-- req, xs: integer --></id>
<action><!-- dep, xs: integer --></action>
<placeNo><!-- req, xs:string --></placeNo>
<placeName><!-- req, xs:string --></placeName>
</LaneRunManagePlaces>
//…Repeat <LaneRunManagePlaces> Structure
</LaneRunManagePlacesList>
```

Test cases

GET /CGI/ITS/LaneRun/Manage/Places

Request XML: none

Response XML: <LaneRunManagePlacesList>

```
<?xml version="1.0" encoding="UTF-8"?>
<LaneRunManagePlacesList>
<LaneRunManagePlaces>
<id>1</id>
<placeNo>abc123</placeNo>
<placeName>test1</placeName>
</LaneRunManagePlaces>
<LaneRunManagePlaces>
<id>2</id>
…
```

```
</LaneRunManagePlaces>
</LaneRunManagePlacesList>
```

2.14.63 /CGI/ITS/LaneRun/Manage/Areas/<ID>

/CGI/ITS/LaneRun/Manage/Areas/<ID>	
GET	
Description	Acquire the parameters of management lane/detection region
Query	None
Inbound Data	None
Success Return	**<LaneRunManageAreas>**
PUT	
Description	Set the parameters of management lane/detection region
Query	None
Inbound Data	**<LaneRunManageAreas>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquiring, setting and deleting parameters of management lane/detection region.
Explanations on key parameters:
<id> Table No., not displayed; kernel assignment, default as 0 when adding; send acquired value (start from 1) when editing and deleting
<action> Operation; 0: Add; 1: Edit; 2: Delete (ignored if get)
<areaNo> No., 1-64
<areaName> Name
<direction> Driving direction; 0: From east to west; 1: From west to east; 2: From south to north; 3: From north to south; 4: Enter city; 5: Leave city
<placeNo> Cross No.
<placeName> Cross name
<cameraNo> Camera No.
<cameraName> Camera name
<cameraAreaNo> Camera lane/detection region No., 1-128
<cameraId> Camera ID, not applied in interface

LaneRunManageAreas XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<LaneRunManageAreas>
<id><!-- req, xs: integer --></id>
<action><!-- dep, xs: integer --></action>
<areaNo><!-- req, xs: integer --></areaNo>
<areaName><!-- dep, xs:string --></areaName>
<direction><!-- req, xs: integer --></direction>
<placeNo><!-- req, xs:string --></placeNo>
<placeName><!-- req, xs:string --></placeName>
<cameraNo><!-- req, xs:string --></cameraNo>
<cameraName><!-- req, xs:string --></cameraName>
<cameraAreaNo><!-- req, xs: integer --></cameraAreaNo>
<cameraId><!-- dep, xs: integer --></cameraId>
</LaneRunManageAreas>
```

Test cases

GET /CGI/ITS/LaneRun/Manage/Areas/1

Request XML: none

Response XML: <LaneRunManageAreas>

PUT /CGI/ITS/LaneRun/Manage/Area/1

Request XML: <LaneRunManageAreas>

Response XML: <ResponseStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<LaneRunManageAreas>
<id>0</id>
<action>0</action>
<areaNo>1</areaNo>
<areaName>test</areaName>
<direction>0</direction>
<placeNo>test1</placeNo>
<placeName>test1</placeName>
<cameraNo>123</cameraNo>
<cameraName>test</cameraName>
<cameraAreaNo>1</cameraAreaNo>
<cameraId>1</cameraId>
</LaneRunManageAreas>
```

2.14.64 /CGI/ITS/LaneRun/Manage/Areas

/CGI/ITS/LaneRun/Manage/Areas	
GET	
Description	Acquire the parameters of management lane/detection region in batch
Query	None
Inbound Data	None
Success Return	**<LaneRunManageAreasList>**

Explanations on protocol:

This protocol is prepared for acquiring parameters of management lane/detection region in batch.

Explanations on key parameters:

<id> Table No., not displayed; kernel assignment, default as 0 when adding; send acquired value (start from 1) when editing and deleting

<action> Operation; 0: Add; 1: Edit; 2: Delete (ignored if get)

<areaNo> No., 1-64

<areaName> Name

<direction> Driving direction; 0: From east to west; 1: From west to east; 2: From south to north; 3: From north to south; 4: Enter city; 5: Leave city

<placeNo> Cross No.

<placeName> Cross name

<cameraNo> Camera No.

<cameraName> Camera name

<cameraAreaNo> Camera lane/detection region No., 1-128

<cameraId> Camera ID, not applied in interface

LaneRunManageAreasList XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<LaneRunManageAreasList>
<LaneRunManageAreas>      // Parameter structure, see protocol in item above
<id><!-- req, xs: integer --></id>
<action><!-- dep, xs: integer --></action>
<areaNo><!-- req, xs: integer --></areaNo>
<areaName><!-- dep, xs:string --></areaName>
<direction><!-- req, xs: integer --></direction>
<placeNo><!-- req, xs:string --></placeNo>
<placeName><!-- req, xs:string --></placeName>
<cameraNo><!-- req, xs:string --></cameraNo>
```

```
<cameraName><!-- req, xs:string --></cameraName>
<cameraAreaNo><!-- req, xs: integer --></cameraAreaNo>
<cameraId><!-- dep, xs: integer --></cameraId>
</LaneRunManageAreas>
//…Repeat <LaneRunManageAreas> Structure
</LaneRunManageAreasList>
```

Test cases

GET /CGI/ITS/LaneRun/Manage/Areas

Request XML: none

Response XML: <LaneRunManageAreasList>

```
<?xml version="1.0" encoding="UTF-8"?>
<LaneRunManageAreasList>
<LaneRunManageAreas>
<id>1</id>
<areaNo>1</areaNo>
<areaName>test</areaName>
<direction>0</direction>
<placeNo>test1</placeNo>
<placeName>test1</placeName>
<cameraNo>123</cameraNo>
<cameraName>test</cameraName>
<cameraAreaNo>1</cameraAreaNo>
<cameraId>1</cameraId>
</LaneRunManageAreas>
<LaneRunManageAreas>
<id>2</id>
…
</LaneRunManageAreas>
</LaneRunManageAreasList>
```

2.14.65 /CGI/ITS/ServerUpload

/CGI/ITS/ServerUpload	
GET	
Description	Acquire uploaded parameters
Query	None
Inbound Data	None
Success Return	**<ServerUpload>**
PUT	
Description	Set uploaded parameters
Query	None
Inbound Data	**<ServerUpload>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
This protocol is prepared for acquiring and setting the uploaded parameters of bayonet.
Explanations on key parameters:
<serverIp> Server ip
<serverPort> Server port
<version> Platform version: 0:7.0 and lower; 1:7.1 and higher (above 7.1 in general)
<resEnable> Package return enabling
<picNameuerDefEnable> Enabling of picture name customization
<separator> Separator, corresponding to Ascii code
<picNameList> Structure list of customized picture name
<picName> Structure of customized picture name
<nameType> Picture type number, as follows

ServerUpload XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<ServerUpload>
<serverIp><!-- req, xs:string --></serverIp>
<serverPort><!-- req, xs: integer --></serverPort>
<version><!-- req, xs: integer --></version>
<resEnable><!-- req, xs: boolean --></resEnable>
<picNameuerDefEnable><!-- req, xs: boolean --></picNameuerDefEnable>
<separator><!-- req, xs: string --></separator>
<picNameList>
<picName>
<nameType><!-- req, xs: integer --></nameType>
</picName>
</picNameList>
</ServerUpload>
```

Test cases

GET /CGI/ITS/ServerUpload/

Request XML: none

Response XML: <ServerUpload>

PUT /CGI/ITS/ServerUpload/

Request XML: <ServerUpload>

Response XML: <ResponseStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<ServerUpload>
<serverIp>192.168.1.10</serverIp>
<serverPort>5605</serverPort>
<version>1</version>
<resEnable>true</resEnable>
<picNameuerDefEnable>true</picNameuerDefEnable>
<separator>_</separator>
<picNameList>
<picName>
<nameType>1</nameType>
</picName>
<picName>
<nameType>4</nameType>
</picName>
</picNameList>
</ServerUpload>
```

2.14.66 /CGI/ITS/HostId

/CGI/ITS/HostId **General Resource v2.0**	
GET	
Description	Acquire host No.
Query	**None**
Inbound Data	**None**
Success Return	**<HostInfo>**
PUT	
Description	Set host No.
Query	**None**
Inbound Data	**<HostInfo>**
Success Return	**<ResponseStatus>**

Explanations on protocol: Set and query host No. **Explanations of parameters:** hostId: Host No., 3-20bit, invalid if value is 0

HostInfo XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<hostInfo version="1.0">
<hostId><!-- req, xs: string --></hostId>
</hostInfo>
```

Test cases

GET /CGI/ITS/HostId

Request XML: none

Response XML: <HostInfo>

PUT /CGI/ITS/HostId

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<hostInfo version="2.0">
<hostId>001</hostId>
</hostInfo>
```

2.14.67 /CGI/ITS/PicDelPolicy

/CGI/ITS/PicDelPolicy **General Resource v2.0**	
GET	
Description	Acquire picture deletion strategy
Query	**None**
Inbound Data	**None**
Success Return	**<PicDelPara>**
PUT	
Description	Set picture deletion strategy
Query	**None**
Inbound Data	**<PicDelPara>**
Success Return	**<ResponseStatus>**
Explanations on protocol: Set and query picture deletion strategy. **Explanations of parameters:** delNum: Number of deleted records, 6 bits keepDay: Days of keeping uploaded records, 6 bits startTime: Start time of record deleting, hh:mm:ss stopTime: Stop time of record deleting, hh:mm:ss maxNum: Max. number of keeping records, 7 bits	

PicDelPara XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<picDelPara version="1.0">
<delNum><!-- req, xs:integer --></delNum>
<keepDay><!-- req, xs:integer --></keepDay>
<startTime><!-- req, xs: datetime --></startTime>
<stopTime><!-- req, xs: datetime --></stopTime>
<maxNum><!-- req, xs:integer --></maxNum>
</picDelPara>
```

Test cases

GET /CGI/ITS/PicDelPolicy

Request XML: none

Response XML: <PicDelPara>
PUT /CGI/ITS/ PicDelPolicy
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<picDelPara version="2.0">
<delNum>500</delNum>
<keepDay>20</keepDay>
<startTime>10:31:00</startTime>
<stopTime>11:31:00</stopTime>
<maxNum>1000000</maxNum>
</picDelPara>
```

2.14.68 /CGI/ITS/DataQuery

/CGI/ITS/DataQuery	**General Resource v2.0**
POST	
Description	Query bayonet data
Query	**None**
Inbound Data	**<DataQueryCondition>**
Success Return	**<DataQueryResult>**

Explanations on protocol:
Query bayonet data
Explanations of parameters:
Query xml:
startTime: Start time
endTime: End time
beginId: Begin No.
endId: End No.
crossId: Cross No., 40 bits; means all crosses if number is null
laneId: Lane No. 0x7fffffff: means all lanes
upLoadStat: Upload state; 0x7fffffff: means all states
vehicleType: Vehicle type; 0x7fffffff: means all types
brand: Vehicle brand; 0x7fffffff: means all brands
color: Vehicle color; 0x7fffffff: means all colors
direction: Driving direction; 0x7fffffff: means all directions
illegalType: Illegal type; 0x7fffffff: means all types
plateType: Plate type; 0x7fffffff: means all types
license: License number; 32 bits; means all licenses if number is null
maxOrderId: Query max. ID; this field is 0 in the first query
count: Query execution result of total amount; if query of total count is not executed, this value is 0
subbrand: Vehicle sub-brand; 0x7fffffff: means all brands

Reply xml:
count: Total count of query result
index: Index of query result
orderId: Table No.
chn: Channel No.
time: Occurrence time of bayonet alarm
crossName: Cross name, 40 bits; means all crosses if number is null
picNum: Number of snapshot pictures
picName: Name of snapshot picture; 32 bits
picSrc: http path of picture; 256 bits
licencePicNum: Number of snapshot license pictures
licencePicName: Name of snapshot license pictures; 32 bits

licencePicSrc: http path of snapshot license pictures; 256 bits
facePicNum: Number of snapshot face pictures
facePicName: Name of snapshot face pictures; 32 bits
facePicSrc: http path of snapshot face pictures; 256 bits
subbrand: Vehicle sub-brand; 0x7fffffff: means all brands

DataQueryCondition XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<dataQueryCondition version="2.0">
<timeSpanList>
<timeSpan>
<startTime><!-- req, xs: datetime --></startTime>
<endTime><!-- req, xs: datetime --></endTime>
</timeSpan>
</timeSpanList>
<sessionId><!—req,sx:integer--></sessionId>
<beginId><!—req,sx:integer--></beginId>
<endId><!—req,sx:integer--></endId>
<crossId><!—req,sx:string--></crossId>
<laneId><!—req,sx: integer--></laneId>
<upLoadStat><!—req,sx:integer--></upLoadStat>
<vehicleType><!—req,sx:integer--></vehicleType>
<brand><!—req,sx:integer--></brand>
<subbrand><!—req,sx:integer--></subbrand>
<color><!—req,sx:integer--></color>
<direction><!—req,sx:integer--></direction>
<illegalType><!—req,sx:integer--></illegalType>
<plateType><!—req,sx:integer--></plateType>
<license><!—req,sx: string--></license>
<maxOrderId ><!—req,sx:integer--></maxOrderId>
<count><!—req,sx:integer--></count>
</dataQueryCondition>
```

DataQueryResult XML Block

```
<dataQueryResult version="2.0">
<sessionId><!—req,sx:integer--></sessionId>
<count><!—req,sx:integer--></count>
<matchList>
<matchElement>
<index><!—req,sx:integer--></index>
<orderId><!—req,sx:integer--></orderId>
<chn><!—req,sx:integer--></chn>
<crossId><!—req,sx:string--></crossId >
<crossName><!—req,sx:string--></crossName>
<laneId><!—req,sx: integer--></laneId>
<time><!—req,sx: time--></time>
<upLoadStat><!—req,sx:integer--></upLoadStat>
<vehicleType><!—req,sx:integer--></vehicleType>
<brand><!—req,sx:integer--></brand>
<subbrand><!—req,sx:integer--></subbrand>
<color><!—req,sx:integer--></color>
<direction><!—req,sx:integer--></direction>
<illegalType><!—req,sx:integer--></illegalType>
<plateType><!—req,sx:integer--></plateType>
<license><!—req,sx: string--></license>
<picNum><!—req,sx:integer--></picNum>
<picList>
<pic>
<id><!—req,sx:integer--></id>
```

```
<picName><!—req,sx: string--></picName>
<picSrc><!—req,sx: string--></picSrc>
</pic>
<id><!—req,sx:integer--></id>
<picName><!—req,sx: string--></picName>
<picSrc><!—req,sx: string--></picSrc>
</pic>
…
<pic>
<id><!—req,sx:integer--></id>
<picName><!—req,sx: string--></picName>
<picSrc><!—req,sx: string--></picSrc>
</pic>
</picList>

<licencePicNum><!—req,sx:integer--></licencePicNum>
<licencePicList>
<licencePic>
<id><!—req,sx:integer--></id>
<licencePicName><!—req,sx: string--></licencePicName>
<licencePicSrc><!—req,sx: string--></licencePicSrc>
</licencePic>
<id><!—req,sx: integer --></id>
<licencePicName><!—req,sx: string--></licencePicName>
<licencePicSrc><!—req,sx: string--></licencePicSrc>
</licencePic>
…
<licencePic>
<id><!—req,sx: integer --></id>
<licencePicName><!—req,sx: string--></licencePicName>
<licencePicSrc><!—req,sx: string--></licencePicSrc>
</licencePic>
</licencePicList>
<facePicNum><!—req,sx:integer--></facePicNum>
<facePicList>
<facePic>
<id><!—req,sx: integer --></id>
<facePicName><!—req,sx: string--></facePicName>
<facePicSrc><!—req,sx: string--></facePicSrc>
</facePic>
<id><!—req,sx: integer --></id>
<facePicName><!—req,sx: string--></facePicName>
<facePicSrc><!—req,sx: string--></facePicSrc>
</facePic>
…
<facePic>
<id><!—req,sx: integer --></id>
<facePicName><!—req,sx: string--></facePicName>
<facePicSrc><!—req,sx: string--></facePicSrc>
</facePic>
</facePicList>
</matchList>
</matchElement>
</dataQueryResult>
```

Test cases

POST /CGI/ITS/DataQuery

Request XML: <DataQueryCondition> As follows

```
<?xml version="1.0" encoding="UTF-8"?>
<dataQueryCondition version="1.0">
<timeSpanList>
<timeSpan>
<startTime>2018-08-01T00:00:00Z</startTime>
<endTime>2018-08-02T23:59:59Z</endTime>
</timeSpan>
</timeSpanList>
<sessionId>1</sessionId>
<beginId>0</beginId>
<endId>100</endId>
<crossId></crossId>
<crossName></crossName>
<laneId>2147483647</laneId>
<upLoadStat>2147483647</upLoadStat>
<vehicleType>2147483647</vehicleType>
<brand>2147483647</brand>
<subbrand>2147483647</subbrand>
<color>2147483647</color>
<direction>2147483647</direction>
<illegalType>2147483647</illegalType>
<platType>2147483647</platType>
<license></license>
<maxOrderId>0</maxOrderId>
<iCount>0</iCount>
</dataQueryCondition>
```


Response XML: <dataQueryResult>


```
<dataQueryResult version="2.0">
<sessionId>1</sessionId>
<iCount>20</iCount>
<matchList>
<matchElement>
<index>0</index>
<orderId>0</orderId>
<ichn>1</ichn>
<crossId>1</crossId >
<crossName> Huake No. 2 Road </crossName>
<laneId>1</laneId>
<time>2018-07-10T12:00:00Z</time>
<upLoadStat>1</upLoadStat>
<vehicleType>1</vehicleType>
<brand>2</brand>
<color>2</color>
<direction>1</direction>
<illegalType>1</illegalType>
<license>Jin A.88888</license>
<picNum>10</picNum>
<picList>
<pic>
<id>0</id>
<picName>XXXX</picName>
</pic>
<id>1</id>
<picName>XXXX</picName>
</pic>
…
<pic>
```

```
<id>n</id>
<picName>XXXX</picName>
</pic>
</picList>
<licencePicNum>5</licencePicNum>
<licencePicList>
<licencePic>
<id>0</id>
<licencePicName>XXXX</licencePicName>
</licencePic>
<id>1</id>
<licencePicName>XXXX</licencePicName>
</licencePic>
…
<licencePic>
<id>n</id>
<licencePicName>XXXX</licencePicName>
</licencePic>
</licencePicList>
<facePicNum>3</facePicNum>
<facePicList>
<facePic>
<id>0</id>
<facePicName>XXXX</facePicName>
</facePic>
<id>1</id>
<facePicName>XXXX</facePicName>
</facePic>
…
<facePic>
<id>n</id>
<facePicName>XXXX</facePicName>
</facePic>
</facePicList>
</matchList>
</matchElement>
</dataQueryResult>
```


2.14.69 /CGI/ITS/CountQuery

/CGI/ITS/CountQuery **General Resource v2.0**	
POST	
Description	Query the total amount of bayonet data
Query	None
Inbound Data	**<CountQueryCondition>**
Success Return	**<CountQueryResult>**
Explanations on protocol: Query bayonet data **Explanations of parameters:** Query xml: startTime: Start time endTime: End time sessionId: Session ID crossId: Cross ID consist of 40 bits, empty ID means all crosses. laneId: Lane No. 0x7fffffff: means all lanes upLoadStat: Upload state; 0x7fffffff: means all states	

vehicleType: Vehicle type; 0x7fffffff: means all types
brand: Vehicle brand; 0x7fffffff: means all brands
color: Vehicle color; 0x7fffffff: means all colors
direction: Driving direction; 0x7fffffff: means all directions
illegalType: Illegal type; 0x7fffffff: means all types
plateType: Plate type; 0x7fffffff: means all types
license: License number; 32 bits; means all licenses if number is null

Reply xml:
count: Total pieces of query results, -1, means the query time is too long and not supported; 2 busy external hanging

CountQueryCondition XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<countQueryCondition version="1.0">
<timeSpanList>
<timeSpan>
<startTime><!—req,sx:datetime--></startTime>
<endTime><!—req,sx:datetime--></endTime>
</timeSpan>
</timeSpanList>
<sessionId><!—req,sx:integer--></sessionId>
<crossId><!—req,sx:integer--></crossId >
<laneId><!—req,sx:integer--></laneId>
<upLoadStat><!—req,sx:integer--></upLoadStat>
<vehicleType><!—req,sx:integer--></vehicleType>
<brand><!—req,sx:integer--></brand>
<color><!—req,sx:integer--></color>
<direction><!—req,sx:integer--></direction>
<illegalType><!—req,sx:integer--></illegalType>
<plateType><!—req,sx:integer--></palteType>
<license><!—req,sx:string--></license>
<maxOrderId ><!—req,sx:integer--></maxOrderId>
<count><!—req,sx:integer--></count>
</countQueryCondition>
```

CountQueryResult XML Block

```
<countQueryResult version="1.0">
<count><!—req,sx:integer--></count>
</countQueryResult>
```

Test cases

POST /CGI/ITS/DataQuery/

Request XML: <DataQueryCondition> As follows

```
<?xml version="1.0" encoding="UTF-8"?>
<countQueryCondition version="1.0">
<timeSpanList>
<timeSpan>
<startTime>2018-07-10T12:00:00Z</startTime>
<endTime>2018-07-10T13:30:00Z</endTime>
</timeSpan>
</timeSpanList>
<sessionId>1</sessionId>
<crossId>1</crossId >
<laneId>1</laneId>
<upLoadStat>0</upLoadStat>
<vehicleType>1</vehicleType>
<brand>20</brand>
<color>3</color>
```

```
<direction>1</direction>
<illegalType>2</illegalType>
<license>Jin A.88888</license>
</countQueryCondition>
```

Response XML: <dataQueryResult>

```
<countQueryResult version="1.0">
<count>20</count>
</countQueryResult>
```

2.14.70 /CGI/ITS/DelData

/CGI/ITS/Deldata/	**General Resource v2.0**
POST	
Description	Delete bayonet data
Query	None
Inbound Data	**<DelDataPara>**
Success Return	**<DelDataResult>**

Explanations on protocol:
Deletion of bayonet data, single pieces or multiple pieces
Explanations of parameters:
Query xml:
delNum: Delete the total number of records, and 40 pieces can be deleted at the most at one time.
orderId: The ID recorded in table

Reply xml:
failNum: Delete the total failed umber of records
orderId: The ID recorded in table

DelDataPara XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<delDataPara version="2.0">
<delNum><!—req,sx:integer--></delNum>
<orderIdlist>
<orderId>
<id><!—req,sx:integer--></id>
</orderId>
</orderIdlist>
</delDataPara >
```

DelDataResult XML Block

```
<delDataResult version="2.0">
<failNum><!—req,sx:integer--></failNum>
<orderIdlist>
<orderId>
<id><!—req,sx:integer--></id>
</orderId>
</orderIdlist>
</delDataResult>
```

Test cases
POST /CGI/ITS/DelData
Request XML: <DelDataPara> as below

```
<?xml version="1.0" encoding="UTF-8"?>
<delDataPara version="1.0">
<delNum>2</delNum>
<orderIdList>
<orderId>
<id>5799</id>
</orderId >
<orderId>
<id>5798</id>
</orderId >
</orderIdList>
</delDataPara>
```

Response XML: <DelDataResult>

```
<delDataResult version="2.0">
<failNum>1</failNum>
<orderIdList>
<orderId>
<id>5799</id>
</orderId >
</orderIdList>
</delDataResult>
```

2.14.71 /CGI/ITS/ModifyData

/CGI/ITS/ModifyData	**General Resource v2.0**
PUT	
Description	Modify record content
Query	**None**
Inbound Data	**<ModifyPara>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
Modify the record content queried.
Explanations of parameters:
orderId: Table No.
vehicleType: Vehicle type; 0x7fffffff: means all types
brand: Vehicle brand; 0x7fffffff: means all brands
subbrand: Vehicle sub-brand; 0x7fffffff: means all brands
color: Vehicle color; 0x7fffffff: means all colors
illegalType: Illegal type; 0x7fffffff: means all types
license: License number; 32 bits; means all licenses if number is null
picName: Name of the first picture captured is of 32 bits
licenseColor: License color, 0: white; 1: yellow; 2: blue; 3: black; 4: green; 51: yellow; 52: gradient green; 53: red; 99: unknown;

PicDelPara XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<modifyPara version="2.0">
<orderId><!—req,sx:integer--></orderId>
<vehicleType><!—req,sx:integer--></vehicleType>
<brand><!—req,sx:integer--></brand>
<subbrand><!—req,sx:integer--></subbrand>
<color><!—req,sx:integer--></color>
<illegalType><!—req,sx:integer--></illegalType>
<license><!—req,sx: string--></license>
<picName><!—req,sx: string--></picName>
<licenseColor><!—req,sx:integer--></licenseColor></modifyPara>
```

Test cases

PUT /CGI/ITS/ PicDelPolicy
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<ModifyPara version="2.0">
<orderId>1</orderId>
<vehicleType>2</vehicleType>
<brand>20</brand>
<subbrand>2</subbrand>
<color>1</color>
<illegalType>2</illegalType>
<license> Jin A8888</license>
<picName>xxxx</picName>
<licenseColor>99</licenseColor></ModifyPara>
```

2.14.72 /CGI/ITS/Capability

/CGI/ITS/Capability **General Resource v2.0**	
POST	
Description	Bayonet acquisition capability set
Query	**None**
Inbound Data	**<Condition>**
Success Return	**<Capability>**

Explanations on protocol:
Acquire the list of the parameters of query conditions
Explanations of parameters:
Request xml
type: request type, 4. Driving direction 5. Vehicle type 7. Vehicle brand 9. Body color 1. Cross ID/ address name; 2. Lane No./ name of monitoring area; 3. Equipment No./ equipment name; 4. Type of driving direction; 5. Vehicle type; 6. Capture type; 7. Vehicle brand; 8. License; 9. Body color; 10. Name and format of picture; 11. Platform version; vehicle Type: vehicle type
vehicleType: Vehicle type
brand: Vehicle brand
color: Body color
direction: Driving direction

Condition XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<condition version="2.0">
<elementList>
<element>
<type><!—req,sx: integer --></type>
</element>
…
</elementList>
</condition>
```

Capability XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<capability version="2.0">
<vehicleTypeList>
<vehicleType>
<value><!—req,sx:integer--></value>
<para><!—req,sx:string--></para>
</vehicleType>
…
</vehicleTypeList>
<brandList>
```

```
<brand>
<value><!—req,sx:integer--></value>
<para><!—req,sx:string--></para>
</brand>
…
</brandList>
<subBrandList>
<subBrand>
<value><!—req,sx:integer--></value>
<para><!—req,sx:string--></para>
</subBrand>
…
</subBrandList>

<colorList>
<color>
<value><!—req,sx:integer--></value>
<para><!—req,sx:string--></para>
</color>
…
</colorList>
<directionList>
<direction>
<value><!—req,sx:integer--></value>
<para><!—req,sx:string--></para>
</direction>
…
</directionList>
</capability>
```

Test cases

POST /CGI/ITS/Capability/

Request XML: <Condition>

```
<?xml version="2.0" encoding="UTF-8"?>
<condition version="2.0">
<elementList>
<element>
<type>4</type>
</element>
<element>
<type>5</type>
</element>
<element>
<type>7</type>
</element>
<element>
<type>9</type>
</element>
…
</elementList>
</condition>
```

Response XML: <Capability>

```
<?xml version="2.0" encoding="UTF-8"?>
<capability version="2.0">
<vehicleTypeList>
<vehicleType>
<value>1</value>
<para>truck</para>
```

```
</vehicleType>
…
</vehicleTypeList>
<brandList>
<brand>
<value>1</value>
<para>Volkswagen</para>
</brand>
…
</brandList>
<colorList>
<color>
<value>1</value>
<para>Red</para>
</color>
…
</colorList>
<directionList>
<direction>
<value>1</value>
<para> From right to left</para>
</direction>
…
</directionList>
</capability >
```

2.14.73/CGI/ITS/LaneRun/TrafficJamPara/channels/<ID>

/CGI/ITS/LaneRun/TrafficJam**Para/channels/<ID>General Resource v2.0**	
GET	
Description	Acquire driveintojamcross parameter
Query	None
Inbound Data	None
Success Return	**<TrafficJamPara>**
PUT	
Description	Set driveintojamcross parameter
Query	None
Inbound Data	**<TrafficJamPara>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for the acquisition and setting of the driveintojamcross parameters of the illegal snap, helping client or IE query and setthe driveintojamcross of equipment via CGI protocol. **Explanations on key parameters:** <trafficLightCheckTimes> Traffic light check times, 3-5. < trafficJamCapDelayTime> trafficJamCapDelayTime, in second, 1-60. <trafficJamCheckLightType> whether to use the status of traffic lights when entering the cross to snap, 0 not defined, 1 snap only the green light is on	

TrafficJamPara XML Block

```
<TrafficJamPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<trafficLightCheckTimes>
<!-- req, xs:integer -->
</trafficLightCheckTimes>
< trafficJamCapDelayTime>
```

```
<!-- req, xs:integer -->
</ trafficJamCapDelayTime>
<trafficJamCheckLightType>
<!-- req, xs:integer -->
</ trafficJamCheckLightType>
</trafficJamPara>
```

Test cases

GET /CGI/ITS/LaneRun/TrafficJamPara/channels/1

Request XML： none

Response XML: < TrafficJamPara>

PUT/CGI/ITS/LaneRun/TrafficJamPara/channels/1

Response XML: < TrafficJamPara>

Request XML： as below

```
<?xml version="2.0" encoding="UTF-8"?>
< trafficJamPara >
<trafficLightCheckTimes>2</trafficLightCheckTimes>
< trafficJamCapDelayTime>30</ trafficJamCapDelayTime>
<trafficJamCheckLightType>0</ trafficJamCheckLightType>
</trafficJamPara>
```

2.14.74/CGI/ITS/SystemRun/ItsAlarmLinkAudio/channels/<ID>/scene/<ID>

/CGI/ITS/SystemRun/ItsAlarmLinkAudio/channels/<ID>/scene/<ID> **General Resource v2.0**	
GET	
Description	Acquire traffic alarm linkage audio parameters
Query	None
Inbound Data	None
Success Return	**<ItsAlarmLinkAudio>**
PUT	
Description	Set traffic alarm linkage audio parameters
Query	None
Inbound Data	**<ItsAlarmLinkAudio>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring and setting traffic alarm linkage audio parameters, helping client or IE query and sett traffic alarm linkage audio parameters via CGI protocol. **Explanations on key parameters:** <playMode> means play mode, 1: Illegal alarm 2: Loop payback <playModeEnable> means play mode enable, true: Enable; false : Not enable <audioType> means the type of linkage audio 1: Audio files 2: Text <audioNo> means the N. of linkage audio 1~20 < audioText> means the length of the text input is not more than 64 characters	

ItsAlarmLinkAudio XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<ItsAlarmLinkAudio version="2.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<ItsAlarmLinkAudioList>
<ItsAlarmLinkAudioInfo>
<playMode><!-- req, xs:integer--></playMode>
    <playModeEnable><!-- req, xs:boolean --></playModeEnable>
    <audioType><!-- req, xs:integer--></audioType>
    <audioNo><!-- req, xs:integer--></audioNo>
    <audioText><!-- req, xs:string--></audioText>
</ItsAlarmLinkAudioInfo>
</ItsAlarmLinkAudioList>
</ItsAlarmLinkAudio>
```

Test cases
GET /CGI/ITS/SystemRun/ItsAlarmLinkAudio/channels/1/scene/1
Request XML： none
Response XML: <ItsAlarmLinkAudio>
PUT /CGI/ITS/SystemRun/ItsAlarmLinkAudio/channels/1/scene/1
Response XML： <ResponseStatus>
Request XML： as below

```
<?xml version="1.0" encoding="UTF-8"?>
<ItsAlarmLinkAudio>
<ItsAlarmLinkAudioList>
<ItsAlarmLinkAudioInfo>
<playMode>1</playMode>
<playModeEnable>true</playModeEnable>
<audioType>1</audioType>
<audioNo>2</audioNo>
<audioText></audioText>
</ItsAlarmLinkAudioInfo>
<ItsAlarmLinkAudioInfo>
<playMode>2</playMode>
<playModeEnable>true</playModeEnable>
<audioType>2</audioType>
<audioNo>3</audioNo>
<audioText> please lay attention to safety </audioText>
</ItsAlarmLinkAudioInfo>
</ItsAlarmLinkAudioList>
</ItsAlarmLinkAudio>
```

2.14.75 /CGI/ITS/ComityPedestrianPara/channels/<ID>/scences/<ID>

/CGI/ITS/ComityPedestrianPara/channels/<ID>/scences/<ID>General Resource v2.0	
GET	
Description	Acquire motor vehicle gives way to pedestrian parameters
Query	None
Inbound Data	None
Success Return	**<ComityPedestrianPara>**
PUT	
Description	Set motor vehicle gives way to pedestrian parameters
Query	None
Inbound Data	**<ComityPedestrianPara>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring and setting motor vehicle gives way to pedestrian parameters, helping client or IE query and set motor vehicle gives way to pedestrian parameters via CGI protocol. **Explanations on key parameters:** <captureMode> snap mode 0- no signal light 1- pedestrian signal light 2- vehicle pedestrian light <capPedestrianOrientation> Direction of pedestrians upon snap 0-not defined 1- pedestrian from left to right 2- pedestrian from right to left <laneRunNum> Lane No. <pedestrianDispSensitivity> pedestrian displacement sensitivity corresponding to lane, 1-100	

ComityPedestrianPara XML Block

```
<ComityPedestrianPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<captureMode><!-- req, xs:integer --></captureMode>
<capPedestrianOrientation><!-- req, xs:integer --></capPedestrianOrientation>
<ComityPedestrianLaneList>
<ComityPedestrianLaneInfo>
    <laneRunNum><!-- req, xs:integer--></laneRunNum>
    <pedestrianDispSensitivity><!-- req, xs:integer--></pedestrianDispSensitivity>
</ComityPedestrianLaneInfo>
</ComityPedestrianLaneList>
</ComityPedestrianPara>
```

Test cases

GET /CGI/ITS/ComityPedestrianPara/channels/1

Request XML: none

Response XML: <ComityPedestrianPara>

PUT/CGI/ITS/ComityPedestrianPara/channels/1

Response XML: <ComityPedestrianPara>

Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<ComityPedestrianPara>
<captureMode>0</captureMode>
<capPedestrianOrientation>1</capPedestrianOrientation>
<ComityPedestrianLaneList>
<ComityPedestrianLaneInfo>
    <laneRunNum>1</laneRunNum>
    <pedestrianDispSensitivity>80</pedestrianDispSensitivity>
</ComityPedestrianLaneInfo>
</ComityPedestrianLaneList>
</ComityPedestrianPara>
```

2.14.76/CGI/ITS/ShotPara/PicOsdExcept/channels/<ID>

/CGI/ITS/ShotPara/PicOsdExcept /channels/<ID> **General Resource v2.0**	
GET	
Description	Acquire picture overlay exception parameter
Query	None
Inbound Data	None
Success Return	<PicOsdExcept>
PUT	
Description	Set picture overlay exception parameter
Query	None
Inbound Data	<PicOsdExcept>
Success Return	**<ResponseStatus>**
Explanations on protocol: This protocol is prepared for acquiring and setting picture overlay exception parameters, helping client or IE query and set picture overlay exception parameters via CGI protocol. **Explanations on key parameters:** pageIndex /<pageIndex> means the number of the page. 0- composite picture, 1- first page, 2- second page, 3- third page capType /<capType> means the numbering scope of illegal types, 1-100, consistent with the illegal type of the page of illegal dictionary. <noPlusType> means the type of character overlay exception information, and character overlay information of traffic pictures.	

PictureOverlay XML Block

```
<PicOsdExcept="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<pageIndexList>
<pageIndexData>
<pageIndex><!-- req, xs:integer--></pageIndex>
<capTypeList>
<capTypeData>
<capType><!-- req, xs: integer --></capType>
<noPlusTypeList>
<noPlusTypeData>
<noPlusType><!-- req, xs:integer--></noPlusType>
</ noPlusTypeData>
</ noPlusTypeList>
</capTypeData>
</capTypeList>
< /pageIndexData>
</ pageIndexList>
</PicOsdExcept>
```

Test cases

GET /CGI/ITS/ShotPara/PicOsdExcept/channels/1

Request XML: none

Response XML: <PicOsdExcept>

PUT /CGI/ITS/ShotPara/PicOsdExcept/channels/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<PicOsdExcept>
<pageIndexList>
<pageIndexData>
<pageIndex>1</pageIndex>
<capTypeList>
<capTypeData>
<capType>1</capType>
<noPlusTypeList>
<noPlusTypeData>
<noPlusType>1</noPlusType>
</noPlusTypeData>
</noPlusTypeList>
</capTypeData>
</capTypeList>
</pageIndexData>
</pageIndexList>
</PicOsdExcept>
```

2.14.77 /CGI/ITS/OverSpeedIllegalPara/channels/<ID>/scences/<ID>

/CGI/ITS/ OverSpeedIllegalPara /channels/<ID>/scences/<ID>General Resource v2.0	
GET	
Description	Acquire vehicle overspeed snap parameters
Query	None
Inbound Data	None
Success Return	**<OverSpeedIllegalPara>**
PUT	
Description	Set vehicle overspeed snap parameters
Query	None

Inbound Data	<OverSpeedIllegalPara>
Success Return	<ResponseStatus>
Explanations on protocol: This protocol is prepared for acquiring and setting picture overlay exception parameters, helping client or IE query and set picture overlay exception parameters via CGI protocol. **Explanations on key parameters:** <carOverSpeedTypeEnable> car over speed type enable; false- disaable; true- enable	

OverSpeedIllegalPara XML Block

```
< OverSpeedIllegalPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<carOverSpeedTypeEnable><!-- req, xs: Boolean --></carOverSpeedTypeEnable>
</ OverSpeedIllegalPara >
```

Test cases

GET /CGI/ITS/OverSpeedIllegalPara/channels/1/scences/1

Request XML: none

Response XML: <OverSpeedIllegalPara>

PUT /CGI/ITS/OverSpeedIllegalPara/channels/1/scences/1

Response XML: <ResponseStatus>

Request XML: as below

```
<?xml version="1.0" encoding="UTF-8"?>
<OverSpeedIllegalPara>
<carOverSpeedTypeEnable>true</carOverSpeedTypeEnable>
</OverSpeedIllegalPara>
```

2.14.78 traffic picture character overlaying information

0	Overlay time enable
1	Overlay cross name enable
2	Overlay lane name enable
3	Overlay lane direction enable
4	Overlay speed
5	Overlay speed limit
6	Overlay overspeed ratio
7	Overlay license enable
8	Overlay equipment No. enable
9	Overlay red light time
10	Overlay illegal park test time set enable
11	Overlay illegal park test No. enable, such as “preset 1 region 3”
12	Regional setting display overlay enable
13	DSP module debugging information display enable
14	Command of illegal park prompt display switch
15	Overlay watch position enable
16	Overlay equipment status enable
17	Overlay license color
18	Overlay body color enable
19	Overlay cross No. enable
20	Overlay illegal type enable
21	Overlay lane upgoing / downgoing enable
22	Overlay security code
23	Overlay car logo enable
24	Lane No.

25	Red light ending time
26	Overlay safety belt enable
27	Overlay post-red light enable
28	Overlay acquisition agency code enable
29	Overlay vehicle type enable
30	Overlay self-definition 1 enable
31	Overlay self-definition 2 enable
32	Overlay illegal code enable
33	Overlay license thumbnail enable
34	Overlay main driver face detect enable
35	Overlay sec pilot face detect enable
36	Overlay illegal park box enable
37	Overlay listening phone
38	Main driver's sun visor overlay enable
39	Co-driver's sun visor overlay enable
40	Overlay hazardous chemical vehicle enable
41	Overlay yellow label car vehicle
42	Overlay pendant enable
43	Overlay tissue box enable
44	Overlay annual inspection label enable
45	Overlay distant light enable
46	Overlay out top window enable
47	Overlay abnormal license enable
48	Overlay lathe parabolic enable
49	Overlay gender detect enable
50	Face thumbnail
51	Overlay check car head
52	Overlay channel property
53	Overlay cradle child in front row
54	Overlay age information
55	Overlay eye information
56	Overlay facial mask information
57	Background image overlays thumbnail position display
58	Overlay race information

2.14.79 illegal dictionary

ID	**Illegal action**
0	
1	Motor vehicles that travel in reverse direction
2	Motor vehicles that travel failing to observe signal lights
3	Motor vehicles that travel not inside motorway
4	Motor vehicles that do not drive into the lane according to the needed driving direction when passing by light control cross
5	Motor vehicles that violate the indications of ban markings

6	Motor vehicles that park and wait within the crosswalk and cross hatch when the motor vehicles in the front are parking or queuing or travelling slowly
7	Motor vehicles that travel over the specified speed per hour
8	Motor vehicles that turn round in the places where there are the signs and graticules that forbid turning round or left
9	Motor vehicles that use the special lanes in violation of the rules
10	Motor vehicles that reverse in violation of the rules
11	Motor vehicles that affect the motor vehicles travelling normally when changing lane
12	Motor vehicles that violate the indications of prohibitory signs.
13	Drivers or passengers do to use safety belt as required
14	Drivers that listen to phone while driving
15	Motor vehicles that do not decelerate or stop and give way to walking people when passing crosswalk
16	Motor vehicles that do not give way to vehicles and pedestrians that go straight when turning
17	Motor vehicles that overtake in crosswalks or road sections where the traffic is busy
18	Drive motor vehicles less than 10% over the specified speed per hour
19	Drive motor vehicles other than passenger and cargo vehicles above medium-size and hazardous goods transportation vehicles at a speed more than 10% but less than 20% over the specified speed
20	Drive motor vehicles other than passenger and cargo vehicles above medium-size, school buses and hazardous goods transportation vehicles on the roads other than expressway at a speed more than 20% but less than 30% over the specified speed.
21	Drive motor vehicles other than passenger and cargo vehicles above medium-size, school buses and hazardous goods transportation vehicles on the roads other than expressway at a speed more than 30% but less than 50% over the specified speed.
22	Drive motor vehicles other than passenger and cargo vehicles above medium-size, school buses and hazardous goods transportation vehicles on the roads other than expressway at a speed more than 50% but less than 70% over the specified speed.
23	Drive motor vehicles other than passenger and cargo vehicles above medium-size, school buses and hazardous goods transportation vehicles on the roads other than expressway at a speed more than 70% but less than 100% over the specified speed.
24	Drive motor vehicles other than passenger and cargo vehicles above medium-size, school buses and hazardous goods transportation vehicles on the roads other than expressway at a speed 100% over the specified speed.
25	Drive motor vehicles other than passenger and cargo vehicles above medium-size, school buses and hazardous goods transportation vehicles at a speed more than 20% but less than 50% over the specified speed.
26	Drive motor vehicles other than passenger and cargo vehicles above medium-size, school buses and hazardous goods transportation vehicles at a speed more than 50% over the specified speed.
27	Overtake through other lane or by occupying the opposite lane or going between waiting vehicles when the motor vehicles in front are parking and queuing or driving slowly
28	Hide vehicle license plate
29	Violate indications of traffic light

30	Hazardous goods vehicles that do not travel in the designated special lanes for hazardous goods transportation
31	Hide vehicle license plate on purpose
32	Non-motor vehicles travel not according to traffic signals
33	Pedestrians that run the red light
34	Motor vehicles that enter congested intersections illegally
35	Non-motor vehicles that travel in reverse direction
36	Drive passenger vehicles above medium-size on the roads other than expressway and urban expressway at a speed less than 10% over the specified speed per hour
37	Drive cargo trucks above medium-size on the roads other than expressway and urban expressway at a speed less than 10% over the specified speed per hour
38	Drive passenger vehicles above medium-size on the roads other than expressway and urban expressway at a speed less than 20% over the specified speed per hour
39	Drive cargo trucks above medium-size on the roads other than expressway and urban expressway at a speed less than 20% over the specified speed per hour
40	Drive passenger vehicles above medium-size on the roads other than expressway and urban expressway at a speed more than 20% but less than 50% over the specified speed per hour
41	Drive cargo trucks above medium-size on the roads other than expressway and urban expressway at a speed more than 20% but less than 50% over the specified speed per hour
42	Drive passenger vehicles above medium-size on urban expressway at a speed less than 20% over the specified speed per hour
43	Drive cargo trucks above medium-size on urban expressway at a speed less than 20% over the specified speed per hour
44	Drive passenger vehicles above medium-size on urban expressway at a speed more than 20% but less than 50% over the specified speed per hour
45	Drive passenger vehicles above medium-size on urban expressway at a speed more than 20% but less than 50% over the specified speed per hour
46	Drive passenger vehicles above medium-size on the roads other than expressway at a speed 50% over the specified speed per hour
47	Drive cargo trucks above medium-size on the roads other than expressway at a speed 50% over the specified speed per hour
48	Drive passenger vehicles above medium-size on expressway at a speed less than 20% over the specified speed per hour
49	Drive cargo trucks above medium-size on expressway at a speed less than 20% over the specified speed per hour
50	Drive passenger vehicles above medium-size on expressway at a speed more than 20% but less than 50% over the specified speed per hour
51	Drive cargo trucks above medium-size on expressway at a speed more than 20% but less than 50% over the specified speed per hour
52	Drive passenger vehicles above medium-size on expressway at a speed more than 50% over the specified speed per hour

53	Drive cargo trucks above medium-size on expressway at a speed more than 50% over the specified speed per hour
54	Horn in the areas or road sections where horning is prohibited
55	Motor vehicles do not pass in sequence and in turn when meeting motor vehicles that are parking and queuing or travelling slowly at the road sections or crosses where lanes are decreased.
56	When motor vehicles are travelling in expressway, they do not keep a safe spacing from other vehicles in the same lane.

2.14.80/CGI/ITS/ExFixture/RfidLoop/channels/<ID>/type/<type>

/CGI/ITS/ExFixture/RfidLoop/channels/<ID>/type/<type> **General Resource v2.0**	
GET	
Description	Acquire RFID loop configuration parameter
Query	None
Inbound Data	None
Success Return	**<RfidLoop>**
PUT	
Description	Set RFID loop configuration parameters
Query	None
Inbound Data	**<RfidLoop>**
Success Return	**<ResponseStatus>**
Explanations on protocol: This proposal is prepared for system type switching. <type> means camera type: 1 bayonet 2 electronic police <snap> means snap loop No.: 1-100 <turnRight> means the No. of turn right loop: 1-100 <straight> means the No. of go straight loop: 1-100 <straightRight> means the No. of go straight and turn right loop: 1-100 <straightLeft> means the No. of go straight and turn left loop: 1-100 <turnLeft> means the No. of turn left loop:1-100 <leftRetrograde> means the No. of turn left and go in the reverse direction loop :1-100 <turnAround> means the No. of turn round loop:1-100 <loopInterval> means loop spacing, in mm, scope: 1 m -10 m	

ReferenceLines XML Block

```
<RfidLoop version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<Type><!-- req, xs:integer --></Type>
<RfidLoopList>
<RfidLoopInfo>
<snap><!-- req, xs:integer --></snap>
<turnRight><!-- req, xs:integer --></turnRight>
<straight><!-- req, xs:integer --></straight>
<straightRight><!-- req, xs:integer --></straightRight>
<straightLeft><!-- req, xs:integer --></straightLeft>
<turnLeft><!-- req, xs:integer --></turnLeft>
<leftRetrograde><!-- req, xs:integer --></leftRetrograde>
<turnAround><!-- req, xs:integer --></turnAround>
<loopInterval><!-- req, xs:integer --></loopInterval>
</RfidLoopInfo>
</RfidLoopList>
</RfidLoop>
```

Test cases

GET /CGI/ITS/ExFixture/RfidLoop/channels/1/type/1

Request XML： none

Response XML: <RfidLoop>
PUT /CGI/ITS/ExFixture/RfidLoop/channels/1/type/1
Response XML: <ResponseStatus>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<RfidLoop version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<type>0</type>
<RfidLoopList>
<RfidLoopInfo>
<snap>1</snap>
<turnRight>2</turnRight>
<turnAround>5</turnAround>
<turnLeft>25</turnLeft>
<loopInterval>5000</loopInterval>
</RfidLoopInfo>
</RfidLoopList>
</RfidLoop>
```

2.14.81 /CGI/ITS/IOLinkRoad/channels/<ID>

/CGI/ITS/IOLinkRoad/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire the corresponding relationship between the io of io converter and lane
Query	None
Inbound Data	None
Success Return	**<IOLinkRoadPara>**
PUT	
Description	Set the corresponding relationship between the io of io converter and lane
Query	None
Inbound Data	**<IOLinkRoadPara>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
The protocol is prepared for acquiring and setting the corresponding relationship between the IO No. of io converter and the lane ID of traffic camera

Explanations on key parameters:
<ioNum>: means the io No. of io converter, starting from 1
<ioStatus>: means the status of io; open: normally on; close: normally off
<ipcNum>: No. of traffic camera
<roadNum>: means the lane ID of traffic camera, starting from 1. 0: clear

StreamingChannelXML Block

```
<IOLinkRoadPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<IOLinkRoadList>
<IOLinkRoadInfo>
    <ioNum><!-- req, xs:integer--></ioNum>
    <ioStatus ><!-- req, xs:string--></ioStatus >
    < ipcNum><!-- req, xs:integer--></ipcNum >
    <roadNum><!-- req, xs:integer--></roadNum>
</IOLinkRoadInfo>
</IOLinkRoadList>
</IOLinkRoadPara>
```

Test cases
GET /CGI/ITS/IOLinkRoad/channels/1
Request XML: none

Response XML: <IOLinkRoadPara>
PUT /CGI/ITS/IOLinkRoad/channels/1
Response XML: <ResponseStatus>
Request XML: as below

```
<IOLinkRoadPara version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<IOLinkRoadList>
<IOLinkRoadInfo>
<ioNum>1</ioNum>
<ioStatus>open</ioStatus>
<ipcNum>1</ipcNum>
<roadNum>1</roadNum>
</IOLinkRoadInfo>
<IOLinkRoadInfo>
<ioNum>2</ioNum>
<ioStatus>close</ioStatus>
<ipcNum>2</ipcNum>
<roadNum>2</roadNum>
</IOLinkRoadInfo>
</IOLinkRoadList>
</IOLinkRoadPara>
```

2.14.82 /CGI/ITS/Network/LaneCmrInfo

/CGI/ITS /Network/ LaneCmrInfo	**General Resource v2.0**
GET	
Description	Acquire the parameter information of traffic camera
Query	None
Inbound Data	None
Success Return	**< LaneCmrInfo >**
PUT	
Description	Set the parameter information of traffic camera
Query	None
Inbound Data	**< LaneCmrInfo >**
Success Return	**<ResponseStatus>**

Explanations on protocol:
The protocol is prepared for acquiring and setting the traffic camera IP that the current equipment needs to connect to, helping client or IE query and set the traffic camera parameters that equipment needs to connect.
Explanations on key parameters:
<id> means the No. of traffic camera
<ipAddress> traffic camera IP
< connectState > means disconnected, connect: Connect; disconnect: disconnect
< laneNumber > means number of the lanes supported

LaneCmrInfo XML Block

```
< LaneCmrInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
< cmrInfoList>
< cmrInfo>
<id><!--req, xs:integer--></id>
<ipAddress><!-- dep, xs:string --></ipaddress>
<connectState><!-- dep, xs:string, "connect,disconnect"--></connectState>
<laneNumber><!--req, xs:integer--></laneNumber>
</cmrInfo>
</cmrInfoList>
</LaneCmrInfo>
```

Test cases

GET /CGI/ITS/Network/LaneCmrInfo
Request XML: none
Response XML: < LaneCmrInfo >
PUT /CGI/ITS/Network/LaneCmrInfo
Response XML: <ResponseStatus>
Request XML: as below

```
<cmrInfoList>
<cmrInfo>
<id>1</id>
<ipAddress>192.168.1.2</ipAddress>
<connectState>connect</connectState>
<laneNumber>6</laneNumber>
</cmrInfo>
<cmrInfo>
<id>2</id>
<ipAddress>192.168.1.3</ipAddress>
<connectState>connect</connectState>
<laneNumber>4</laneNumber>
</cmrInfo>
</cmrInfoList>
</LaneCmrInfo>
```

2.14.83 /CGI/ITS/PassTrigger/channels/<ID>

/CGI/ITS/PassTrigger/channels/<ID> General Resource v2.0	
PUT	
Description	Set lane simulation of trigger car travelling signal
Query	None
Inbound Data	**<PassTrigger>**
Success Return	**<ResponseStatus>**
Explanations on protocol: The protocol is prepared for car travelling signal of lane simulation. **Explanations on key parameters:** <laneID> land ID, starting from 1	

PassTrigger XML Block

```
<PassTrigger version="2.0"xmlns="http://www.isapi.com/ver20/XMLSchema">
<laneID><!-- req, xs:integer --></laneID>
</PassTrigger>
```

Test cases
PUT/CGI/ITS/PassTrigger/channels/1
Response XML: <PassTrigger>
Request XML: as below

```
<?xml version="2.0" encoding="UTF-8"?>
<PassTrigger>
<laneID>1</laneID>
</PassTrigger>
```

2.14.84/CGI/ITS/ContentMgmt/TrafficFlowSearch/ channels/<ID>

/ISAPI/ITS/ContentMgmt/TrafficFlowSearch General Resource v2.0	
POST	
Description	Vehicle flow query
Query	None

Inbound Data	<MemFlowSearch>
Success Return	<MemFlowSearchResult>

Explanations on protocol:
The protocol is prepared for acquiring and setting vehicle flow, helping client or IE query and set vehicle traffic that the equipment detects via CGI.

Explanations on key parameters:

<ID> means channel ID
<startTime> represents start time
<endTime> represents end time
<searchResultPostion> represents search result position. This field cannot be omitted, (when searching from the 1st log, the assigned value is 1, not 0)
<maxResults> means of the number of queries (no more than 20)
<totalNums> means the total number of files
<trafficFlow> means traffic data; details of major parameters are the same as 2.14.25

MemFlowSearch XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<MemFlowSearch version="1.0"xmlns="http://www.isapi.org/ver20/XMLSchema">
<ID><!—req,sx:integer --></ID>
<timeSpanList>
<timeSpan>
<startTime>2013-05-18T10:31:26Z</startTime>
<endTime> 2013-05-18T10:31:26Z</endTime>
</timeSpan>
</timeSpanList>
<searchResultPostion><!—opt,sx:integer--></searchResultPostion>
<maxResults><!—opt,sx:integer--></maxResults>
</MemFlowSearch>
```

MemFlowSearchResult XML Block

```
<MemFlowsearchResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<ID><!—req,sx:integer --></ID>
<totalNums><!—req:inter ></totalNums>
<matchList>
<trafficFlow>
<laneID><!-- req, xs:integer --></laneID>
<laneName><!-- dep, xs:string --></laneName>
<beginTime><!—dep, xs:dateTime></beginTime>
<endTime><!—dep, xs:dateTime></endTime>
<vehicleFlow><!-- dep, xs:integer --></vehicleFlow>
<holdRate><!-- dep, xs:integer --></holdRate>
<averageSpeed><!-- dep, xs:integer,km/h --></averageSpeed>
<headWay><!-- dep, xs:integer --></headWay>
<vehicleTypeList><!-- dep,opt -->
<vehicleTypeItem>
<vehicleType><!-- dep, xs:integer --><vehicleType>
<vehicleNum><!-- dep, xs:integer --><vehicleNum>
</vehicleTypeItem>
</vehicleTypeList>
<carQueueLength><!-- dep, xs:integer --></ carQueueLength >
<hardDistance><!-- dep, xs:integer --></hardDistance>
<roomRate><!-- dep, xs:integer --></roomRate>
<runState><!-- dep, xs:integer --></runState>
</trafficFlow>
</matchList>
</MemFlowsearchResult>
```

Test cases

POST/ISAPI/ContentMgmt/ MemFlowSearch

Response XML: < MemFlowSearchResult >

Request XML: < MemFlowSearch > is as below

Query historical data


```
<MemFlowSearch>
<ID>1</ID>
<timeSpan>
<startTime>2016-12-14T00:00:00Z</startTime>
<endTime>2016-12-14T23:00:00Z </endTime>
</timeSpan>
<searchResultPostion>1</searchResultPostion>
<maxResults>20</maxResults>
</MemFlowSearch>
```

```
<MemFlowsearchResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<ID>1</ID>
<totalNums>55</totalNums>
<matchList>
<trafficFlow>
<laneID>1</laneID>
<laneName>111</laneName>
<beginTime>2017-07-07T01:04:47Z </beginTime>
<endTime>2017-07-07T09:04:47Z </endTime>
<vehicleFlow>2</vehicleFlow>
<holdRate>80</holdRate>
<averageSpeed>70</averageSpeed>
<headWay>2</headWay>
<vehicleTypeList>
<vehicleTypeItem>
<vehicleType>1<vehicleType>
<vehicleNum>2<vehicleNum>
</vehicleTypeItem>
</vehicleTypeList>
<carQueueLength>200</ carQueueLength >
<hardDistance>5</hardDistance>
<roomRate>3000</roomRate>
<runState>0</runState>
</trafficflow>
<trafficFlow>
<laneID>2</laneID>
<laneName>111</laneName>
<beginTime>2017-07-07T01:04:47Z </beginTime>
<endTime>2017-07-07T09:04:47Z </endTime>
<vehicleFlow>2</vehicleFlow>
<holdRate>80</holdRate>
<averageSpeed>70</averageSpeed>
<headWay>2</headWay>
<vehicleTypeList>
<vehicleTypeItem>
<vehicleType>1<vehicleType>
<vehicleNum>2<vehicleNum>
</vehicleTypeItem>
</vehicleTypeList>
<carQueueLength>200</ carQueueLength >
<hardDistance>5</hardDistance>
<roomRate>3000</roomRate>
<runState>0</runState>
</trafficflow>
```

```
</matchList>
</MemFlowsearchResult>
```

2.14.85 /CGI/ITS/SystemRun/TimeSnap/channels/<ID>

/CGI/ITS/SystemRun/TimeSnap/channels/<ID> General Resource v2.0	
GET	
Description	Acquire automatic equipment snap time
Query	None
Inbound Data	None
Success Return	**<TimeSnap>**
PUT	
Description	Set automatic equipment snap time
Query	None
Inbound Data	**<TimeSnap>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
The protocol can is prepared for acquiring and setting the automatic snap time of equipment, helping client or IE query and set the automatic snap time of equipment via CGI.
Explanations on key parameters:
<enabled> represents enabling, true：start, false：not start
<frequency> snap frequency, 0~6 from Sunday to Saturday; 7- everyday; 8- never
<hour> means hour
<minute> means minute

TimeSnap XML Block

```
<TimeSnap version="2.0"       xmlns="http://www.isapi.org/ver20/XMLSchema">
<enabled><!--req, xs:Boolean --></enabled>
<frequency><!-- req, xs: integer --></frequency>
<hour><!-- req, xs:integer --></hour>
<minute><!-- req, xs: integer --></minute>
</TimeSnap>
```

Test cases
GET /CGI/ITS/SystemRun/TimeSnap/channels/1
Request XML： none
Response XML: < TimeSanp>
PUT/CGI/ITS/SystemRun/TimeSnap/Channels/1
Response XML： <ResponseStatus>
Request XML： as below

```
<TimeSnap>
<enabled>true</enabled>
<frequency>7</frequency>
<hour>10</hour>
<minute>0</minute>
</TimeSnap>
```

2.14.86/CGI/ITS/IOctrl/RadarAccess/channels/<ID>

/CGI/ITS/IOctrl/RadarAccess/channels/<ID> **General Resource v2.0**	
GET	
Description	Acquire the list of access radar parameters

Query	None
Inbound Data	None
Success Return	**<RadarParameter>**
PUT	
Description	Set the list of access radar parameters
Query	None
Inbound Data	**<RadarAccessParameter>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
The protocol is prepared for acquiring and setting the parameters of access radars in the customization of DZ19749 signal converter, including radar IP address, radar type, horizontal distance from the object to the front radar (in mm) and the horizontal position of lane lines to radars.
Explanations on key parameters:
<radarID> means radar ID, starting from 1
<radarIPaddress> means radar ip address
<radarType> means radar type,; front means front radar and behind means behind radar
<horizontalDistance> means the horizontal distance from the object to the radar, in mm, scope 0~5,000, 50 by default
<line> lane ID
<distance> means the horizontal distance from radar, in mm, scope 0~5,000, default 50

RadarAccessParameter XML Block

```
<RadarAccessParameter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<RadarParameterList>
<RadarParameter>
<radarID>1</radarID>
<radarIPaddress><!-- req, xs:string--></radarIPaddress>
<radarType><!-- req, xs:string--></radarType>
<horizontalDistance><!-- req, xs:integer--></horizontalDistance>
<lineDistancelist>
<lineDistance>
<line><!-- req, xs:integer--></line>
<distance><!--req, xs:integer--></distance>
</lineDistance>
</lineDistancelist>
</RadarParameter>
</RadarParameterList>
</RadarAccessParameter>
```

Test cases

GET /CGI/ITS/IOctrl/RadarAccess/channels/<ID>

Request XML: none

Response XML: <RadarAccessParameter>

PUT /CGI/ITS/IOctrl/RadarAccess/channels/<ID>

Response XML: <ResponseStatus>

Request XML: as below

```
<RadarAccessParameter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<RadarParameterList>
<RadarParameter>
<radarID>1</radarID>
<radarIPaddress>192.168.1.22</radarIPaddress>
<radarType>front</radarType>
<horizontalDistance>50</horizontalDistance>
<lineDistancelist>
<lineDistance>
<line>1</line>
<distance>50</distance>
</lineDistance>
```

```
<lineDistance>
<line>2</line>
<distance>50</distance>
</lineDistance>
</lineDistancelist>
</RadarParameter>
<radarID>2</radarID>
<radarIPaddress>192.168.1.23</radarIPaddress>
<radarType>behind</radarType>
<horizontalDistance>50</horizontalDistance>
<lineDistancelist>
<lineDistance>
<line>1</line>
<distance>50</distance>
</lineDistance>
<lineDistance>
<line>2</line>
<distance>50</distance>
</lineDistance>
</lineDistancelist>
</RadarParameter>
</RadarParameterList>
</RadarAccessParameter>
```


2.14.87 /CGI/ITS/Expand/Capability

/CGI/ITS/Expand/Capability **General Resource v2.0**	
POST	
Description	Acquire bayonet extensions
Query	**None**
Inbound Data	**<Condition>**
Success Return	**<Capability>**
Explanations on protocol: Acquire the list of the parameters of query conditions **Explanations of parameters:** Request xml type: request type, subBarnd, vehicle subbrand brand: Main brand No. of vehicle. Several main brands shall be separated with comma. 300 main brands are supported at the most. subBrand: Vehicle subbrand	

Condition XML Block


```
<?xml version="2.0" encoding="UTF-8"?>
<condition version="2.0">
<elementList>
<element>
<type><!—req,sx: string--></type>
<brand><!—req,sx: string--></brand>
</element>
…
</elementList>
</condition>
```


Capability XML Block

```
<?xml version="2.0" encoding="UTF-8"?>
<capability version="2.0">
<BrandList>
<brand><!—req,sx: integer --></brand> // main brand
<subBrandList> // subbrand list
<subBrand> // subbrand parameter
<value><!—req,sx:integer--></value>
<para><!—req,sx:string--></para>
</subBrand>
…
</subBrandList>
<brand><!—req,sx: integer --></brand>
<subBrandList>
<subBrand>
<value><!—req,sx:integer--></value>
<para><!—req,sx:string--></para>
</subBrand>
…
</subBrandList>
</BrandList>
</capability>
```

Test cases

POST /CGI/ITS/Expand/Capability/

Request XML: <Condition>

```
<?xml version="2.0" encoding="UTF-8"?>
<condition version="2.0">
<elementList>
<element>
<type>subBarnd</type>
<brand>20,22</brand>
</element>
…
</elementList>
</condition>
```

Response XML: <Capability>

```
<?xml version="2.0" encoding="UTF-8"?>
<capability version="2.0">
<BrandList>
<brand>20</brand>
<subBrandList>
<subBrand>
<value>1</value>
<para>Volkswagen</para>
</subBrand>
…
</subBrandList>

<brand>22</brand>
<subBrandList>
<subBrand>
<value>1</value>
<para> Audi</para>
</subBrand>
…
</subBrandList>
</BrandList>
```

```
</capability >
```

2.15 /CGI/CloudUpload

2.15.1 /CGI/CloudUpload/Version/channels/<ID>

/CGI/CloudUpload/Version/channels/<ID>	**General Resource v2.0**
GET	
Description	Acquire the latest version of equipment
Query	**None**
Inbound Data	**None**
Success Return	**<VersionParameter>**

Explanations on protocol:
The protocol is prepared for acquiring and setting whether the equipment can upgrade via CGI protocol.
Explanations on key parameters:
<versionRetState> version acquisition 0: Version being tested; 1: When the testing is over time, please confirm whether the network is connected and test again 2: It is the latest version 3: Unsupported protocol
(0 when there is a new version; 1 when it fails to acquire; 3 when it is not handled for the temporary)
<newVersionStatus>0: There is no new version 1: There is a new version
<version> Cloud version
<releaseDate> Release date
<chn> newly added channel ID
Note: The field of channel ID is expanded in the URL of this protocol, so that it can meet new requirements and be compatible with the old version. If there is no channel ID or the channel ID is 0xFFFF in the protocol, acquire the latest cloud version of NVR; otherwise, acquire the latest cloud version of IPC. Channel ID starts from 1.

VersionParameter XML Block

```
<VersionParameter>
   <chn><!--req, xs:integer--></chn>
   <versionRetState><!--req, xs:integer--></versionRetState>
   <newVersionStatus><!--req, xs:integer--></newVersionStatus>
   <version><!--req, xs:string--></version>
   <releaseDate><!--req, xs:string--></releaseDate>
</VersionParameter>
```

Test cases
GET /CGI/CloudUpload/Version/<ID>
Request XML: none
Response XML: <VersionParameter>

```
<?xml version="1.0" encoding="UTF-8"?>
<VersionParameter >
   <chn>1</chn>
   <versionRetState>0</versionRetState>
   <newVersionStatus>1</newVersionStatus>
   <version>DVRS_V9.9.4.20171124</version>
   <releaseDate>20171128</releaseDate>
</VersionParameter >
```

2.15.2 /CGI/CloudUpload/Detect/channels/<ID>

/CGI/CloudUpload/Detect/channels/<ID>	**General Resource v2.0**

PUT	
Description	Detect cloud version
Query	**None**
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: IE enables the equipment to detect the functions of the latest version from the cloud platform via CGI protocol Note: The field of channel ID is expanded in the URL of this protocol, so that it can meet new requirements and be compatible with the old version. If there is no channel ID or the channel ID is 0xFFFF in the protocol, acquire the latest cloud version of NVR; otherwise, detect the latest cloud version of IPC. Channel ID starts from 1.	

Test cases
PUT /CGI/CloudUpload/Detect/channels/<ID>
Response XML: <ResponseStatus>
Request XML: None

2.15.3 /CGI/CloudUpload/Start/channels/<ID>

/CGI/CloudUpload/Start/channels/<ID> **General Resource v2.0**	
PUT	
Description	Cloud upgrade function
Query	**None**
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: IE sends cloud upgrade commands via CGI protocol Note: The field of channel ID is expanded in the URL of this protocol, so that it can meet new requirements and be compatible with the old version. If there is no channel ID or the channel ID is 0xFFFF in the protocol, NVR starts cloud upgrade; otherwise, IPC will start cloud upgrade. Channel ID starts from 1.	

Test cases
PUT /CGI/CloudUpload/Start/channels/<ID>
Response XML: <ResponseStatus>
Request XML: None

2.15.4 /CGI/CloudUpload/DownloadState/channels/<ID>

/CGI/CloudUpload/DownloadState/channels/<ID> **General Resource v2.0**	
GET	
Description	Acquire downloading status
Query	**None**
Inbound Data	**None**
Success Return	**<DownloadState>**
Explanations on protocol: Acquire upgrade package downloading status **Explanations on key parameters:** <status> download status, 0-idle, 1- downloading, 2- download succeeds, 3- download fails, 4- download fails, please connect the disk and try again <progress> download progress Note: The field of channel ID is expanded in the URL of this protocol, so that it can meet new requirements and be compatible with the old version. If there is no channel ID or the channel ID is 0xFFFF in the protocol, acquire the download loading of NVR cloud upgrade;	

otherwise, acquire the download status of IPC. Channel ID starts from 1.

DownloadState Block

```
<DownloadState>
   <chn><!--req, xs:integer--></chn>
   <status><!--req, xs:integer--></status>
   <progress><!--req, xs:integer--></progress>
</DownloadState>
```

Test cases

GET /CGI/CloudUpload/DownloadState/channels/<ID>

Request XML: none

Response XML: <DownloadState> is as below

```
<?xml version="1.0" encoding="UTF-8"?>
<DownloadState>
   <chn>1</chn>
   <status>1</status>
   <progress>100</progress>
</DownloadState>
```

2.15.5 /CGI/CloudUpload/GetProgress/channels/<ID>

/CGI/CloudUpload/GetProgress/channels/<ID> General Resource v2.0	
GET	
Description	Query cloud upgrade progress
Query	None
Inbound Data	None
Success Return	**<CloudProgress>**

Explanations on protocol:

This protocol is prepared for query of device upgrade progress, helping client or IE query the device upgrade progress via CGI protocol.

Note: The field of channel ID is expanded in the URL of this protocol, so that it can meet new requirements and be compatible with the old version. If there is no channel ID or the channel ID is 0xFFFF in the protocol, acquire NVR upgrade progress; otherwise, acquire IPC upgrade progress. Channel ID starts from 1.

Explanations on key parameters:

<status> means equipment upgrade status. Meanings of all figures, 0: System upgrade in progress; 1: System upgrade completed; 2: System upgrade error; 3: Upgrade package is transmitted successfully; 4: Wrong chip model; 5: Wrong main version No.; 6: Wrong secondary version No.; 7: Verification and error; 8: Save the errors of temporary packages; 9: Upgrade data errors; 10: Wrong small version No.; 11: Incomplete box

<chn> means channel ID; in case of 0xFFFF or N/A, it means to query NVR upgrade progress; otherwise, it means to query IPC.

CloudProgress XML Block

```
<CloudProgress version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<chn><!--req, xs:interger; id --></chn>
<status><!--req, xs:interger; id --></status>
<progress><!--req, xs:interger; id --></progress >
</CloudProgress>
```

Test cases
GET /CGI/CloudProgress/GetProgress/channels/<ID>
Request XML: none
Response XML: <CloudProgress>

```
<?xml version="1.0" encoding="UTF-8"?>
<CloudProgress>
<chn>1</chn>
<status>0</status>
<progress>90</progress>
</CloudProgress>
```

2.16/CGI/Security

2.16.1/CGI/Security/CreatePwdResetQRcode/type/<ID>

/CGI/Security/CreatePwdResetQRcode/type/<ID>	**Resource v2.0**
GET	
Description	Acquire QR code /SN code
Query	**None**
Inbound Data	**None**
Success Return	**<ResponseStatus>**
Explanations on protocol: Generate a QR code picture used to reset password via CGI protocol Explanations on key parameters: Type in Url means acquisition type; 1 means QR code. Reply to the path where QR code picture is at 2 means SN code 3 means email QR code, reply to the path where the QR code picture is	

QRcodeOrSn Block

```
<QRcodeOrSn>
  <codeInfo><!--req, xs:string--></codeInfo>
</QRcodeOrSn>
```

Test cases
GET /CGI/Security/CreatePwdResetQRcode/type/<ID>
Response XML: <QRcodeOrSn>
Request XML: None

```
<QRcodeOrSn>
  <string>passwd.bmp</string>
</QRcodeOrSn>
```

2.16.2 /CGI/Security/SecurityCodeCheck

/CGI/Security/SecurityCodeCheck	**Resource v2.0**
POST	
Description	Validate verification code
Query	**None**

Inbound Data	**<SecurityCodePara>**
Success Return	**<SecurityCodeStatus>**

Explanations on protocol:
IE sends verification code to the equipment to verify via CGI protocol. The equipment will send verification result to IE. If the verification code validation is passed, it will send back 200 and key and user password. If the validation fails, it will send back 400 and error status code.
Explanations on key parameters:
<securityCode> verification code
<password> user password
Besides: In this protocol, <ResponseStatus> that CGI sends back to IE is added with statusCode: "9", statusString"Check securitycode failed" and subStatusCode: CodeError, as well as CodeInvalid and CodeErrorFiveTimes

SecurityCodePara Block

```
<SecurityCodePara>
   <securityCode><!--req, xs:string--><securityCode>
</SecurityCodePara>
```

SecurityCodeStatus Block

```
<SecurityCodeStatus>
   <access><!--req, xs:string--></access>
   <password><!--req, xs:string--><password>
</SecurityCodeStatus>
```

Test cases
POST /CGI/Security/SecurityCodeCheck
Request XML: <SecurityCodePara>

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurityCodePara>
   <testSecurityCode>35416115</testSecurityCode>
</SecurityCodePara>
```

Response XML: <SecurityCodeStatus>

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurityCodeStatus>
   <access>94AAABB419A9820DC171B43240CEEF41</access>
   <password>T6g05arqzu4=</password>
</SecurityCodeStatus>
```

2.16.3 /CGI/Security/ReserveMsg/type/<ID>

/CGI/Security/ReserveMsg/type/<ID>	**General Resource v2.0**
GET	
Description	Acquire reserved information
Query	**None**
Inbound Data	**None**
Success Return	**<ReserveMsg>**
PUT	
Description	Set reserved information
Query	**None**
Inbound Data	**<ReserveMessage>**
Success Return	**<ResponseStatus>**

Explanations on protocol:
IE acquires or sets the reserved MP or email of the equipment via CGI protocol.
Explanations on key parameters:
Type in Url means the type of reserved information; 1 MP; 2 email and 3 new mailbox
<synchroFlag> whether it needs to synchronize to the front; true means yes

```
    <phone> MP
    <mail> email
```

ReserveMsg Block

```
<ReserveMsg>
  <phone><!--req, xs:string--></phone>
  <mail><!--req, xs:string--></mail>
</ReserveMsg>
```

ReserveMessage Block

```
<ReserveMessage>
  <synchroFlag><!--req, xs:string--></synchroFlag>
  <phone><!--req, xs:string--></phone>
  <mail><!--req, xs:string--></mail>
</ReserveMessage>
```

Test cases

GET /CGI/Security/Reservemsg/type/<ID>

Request XML: None

Response XML: <ReserveMsg>

```
<?xml version="1.0" encoding="UTF-8"?>
<ReserveMsg>
  <phone>12233445566</phone>
  <mail></mail>
</ReserveMsg>
```

PUT /CGI/Security/Reservemsg/type/<ID>

Response XML: <ResponseStatus>

Request XML: <ReserveMessage> is as below

ReserveMessage Block

```
<ReserveMessage>
  <synchroFlag>true</synchroFlag>
  <phone>12233445566</phone>
  <mail></mail>
</ReserveMessage>
```

2.16.4/CGI/Security/CountDown/type/<ID>

/CGI/Security/CountDown/type/<ID>	**Resource v2.0**
GET	
Description	Acquire countdown
Query	**None**
Inbound Data	**None**
Success Return	**<SecondForCountDown>**
Explanations on protocol: Acquire the remaining time of the current locking of equipment safety code via CGI protocol. **Explanations on key parameters:** Type in Url means acquisition type; 1 means safety code. Others are to be extended	

SecondForCountDown Block

```
<SecondForCountDown>
  <howManySecond><!--req, xs:string--></howManySecond>
</SecondForCountDown>
```

Test cases

GET /CGI/Security/CountDown/type/<ID>

Response XML: <SecondForCountDown >

Request XML：None

```
<SecondForCountDown>
   <howManySecond>87</howManySecond>
</SecondForCountDown>
```