DAHUA HTTP API FOR IPC

Version 1.67

Document History

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46	SD Camera VideoInColor,VideoInDenoise, VideoInExposure, VideoInDayNight is not public	**2015-07-08**	**1.63**	**Wang Shu**
47	Add chapter ThermographyManager	**2015-7-10**	**1.64**	**Xiaojie Fang**
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50	Revise getCaps method in chapter ThermographyManager	**2015-9-16**	**1.67**	**Xiaojie Fang**

1.Preface

This document details the API of Dahua video products. Programmers can access and configure Dahua video products follows the API. This document with version 1.10 is available with firmware version 2.0 and above. This document with version 1.20, 1.21, 1.22, 1.23, 1.24,1,25,1,26,1,27,1,28 is available with firmware 2.210 and above.This document with version 1. 29 , 1.30, 1.31, 1.32, 1.33, 1.34, 1.35, 1.36 is available with firmware 2.210 and above.This document with version 1.37,1.38 is available with firmware 2.212, 2.4 and above. This document with version 1.39 is available with firmware 2.42 and above.

2.Catalog

3.HTTP API Transaction

3.1 Transaction

The HTTP API Transaction starts from a request from a client Application, usually a web browser. The request is processed by the web server on the Dahua video products, then send the response back to the client application. The HTTP request is taken in GET form. If the request is successful, the Dahua video product will return a HTTP header contains 200 OK. The HTTP Body will contain actual data or error message if an error occurs.

For describe convenience, we use some short words to instead the long expressions. The follows are several regulations:

1. The italics and bold will be replaced by the value behind the symbol "=".
2. The URL must follow the standard way of writing a URL.(RFC_3986:Uniform Resource Identifiers (URI) Generic Syntax);that is ,spaces and other reserved characters (";", "/", "?", ":", "@", "=", "+", "," and "$") within a <paramName> or a <paramValue> must be replaced with %<ASCII hex>.For example ,the blank must be instead with %20.
3. To describe the range of the configuration, we use some symbols such as "[]", "{}" and so on. For example :"[0-100]" denotes a integer not less than 0 and not larger than 100. "{0,1,2,3}" denotes the valid value of a integer among 0,1,2 and 3.
4. In the request and response, we use "[]" to denote an array. The index is usually a integer and start form 0.
5. The parameter value has several types: string, integer, bool and float.Integer is 32 bits.The range of bool is "true" and "false".

The below is an example of a transaction:

Request	**GET** http://*<ip>*/cgi-bin/configManager.cgi?action=getConfig&name=**VideoColor**
Description	Get VideoColor configuration.
Response	HTTP/1.1 200 OK Content-Type:text/plain ***head***.Brightness=50 ***head***.Contrast=50 ***head***.Hue=50 ***head***.Saturation=50

	head.TimeSection=1 00:00:00-24:00:00
Comment	In above table, ***head***= table.VideoColor[*ChannelNo*][*ColorConfigNo*] *ChannelNo* = video channel index, *colorConfigNo* = color config index. 0 = Color Config 1 1 = Color Config 2 ... We can also request the single config. For example: **Request :** **GET** http://10.7.2.4/cgi-bin/configManager.cgi?action=getConfig&name=VideoColor[0][0].Brightness **Response:** HTTP/1.1 200 OK Content-Type:text/plain table.VideoColor[0][0].Brightness=50

3.2 Format

The format of CGI Description is below table:

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=getProductDefinition&name=**MaxExtraStream**
Description	Get Max Extra Stream number of device
Comment	In below table, the range of table.MaxExtraStream is {1,2,3}
Response	table.MaxExtraStream=1

URL Syntax: the format of CGI, the Necessary param is between "<" and ">", unnecessary param is between "[" and "]".

Description: the description of this CGI.

Comment : the comment to params, including range of param , example for this cgi and so on.

Response: example for response of this CGI.

3.3 Authentication

The Dahua video product supplies two authentication ways: basic authentication and digest authentication. If the http request does not have "Authorization" , the Dahua video product returns 401, utill the http request has a legal authentication .

For example:

1. When basic authentication, the Dahua video product response:

401 Unauthorized

WWW-Authenticate: Basic realm="XXXXXX"

Then the client encode the username and password with base64, send the following request:

Authorization: Basic VXZVXZ.

2. When digest authentication, the Dahua video product response:

WWW-Authenticate: Digest realm="DH_00408CA5EA04", nonce="000562fdY631973ef04f77a3ede7c1832ff48720ef95ad", stale=FALSE, qop="auth";

The client calculates the digest using username, password, nonce, realm and URI with MD5, then send the following request:

Authorization: Digest username="admin", realm="DH_00408CA5EA04", nc=00000001,cnonce="0a4f113b",qop="auth" nonce="000562fdY631973ef04f77a3ede7c1832ff48720ef95ad",uri="cgi-bin/global.login?userName=admin", response="65002de02df697e946b750590b44f8bf"

3.4 Response

When cgi response is failed, the answer's format is:

Error\n

ErrorID=<Error No.>, Detail=<Error Description>\n

For example:

Error\n

ErrorID=2, Detail=Forbidden\n

Error No. definition are as follows:

Table3-1 Error Code

错误码	错误描述	详细解释
0	Invalid Authority!	用户没有权限
1	Request parse error!	请求内容错误，比如请求内容不全
2	Invalid Request!	请求非法
3	Method not found!	接口没找到，不支持
4	Request invalid param!	请求带有的参数不合法
5	Server internal error!	内部错误
6	Request Timeout!	请求超时
7	Client keepalive failed!	客户端保活失败
8	Network error!	设备端网络错误

4.Camera

Camera API allows application to configure and view Dahua video product settings.

4.1Stream

4.1.1 GetStream

URL Syntax	rtsp://<*username*>:<*password*>@<*ip*>:<*port*>/cam/realmonitor?channel=<*channelNo*>&subtype=<*typeNo*>
Comment	<*username*>: a valid user's username. <*password*> :user's password. <*ip*> :the IP address of the Dahua video product. <*port* >:the default port is 554. It can be omitted. It can be obtained in **5.10.1 GetRTSPConfig.** <*channelNo*> :the channel number. It starts from 1. <*typeNo*> :the stream type. The <*typeNo*> of main stream is 0, extra stream 1 is 1, extra stream 2 is 2.The extra stream counts can be obtained in **4.1.2 GetMaxStreamCounts.** The stream must be enabled by setting ***head***.VideoEnable to true in **4.4.4 SetVideoEncodeConfig.** For example, we request the extra stream 1 of channel 1, the URL is: rtsp://admin:admin@10.7.6.67:554/cam/realmonitor?channel=1&subtype=1. The IP Camera supports both TCP and UDP transmission forms. It also supplies basic authentication and digest authentication ways. The authentication process is similar with **3.2 Authentication.**

4.1.2 GetMaxExtraStreamCounts

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=getProductDefinition&name=**MaxExtraStream**
Response	table.MaxExtraStream=1
Comment	In above table, the range of table.MaxExtraStream is {1,2,3}

4.1.3 GetSnapshot

URL Syntax	**http://<ip>/cgi-bin/snapshot.cgi? [channel=<**channelNo**>]**
Response	A picture encoded by jpg
Comment	The channel number is default 0 if the request is not carried the param.

4.1.4 GetVideo

URL Syntax	http://<ip>/cgi-bin/mjpg/video.cgi?[channel=<***channelNo***>]&subtype=<typeNo>
Response	video stream encoded by mjpg Return: HTTP Code:200 OK Content-Type:multipart/x-mixed-replace;boundary=<boundary> Body: --<boundary> Content-Type:image/jpeg Content-Length:<image size> <JPEG image data> --<boundary>
Comment	The channel number is default 0 if the request is not carried the param. subtype : Definition in 4.1.1 GetStream

4.1.5 PlayBack

URL Syntax	rtsp://<*username*>:<*password*>@<*ip*>:<*port*>/<filename>
Response	It's similar with **4.1.1 GetStream.** For example: rtsp://admin:admin@10.7.6.67:554//mnt/sd/2012-07-13/001/dav/09/09.30.37-09.30.47[R][0@0][0].dav

4.1.6 LoadFile

URL Syntax	http://<ip>/cgi-bin/RPC_Loadfile/<filename>
Response	HTTP Code: 200 OK Content-Type: Application/octet-stream Content-Length:<fileLength> Body: <data> <data> For example: http://10.61.5.117/cgi-bin/RPC_Loadfile/mnt/sd/2012-07-13/001/dav/09/09.30.37-09.30.47[R][0@0][0].dav

4.1.7 GetStream By Http

URL Syntax	http://<*ip*>/cgi-bin/realmonitor.cgi?action=getStream&channel=<channelNo>&subtype=<typeNo>
Response	HTTP Code: 200 OK Content-Type: Application/octet-stream Body: <data> <data>
Comment	Compared to 4.1.1 GetStream using RTSP, it is another way of get stream. This is a way to use http protocol to get realmonitor stream. The data format is shown in appendix.

4.1.8 Playback By Http

URL Syntax	http://<ip>/cgi-bin/playBack.cgi?action=getStream&channel=<channelNo>&subtype=<typeNo>&startTime=<startTime>&endTime=<endTime>
Response	HTTP Code: 200 OK Content-Type: Application/octet-stream Body: streamId=<streamId>\r\n <data>

	<data>
Comment	Compared to 4.1.5 Playback using RTSP, it is another way of get playback stream. This is a way to use http protocol to get playback stream. The data format is shown in appendix.

URL Syntax	http://*<ip>*/cgi-bin/playBack.cgi?action=control&streamId=<streamId>&cmd=<cmd>&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Response	OK or ERROR
Comment	Control the playback stream Cmd=play Speed=<speed> optional, default speed=1,if speed > 0, play back forward, else if speed < 0, playback backward(param iframe is ignored, only support iframe playback backward); Iframe=<iframe> optional, default iframe=0, if iframe=1, playback I frame only; seekTime=<seekTime> seek time, optional, default playback from the stream current point; cmd=pause pause the playback stream; cmd=cancel cancel the playback stream, and destroy the streamed; This is the cgi to control playback stream, used to control the stream which built by “action=getStream”.

4.2VideoColor

4.2.1 GetVideoColorConfig

URL Syntax	http://*<ip>*/cgi-bin/configManager.cgi?action=getConfig&name=**VideoColor**
Response	***head***.Brightness=50 ***head***.Contrast=50 ***head***.Hue=50 ***head***.Saturation=50 ***head***.TimeSection=1 00:00:00-24:00:00
Comment	In above table, ***head***= table.VideoColor[*ChannelNo*][*ColorConfigNo*] *ChannelNo* = video channel index, *colorConfigNo* = color config index. 0 = Color Config 1 1 = Color Config 2 ...

4.2.2 SetVideoColorConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Response	OK or ERROR
Comment	In below table, ***head***=VideoColor[*ChannelNo*][*ColorConfigNo*] *ChannelNo* = video channel index, *colorConfigNo* = color config index, 0 = Color Config 1 1 = Color Config 2 ...

ParamName	ParamValue type	Description
head.Brightness	integer	Brightness, range is [0-100]
head.Contrast	integer	Contrast, range is [0-100]
head.Hue	integer	Hue
head.Saturation	integer	Saturation
head.TimeSection	string	Effective time for this video color config. Format is: ***mask starttime endtime*** **Mask** range is {0, 1}. Mask 0 – this video config is not effective Mask 1 - this config is effective ***Starttime/Endtime*** format like 11:00:00. Example: 0 01:00:00-02:00:00, means this config is not effective. 1 01:00:00-02:00:00, means this config is effective between 01:00:00 and 02:00:00

4.3VideoInOptions

4.3.1 GetVideoInputCaps

URL Syntax	http://<*ip*>/cgi-bin/devVideoInput.cgi?action=**getCaps**&channel=<***channelNo***>
Description	Get video input capabilities, ***channelNo*** is video in channel index.
Response	caps.Backlight=true caps.ChipID=0 caps.CoverCount=0 caps.CoverType=0 caps.CustomManualExposure=true caps.DayNightColor=true caps.DownScaling=true caps.Exposure=9 caps.ExternalSyncInput=true

	caps.FlashAdjust=true caps.Flip=true caps.Gain=true caps.GainAuto=true caps.HorizontalBinning=1 caps.InfraRed=false caps.Iris=false caps.IrisAuto=false caps.LadenBitrate=750000 caps.LimitedAutoExposure=true caps.MaxHeight=1200 caps.MaxWidth=1600 caps.Mirror=false caps.NightOptions=false caps.ReferenceLevel=false caps.Rotate90=false caps.SetColor=true caps.SignalFormats=Inside,720p,1080p caps.SyncChipChannels=false caps.TitleCount=0 caps.UpScaling=false caps.VerticalBinning=1 caps.WhiteBalance=2

Field in response	**Value type**	**Description**
Backlight	bool	True: support backlight
ChipID	String	ID of chips in this channel
CoverCount	integer	The maximum cover region count.
CoverType	integer	0: don't support cover 1: support realtime cover 2: support non-realtime cover
CustomManualExposure	bool,	true: support use defined manual exposure time
DayNightColor	bool	true: support color alternate between day and night.
DownScaling	bool	true: support down scaling, binning mode not included.
Exposure	integer	Exposure grade. 0 – don't support exposure control.
ExternalSyncInput	bool	true: support HD signal external synchronization.
FlashAdjust	bool	true: support flash adjust
Flip	bool	true: support picture flip.
Gain	bool	true: support gain control.
GainAuto	bool	true: support auto gain.
HorizontalBinning	integer	Horizontal/Vertical pixel binning mask, 1 – support 2 pixel binning, 2 – support 3 pixel binning 4 - support 4 pixel binning
VerticalBinning	integer	

		… 2^n – support n+2 pixel binning
InfraRed	bool	true: support Infra compensation
Iris	bool	true: support Iris adjust
IrisAuto	bool	true: support auto Iris adjust
LadenBitrate	integer	Unit is Kbps. Maximum value of video stream bitrate, 16bpp, not in binning mode.
LimitedAutoExposure	bool	true: support auto exposure with time limit.
MaxHeight	integer	Maximum video height
MaxWidth	integer	Maximum video width
Mirror	bool	true: support picture mirror.
NightOptions	bool	true: support night options.
ReferenceLevel	bool	true: support reference level.
Rotate90	bool	true: support clockwise/anticlockwise 90° rotate
SetColor	bool	true: support color set.
SignalFormats	string	It's a string contains supported video input signal formats for this channel. Signal formats are separated by comma. Range is {Inside, BT656, 720p,1080p, 1080i, 1080sF, 1_3M} Inside – inside input. 1_3M - 1280*960
SyncChipChannels	bool	True: channels in same chip should be synchronized. Synchronized means video resolution of these channels should be the same.
TitleCount	integer	Maximum count of blending titles.
UpScaling	bool	true: support up scaling.
WhiteBalance	integer	Range is {0, 1, 2, 3} 0 – don't support white balance. 1 – support auto white balance 2 - support auto and pre defined white balance. 3 - support auto, pre defined and user defined white balance

4.3.2 GetVideoInOptionsConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**VideoInOptions**
Description	Video in options contain Backlight, ExposureSpeed, DayNightColor. DayOptions, NightOptions, NormalOptions and so on
Response	***head***.Backlight=0 ***head***.DayNightColor=false ***head***.ExposureSpeed=0 ***head***.ExposureValue1=0.100000 ***head***.ExposureValue2=80.000000 ***head***.ExternalSync=0 ***head***.ExternalSyncPhase=0

	head.FlashControl.Mode=0 ***head***.FlashControl.Pole=0 ***head***.FlashControl.Value=0 ***head***.FlashControl.PreValue=0 ***head***.Flip=false ***head***.Gain=50 ***head***.GainAuto=true ***head***.IrisAuto=false ***head***.Mirror=false ***head***.NightOptions.AntiFlicker=0 ***head***.NightOptions.Backlight=0 ***head***.NightOptions.BacklightRegion[0]=3096 ***head***.NightOptions.BacklightRegion[1]=3096 ***head***.NightOptions.BacklightRegion[2]=5096 ***head***.NightOptions.BacklightRegion[3]=5096 ***head***.NightOptions.BrightnessThreshold=50 ***head***.NightOptions.DayNightColor=2 ***head***.NightOptions.ExposureMode=0 ***head***.NightOptions.ExposureSpeed=0 ***head***.NightOptions.ExposureValue1=0 ***head***.NightOptions.ExposureValue2=40 ***head***.NightOptions.ExternalSyncPhase=125 ***head***.NightOptions.Flip=false ***head***.NightOptions.Gain=50 ***head***.NightOptions.GainAuto=true ***head***.NightOptions.GainBlue=50 ***head***.NightOptions.GainGreen=50 ***head***.NightOptions.GainMax=50 ***head***.NightOptions.GainMin=0 ***head***.NightOptions.GainRed=50 ***head***.NightOptions.GlareInhibition=0 ***head***.NightOptions.IrisAuto=true ***head***.NightOptions.Mirror=false ***head***.NightOptions.Profile=3 ***head***.NightOptions.ReferenceLevel=50 ***head***.NightOptions.Rotate90=0 ***head***.NightOptions.SunriseHour=0 ***head***.NightOptions.SunriseMinute=0 ***head***.NightOptions.SunriseSecond=0 ***head***.NightOptions.SunsetHour=23 ***head***.NightOptions.SunsetMinute=59 ***head***.NightOptions.SunsetSecond=59 ***head***.NightOptions.SwitchMode=4 ***head***.NightOptions.WhiteBalance=Auto ***head***.NightOptions.WideDynamicRange=0

	head.NightOptions.WideDynamicRangeMode=0 ***head***.NormalOptions.AntiFlicker=0 ***head***.NormalOptions.Backlight=0 ***head***.NormalOptions.BacklightRegion[0]=3096 ***head***.NormalOptions.BacklightRegion[1]=3096 ***head***.NormalOptions.BacklightRegion[2]=5096 ***head***.NormalOptions.BacklightRegion[3]=5096 ***head***.NormalOptions.BrightnessThreshold=50 ***head***.NormalOptions.DayNightColor=1 ***head***.NormalOptions.ExposureMode=0 ***head***.NormalOptions.ExposureSpeed=0 ***head***.NormalOptions.ExposureValue1=0 ***head***.NormalOptions.ExposureValue2=40 ***head***.NormalOptions.ExternalSyncPhase=125 ***head***.NormalOptions.Flip=false ***head***.NormalOptions.Gain=50 ***head***.NormalOptions.GainAuto=true ***head***.NormalOptions.GainBlue=50 ***head***.NormalOptions.GainGreen=50 ***head***.NormalOptions.GainMax=50 ***head***.NormalOptions.GainMin=0 ***head***.NormalOptions.GainRed=50 ***head***.NormalOptions.GlareInhibition=0 ***head***.NormalOptions.IrisAuto=true ***head***.NormalOptions.Mirror=false ***head***.NormalOptions.Profile=0 ***head***.NormalOptions.ReferenceLevel=50 ***head***.NormalOptions.Rotate90=0 ***head***.NormalOptions.SunriseHour=0 ***head***.NormalOptions.SunriseMinute=0 ***head***.NormalOptions.SunriseSecond=0 ***head***.NormalOptions.SunsetHour=23 ***head***.NormalOptions.SunsetMinute=59 ***head***.NormalOptions.SunsetSecond=59 ***head***.NormalOptions.SwitchMode=0 ***head***.ReferenceLevel=50 ***head***.ReferenceLevelEnable=false ***head***.Rotate90=0 ***head***.SignalFormat=BT656 ***head***.WhiteBalance=Disable
Comment	In above table, ***head*** = table.VideoInOptions[*ChannelNo*] *ChannelNo* = video channel index.

4.3.3 SetVideoInOptionsConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** =VideoInOptions[*ChannelNo*] *ChannelNo* = video channel index. For example: Auto Exposure: http://172.29.2.33/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].ExposureMode=0 &VideoInOptions[0].ExposureSpeed=0 Low Noice: http://172.29.2.33/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].ExposureMode=1 &VideoInOptions[0].ExposureSpeed=0&VideoInOptions[0].GainMin=0 & VideoInOptions[0].GainMax=60 Low Motion Blur: http://172.29.2.33/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].ExposureMode=2 &VideoInOptions[0].ExposureSpeed=0&VideoInOptions[0].GainMin=0 & VideoInOptions[0].GainMax=50&VideoInOptions[0].ExposureValue1=0 & VideoInOptions[0].ExposureValue2=20 Manual: http://172.29.2.33/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].ExposureMode=4 &VideoInOptions[0].ExposureSpeed=32&VideoInOptions[0].GainMin=0 & VideoInOptions[0].GainMax=50&VideoInOptions[0].ExposureValue1=40 & VideoInOptions[0].ExposureValue2=40
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head.Backlight	integer	Range is [0-n] n depends on capability in **4.3.1 GetVideoInputCaps** 0 – backlight closed. 1 – backlight grade 1 … n – backlight grade n
head.DayNightColor	integer	Range is {0,1,2} 0: always multicolor 1: autoswitch along with brightness， 2: always monochrome
head.ExposureMode	integer	Range is {0,1,2, 4} 0: AutoExposure 1: Gain first 2: Exposure first 4:Manual.
head.ExposureSpeed	integer	Range is [0-n+1] n depends on capability in **4.3.1 GetVideoInputCaps**

		0: AutoExposure 1-n-1: manual Exposure grade n: AutoExposure with time limit. n+1:manualExposure with user-defined time (n is supported maximum exposure grade)
head.ExposureValue1	float	Range is [0.1-80], unit is millisecond If ExposureSpeed is 0(AutoExposure enable), it's lower limit of AutoExposure time, otherwise it's time of manualExposure
head.ExposureValue2	float	Range is [0.1-80], unit is millisecond Upper limit of AutoExposure time, should be bigger than ExposureValue1
head.ExternalSync	integer	Range is {0,1} External Synchronous 0: Internal Synchronization 1: External Synchronous
head.ExternalSyncPhase	integer	Range is [0°-360°] External Synchronous Signal Phase
head.FlashControl.Mode	integer	Range is {0,1,2} 0:forbid flash 1:always flash 2:auto flash
head.FlashControl.Pole	integer	Range is {0,1, 2, 3} Trigger mode: 0:low level 1:high level 2: rising-edge 3:falling-edge
head.FlashControl.Value	integer	Range is [0-15] Flashlight time-unit: 0 - 0us, 1 - 64us, 2 - 128us, 3 – 192us ... 15 - 960us
head.FlashControl.PreValue	integer	Range is [0-100] It's threshold of brightness value, if brightness is less than this value, flash light begin to work.
head.Flip	bool	true: enable video flip function false: disable video flip function
head.Gain	integer	Range is [0-100] If GainAuto is true, it's upper limit of auto gain, else it's the fixed gain adjust value.
head.GainBlue	integer	Range is [0-100] Gain for blue value, Value is effective when WhiteBalance is "Custom."
head.GainRed	integer	Range is [0-100]

		Gain for red value, Value is effective when WhiteBalance is “Custom.”
head.GainGreen	integer	Range is [0-100] Gain for green value, Value is effective when WhiteBalance is “Custom.”
head.GainAuto	bool	true: GainAuto false: No GainAuto
head.IrisAuto	bool	true: IrisAuto false: No IrisAuto
head.Mirror	bool	true: enable video mirror function false: disable video mirror function
head.WhiteBalance	String	Range is {Disable, Auto, Custom, Sunny, Cloudy, Home, Office, Night} White balance Mode
head.ReferenceLevel	integer	Range is [0-100] The expected average brightness level of video frames.
head.Rotate90	integer	Range is {0,1,2} Video rotation: 0: No rotate 1: clockwise rotate 90° 2: anticlockwise rotate 90°
head.SignalFormat	String	Range is {Inside, BT656, 720p, 1080p, 1080i, 1080sF} Input Signal Mode
head.AntiFlicker	integer	Range is {0,1,2} AntiFlicker mode: 0: Outdoor 1: 50 Hz AntiFlicker 2: 60 Hz AntiFlicker
head.GlareInhibition	integer	Range is [0-100] GlareInhibition: 0: Close GlareInhibition.
head.NightOptions.BrightnessThreshold	integer	**NightOptions** contain a set of parameters used when brightness is not enough. Range is [0-100] when brightness is less than the BrightnessThreshold, parameters change to **Nightoptions.**
head.NightOptions.IrisAuto	bool	true: IrisAuto false: No IrisAuto
head.NightOptions.SunriseHour	integer	Range is [00-23] Sunrise hour.
head.NightOptions.SunriseMinute	integer	Range is [00-59] Sunrise minute
head.NightOptions.SunriseSecond	integer	Range is [00-59] Sunrise second
head.NightOptions.SunsetHour	integer	Sunset time. Its range is same with sunrise time, and it should be after sunrise time. **NightOptions** are used if time is after sunset time and before sunrise time.
head.NightOptions.SunsetMinute	integer	
head.NightOptions.SunsetSecond	integer	
head.NightOptions.SwitchMode	integer	Range is {0,1,2} 0: NoSwitch,always use day options；

		1: Switch depends on brightness; 2: Switch depends on time, switch to NightOptions when time is after sunset time and before sunrise. 3: NoSwitch,always use NightOptions; 4:No switch,always use NormalOptions.
head.NightOptions.Profile	integer	Range is {0,1,2,3} 0: use temporary day options; 1: use temporary NightOptions; 2: use temporary NormalOptions; 3:depends on ***head***.NightOptions.SwitchMode.
head.NightOptions.ExposureSpeed	integer	Range is the same as relevant items of day options in this table. Example: Value range of ***head***.NightOptions.ExposureSpeed is the same with ***head***. ExposureSpeed
head.NightOptions.ExposureValue1	float	
head.NightOptions.ExposureValue2	float	
head.NightOptions.Gain	integer	
head.NightOptions.GainAuto	bool	
head.NightOptions.GainBlue	integer	
head.NightOptions.GainGreen	integer	
head.NightOptions.GainRed	integer	
head.NightOptions.WhiteBalance	String	
head.NightOptions.ReferenceLevel	integer	
head.NightOptions.ExternalSyncPhase	integer	
head.NightOptions.AntiFlicker	integer	
head.NightOptions.Backlight	integer	
head.NightOptions.DayNightColor	integer	
head.NightOptions.ExposureMode	integer	
head.NightOptions.GlareInhibition	integer	
head.NightOptions.Mirror	integer	
head.NightOptions.Flip	integer	
head.NightOptions.Rotate90	integer	
head.NomalOptions.BrightnessThreshold	integer	**NomalOptions** contain a set of parameters similar with **NightOptions**. Range is the same as relevant items of **NightOptions** in this table.
head.NormalOptions.IrisAuto	bool	
head.NormalOptions.SunriseHour	integer	
head.NormalOptions.SunriseMinute	integer	
head.NormalOptions.SunriseSecond	integer	
head.NormalOptions.SunsetHour	integer	
head.NormalOptions.SunsetMinute	integer	
head.NormalOptions.SunsetSecond	integer	
head.NormalOptions.ExposureSpeed	integer	
Head.NormalOptions.ExposureValue1	float	
head.NormalOptions.ExposureValue2	float	
head.NormalOptions.Gain	integer	
head.NormalOptions.GainAuto	bool	
head.NormalOptions.GainBlue	integer	
head.NormalOptions.GainGreen	integer	

head.NormalOptions.GainRed	integer	
head.NormalOptions.WhiteBalance	String	
head.NormalOptions.ReferenceLevel	integer	
head.NormalOptions.ExternalSyncPhase	integer	
head.NormalOptions.AntiFlicker	integer	
head.NormalOptions.Backlight	integer	
head.NormalOptions.DayNightColor	integer	
head.NormalOptions.ExposureMode	integer	
head.NormalOptions.GlareInhibition	integer	
head.NormalOptions.Mirror	integer	
head.NormalOptions.Flip	integer	
head.NormalOptions.Rotate90	integer	

4.4VideoEncode

4.4.1 GetVideoConfigCaps

URL Syntax	http://<*ip*>/cgi-bin/encode.cgi?action=**getConfigCaps**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Description	Get video config capibilities. The description of <**paramName**> and <**paramValue**> is the same as **4.4.4 SetVideoEncodeConfig.** For example: http://192.168.1.108/cgi-bin/encode.cgi?action=getConfigCaps& Encode[0].MainFormat[0].Video.Width=1920&Encode[0].MainFormat[0].Video.Height=1080
Response	***headMain***.Video.BitRateOptions=448,2560 ***headMain***.Video.CompressionTypes=H.264,MJPG ***headMain***.Video.FPSMax=25 ***headMain***.Video.ResolutionTypes=2048 x 1536,1080,SXGA, 1280 x 960,720,D1,CIF ***headExtra***.Video.BitRateOptions=80,448 ***headExtra***.Video.CompressionTypes=H.264,MJPG ***headExtra***.Video.FPSMax=25 ***headExtra***.Video.ResolutionTypes=D1,CIF ***headSnap***.Video.CompressionTypes=H.264,MJPG ***headSnap***.Video.ResolutionTypes=2048 x 1536,1080,SXGA, 1280 x 960,720,D1,CIF
Comment	In above table: *Channel*: video channel index *RecordType*: 0 = regular record 1 = motion detection record 2 = alarm record *ExtraStream*: 0 = extra stream 1 1 = extra stream 2 2 = extra stream 3

	SnapType: 0 = regular snapshot 1 = motion detection snapshot 2 = alarm snapshot Abbreviations in below table: ***headMain***= caps[*Channel*].MainFormat[*RecordType*] ***headExtra*** = caps[*Channel*].ExtraFormat[*ExtraStream*] ***headSnap*** = caps[*Channel*].SnapFormat[*SnapType*]

Field in respons	**Value range**	**Description**
BitRateOptions	string	Before comma is minimum bit rate. (kbps), after comma is maximum bit rate.(kbps) BitRateOptions=80,448 80 is minimum bitrate, 448 is maximum.
CompressionTypes	string	It contains all supported video compression types separated by comma. Range is {MPEG4, MPEG2, MPEG1, MJPG, H.263, H.264}
FPSMax	integer	Maximum FPS.
ResolutionTypes	string	It contains all supported video resolutions. Range is in **4.4.2 Resolution**.

4.4.2 Resolution

Fixed Resolution Name	**Size in PAL**	**Size in NTSC**
"D1"	704 x 576	704 x 480
"HD1"	352 x 576	352 x 480
"BCIF"	704 x 288	704 x 240
"CIF"	352 x 288	352 x 240
"QCIF"	176 x 144	176 x 120
"VGA"	640 x 480	
"QVGA"	320 x 240	
"SVCD"	480 x 480	
"QQVGA"	160 x 128	
"SVGA"	800 x 592	
"XVGA"	1024 x 768	
"WXGA"	1280 x 800	
"SXGA"	1280 x 1024	
"WSXGA"	1600 x 1024	
"UXGA"	1600 x 1200	
"WUXGA"	1920 x 1200	
"ND1"	240 x 192	
"720P"	1280 x 720	
"1080P"	1920 x 1080	

"1280x960"	1280 x 960 (1.3 Mega Pixels)	
"1872x1408"	1872 x 1408 (2.5 Mega Pixels)	
"3744x1408"	3744 x 1408 (5 Mega Pixels)	
"2048x1536"	2048 x 1536 (3 Mega Pixels)	
"2432x2048"	2432 x 2048 (5 Mega Pixels)	
"1216x1024"	1216 x 1024 (1.2 Mega Pixels)	
"1408x1024"	1408 x 1024 (1.5 Mega Pixels)	
"3296x2472"	3296 x 2472 (8 Mega Pixels)	
"2560x1920"	2560 x 1920 (5 Mega Pixels)	
"960H",	960 x 576	960 x 480
"DV720P"	960 x 720	

4.4.3 GetVideoEncodeConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Encode**
Response	***headMain***.Video.BitRate=8192 ***headMain***.Video.BitRateControl=CBR ***headMain***.Video.Compression=H.264 ***headMain***.Video.FPS=25 ***headMain***.Video.GOP=50 ***headMain***.Video.Height=1200 ***headMain***.Video.Profile=Main ***headMain***.Video.Quality=4 ***headMain***.Video.Width=1600 ***headMain***.VideoEnable=true ***headExtra***.Video.BitRate=8192 ***headExtra***.Video.BitRateControl=CBR ***headExtra***.Video.Compression=H.264 ***headExtra***.Video.FPS=25 ***headExtra***.Video.GOP=50 ***headExtra***.Video.Height=1200 ***headExtra***.Video.Profile=Main ***headExtra***.Video.Quality=4 ***headExtra***.Video.Width=1600 ***headExtra***.VideoEnable=true
Comment	*Channel*: video channel index *RecordType*: 0 = regular record 1 = motion detection record 2 = alarm record *ExtraStream*: 0 = extra stream 1 1 = extra stream 2

	2 = extra stream 3 Abbreviations in above table: ***headMain***= table.Encode[*Channel*].MainFormat[*RecordType*] ***headExtra*** =table.Encode[*Channel*].ExtraFormat[*ExtraStream*]

4.4.4 SetVideoEncodeConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	*Channel*: video channel index *RecordType*: 0 = regular record 1 = motion detection record 2 = alarm record *ExtraStream*: 0 = extra stream 1 1 = extra stream 2 2 = extra stream 3 Abbreviation in below table: ***head***=Encode[*Channel*].MainFormat[*RecordType*] (or) Encode[*Channel*].ExtraFormat[*ExtraStream*]
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head.Video.BitRate	integer	Unit is Kbps Range depends on capability in **4.4.1 GetVideoConfigCaps**
head.Video.BitRateControl	string	Range is {CBR,VBR} CBR: constant bitrate VBR: variable bitrate, available when Video.Compression=H264
head.Video.Compression	String	Range is {MPEG4,MPEG2, MPEG1,MJPG,H.263,H.264} Depends on capacity in **4.4.1 GetVideoConfigCaps**
head.Video.FPS	float	Range is [0.2-30]. Frames per second. < 1.0: several seconds/frame, FPS=0.3333: 3 seconds per frame. >1.0: several frames/second. FPS=3: 3 frames per second.
head.Video.GOP	integer	Range is [1-100]. Group of picture, it's the interval of I Frame, Example: GOP=50, means there is one I frame every 49 P or B frames
head.Video.Height	integer	Video height
head.Video.Width	integer	Video Width
head.Video.Profile	String	Range is { Baseline, Main , Extended , High } Only when video compression is H.264, it's effective.

head.Video.Quality	integer	Range is [1-6]. Image Quality, available when Video.BitRateControl=VBR 1: worst quality 6: best quality
head.VideoEnable	bool	True: enable video

4.5AudioEncode

4.5.1 GetAudioConfigCaps

URL Syntax	http://<*ip*>/cgi-bin/encode.cgi?action=getConfigCaps
Comment	The angle brackets below denotes a array
Response	caps[0].ExtraFormat[0].Audio.CompressionTypes=PCM,G.711A,G.711Mu caps[0].ExtraFormat[1]…. … caps[0].MainFormat[0].Audio.CompressionTypes=PCM,G.711A,G.711Mu caps[0].MainFormat[1]… …

Field in respons	**Value range**	**Description**
CompressionTypes	string	It contains all supported audio compression types, separated by comma. Range is {PCM, ADPCM, G.711A, G.711Mu, G.726, G.729, MPEG2, AMR}

4.5.2 GetAudioEncodeConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Encode**
Response	***headMain***.Audio.Bitrate=64 ***headMain***.Audio.Compression=G.711A ***headMain***.Audio.Depth=16 ***headMain***.Audio.Frequency=44000 ***headMain***.Audio.Mode=0 ***headMain***.AudioEnable=false ***headExtra***.Audio.Bitrate=64 ***headExtra***.Audio.Compression=G.711A ***headExtra***.Audio.Depth=16 ***headExtra***.Audio.Frequency=44000 ***headExtra***.Audio.Mode=0 ***headExtra***.AudioEnable=false
Comment	*Channel*: video channel index *RecordType*: 0 = regular record

	1 = motion detection record 2 = alarm record *ExtraStream*: 0 = extra stream 1 1 = extra stream 2 2 = extra stream 3 Abbreviations in above table: ***headMain***=table.Encode[*Channel*].MainFormat[*RecordType*] ***headExtra***=table.Encode[*Channel*].ExtraFormat[*ExtraStream*]

4.5.3 SetAudioEncodeConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	*Channel*: video channel index *RecordType*: 0 = regular record 1 = motion detection record 2 = alarm record *ExtraStream*: 0 = extra stream 1 1 = extra stream 2 2 = extra stream 3 Abbreviations in below table: ***head***=Encode[*Channel*].MainFormat[*RecordType*] (or) Encode[*Channel*].ExtraFormat[*ExtraStream*]
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head.Audio.Bitrate	integer	Unit is kbps Range depends on capacity in **4.5.1 GetAudioConfigCaps**
head.Audio.Compression	string	Range depends on capacity in **4.5.1 GetAudioConfigCaps**
head.Audio.Depth	integer	Audio sampling depth
head.Audio.Frequency	integer	Audio sampling frequency
head.Audio.Mode	integer	Range is {0,1,2,3,4,5,6,7} Audio encode mode. 0: 4.75kbps, 1: 5.15 kbps, 2: 5.9 kbps, 3: 6.7 kbps,

		4: 7.4 kbps, 5: 7.95 kbps, 6: 10.2 kbps, 7: 12.2 kbps,
head.AudioEnable	bool	Enable/Disable audio

4.6 SnapEncode

4.6.1 GetSnapConfigCaps

URL Syntax	http://<*ip*>/cgi-bin/encode.cgi?action=**getConfigCaps**
Comment	***Channel***: video channel index ***SnapType***: 0 = regular snapshot 1 = motion detection snapshot 2 = alarm snapshot
Response	caps[***Channel***].SnapFormat[***SnapType***].Video.CompressionTypes=H.264,MJPG caps[***Channel***].SnapFormat[***SnapType***].Video.ResolutionTypes=3M,1080,SXGA,1_3M,720,D1,CIF

Field in respons	**Value range**	**Description**
CompressionTypes	string	It contains all supported video compression types separated by comma. Range is {MPEG4, MPEG2, MPEG1, MJPG, H.263, H.264}
ResolutionTypes	string	It contains all supported video resolutions, separated by comma. Range is {D1, HD1, BCIF, CIF, QCIF, VGA, QVGA, SVGA, XVGA, WXGA, SXGA, WSXGA, UXGA, WUXGA, ND1,720P, 1080P, 1_3M, 2_5M, 3M, 5M}.

4.6.2 GetSnapEncodeConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=**getConfig**&name=Encode [***Channel***].SnapFormat
Response	***headSnap***.Video.BitRate=384 ***headSnap***.Video.BitRateControl=VBR ***headSnap***.Video.Compression=H.264 ***headSnap***.Video.FPS=1 ***headSnap***.Video.GOP=50 ***headSnap***.Video.Height=576 ***headSnap***.Video.Quality=4 ***headSnap***.Video.Width=704 ***headSnap***.VideoEnable=true
Comment	***Channel***: video channel index

	SnapType: 0 = regular snapshot 1 = motion detection snapshot 2 = alarm snapshot Abbreviations in above table: ***headSnap*** = table.Encode[***Channel***].SnapFormat[***SnapType***]

4.6.3 SetSnapEncodeConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***Channel***: video channel index ***SnapType***: 0 = regular snapshot 1 = motion detection snapshot 2 = alarm snapshot Abbreviation in below table: ***head***= Encode[***Channel***].SnapFormat[***SnapType***]
Response	OK or ERROR

ParamName	ParamValue type	Description
head.Video.BitRate	integer	Unit is Kbps Range depends on capability in **4.3.1 GetVideoInputCaps**
head.Video.BitRateControl	string	Range is {CBR,VBR} CBR: constant bitrate VBR: variable bitrate
head.Video.Compression	String	Range is {MPEG4,MPEG2, MPEG1,MJPG,H.263,H.264} Depends on capacity in **4.3.1 GetVideoInputCaps**
head.Video.FPS	float	Range is [0.2-30]. The lower limit can be reached 0.00002 with firmware 2.4 and above. Frames per second. < 1.0: several seconds/frame, FPS=0.3333: 3 seconds per frame. >1.0: several frames/second. FPS=3: 3 frames per second.
head.Video.GOP	integer	Range is [1-100]. Group of picture, it's the interval of I Frame, Example: GOP=50, means there is one I frame every 49 P or B frames
head.Video.Height	integer	Video height
head.Video.Width	integer	Video Width
head.Video.Quality	integer	Range is [1-6]. Image Quality, available when Video.BitRateControl=VBR 1: worst quality

		6: best quality
head.VideoEnable	bool	True: enable video

4.7ChannelTitle

4.7.1 GetChannelTitleConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**ChannelTitle**
Comment	Get the title of the channel. In below table, ***Channel*** = video channel index
Response	table.ChannelTitle[***Channel***].Name=CAM1

4.7.2 SetChannelTitleConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>
Comment	Set the title of the channel. If VideoWidget[***Channel***].ChannelTitle.EncodeBlend is true, this title is blended to the video frames. Please refer to **4.8.2 SetVideoWidget** In below table, ***Channel*** : video channel index
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
ChannelTitle[***Channel***].Name	String	Channel Name

4.8VideoStandard

4.8.1 GetVideoStandardConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**VideoStandard**
Comment	
Response	table.VideoStandard=PAL

4.8.2 SetVideoStandardConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>

Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
VideoStandard	string	Range is {PAL，NTSC} Video Standard

4.9VideoWidget

4.9.1 GetVideoWidgetConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**VideoWidget**
Description	VideoWidget config contains ChannelTitle, Covers and TimeTitle parameters, defines the background color, front color and positions of channel title and time title, and defines the regions which are not visible (cover).
Response	***head***.BackColor[0]=0 ***head***.BackColor[1]=0 ***head***.BackColor[2]=0 ***head***.BackColor[3]=128 ***head***.EncodeBlend=true ***head***.FrontColor[0]=255 ***head***.FrontColor[1]=255 ***head***.FrontColor[2]=255 ***head***.FrontColor[3]=0 ***head***.Rect[0]=0 ***head***.Rect[1]=8191 ***head***.Rect[2]=0 ***head***.Rect[3]=8191 ... ...
Comment	Channel: video channel index CoReg: Cover Region Covers is an array which sustains multi- Cover regions 0 = region 1 1 = region 2 2 = region 3 3 = region 4 ***head***=table.VideoWidget[*Channel*].ChannelTitle (or) table.VideoWidget[*Channel*].Covers[*CoReg*] (or) table.VideoWidget[*Channel*].TimeTitle table.VideoWidget[*Channel*].CustomTitle[index]

4.9.2 SetVideoWidgetConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	Channel: video channel index CoReg :Cover region index Covers is an array which contains multiple cover regions 0 = region 1 1 = region 2 2 = region 3 3 = region 4 ***headChannelTitle*** = VideoWidget[*Channel*].ChannelTitle ***headCover*** = VideoWidget[*Channel*].Covers[*CoReg*] ***headTimeTitle*** = VideoWidget[*Channel*].TimeTitle ***headCustomTitle*** = VideoWidget[*Channel*].CustomTitle VideoWidgetConfig contains cover region settings, channel title settings and time title settings. The italics below will be replaced by the above abbreviations.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
headCover.BackColor[0] ***headCover***.BackColor[1] ***headCover***.BackColor[2] ***headCover***.BackColor[3]	integer	Range is [0-255]. BackColor[0]:red value BackColor[1]:green value BackColor[2]:blue value BackColor[3]: alpha value
headCover.EncodeBlend	bool	false - widget blend is disabled.
headCover.FrontColor[0] ***headCover***.FrontColor[1] ***headCover***.FrontColor[2] ***headCover***.FrontColor[3]	integer	Range is [0-255]. FrontColor[0]:red value FrontColor[1]:green value FrontColor[2]:blue value FrontColor[3]: alpha value
headCover.Rect[0] ***headCover***.Rect[1] ***headCover***.Rect[2] ***headCover***.Rect[3]	integer	Range is [0-8191]. Rect[0]：top left corner x coordinate (left) Rect[1]：top left corner y coordinate (top) Rect[2]：bottom right x coordinate (right) Rect[3]：bottom right y coordinate (bottom)
headChannelTitle.BackColor[0] ***headChannelTitle***.BackColor[1] ***headChannelTitle***.BackColor[2] ***headChannelTitle***.BackColor[3]	integer	Range is the same with ***headCover***
headChannelTitle.EncodeBlend	bool	
headChannelTitle.FrontColor[0] ***headChannelTitle***.FrontColor[1] ***headChannelTitle***.FrontColor[2]	integer	

headChannelTitle.FrontColor[3]		
headChannelTitle.Rect[0] ***headChannelTitle***.Rect[1] ***headChannelTitle***.Rect[2] ***headChannelTitle***.Rect[3]	integer	Only use the value of (left,top),the value of (right,bottom) is the same as (left,top) Rect[0], Rect[1] are used, and Rect[2] must be same with Rect[0], Rect[3] must be same with Rect[1].
headTimeTitle.BackColor[0] ***headTimeTitle***.BackColor[1] ***headTimeTitle***.BackColor[2] ***headTimeTitle***.BackColor[3]	integer	Range is the same with ***headChannelTitle*** These are configs about time title***.***
headTimeTitle.EncodeBlend	bool	
headTimeTitle.FrontColor[0] ***headTimeTitle***.FrontColor[1] ***headTimeTitle***.FrontColor[2] ***headTimeTitle***.FrontColor[3]	integer	
headTimeTitle.Rect[0] ***headTimeTitle***.Rect[1] ***headTimeTitle***.Rect[2] ***headTimeTitle***.Rect[3]	integer	
headTimeTitle.ShowWeek	bool	True: Display week within the time title.
headCustomTitle.BackColor[0] ***headCustomTitle***.BackColor[1] ***headCustomTitle***.BackColor[2] ***headCustomTitle***.BackColor[3]	integer	Range is the same with ***headCover***
headCustomTitle.EncodeBlend	bool	
headCustomTitle.FrontColor[0] ***headCustomTitle***.FrontColor[1] ***headCustomTitle***.FrontColor[2] ***headCustomTitle***.FrontColor[3]	integer	
headCustomTitle.Rect[0] ***headCustomTitle***.Rect[1] ***headCustomTitle***.Rect[2] ***headCustomTitle***.Rect[3]	integer	Range is [0-8191]. Rect[0]：top left corner x coordinate (left) Rect[1]：top left corner y coordinate (top) Rect[2]：bottom right x coordinate (right) Rect[3]：bottom right y coordinate (bottom).
PTZPreset.BackColor[0] ***PTZPreset***.BackColor[1] ***PTZPreset***.BackColor[2] ***PTZPreset***.BackColor[3]	integer	Range is the same with headCover
PTZPreset.EncodeBlend	bool	
PTZPreset.FrontColor[0] ***PTZPreset***.FrontColor[1] ***PTZPreset***.FrontColor[2] ***PTZPreset***.FrontColor[3]	integer	
PTZPreset.Rect[0] ***PTZPreset***.Rect[1] ***PTZPreset.Rect[2]***	integer	Range is [0-8191]. Rect[0]：top left corner x coordinate (left) Rect[1]：top left corner y coordinate (top)

PTZPreset.Rect[3]		Rect[2]：bottom right x coordinate (right) Rect[3]：bottom right y coordinate (bottom).

4.10VideoIn

4.10.1 getCollect

URL Syntax	http://<*ip*>/cgi-bin/devVideoInput.cgi?action=**getCollect**
Description	Get video input ***channels***
Response	result=1

4.11VideoOut

4.11.1 GetVideoOutConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**VideoOut**
Description	
Response	***head***.Margin[0]=0 ***head***.Margin[1]=0 ***head***.Margin[2]=0 ***head***.Margin[3]=0 ***head***.Color.Brightness=50 ***head***.Color. Contrast =50 ***head***.Color. Satuation =50 ***head***.Color. Hue =50 ***head***.Mode. Width =800 ***head***.Mode. Height=600 ***head***.Mode. BPP =16 ***head***.Mode. Format =”Auto” ***head***.Mode. RefreshRate =60... ...
Comment	head = ***table.VideoOut[channel].***

4.11.2 SetVideoOutConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
head.Margin[0] ***head.Margin[1]*** ***head.Margin[2]*** ***head.Margin[3]***	integer	Margin
head.Color.Brightness	integer	Brightness
head.Color.Contrast =50	integer	Contrast
head.Color.Satuation =50	integer	Satuation
head.Color.Hue =50	integer	Hue
head.Mode.Width =800 ***head***.Mode.Height=600	integer	Resolution
head.Mode.BPP =16	integer	
head.Mode.Format =”Auto”	string	The range is {“Auto”, “TV”, “VGA”, “DVI”}
head.Mode.RefreshRate =60	integer	Refresh rate.

4.12FlashLight

4.12.1 GetFlashLightConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**FlashLight**
Description	
Response	***head*** .Brightness=50 ***head***.Enable=false ***head***.TimeSection[0][0]=1 00:00:00-23:59:59 ***head***.TimeSection[0][1]=0 00:00:00-23:59:59 … ***head***.TimeSection[6][5]=0 00:00:00-23:59:59
Comment	head = ***table.FlashLight***

4.12.2 SetFlashLightConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
FlashLight.Enable	bool	Enable
FlashLight.Brightness	integer	Brightness
FlashLight.TimeSection[***wd***][***ts***]	string	It’s table contains effective time period for flash light everyday. ***wd*** (week day) range is [0-6] (Sunday-Staurday)

		ts (time section) range is [0-23], it's index of timesection table. Format: mask hh:mm:ss-hh:mm:ss Mask: {0,1}, hh: [0-24], mm: [00-59], ss: [00-59] Mask 0: this time section is not used. Mask 1: this time section is used. Example: TimeSection[1][0]=1 12:00:00-18:00:00 Means flash light is effective between 12:00:00 and 18:00:00 at Monday.

5.NetWork

5.1NetInterfaces

5.1.1 GetInterfaces

URL Syntax	http://<*ip*>/cgi-bin/netApp.cgi?action=getInterfaces
Comment	Get all of the system network interfaces. Description for items In below table Name: network interface name. "eth0" - wired network interface "eth2" - wireless network interface "3G" - 3G network interface Type: "Normal" – wired network "Wireless" – wireless network "Auto", "TD-SCDMA", "WCDMA", "CDMA1x", "EDGE", "EVDO" – 3G network types. Valid: network interface is valid if netInterface[n].Valid is true.
Response	netInterface[0].Name=eth0 netInterface[0].Type=Normal netInterface[0].Valid=true netInterface[1]…. …

5.2BasicConfig

5.2.1 GetBasicConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Network**
Comment	Basic config contains basic network parameters (Default interface, domain name, host name), and configuration of each network interface. ***interface*** in below table is network interface name, such as eth0, eth2…
Response	table.Network.DefaultInterface=eth0 table.Network.Domain=dahua table.Network.Hostname=badak table.Network.***interface***.DefaultGateway=10.7.0.1 table.Network.***interface***.DhcpEnable=false table.Network.***interface***.DnsServers[0]=221.123.33.228 table.Network.***interface***.DnsServers[1]=221.12.1.228 table.Network.***interface***.IPAddress=10.7.2.3 table.Network.***interface***.MTU=1500 table.Network.***interface***.PhysicalAddress=00:10:5c:f2:1c:b4 table.Network.***interface***.SubnetMask=255.255.0.0

5.2.2 SetBasicConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***interface*** in below table is network interface name, such as eth0, eth1…
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
NetWork.DefaultInterface	string	Set default network interface when multiple interfaces exist. Range of interfaces is depends on **5.1.1 GetInterfaces**
NetWork.Domain	string	Domain name.
NetWork.Hostname	string	Hostname and Domain compose a network address.
Network.***interface***.DefaultGateway	string	IP address
Network.***interface***.DhcpEnable	bool	Enable/Disable DHCP.
Network.***interface***.DnsServers[0]	string	IP address of first DNS server.
Network.***interface***.DnsServers[1]	string	IP address of second DNS server.
Network.***interface***.IPAddress	string	Interface IP address.
Network.***interface***.MTU	integer	Interface MTU.
Network.***interface***.PhysicalAddress	string	MAC address of interface. HEX string in the form of: xx:xx:xx:xx:xx:xx. Range of x is [0-9,a-f,A-F]

		Example: 00:10:5c:f2:1c:b4 00:10:5C:F2:1C:B5
Network.***interface***.SubnetMask	string	Network mask string: In the form of x.x.x.x, range of x is [0-255] Example: 255.255.255.0

5.3PPPoE

5.3.1 GetPPPoEConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**PPPoE**
Comment	
Response	table.PPPoE.Enable=false table.PPPoE.Password=123456 table.PPPoE.UserName=123456

5.3.2 SetPPPoEConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
PPPoE.Enable	bool	Enable/Disable PPPoE.
PPPoE.UserName	string	PPPoE user name.
PPPoE.Password	string	PPPoE user password.

5.4DDNS

5.4.1 GetDDNSConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**DDNS**
Comment	***Index*** below is the DDNS protocol table index, start from 0. the meaning of params can refer to ***SetDDNSConfig chapter***.

Response	table.DDNS[***index***].Address=www.dahuatech.com table.DDNS[***index***].Enable=true table.DDNS[***index***].HostName=www.dahuatech.com table.DDNS[***index***].KeepAlive=10 table.DDNS[***index***].Password=none table.DDNS[***index***].Port=5050 table.DDNS[***index***].Protocol= Quick DDNS table.DDNS[***index***].UserName=user1 table.DDNS[***index***].DefaultHostName.Enable=false table.DDNS[***index***].DefaultHostName.HostName=9002A9D77133.quickddns.com

5.4.2 SetDDNSConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***Index*** below is the DDNS protocol table index, start from 0.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
DDNS[***index***].Address	string	DDNS server IP address or name.
DDNS[***index***].Enable	bool	Multiple DDNS hostname can be configured, but Only one hostname can be enabled, others should be disabled.
DDNS[***index***].***HostName***	String	Host name of this device.
DDNS[***index***].KeepAlive	integer	Range is [1-65535]. Unit is minutes.
DDNS[***index***].Password	string	DDNS user password
DDNS[***index***].Port	integer	Range is [1-65535]. Port of DDSN server
DDNS[***index***].Protocol	string	Range is {"NO-IP DDNS", "Dyndns DDNS", ~~"DAHUA"~~, "Private DDNS", "DHDDNS","QUICK DDNS" }. DDSN protocol type
DDNS[***index***].UserName	string	DDNS user name
DDNS[*index*].DefaultHostName.Enable	bool	Only protocol is in range { "Private DDNS" , "DHDDNS","QUICK DDNS"},it effects. true : use the ***DefaultHostName.HostName*** false: use the ***HostName***
DDNS[***index***].***DefaultHostName.HostName***	string	The defaultHostName,it can not modify,just can get.

5.5Email

5.5.1 GetEmailConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Email**
Comment	
Response	table.Email.Address=www.dahuatech.com table.Email.Anonymous=true table.Email.AttachEnable=true table.Email.AttachmentEnable=true table.Email.Enable=true table.Email.HealthReport.Enable=false table.Email.HealthReport.Interval=61 table.Email.Password=123456 table.Email.Port=26 table.Email.Receivers[0]=x@dahuatech.com table.Email.Receivers[1]=y@dahuatech.com table.Email.Receivers[2]=z@dahuatech.com table.Email.SendAddress=x@dahuatech.com table.Email.SslEnable=false table.Email.Title=DVRMessage table.Email.UserName=anonymitty

5.5.2 SetEmailConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
Email.Address	string	SMTP server IP address or name.
Email.Anonymous	bool	Enable/Disable anonymous email.
Email.AttachEnable	bool	Enable/Disable email attachment
Email.AttachmentEnable	bool	Enable/Disable email attachment
Email.Enable	bool	Enable/Disable email function
Email.HealthReport.Enable	bool	Enable/Disable report device status by email.
Email.HealthReport.Interval	integer	Range is [30-1440]. Unit is minutes
Email.Password	string	User password of email account.

Email.Port	integer	Range is [1-65535]
Email.Receivers[0]	string	Email addresses of 3 receivers.
Email.Receivers[1]	string	
Email.Receivers[2]	string	
Email.SendAddress	string	Sender email address.
Email.SslEnable	bool	True: enable SSL email.
Email.Title	string	Title of email.
Email.UserName	string	User name of email account.

5.6Wlan

5.6.1 GetWlanConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**WLan**
Comment	
Response	table.WLan.eth2.Enable=true table.WLan.eth2.Encryption=off table.WLan.eth2.KeyFlag=false table.WLan.eth2.KeyID=0 table.WLan.eth2.KeyType=Hex table.WLan.eth2.Keys[0]=password1 table.WLan.eth2.Keys[1]=password2 table.WLan.eth2.Keys[2]=password3 table.WLan.eth2.Keys[3]=password4 table.WLan.eth2.LinkMode=Auto table.WLan.eth2.SSID=dahua

5.6.2 SetWlanConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***interface*** is name of wireless interface, to get all the network interfaces and their properties, refer to **5.1:NetInterfaces.**
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
WLan.***interface***.Enable	bool	True: Enable WLan on this interface.
WLan.***interface***.Encryption	string	Range is {Off, On, WEP64Bits, WEP128Bits,

		WPA-PSK-TKIP, WPA-PSK-CCMP} Encryption mode.
WLan.***interface***.KeyFlag	bool	true: key is configured.
WLan.***interface***.KeyID	integer	Range is [0-3] Indicates which key is used. 0 : WLan.***interface***.Keys[0] is used.
WLan.***interface***.KeyType	string	Range is {Hex, ASCII]
WLan.***interface***.Keys[0]	string	For ASCII key type: 64bits encryption key length is 5, 128bits encryption key length is 13, consists of [0-9, a-z, A-Z] For HEX key type: 64bits encryption key length is 10, 128bits encryption key length is 26, consists of [0-9, a-z, A-Z]
WLan.***interface***.Keys[1]	string	
WLan.***interface***.Keys[2]	string	
WLan.***interface***.Keys[3]	string	
WLan.***interface***.LinkMode	string	Range is {Auto, Ad-hoc, Infrastructure}. Auto – select suitable mode automatically. Ad-hoc – Device with wireless network adapter can connect to each other without Access Point. Infrastructure – Integrate wire and wireless LAN together to share network resource, access point is need in this mode.
WLan.***interface***.SSID	string	

5.6.3 ScanWlanDevices

URL Syntax	http://<*ip*>/cgi-bin/wlan.cgi?action=scanWlanDevices&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	Search wifi information
Response	Available wifi num and detailed information, for example: found=1 wlanDevice[0].ApConnected=0 wlanDevice[0].ApMaxBitRate=54000000 wlanDevice[0].ApNetWorkType=255 wlanDevice[0].AuthMode=7 wlanDevice[0].BSSID=28:2c:b2:5c:de:36 wlanDevice[0].EncrAlgr=3 wlanDevice[0].LinkMode=0 wlanDevice[0].LinkQuality=31 wlanDevice[0].RSSIQuality=0 wlanDevice[0].SSID=xia_yuguo 13098 Internet

ParamName	**ParamValue type**	**Description**
SSID	string	Specified SSID, if not include any SSID, all wifi information will be searched and displayed.

5.7UPnP

5.7.1 GetUPnPConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**UPnP**
Comment	***Index*** in below is the UPNP map table index, start from 0.
Response	table.UPnP.Enable=true table.UPnP.MapTable[***index***].Enable=true table.UPnP.MapTable[***index***].InnerPort=80 table.UPnP.MapTable[***index***].OuterPort=8080 table.UPnP.MapTable[***index***].Protocol=TCP table.UPnP.MapTable[***index***].ServiceName=HTTP

5.7.2 SetUPnPConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***Index*** in below table is UPNP map table index, range is [0-255]
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
UPnP.Enable	bool	Enable/Disable UPNP feature.
UPnP.MapTable[***index***].Enable	bool	Enable/Disable this UPNP map.
UPnP.MapTable[***index***].InnerPort	integer	Range is [1-65535]. Inner port number
UPnP.MapTable[***index***].OuterPort	integer	Range is [1-65535]. Outer port number.
UPnP.MapTable[***index***].Protocol	string	Range is {TCP, UDP]
UPnP.MapTable[***index***].ServiceName	string	User defined UPnP service name.

5.7.3 GetUPnPStatus

URL Syntax	http://<*ip*>/cgi-bin/netApp.cgi?action=getUPnPStatus
Comment	Get UPNP mapping result: result=1: mapping succeed. result=0: mapping failed.

Response	rsult=1

5.8NTP

5.8.1 GetNTPConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**NTP**
Comment	
Response	table.NTP.Address=clock.isc.org table.NTP.Enable=false table.NTP.Port=38 table.NTP.TimeZone=9 table.NTP.UpdatePeriod=31

5.8.2 SetNTPConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
NTP.Address	string	NTP server IP address or name.
NTP.Enable	bool	Enable/Disable NTP server.
NTP.Port	integer	Range is [1-65535]. Port of NTP server.
NTP.TimeZone	integer	Range is [0-32]. 0: "GMT+00:00" 1: "GMT+01:00" 2: "GMT+02:00" 3: "GMT+03:00" 4: "GMT+03:30" 5: "GMT+04:00" 6: "GMT+04:30" 7: "GMT+05:00" 8: "GMT+05:30" 9: "GMT+05:45" 10: "GMT+06:00" 11: "GMT+06:30" 12: "GMT+07:00"

		13: "GMT+08:00" 14: "GMT+09:00" 15: "GMT+09:30" 16: "GMT+10:00" 17: "GMT+11:00" 18: "GMT+12:00" 19: "GMT+13:00" 20: "GMT-01:00" 21: "GMT-02:00" 22: "GMT-03:00" 23: "GMT-03:30" 24: "GMT-04:00" 25: "GMT-05:00" 26: "GMT-06:00" 27: "GMT-07:00" 28: "GMT-08:00" 29: "GMT-09:00" 30: "GMT-10:00" 31: "GMT-11:00" 32: "GMT-12:00"
NTP.UpdatePeriod	integer	Range is [0-65535], unit is minutes

5.9RTSP

5.9.1 GetRTSPConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**RTSP**
Comment	
Response	table.RTSP.Enable=true table.RTSP.Port=554 table.RTSP.RTP.EndPort=40000 table.RTSP.RTP.StartPort=20000

5.9.2 SetRTSPConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
RTSP.Enable	bool	Enable/Disable RTSP.
RTSP.Port	integer	RTSP port.
RTSP.RTP.StartPort	integer	RTP start port.
RTSP.RTP.EndPort	integer	RTP end port.

5.10Telnet

5.10.1 GetTelnetConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Telnet**
Comment	
Response	table.Telnet.Enable=true

5.10.2 SetTelnetConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
Telnet.Enable	bool	Enable/Disable Telnet.

6.Events

6.1EventHandler

EventHandler is used in alarm and event config in following sections. It contains settings for actions linked with alarm and events. Actions include record, snapshot, PTZ action, log, mail, alarm out and so on.When alarm or event happen, actions defined in alarm EventHandler and event EventHandler are executed.

6.1.1 GetEventHandler

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**<*handlerName*>**
Comment	**< *handlerName*>** can be one of below four formats

	Alarm[***alarm channel***].EventHandler MotionDetect[***video channel]***. EventHandler BlindDetect[***video channel***]. EventHandler LossDetect[***video channel***]. EventHandler LoginFailureAlarm.EventHandler Example URL: http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=Alarm[0].EventHandler can get EventHandler settings of alarm channel 0.
Response	***handlerName***.EventHandler.AlarmOutChannels[0]=1 ***handlerName***.EventHandler.AlarmOutChannels[1]=1 … ***handlerName***.EventHandler.AlarmOutEnable=false ***handlerName***.EventHandler.AlarmOutLatch=10 ***handlerName***.EventHandler.BeepEnable=true ***handlerName***.EventHandler.Dejitter=0 ***handlerName***.EventHandler.Delay=30 ***handlerName***.EventHandler.LogEnable=true ***handlerName***.EventHandler.MailEnable=true ***handlerName***.EventHandler.PtzLink[0][0]=None ***handlerName***.EventHandler.PtzLink[0][1]=0 ***handlerName***.EventHandler.PtzLink[1][0]=None ***handlerName***.EventHandler.PtzLink[1][1]=0 … ***handlerName***.EventHandler.PtzLinkEnable=false ***handlerName***.EventHandler.RecordChannels[0]=1 ***handlerName***.EventHandler.RecordChannels[1]=1 … ***handlerName***.EventHandler.RecordEnable=true ***handlerName***.EventHandler.RecordLatch=10 ***handlerName***.EventHandler.SnapshotChannels[0]=1 ***handlerName***.EventHandler.SnapshotChannels[1]=1 … ***handlerName***.EventHandler.SnapshotEnable=false ***handlerName***.EventHandler.SnapshotPeriod=3 ***handlerName***.EventHandler.SnapshotTimes=0 ***handlerName***.EventHandler.TimeSection[0][0]=1 01:00:00-24:00:00 ***handlerName***.EventHandler.TimeSection[0][1]=1 01:00:00-24:00:00 … … ***handlerName***.EventHandler.TimeSection[6][5]=1 01:00:00-24:00:00 ***handlerName***.EventHandler.TipEnable=true

	handlerName.EventHandler. ExAlarmOutEnable=true ***handlerName***. ExAlarmOutChannels[0] =2 ***handlerName***.ExAlarmOutChannels[1]=3 …

6.1.2 SetEventHandler

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	Meaning of ***handlerName*** is the same with **6.1.1 GetEventHandler**
Response	OK or ERROR

paramName	**paramValue type**	**Description**
handlerName.EventHandler.AlarmOutChannels[***ch***]	integer	Range is {0, 1}, ***ch*** is alarm out channel index. 0 – do not output alarm at alarm out channel ***ch*** 1 – output alarm at alarm out channel ***ch***
handlerName.EventHandler.AlarmOutEnable	bool	Enable/Disable alarm out function.
handlerName.EventHandler.AlarmOutLatch	Integer	Range is [10-300]. Unit is seconds, indicates the time to output alarm after input alarm is cleared.
handlerName.EventHandler.BeepEnable	bool	Enable/Disable beep.
handlerName.EventHandler.Dejitter	integer	Range is [0-255]. Alarm signal dejitter seconds. Alarm signal change during this period is ignored.
handlerName.EventHandler.Delay	integer	Range is [0-300]. Delay seconds before setting take effect.
handlerName.EventHandler.LogEnable	bool	Enable/Disable log for alarm.
handlerName.EventHandler.MailEnable	bool	Enable/Disable mail send for alarm.
handlerName.EventHandler.PtzLink[***ch***][0]	string	Range is {None, Preset, Tour, Pattern} This is PTZ action linked with events. ***ch*** is PTZ channel index.
handlerName.EventHandler.PtzLink[***ch***][1]	integer	This is the parameter of PtzLink[***ch***][0], If PtzLink[***ch***]][0] is Preset: this is preset point. Tour: this is tour path number. Pattern: this is pattern number.
handlerName.EventHandler.PtzLinkEnable	Bool	Enable/Disable PTZ link.
handlerName.EventHandler.RecordChannels[***ch***]	Integer	Range is {0, 1} 0 – do not record on video channel ***ch*** 1 – record. on video channel ***ch***
handlerName.EventHandler.RecordEnable	bool	Enable/Disable record function.
handlerName.EventHandler.RecordLatch	integer	Range is [10-300]. Unit is seconds, indicates the time to record after input alarm is cleared..

handlerName.EventHandler.SnapshotChannels[***ch***]	integer	Range is {0, 1} 0 – do not snapshot on video channel ***ch*** 1 – snapshot on video channel ***ch***
handlerName.EventHandler.SnapshotEnable	bool	Enable/Disable snapshot function.
handlerName.EventHandler.SnapshotPeriod	integer	Range is [0-255]. Frames between snapshot. 0 means continuously snapshot for every frame.
handlerName.EventHandler.SnapshotTimes	integer	Range is [0-65535] Snapshot times before stop, 0 means don't stop snapshot.
handlerName.EventHandler.TimeSection[***wd***][***ts***]	String	It's table contains effective time period for eventHanlder everyday. ***wd*** (week day) range is [0-6] (Sunday-Staurday) ***ts*** (time section) range is [0-23], it's index of timesection table. Format: mask hh:mm:ss-hh:mm:ss Mask: {0,1}, hh: [0-24], mm: [00-59], ss: [00-59] Mask 0: this time section is not used. Mask 1: this time section is used. Example: TimeSection[1][0]=1 12:00:00-18:00:00 Means EventHandler is effective between 12:00:00 and 18:00:00 at Monday.
handlerName.EventHandler.TipEnable	bool	Enable/Disable local message box tip.
handlerName.EventHandler. ExAlarmOutEnable	bool	
handlerName. ExAlarmOutChannels[channels]	integer	

6.2Alarm

6.2.1 GetAlarmConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Alarm**
Comment	
Response	table.Alarm[0].Enable=false table.Alarm[0].EventHandler….(output of EventHandler is described in **6.1.1 GetEventHandler**) table.Alarm[0].Name=Door1 table.Alarm[0].SensorType=NC table.Alarm[1]…. …

6.2.2 SetAlarmConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	In below table, **input** is external alarm input channel, ***ch*** is channel number, ***wd*** is weekday index, ***ts*** is timesection index. EventHandler defines parameter of relevant actions when alarm or event happens. It's also used in following sections about events.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
Alarm[*input*].Enable	bool	Enable/Disable alarm from a input channel
Alarm[*input*].EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**
Alarm[*input*].Name	string	Name of alarm input channel.
Alarm[*input*].SensorType	string	Range is {NC, NO]. NC: normal close NO: normal open

6.2.3 GetAlarmOutConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**AlarmOut**
Comment	***alarmOutChannel*** below is the alarm out channel index.
Response	table.AlarmOut[***alarmOutChannel***].Mode=0 table.AlarmOut[***alarmOutChannel***].Name=Beep

6.2.4 SetAlarmOutConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***Port*** in below table is alarm out port index, start form 0.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
AlarmOut[***port***].Mode	integer	Range is {0, 1, 2} 0: automatically alarm 1: force alarm 2: close alarm
AlarmOut[***port***].Name	string	Alarm out port name.

6.2.5 GetInSlots

URL Syntax	http://*<ip>*/cgi-bin/alarm.cgi?action=**getInSlots**
Comment	Get alarm input channel number. Below response means there are 2 alarm input channels.
Response	result=2

6.2.6 GetOutSlots

URL Syntax	http://*<ip>*/cgi-bin/alarm.cgi?action=**getOutSlots**
Comment	Get alarm output channel number.
Response	result=1

6.2.7 GetInState

URL Syntax	http://*<ip>*/cgi-bin/alarm.cgi?action=**getInState**
Comment	Get alarm input state for all channels. A bit in the response result indicates a channel alarm states, below result 3 means alarm channel 1 and channel 2 have alarm now.
Response	result=3

6.2.8 GetOutState

URL Syntax	http://*<ip>*/cgi-bin/alarm.cgi?action=**getOutState**
Comment	Get alarm output state for all channels. A bit in the response result indicates a channel. 1 means alarm is present.
Response	result=0

6.2.9 GetChannelInState

URL Syntax	http://*<ip>*/cgi-bin/alarm.cgi?action=**getInState&channel=*<channelNo>***
Comment	Get alarm input state for ***channelNo***. ***channelNo*** starts from 0, and must be less than alarm input channels obtained from **6.2.5 GetInSlots**. Result 1 means alarm is present. Result 0 means alarm is not present.

Response	result=1

6.2.10 GetChannelOutState

URL Syntax	http://<*ip*>/cgi-bin/alarm.cgi?action=**getOutState&channel=<*channelNo*>**
Comment	Get alarm output state for ***channelNo***. ***channelNo*** starts from 0, and must be less than alarm output channels obtained from **6.2.6 GetOutSlots** . Result 1 means alarm is present. Result 0 means alarm is not present.
Response	result=0

6.3MotionDetect

6.3.1 GetMotionDetectConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**MotionDetect**
Comment	MotionDetect config of a video channel contains Enable, Level, Region and EventHandler.
Response	table.MotionDetect[0].Enable=false table.MotionDetect[0].EventHandler… (output of EventHandler is described in **6.1.1 GetEventHandler)** table.MotionDetect[0].Level=3 table.MotionDetect[0].Region[0]=3932160 table.MotionDetect[0].Region[1]=3932160 table.MotionDetect[0].MotionDetectWindow[0].Id=0 table.MotionDetect[0].MotionDetectWindow[0].Name=Region0 table.MotionDetect[0].MotionDetectWindow[0].Sensitive=58 table.MotionDetect[0].MotionDetectWindow[0].Threshold=4 table.MotionDetect[0].MotionDetectWindow[0].Region[0]=3932160 table.MotionDetect[0].MotionDetectWindow[0].Region[1]=3932160 … … table.MotionDetect[1]… …

6.3.2 SetMotionDetectConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	Channel: video channel index ***LineNum*** Index of region, region is divided into lines and each line has several blocks, a line is described by a 32 bit integer, a bit for a block.. 0=Line 1

	1=Line 2 … … ***WinNum*** Index of detect window, there are 4 detect windows at present. Each window is divided into 18 lines and 22 blocks/line. MotionDetectWindow is available with firmware 2.212 and above. ***RegionIndex*** It is similar with ***LineNum,***but is beyond to a detect window. ***Head*** = MotionDetect[*Channel*] The italics below will be replaced by the above abbreviations.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head.Enable	bool	Enable/Disable motion detect feature in a channel.
head.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**
head.Level	integer	Range is [1-6]. Sensitivity of motion detection. 1: lowest sensitivity. 6: highest sensitivity.
head.Region[***LineNum***]	integer	Currently, region is divided into 18 lines and 22 blocks/line. A bit describes a block in the line. Bit = 1: motion in this block is monitored.. This filed is used to compatible with the previous firmware. It can be instead by ***head***. MotionDetectWindow[***WinNum***]. Example: MotionDetect[0].Region[0] = 4194303 (0x3FFFFF):: motion in channel 0 line 0's 22 blocks is monitored. MotionDetect[0].Region[1] =0: motion in line 1's 22 blocks is not monitored. MotionDetect[0].Region[17] = 3: in the last line of channel 0, motion in the left two blocks is monitored.
head.MotionDetectWindow [***WinNum***].Id	integer	It is the Id of a detect window.
head.MotionDetectWindow [***WinNum***].Name	string	It is the name of a detect window.
head.MotionDetectWindow [***WinNum***].Sensitive	integer	Range is [0-100]. It presents more sensitive if the value is larger.
head.MotionDetectWindow [***WinNum***]. Threshold	integer	Range is [0-100]. It presents the threshold value when trigger motion detect.
head.MotionDetectWindow [***WinNum***]. Region[***RegionIndex***]	integer	It is similar with ***head***.Region[***LineNum***].

6.4BlindDetect

6.4.1 GetBlindDetectConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**BlindDetect**
Comment	*Channel*: video channel number ***head***= table.BlindDetect[*Channel*]
Response	***head***.Enable=false ***head***.EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**) ***head***.Level=3

6.4.2 SetBlindDetectConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	*Channel*: video channel number ***head***=BlindDetect[*Channel*]
Response	OK or ERROR

ParamName	ParamValue type	Description
head.Enable	bool	Enable/Disable blind detect feature.
head.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**
head.Level	integer	Range is [1-6]. Sensitivity of blind detection. 1: lowest sensitivity. 6: highest sensitivity.

6.5LossDetect

6.5.1 GetLossDetectConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**LossDetect**
Comment	*Channel*: video channel number ***head***=table.BlindDetect[*Channel*]
Response	***head***.Enable=false ***head***.EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**)

6.5.2 SetLossDetectConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]

Comment	*Channel*: video channel number ***Head*** = BlindDetect[*Channel*]
Response	OK or ERROR

ParamName	ParamValue type	Description
head.Enable	bool	Enable/Disable loss detect feature.
head.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**

6.6LoginFailureAlarm

6.6.1 GetLoginFailureAlarmConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**LoginFailureAlarm**
Comment	*Channel*: video channel number ***head***=table.LoginFailureAlarm
Response	***head***.Enable=false ***head***.EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**)

6.6.2 SetLoginFailureAlarmConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***Head***=LoginFailureAlarm
Response	OK or ERROR

ParamName	ParamValue type	Description
head.Enable	bool	Enable/Disable notify LoginFailure event.Now this event can be linked with send email and alarm out.The max try login times can be configured in chapter **9.1.2 SetGeneralConfig**.
head.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**

6.7 StorageAbnormal

6.7.1 GetStorageNotExistConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=StorageNotExist
Comment	
Response	StorageNotExist.Enable=false StorageNotExist.EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**)

6.7.2 SetStorageNotExistConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
StorageNotExist.Enable	bool	Enable/Disable loss detect feature.
StorageNotExist.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**

6.7.3 Get StorageFailureConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name= StorageFailure
Comment	
Response	StorageFailure.Enable=false StorageFailure.EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**)

6.7.4 Set StorageFailureConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
StorageFailure.Enable	bool	Enable/Disable loss detect feature.
StorageFailure.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**

6.7.5 GetStorageLowSpaceConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name= StorageLowSpace
Comment	
Response	StorageLowSpace.Enable=false StorageLowSpace.EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**)

6.7.6 SetStorageLowSpaceConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	

Response	OK or ERROR

ParamName	ParamValue type	Description
StorageLowSpace.Enable	bool	Enable/Disable loss detect feature.
StorageLowSpace.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**

6.8 NetAbnormal

6.8.1 GetNetAbortConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name= NetAbort
Comment	
Response	NetAbort.Enable=false NetAbort.EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**)

6.8.2 SetNetAbortConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
NetAbort.Enable	bool	Enable/Disable loss detect feature.
NetAbort.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**

6.8.3 GetIPConflictConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name= IPConflict
Comment	
Response	IPConflict.Enable=false IPConflict.EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**)

6.8.4 SetIPConflictConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
IPConflict.Enable	bool	Enable/Disable loss detect feature.
IPConflict.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**

6.9 GetEventIndexes

URL Syntax	http://<*ip*>/cgi-bin/eventManager.cgi?action=getEventIndexes&code=<***eventCode***>
Comment	Get channels indexes that event of code ***eventCode*** happens. ***eventCode*** includes: VideoMotion: motion detection event VideoLoss: video loss detection event VideoBlind: video blind detection event. AlarmLocal: alarm detection event.
Response	channels[0]=0 channels[1]=2 channels[2]=3 … (This response means event happened on channel 0, channel 2, and channel 3.)

6.10 Attach

URL Syntax	http://<*ip*>/cgi-bin/eventManager.cgi?action=attach&codes=[<***eventCode***>,<***eventCode***> ,…]
Comment	Get channels indexes that event of code ***eventCode*** happens. ***eventCode*** includes: VideoMotion: motion detection event VideoLoss: video loss detection event VideoBlind: video blind detection event. AlarmLocal: alarm detection event. CrossLineDetection: tripwire event CrossRegionDetection: intrusion event LeftDetection: abandoned object detection TakenAwayDetection: missing object detection VideoAbnormalDetection: scene change event FaceDetection: face detect event AudioMutation: intensity change AudioAnomaly: input abnormal VideoUnFocus: defocus detect event WanderDetection: loitering detection event RioterDetection: People Gathering event

	ParkingDetection: parking detection event MoveDetection: fast moving event MDResult: motion detection data reporting event. The motion detect window contains 18 rows and 22 columns. The event info contains motion detect data with mask of every row. HeatImagingTemper: temperature alarm event
Response	HTTP Code: 200 OK\r\n Cache-Control: no-cache\r\n Pragma: no-cache\r\n Expires: Thu, 01 Dec 2099 16:00:00 GMT\r\n Connection: close\r\n Content-Type: multipart/x-mixed-replace; boundary=<***bondary***>\r\n Body: --<***bondary***>\r\n Content-Type: text/plain\r\n Content-Length: ***<data length>\r\n*** ***<eventInfo>\r\n\r\n*** --<***bondary***>\r\n Content-Type: text/plain\r\n Content-Length: ***<data length>***\r\n ***<eventInfo>\r\n\r\n*** For example: HTTP Code: 200 OK\r\n Cache-Control: no-cache\r\n Pragma: no-cache\r\n Expires: Thu, 01 Dec 2099 16:00:00 GMT\r\n Connection: close\r\n Content-Type: multipart/x-mixed-replace; boundary=myboundary\r\n\r\n Body: -- myboundary \r\n Content-Type: text/plain\r\n Content-Length: 39\r\n Code=VideoMotion;action=Start;index=0\r\n\r\n -- myboundary \r\n Content-Type: text/plain\r\n Content-Length: 38\r\n Code=VideoBlind;action=Start;index=0\r\n\r\n -- myboundary \r\n Content-Type: text/plain\r\n Content-Length: 38\r\n Code= AlarmLocal;action=Start;index=0\r\n\r\n -- myboundary \r\n Content-Type: text/plain\r\n Content-Length: 38\r\n Code= MDResult;action=Pulse;index=0;data=61708863,61708863…\r\n\r\n

	-- myboundary \r\n …

7.PTZ

7.1PTZConfig

7.1.1 GetPTZConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Ptz**
Comment	***Port*** in below table is PTZ port index, start form 0.
Response	table.Ptz[***port***].Address=8 table.Ptz[***port***].Attribute[0]=115200 table.Ptz[***port***].Attribute[1]=8 table.Ptz[***port***].Attribute[2]=Even table.Ptz[***port***].Attribute[3]=1 table.Ptz[***port***].Homing[0]=0 table.Ptz[***port***].Homing[1]=30 table.Ptz[***port***].NumberInMatrixs=0 table.Ptz[***port***].ProtocolName=NONE

7.1.2 SetPTZConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***Port*** in below table is PTZ port index, start form 0.
Response	OK or ERROR

ParamName	ParamValue type	Description
Ptz[***port***].Address	integer	Range is [0-255]. Device address, if there are more than one device connected to this port, distinguish them by this address.
Ptz[***port***].Attribute[0]	integer	Range is {1200, 2400 ,4800, 9600, 19200, 38400, 57600, 115200}. Baudrate
Ptz[***port***].Attribute[1]	integer	Range is {4, 5, 6, 7, 8}. Data bit.
Ptz[***port***].Attribute[2]	string	Range is {Even, Mark, None, Odd, Space}. Parity verification mode.

Ptz[***port***].Attribute[3]	float	Range is {1, 1.5, 2}. Stop bit.
Ptz[***port***].Homing[0]	integer	Range is {-1,0-255} -1: homing is disabled. [0-255]: preset point number
Ptz[***port***].Homing[1]	integer	Range is [0-65535]. No operation timeout, unit is seconds. After no operation timeout, PTZ go to preset point set in Ptz[port].Homing[0].
Ptz[***port***].ProtocolName	string	PTZ protocol name, depends on PTZ capability, refer to **7.2.1 GetProtocolList** to get the protocol list.

7.1.3 GetPtzAutoMovementConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**PtzAutoMovement**
Comment	***Port*** in below table is PTZ port index, start from 0. ***Task*** is the number of task, start from 0. ***week***:from 1 to 7. ***section***: time section, from 0 to 5.
Response	table.PtzAutoMovement[***port***][***Task***].Enable = true table.PtzAutoMovement[***port***][***Task***].TimeSection[***week***][***section***] = ”1 10:00:00-11:00:00” … table.PtzAutoMovement[***port***][***Task***].Fuction = “Scan” table.PtzAutoMovement[***port***][***Task***].ScanId = 0 table.PtzAutoMovement[***port***][***Task***].PresetId = 1 table.PtzAutoMovement[***port***][***Task***].PatternId = 0 table.PtzAutoMovement[***port***][***Task***].TourId = 0 table.PtzAutoMovement[***port***][***Task***].AutoHoming.Enable = true table.PtzAutoMovement[***port***][***Task***].AutoHoming.Time = 300 table.PtzAutoMovement[***port***][***Task***].SnapshotEnable = false table.PtzAutoMovement[***port***][***Task***].SnapshotDelayTime = 30

7.1.4 SetPtzAutoMovementConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***Channel***: video channel index ***tasknum***: task number Abbreviation in below table: ***head***=PtzAutoMovement[***port***][***task***] ***week***:from 1 to 7. ***section***: time section, from 0 to 5.

Response	OK or ERROR

ParamName	ParamValue type	Description
head.Enable	bool	Enable/Disable PtzAutoMovement
head.TimeSection	timeSchedule	timeSchedule[***week***][***section***]=”1 10:00:00-11:00:00” …
head.Fuction	string	Range is {Scan,Preset,Pattern,Tour}.
head.ScanId	integer	Scan Id, start from 0
head.PresetId	integer	Preset Id, start from 1
head.PatternId	integer	Pattern Id, start from 0
head.TourId	integer	Tour Id, start from 1
head.AutoHoming.Enable	bool	Enable/Disable AutoHoming. If ptz manual operation have stopped, it will recover auto movement.
head.AutoHoming.Time	integer	Recover time, unit is second.
head.SnapshotEnable	bool	Enable/Disable Snap, when “Fuction” is “Preset”.
head.SnapshotDelayTime	integer	Delay time of snap, when “Fuction” is “Preset”.

7.2PTZControl

7.2.1 GetProtocolList

URL Syntax	http://<*ip*>/cgi-bin/ptz.cgi?action=**getProtocolList**
Comment	Get PTZ protocol list. Response contains all support PTZ protocols separated by comma.
Response	result=NONE,AD1641M,ADMATRIX,BANKNOTE,DH-CC440,DH-MATRIX,DH-SD1,DH-SD2,HAIYU,HY,LILIN,PANASONIC

7.2.2 GetCurrentProtocolCaps

URL Syntax	http://<*ip*>/cgi-bin/ptz.cgi?action=**getCurrentProtocolCaps**&channel=<***channelNo***>
Comment	Get PTZ protocol list, ***channelNo*** is PTZ channel index.
Response	caps.AlarmLen=0 caps.AuxMax=8 caps.AuxMin=1 caps.CamAddrMax=255 caps.CamAddrMin=1 caps.Interval=200 caps.Menu=false caps.MonAddrMax=255 caps.MonAddrMin=0

	caps.Name=DH-SD1 caps.PanSpeedMax=255 caps.PanSpeedMin=1 caps.PatternMax=5 caps.PatternMin=1 caps.PresetMax=80 caps.PresetMin=1 caps.TileSpeedMax=255 caps.TileSpeedMin=1 caps.TourMax=7 caps.TourMin=0 caps.Type=1

Field in response	**Description**
AlarmLen	Alarm length in protocol
AuxMax	Maximum/Minimum number for auxiliary functions
AuxMin	
CamAddrMax	Maximum/Minimum channel address
CamAddrMin	
Menu	True or false, support internal menu of the PTZ or not,
MonAddrMax	Maximum/Minimum monitor address
MonAddrMin	
Name	Name of the operation protocol
PanSpeedMax	Maximum/Minimum pan speed.
PanSpeedMin	
PatternMax	Maximum/Minimum pattern path number.
PatternMin	
PresetMax	Maximum/Minimum preset point number.
PresetMin	
TileSpeedMax	Maximum/Minimum tile speed.
TileSpeedMin	
TourMax	Maximum/Minimum tour path number.
TourMin	
Type	Type of PTZ protocol.

7.2.3 PTZ control commands

URL Syntax	http://<*ip*>/cgi-bin/ptz.cgi?action=[**action**]&channel=[**ch**]&code=[**code**]&arg1=[**argstr**]& arg2=[**argstr**]&arg3=[**argstr**]
Comment	This URL is used to start/stop PTZ control command. ***action*** is PTZ control command, it can be ***start*** or ***stop***. ***ch*** is PTZ channel range is [0 - n-1], code is PTZ operation, and arg1, arg2, arg3 is the arguments of operation. ***Code*** and ***argstr*** values are listed in below table.
Response	OK or ERROR

Code	Code description	arg1	arg2	arg3	arg4
Up	Tile up	0	Vertical speed, range is [1-8]	0	0
Down	Tile down	0	Vertical speed, range is [1-8]	0	0
Left	Pan left	0	Vertical speed, range is [1-8]	0	0
Right	Pan right	0	Vertical speed, range is [1-8]	0	0
ZoomWide	Zoom out	0	multiple	0	0
ZoomTele	Zoom in	0	multiple	0	0
FocusNear	Focus near	0	multiple	0	0
FocusFar	Focus far	0	multiple	0	0
IrisLarge	Aperture larger	0	multiple	0	0
IrisSmall	Aperture smaller	0	multiple	0	0
GotoPreset	Go to PTZ preset point	0	Preset point number	0	0
SetPreset	Set PTZ preset point	0	Preset point number	0	0
ClearPreset	Clear PTZ preset point	0	Preset point number	0	0
LampWaterClear		1: open 2: close	0	0	0
StartTour	Start PTZ tour	Tour path number	0	1: start 2: automatically 3: stop	0
LeftUp	Pan left and tile up	Vertical speed, range is [1-8]	Horizontal speed, range is [1-8]	0	0
RightUp	Pan right and tile up	Vertical speed, range is [1-8]	Horizontal speed, range is [1-8]	0	0
LeftDown	Pan left and tile down	Vertical speed, range is [1-8]	Horizontal speed, range is [1-8]	0	0
RightDown	Pan right and tile down	Vertical speed, range is [1-8]	Horizontal speed, range is [1-8]	0	0
AddTour	Add preset point to tour path	Tour path number	Preset point number	0	0
DelTour	Delete preset point from tour path	Tour path number	Preset point number	0	0
ClearTour	Clear tour path	Tour path number	0	0	0
AutoPanOn	Start pan rotate	0	0	0	0
AutoPanOff	Stop pan rotate	0	0	0	0

SetLeftLimit	Set left limit.	0	0	0	0
SetRightLimit	Set right limit.	0	0	0	0
AutoScanOn	Start auto scan.	0	0	0	0
AutoScanOff	Stop auto scan.	0	0	0	0
SetPatternBegin	Begin pattern path set.	Pattern number	0	0	0
SetPatternEnd	End pattern path set.	Pattern number	0	0	0
StartPattern	Run pattern path	Pattern number	0	0	0
StopPattern	Stop pattern path	Pattern number	0	0	0
ClearPattern	Clear pattern path	Pattern number	0	0	0
AlarmSearch	Search alarm.	0	0	0	0
Position	Go to position	Horizontal position	Vertical position	Zoom change	0
AuxOn	Auxiliary function on, auxiliary function is defined in product definition document.	0	0	0	0
AuxOff	Auxiliary function off	0	0	0	0
Menu		0	0	0	0
Exit		0	0	0	0
Enter		0	0	0	0
Esc		0	0	0	0
MenuUp		0	0	0	0
MenuDown		0	0	0	0
MenuLeft		0	0	0	0
MenuRight		0	0	0	0
Reset	Restore default configuration.	0	0	0	0
SetPresetName		Preset point number (1 byte)	Preset point title.	0	0
AlarmPtz	Alarm linked PTZ.	External alarm input channel.	Link type： 1: go to preset point 2: auto scan 3: tour	Argument of link type: Link type = 1, this is preset point number Link type = 2, this is auto scan path Link type = 3, this is tour path	0
LightController	Control the light on/off.	Address of light controller	Light number	switch	0
PositionABS	Go to ABS position	Horizontal angle: 0°-360°	Vertical angle :0°-90°	Zoom in mutiple	Speed[1-8], not must
PositionReset	Use current direction as reference.	0	0	0	0
UpTele	up + TELE	Speed [1-8]	0	0	0

DownTele	down + TELE	Speed [1-8]	0	0	0
LeftTele	left + TELE	Speed [1-8]	0	0	0
RightTele	right + TELE	Speed [1-8]	0	0	0
LeftUpTele	leftup + TELE	Speed [1-8]	0	0	0
LeftDownTele	leftdown + TELE	Speed [1-8]	0	0	0
RigjtUpTele	rightup + TELE	Speed [1-8]	0	0	0
RightDownTele	rightdown + TELE	Speed [1-8]	0	0	0
UpWide	up + WIDE	Speed [1-8]	0	0	0
DownWide	down + WIDE	Speed [1-8]	0	0	0
LeftWide	left + WIDE	Speed [1-8]	0	0	0
RightWide	right + WIDE	Speed [1-8]	0	0	0
LeftUpWide	leftup + WIDE	Speed [1-8]	0	0	0
LeftDownWide	leftdown + WIDE	Speed [1-8]	0	0	0
RightUpWide	rightup + WIDE	Speed [1-8]	0	0	0
RightDownWide	rightdown + WIDE	Speed [1-8]	0	0	0
Continuously	Move Continuously	Horizontal Speed [-8-8]	Vertical Speed [-8-8]	Zoom Speed [-8-8]	Timeout
Relatively	Move Relatively	Relatively angle: 0°-360°	Relatively angle :0°-90°	Relatively Zoom	

7.3PTZStatus

7.3.1 PTZ GetStatus

URL Syntax	http://<*ip*>/cgi-bin/ptz.cgi?action=getStatus
Comment	This URL is used to get PTZStatus.
Response	status.UTC=6538920 status.MoveStatus=Idle status.ZoomStatus=Idle status.PresetID=10 status.Position=120,12,2

8.RecordSnap

8.1Record

8.1.1 GetRecordConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Record**
Comment	***Channel*** in below table is video channel number, ***weekday*** range is [0-6] (Sunday - Saturday). Record config contains pre record time and record time sections of every day.
Response	table.Record[***channel***].PreRecord=6 table.Record[***channel***].HolidayEnable=true table.Record[***channel***].TimeSection[***weekday***][0]=1 00:00:00-24:00:00 table.Record[***channel***].TimeSection[***weekday***][1]=0 02:00:00-24:00:00 table.Record[***channel***].TimeSection[***weekday***][2]=0 03:00:00-24:00:00 table.Record[***channel***].TimeSection[***weekday***][3]=0 04:00:00-24:00:00 table.Record[***channel***].TimeSection[***weekday***][4]=0 05:00:00-24:00:00 table.Record[***channel***].TimeSection[***weekday***][5]=0 06:00:00-24:00:00

8.1.2 SetRecordConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	In below table: ***ch*** = channel index, ***wd*** = week day index, ***ts*** = time section index
Response	OK or ERROR

ParamName	ParamValue type	Description
Record[***ch***].PreRecord	integer	Range is [0-300]. Prerecord seconds, 0 means no prerecord. ch (Channel number) starts form 0
Record[***ch***]. HolidayEnable	bool	Record or not when a day is a holiday setted is chapter **8.4 Holiday**.
Record[***ch***].TimeSection[***wd***][***ts***]	string	***wd*** (week day) range is [0-6] (Sunday - Staurday) ***ts*** (time section) range is [0-23], timesection table index. Format: mask hh:mm:ss-hh:mm:ss Mask: [0-65535], hh: [0-24], mm: [0-59], ss: [0-59] Mask indicates record type by bits: Bit0: regular record Bit1: motion detection record Bit2: alarm record Bit3: card record

Example:

Set record time to every Sunday all day. Record type is motion detection and alarm.

URL should be:

http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&name=Record[0].TimeSection[0][0]&table=6 00:00:00-24:00:00

In this example, "6 00:00:00-24:00:00" means motion detection and alarm record all day (6 = 4 & 2, alarm is 4, motion detection is 2.).

8.1.3 GetRecordModeConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**RecordMode**
Comment	Get record mode for video channels. ***channel*** in below table is video channel number.
Response	table.RecordMode[***channel***].Mode=0

8.1.4 SetRecordModeConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***channel*** in below table is video channel index, start form 0.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
RecordMode[***channel***].Mode	integer	Range is {0, 1, 2}. 0: automatically record 1: manually record 2: stop record.

8.2Snap

8.2.1 GetSnapConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Snap**
Comment	***Channel*** in below table is video channel number, ***weekday*** range is [0-6] (Sunday - Saturday).
Response	table.Snap [***channel***].HolidayEnable=true table.Snap[***channel***].TimeSection[***weekday***][0]=1 00:00:00-24:00:00 table.Snap[***channel***].TimeSection[***weekday***][1]=0 02:00:00-24:00:00 table.Snap[***channel***].TimeSection[***weekday***][2]=0 03:00:00-24:00:00 table.Snap[***channel***].TimeSection[***weekday***][3]=0 04:00:00-24:00:00 table.Snap[***channel***].TimeSection[***weekday***][4]=0 05:00:00-24:00:00 table.Snap[***channel***].TimeSection[***weekday***][5]=0 06:00:00-24:00:00

8.2.2 SetSnapConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	In below table: ***ch*** = channel index, ***wd*** = week day index, ***ts*** = time section index
Response	OK or ERROR

ParamName	ParamValue type	Description
Snap [***ch***].HolidayEnable	bool	Snap or not when a day is a holiday setted is chapter **8.4 Holiday**.
Snap[***ch***].TimeSection[***wd***][***ts***]	string	**wd** (week day) range is [0-6] (Sunday- Staurday) **ts** (time section) range is [0-23], it's timesection table index. Format: mask hh:mm:ss-hh:mm:ss Mask: [0-65535], hh: [0-24], mm: [0-59], ss: [0-59] Mask indicates record type by bits: Bit0: regular snapshot Bit1: motion detection snapshot Bit2: alarm snapshot Bit3: card snapshot

8.2.3 attachFileProc

URL Syntax	http://<*ip*>/cgi-bin/snapManager.cgi?action=attachFileProc&Flags[0]=Event&Events=[<***eventCode***>,<***eventCode***> ,...]
Comment	Get channels indexes that event of code ***eventCode*** happens. Flag[0]:Event ***eventCode*** includes: All: all event. VideoMotion: motion detection event VideoLoss: video loss detection event VideoBlind: video blind detection event. AlarmLocal: alarm detection event. All intelligent event include CrossLineDetection,..eg
Response	--<***bondary***>\r\n Content-Type: text/plain\r\n Content-Length: <data length>\r\n Events[0].Code=TrafficJunction Events[0].CountInGroup=1 Events[0].IndexInGroup=1 Events[0].Lane=1 Events[0].Data.PTS= 42949485818.0

	Events[0].TrafficCar.PlateNumber=浙 A12345 Events[0].TrafficCar. DeviceAddress=杭州 …… Events[1].Code=TrafficJunction …… --<***boundary***> Content-Type:image/jpeg Content-Length:<image size> <JPEG image data> --<***boundary***>

8.3MediaGlobal

8.3.1 GetMediaGlobalConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**MediaGlobal**
Description	
Response	table.MediaGlobal.SnapFormatAs=MainFormat

8.3.2 SetMediaGlobalConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	It presents obtaining snap stream from Main stream or extra stream.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
MediaGlobal.SnapFormatAs	string	The range is {“MainFormat”, “ExtraFormat”}

8.4Holiday

8.4.1 GetHolidayConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Holiday**
Description	Get holiday config for record or snap.
Response	table.Holiday.MonthMask[0]=3 table.Holiday.MonthMask[1]=0 table.Holiday.MonthMask[2]=0 table.Holiday.MonthMask[3]=0

	table.Holiday.MonthMask[4]=0 table.Holiday.MonthMask[5]=0 table.Holiday.MonthMask[6]=0 table.Holiday.MonthMask[7]=0 table.Holiday.MonthMask[8]=0 table.Holiday.MonthMask[9]= 1610612739 table.Holiday.MonthMask[10]=0 table.Holiday.MonthMask[11]=0

8.4.2 SetHolidayConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	***monthIndex*** presents the index of a month. 0 presents January, 1 presents February, 11 presents December.
Response	OK or ERROR

ParamName	ParamValue type	Description
Holiday.MonthMask[***monthIndex***]	integer	It is the mask of a month.Every bit present a day. For example, 0x0001 presents the first day of a month is holiday.0x0002 presents the second day of a month is holiday, 0x0003 presents the first day and second day of a month is holiday.

9.System

9.1General

9.1.1 GetGeneralConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**General**
Comment	
Response	table.General.MachineName=Dahua001 table.General. LocalNo=8 table.General. MachineAddress=”binjiangqv jiangnandadao weiyelu” table.General. MachineGroup=”jiaojing yidui table.General.LockLoginEnable=true table.General.LockLoginTimes=3 table.General.LoginFailLockTime=1800

9.1.2 SetGeneralConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	ParamValue type	Description
General.MachineName	string	Device name or serial number.
General. LocalNo	integer	
General. MachineAddress	string	
General. MachineGroup	string	
General. LockLoginEnable	bool	Whether support lock login times setting.
General. LockLoginTimes	integer	Max try times of login failed, when exceeding the times the device will be locked and alarm.
General. LoginFailLockTime	integer	Lock login seconds.

9.2SystemTime

9.2.1 GetCurrentTime

URL Syntax	http://<*ip*>/cgi-bin/global.cgi?action=getCurrentTime
Comment	The time format is "Y-M-D H-m-S". It's not be effected by Locales.TimeFormat in **9.3.2 SetLocalesConfig.**
Response	result = 2011-7-3 21:02:32

9.2.2 SetCurrentTime

URL Syntax	http://<*ip*>/cgi-bin/global.cgi?action=setCurrentTime&time=2011-7-3%2021:02:32
Comment	The time format is "Y-M-D H-m-S". It's not be effected by Locales.TimeFormat in **9.3.2 SetLocalesConfig.**
Response	OK or ERROR

9.3Locales

9.3.1 GetLocalesConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Locales**
Comment	
Response	table.Locales.DSTEnable=false

	table.Locales.DSTEnd.Day=1 table.Locales.DSTEnd.Hour=0 table.Locales.DSTEnd.Minute=0 table.Locales.DSTEnd.Month=1 table.Locales.DSTEnd.Week=2 table.Locales.DSTEnd.Year=2011 table.Locales.DSTStart.Day=0 table.Locales.DSTStart.Hour=0 table.Locales.DSTStart.Minute=0 table.Locales.DSTStart.Month=1 table.Locales.DSTStart.Week=1 table.Locales.DSTStart.Year=2011 table.Locales.TimeFormat=yyyy-MM-dd HH:mm:ss

9.3.2 SetLocalesConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
Locales.DSTEnable	bool	Enable/Disable DST (daylight saving time)
Locales.DSTEnd.Day	integer	Range is [0-6] or [1-31] [0-6]: week day, 0 = Sunday, 6 = Saturday [1-31]: month day If Locales.DSTEnd.Week is 0, use month day, otherwise, use week day.
Locales.DSTEnd.Hour	integer	Range is [0-23]
Locales.DSTEnd.Minute	integer	Range is [0-59]
Locales.DSTEnd.Month	integer	Range is [1-12]
Locales.DSTEnd.Week	Integer	Range is {1,2,3,4,-1,0}. 0 = Use month day [1,2,3,4,-1]: use week day. 1 = first week, 2 = second, 3 = third, 4 = fourth, -1 = last.
Locales.DSTEnd.Year	Integer	Range is [2000-2038]
Locales.DSTStart.Day		Range is the same with items in Locales.DSTEnd Locales.DSTStart table and Locales.DSTEnd table together defines the time range of DST.
Locales.DSTStart.Hour		
Locales.DSTStart.Minute		
Locales.DSTStart.Month		
Locales.DSTStart.Week		
Locales.DSTStart.Year		

Locales.TimeFormat	string	Defines time format displayed in video time title. String form is: ***year-month-day hour***:mm:ss. Position of ***year***, ***month*** and ***day*** can be exchanged. Range of ***year*** is {yy, yyyy} yy = year without century, yyyy = year with century. Range of ***month*** is {M, MM, MMMM} M = 1 for January, MM = 01 for January, MMMM = Jan for January Range of ***day*** is {d, dd} d = 1 for first day, dd = 01 for first day Range of ***hour*** is {H, HH, h, hh} H = 1 for 1:00, HH = 01 for 1:00, range is 0-23 h = 1 for 1:00, hh = 01 for 1:00, time range is 1-12 Example: yyyy-MM-dd HH:mm:ss or MM-dd-yyyy HH:mm:ss or dd-M-yy hh:mm:ss

9.4Language

9.4.1 GetLanguageCaps

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=getLanguageCaps
Comment	Get the list of supported languages, response is a string contains languages with comma separated. Languages include {English, SimpChinese, TradChinese, Italian, Spanish, Japanese, Russian, French, German]
Response	Languages=SimpChinese,English,French

9.4.2 GetLanguageConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**Language**
Comment	Get current system language cofnig.
Response	table.Language=SimpChinese

9.4.3 SetLanguageConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	**NOTE: After changing language setting, system will automatically reboot!**
Response	OK or ERROR

ParamName	ParamValue type	Description
Language	string	The language range is get from interface in **9.3.1 GetLanguageCaps**

9.5AccessFilter

9.5.1 GetAccessFilterConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**AccessFilter**
Comment	***bannedIndex*** below is the banned IP list index, ***trustIndex*** below is the trust IP list index.
Response	table.AccessFilter.BannedList[***bannedIndex***]=10.6.10.1 table.AccessFilter. TrustList[***trustIndex***]=1.2.3.4 table.AccessFilter.Enable=false table.AccessFilter.Type=BannedList

9.5.2 SetAccessFilterConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	Range of ***index*** in below table is [0-255]
Response	OK or ERROR

ParamName	ParamValue type	Description
AccessFilter.BannedList[***index***]	string	Banned IP address list
AccessFilter.TrustList[***index***]	string	Trusted IP address list
AccessFilter.Enable	bool	Enable/Disable access filter function
AccessFilter.Type	string	Range is {TrustList, BannedList}, TrustList: Turst list is used, banned list is not used. BannedList: Banned list is used, turst list is not used.

9.6AutoMaintain

9.6.1 GetAutoMaintainConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**AutoMaintain**
Comment	
Response	table.AutoMaintain. AutoRebootDay=3 table.AutoMaintain. AutoRebootHour=0 table.AutoMaintain. AutoRebootMinute=0 table.AutoMaintain. AutoShutdownDay=1 table.AutoMaintain. AutoShutdownHour=0 table.AutoMaintain. AutoShutdownMinute=0 table.AutoMaintain. AutoStartUpDay=1 table.AutoMaintain. AutoStartUpHour=2 table.AutoMaintain. AutoStartUpMinute=0

9.6.2 SetAutoMaintainConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
AutoMaintain. AutoRebootDay	integer	Range is [-1-7]. Auto restart day. -1 = never auto restart 0- 6 = Sunday-Saturday 7 = restart every day
AutoMaintain. AutoRebootHour	integer	Range is [0-23]. Auto restart hour
AutoMaintain. AutoRebootMinute	integer	Range is [0-59]. Auto restart minute
AutoMaintain. AutoShutdownDay	integer	Auto reboot time. Range is same with AutoOpenDay, AutoOpenHour, AutoOpenMinute.
AutoMaintain. AutoShutdownHour		
AutoMaintain. AutoShutdownMinute		
AutoMaintain. AutoStartUpDay	integer	Auto shutdown time. Range is same with AutoOpenDay, AutoOpenHour, AutoOpenMinute.
AutoMaintain. AutoStartUpHour		
AutoMaintain. AutoStartUpMinute		

9.7UserManager

9.7.1 Group

There are two user groups: “admin” and “user”. The “admin” group has all the authorities of operating the IP Camera. The “user” group only has monitor and replay authorities.

9.7.2 GetGroupInfo

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**getGroupInfo**&name=<***groupName***>
Comment	Get group setting with name ***groupName.*** The range of ***groupName*** is: “admin” and “user”.
Response	group.Name=admin group.Memo=administrator group goup. AuthorityList=<***authList***>

9.7.3 GetGroupInfoAll

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**getGroupInfoAll**
Comment	Get information of all groups.
Response	group[0].Name=admin group[0].Memo=administrator group group[0]. AuthorityList=<***authList***> group[1].Name=user group[1].Memo=user group group[1]. AuthorityList=<***authList***> group[2]….

9.7.4 AddUser

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**addUser**& user.Name=<***userName***>& user.Password=<***userPassword***>& user.Memo=<***userMemo***>& user.Group=<***userGroup***>&

	user.Reserved=<***userReserved***>& user.Sharable=<***userSharable***> user.AuthList=<***authList***>
Comment	user.Group: string, the range is “admin” and “user”. In different group, the user has different authorities. user.Sharable: bool, true means allow multi-point login. User.Reserved: bool, true means this user can’t be deleted. User.AuthList;. For example: Add a user of name operator, password 123456, belongs to group user, and allow multi-point login. http://<*ip*>/cgi-bin/userManager.cgi?action=addUser&user.Name=operator&user.Password=123456&user.Group=user&user.Sharable=true&user.Reserved=false&user.AuthList= CtrlPanel,ShutDown, Record,Backup
Response	OK or ERROR

9.7.5 DeleteUser

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**deleteUser**&name=<***userName***>
Comment	Delete user with name ***username.***
Response	OK or ERROR

9.7.6 ModifyUser

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**modifyUser**& name=<***oldUserName***>& user.Name=<***userName***>& user.Password=<***userPassword***>& user.Memo=<***userMemo***>& user.Group=<***userGroup***>& user.Reserved=<***userReserved***>& user.Sharable=<***userSharable***> user.AuthList=<***authList***>
Comment	Value range of parameters in <> is the same with **9.7.4 AddUser**
Response	OK or ERROR

9.7.7 ModifyPassword

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**modifyPassword&**name=**<username>**&pwd=<***newPwd***>&pwdOld=<***oldPwd***>
Comment	Modify user password, old password ***oldPwd*** should be supplied, new password is ***newPwd.***
Response	OK or ERROR

9.7.8 GetUserInfo

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**getUserInfo**&name=<***userName***>
Comment	Get use information with name ***userName***
Response	user.Name=admin user.Memo=admin 's account user.Group=admin user.Reserved=true user.Sharable=true user. AuthList=<***authList***>

9.7.9 GetUserInfoAll

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**getUserInfoAll**
Comment	Get information of all users.
Response	users[0].Group=admin users[0].Id=1 users[0].Memo=admin 's account users[0].Name=admin users[0].Reserved=true users[0].Sharable=true users[0]. AuthList=<***authList***> users[1].Group=admin …

9.7.10 GetActiveUserInfoAll

URL Syntax	http://<*ip*>/cgi-bin/userManager.cgi?action=**getActiveUserInfoAll**
Comment	Get active users.
Response	users[0].name=admin users[0].ip=10.43.2.16 users[0].group=admin users[0].clienttype=web3.0 users[0].logintime=2011-11-08 09:51:03

9.8System Operation

9.8.1 Reboot

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=**reboot**
Comment	Reboot the device. If successful, response OK. If fail, response ERROR.
Response	OK or ERROR

9.8.2 Shutdown

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=**shutdown**
Comment	Shutdown the device. If successful, response OK. If fail, response ERROR.
Response	OK or ERROR

9.8.3 GetDeviceType

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=**getDeviceType**
Comment	Get the device type.
Response	type=IPC-HF3300

9.8.4 GetHardwareVersion

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=**getHardwareVersion**
Comment	Get the device hardware version
Response	version=1.00

9.8.5 GetSerialNo

URL Syntax	http://<*ip*> /cgi-bin/magicBox.cgi?action=**getSerialNo**
Comment	Get the device serial number
Response	sn=YZC0GZ05100020

9.8.6 GetMachineName

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=**getMachineName**
Comment	Get the device machine name.
Response	name=YZC0GZ05100020

9.8.7 GetSystemInfo

URL Syntax	http://<*ip*>/cgi-bin/magicBox.cgi?action=**getSystemInfo**
Comment	Get the system information.
Response	serialNumber=YZC0GZ05100020 deviceType=IPC-HF3300 hardwareVersion=1.00

9.8.8 GetVendor

URL Syntax	http://<ip>/cgi-bin/magicBox.cgi?action=getVendor
Comment	Get the vendor information.
Response	vendor=Dahua

9.8.9 GetSoftwareVersion

URL Syntax	http://<ip>/cgi-bin/magicBox.cgi?action=getSoftwareVersion
Comment	Get software information.
Response	version=2.212.0000.0.R,build:2013-11-14

9.8.10 GetOnvifVersion

此协议停止使用，以后获取 Onvif 版本使用下述 cgi

http://<*ip*>/cgi-bin/ IntervideoManager.cgi?action=getVersion&Name=Onvif

URL Syntax	~~http://<ip>/cgi-bin/intervideoManager.cgi?action=getOnvifVersion~~
Comment	~~Get onvif version information.~~
Response	~~version=2.4.1~~

9.8.11 getUUID

URL Syntax	http://<ip>/cgi-bin/magicBox.cgi?action=getUUID
Description	Get the UUID
Comment	
Response	uuid:7b9da892-7da2-48dd-aae1-3ee0c50b36f0

9.9 Log

9.9.1 StartFind

URL Syntax	http://<*ip*>/cgi-bin/log.cgi?action=**startFind**&condition.StartTime=<***start***>&condition.EndTime=<***end***>
Comment	Start to find log, in response, there is a token for further log finding process. ***start/end***: the start/end time of log. Format is: yyyy-mm-dd hh:mm:ss. Example: Find log between 2011-1-1 12:00:00 and 2011-1-10 12:00:00, URL is: http://<*ip*>/cgi-bin/log.cgi?action=startFind&condition.StartTime=2011-1-1 12:00:00 &condition.EndTime=2011-1-10 12:00:00
Response	token=1

9.9.2 DoFind

URL Syntax	http://<*ip*>/cgi-bin/log.cgi?action=**doFind**&token=<***tokenValue***>&count=<***logCount***>
Comment	Find log with token ***tokenValue*** and count ***logCount*** ***tokenValue*** is get by startFind in above section, ***logCount*** is the count of logs for this query. The maximum value of ***logCount*** is 100.
Response	found=2 items[0].RecNo=789 items[0].Time=2011-05-20 11:59:10 items[0].Type=ClearLog items[0].User=admin items[1].Detail.Compression=H.264->MJPG items[1].Detail.Data=Encode items[1].RecNo=790 items[1].Time=2011-05-20 11:59:21 items[1].Type=SaveConfig items[1].User=System …

Field in Response	**Description**
found	Count of found log, found is 0 if no log is found.
User	User name
Type	Log type
Time	Time of this log
RecNo	Log number.
Detail	Log details.

9.9.3 StopFind

URL Syntax	http://<*ip*>/cgi-bin/log.cgi?action=**stopFind**&token=<***tokenValue***>
Comment	Stop query log by token ***tokenValue***
Response	OK or ERROR

9.9.4 Clear

URL Syntax	http://<*ip*>/cgi-bin/log.cgi?action=**clear**
Comment	Clear all the logs.
Response	OK or ERROR

9.10 UserGlobal

9.10.1 GetUserGlobalConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**UserGlobal**
Comment	
Response	table.UserGlobal.OnvifLoginCheck=false

9.10.2 SetUserGlobalConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&UserGlobal.OnvifLoginCheck=***<flag>***
Comment	Enable Onvif login check or not, ***<flag>*** range is {true, false}
Response	OK or ERROR

9.11 IntervideoManager

9.11.1 GetCGIVersion

URL Syntax	http://<*ip*>/cgi-bin/ IntervideoManager.cgi?action=getVersion&Name=CGI
Comment	Get CGI version
Response	version=1.40

9.12 ConfigRestore

9.12.1 Restore

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=restore&names[0]=xxx&names[1]=yyy[&...]
Comment	xxx and yyy is config name which need to be restore
Response	OK or ERROR

9.12.1 RestoreExcept

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=restoreExcept&names[0]=xxx&names[1]=yyy[&...]
Comment	All the config file but xxx and yyy will be restored
Response	OK or ERROR

10.Storage

10.1 File Finding

10.1.1 Create

URL Syntax	http://<*ip*>/cgi-bin/mediaFileFind.cgi?action=factory.create
Comment	Create a media file finder
Response	result=08137

10.1.2 StartFind

URL Syntax	http://<*ip*>/cgi-bin/mediaFileFind.cgi?action=findFile&object=<***objectId***>&condition.Channel=<***channel***>&condition.StartTime=<***start***>&condition.EndTime=<***end***>&condition.Dirs[0]=<***dir***>&condition.Types[0]=<***type***>&condition.Flag[0]=<***flag***>&condition.Events[0]=<***event***>
Comment	Start to find file wth the above condition. If start successfully, return true, else return false. object : The object Id is got from interface in **10.1.1 Create** condition.Channel: in which channel you want to find the file . condition.StartTime/condition.EndTime: the start/end time when recording. condition.Dirs: in which directories you want to find the file. It is an array. The index starts from 0. The range of ***dir*** is {"/mnt/dvr/sda0", "/mnt/dvr/sda1"}. This condition can be omitted. If omitted, find files in all the directories. condition.Types: which types of the file you want to find. It is an array. The index starts from 0. The range of ***type*** is {"dav",

	“jpg”, “mp4”}. If omitted, find files with all the types. condition.Flags: which flags of the file you want to find. It is an array. The index starts from 0. The range of ***flag*** is {“Timing”, “Manual”, “Marker”, “Event”, “Mosaic”, “Cutout”}. If omitted, find files with all the flags. condition.Event: by which event the record file is triggered. It is an array. The index starts from 0. The range of ***event*** is {“AlarmLocal”, “VideoMotion”, “VideoLoss”, “VideoBlind”, “Traffic*”}. This condition can be omitted. If omitted, find files of all the events. Example: Find file in channel 1, in directory “/mnt/dvr/sda0",event type is "AlarmLocal" or "VideoMotion", file type is “dav”, and time between 2011-1-1 12:00:00 and 2011-1-10 12:00:00 , URL is: http://<*ip*>/cgi-bin/mediaFileFind.cgi?action=findFile&object=08137&condition.Channel=1&conditon.Dir[0]=”/mnt/dvr/sda0”&conditon.Event[0]=AlarmLocal&conditon.Event[1]=VideoMotion&condition.StartTime=2011-1-1%2012:00:00&condition.EndTime=2011-1-10%2012:00:00
Response	OK or Error

10.1.3 FindNextFile

URL Syntax	http://<*ip*>/cgi-bin/mediaFileFind.cgi?action=findNextFile&object=<***objectId***>&count=<***fileCount***>
Comment	Find the next ***fileCount*** files. The maximum value of ***fileCount*** is 100.
Response	found=1 items[0]. Channel =1 items[0]. StartTime =2011-1-1 12:00:00 items[0]. EndTime =2011-1-1 13:00:00 items[0]. Type =dav items[0]. Events[0]=AlarmLocal items[0]. FilePath =/mnt/dvr/sda0/2010/8/11/dav/15:40:50.jpg items[0]. Length =790 items[0]. Duration = 3600 items[0].SummaryOffset=2354 tems[0].Repeat=0 items[0].WorkDir=”/mnt/dvr/sda0” items[0]. Overwrites=5 items[0]. WorkDirSN=0

Field in Response	**Description**
found	Count of found file, found is 0 if no file is found.
Channel	Channel
StartTime	Start Time
EndTime	End time
Type	File type
Events	Event type.
FilePath	filepath.
Length	File length

Duration	Duration time
SummaryOffset	Summary offset
Repeat	Repeat file number
WorkDir	The file's directory
Overwrites	Overwrite times of the work directory
WorkDirSN	Workdir No

10.1.4 Close

URL Syntax	http://<*ip*>/cgi-bin/mediaFileFind.cgi?action=close&object=<***objectId***>
Comment	Stop find.
Response	OK or ERROR

10.1.5 Destroy

URL Syntax	http://<*ip*>/cgi-bin/mediaFileFind.cgi?action=destroy&object=<***objectId***>
Comment	Destroy the media file finder.
Response	OK or ERROR

10.2 Storage Device

10.2.1 GetStorageDeviceCollect

URL Syntax	http://<*ip*>/cgi-bin/storageDevice.cgi?action=factory.getCollect
Comment	Get all the storage device names
Response	A list of all device names list[0]="/dev/sda0" list[1]="/dev/sda1" list[2]="/dev/sg1"

10.2.2 getDeviceAllInfo

URL Syntax	http://<ip>/cgi-bin/storageDevice.cgi?action=getDeviceAllInfo
Comment	Get all the storage device infos
Response	list[0].Detail[0].IsError=false list[0].Detail[0].Pointer=27023434 list[0].Detail[0].TotalBytes=0 list[0].Detail[0].Type=ReadWrite list[0].Detail[0].UsedBytes=0

	list[0].Pointer=22347602 list[0].State=Success

10.2.3 setStorageDevice

URL Syntax	http://<ip>/cgi-bin/storageDevice.cgi?action=setDevice&pointer=xxx&type=xxx
Comment	Set to storage device wth the above condition. If set successfully, return true, else return false. type: Range is {Lock, UnLock, FormatPatition, UnMount }. pointer: The object Id is got from cgi API(cgi-bin/storageDevice.cgi?action=getDeviceAllInfo).If type is Lock or UnLock, pointer is list[0].Detail[0].Pointer, If If type is FormatPatition or UnMount, pointer is list[0].Pointer.
Response	OK or Error:No SD Card

*After formation operation, the device would reboot.

10.2.4 getCaps

URL Syntax	http://<*ip*>/cgi-bin/storage.cgi?action=**getCaps**
Description	Get storage caps
Response	caps.IsLocalStore= true caps.IsRemoteStore=true capsSupportRemoteLimit=false …see Storage Capabilities

10.3 Work Group

10.3.1 GetWorkGroupCollect

URL Syntax	http://<*ip*>/cgi-bin/workGroup.cgi?action=factory.getCollect
Comment	Get all the work group names
Response	A list of all device names list [0]=”group1” list [1]=”group2” list [2]=”group3”

10.4 Work Directory

10.4.1 GetWorkDirectoryCollect

URL Syntax	http://<*ip*>/cgi-bin/workDirectory.cgi?action=factory.getCollect
Comment	Get the all work derictory names
Response	A list of all work directory names list [0]=”dir1” list [1]=”dir2” list [2]=”dir3”

10.5 NAS

10.5.1 GetNASConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**NAS**
Comment	Return all the directories on the NAS server.
Response	table.NAS[0].Name=” FTP1” table.NAS[0].Enable = true table.NAS[0].Protocol =”FTP” table.NAS[0].Address =”www.dahuatech.com” table.NAS[0].Port =21 table.NAS[0].UserName =”anonymity” table.NAS[0].Password =”none” table.NAS[0].Directory =”share”

10.5.2 SetNASConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	In below table: ***Head*** **=**NAS[***index***] ***Index:*** The index of the NAS Server
Response	OK or ERROR

ParamName	ParamValue type	Description
Head.Name	string	NAS name.
Head .Enable	bool	Enable/Disable the NAS.
Head. Protocol	string	The range is {“FTP”, “SMB”}
Head. Address	string	The IP address or host name.

Head .Port	integer	NAS port.
Head.UserName	string	NAS username.
Head .Password	string	NAS password.
Head .Directory	string	Directory name.

10.6 Storage Point

10.6.1 GetRecordStoragePointConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**RecordStoragePoint**
Comment	
Response	table.RecordStoragePoint [0].TimingRecord.Local =”local” table.RecordStoragePoint [0].TimingRecord. Redundant =” Redundant” table.RecordStoragePoint [0].TimingRecord. Remote =” FTP” table.RecordStoragePoint [0].TimingRecord. AutoSync = false table.RecordStoragePoint [0].TimingRecord. AutoSyncRange =0 table.RecordStoragePoint [0].TimingRecord. LocalForEmergency =false table.RecordStoragePoint [0].TimingRecord. CompressBefore =15

10.6.2 SetRecordStoragePointConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	In below table: ***ch*** = channel index, ***recType*** :The range is {“TimingRecord”,” VideoDetectRecord”,” AlarmRecord”,” EventRecord”,” TimingSnapShot”,” VideoDetectSnapShot”,” AlarmSnapShot”,” EventSnapShot”}
Response	OK or Error

ParamName	**ParamValue type**	**Description**
RecordStoragePoint [***ch***].[***recType***].Local	string	Local directory name.
RecordStoragePoint [***ch***].[***recType***]. Redundant	string	Redundant directory name.
RecordStoragePoint [***ch***].[***recType***]. Remote	string	Remote directory name.
RecordStoragePoint [***ch***].[***recType***]. AutoSync	bool	When remote directory recovers, auto synchronize local directory to remote directory or not.
RecordStoragePoint [***ch***].[***recType***]. AutoSyncRange	integer	From the remote directory recovering time, how long the data needs to be synchronized. The unit is hour. If it is 0, all the data needs to be synchronized.
RecordStoragePoint [***ch***].[***recType***]. LocalForEmergency	bool	When the remote directory is unusable, save the data the

		local directory or not.
RecordStoragePoint [***ch***].[***recType***]. CompressBefore	integer	How many days data will be compressed.

10.6.3 GetStorageGroupConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=StorageGroup
Comment	
Response	table.StorageGroup[0]. Name=”ReadWrite” table.StorageGroup[0]. Memo =” For Reading & Writing Files” table.StorageGroup[0]. FileHoldTime =0 table.StorageGroup[0]. OverWrite =true table.StorageGroup[0]. Channels[0]. MaxPictures =1000 table.StorageGroup[0]. Channels[0]. Path =”/mnt/dvr/sda0”

10.6.4 SetStorageGroupConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	In below table: ***Index*** = StorageGroup index ***ch*** = channel index
Response	OK or Error

ParamName	**ParamValue type**	**Description**
StorageGroup[***Index***]. Name	string	Storage group name.
StorageGroup[***Index***]. Memo	string	Storage group memo.
StorageGroup[***Index***]. FileHoldTime	integer	How many days the file will be hold.
StorageGroup[***Index***]. OverWrite	bool	Over write or not when there is not enough storage.
StorageGroup[***Index***]. Channels[***ch***]. MaxPictures	Integer	The max pictures beyond which the old pictures will be over written. If it is 0, the old pictures will be not over written.
StorageGroup[***Index***]. Channels[***ch***]. Path	string	The channel path.

11.Audio

11.1 Audio MIME type

MIME	Description
Audio/PCM	
Audio/ADPCM	
Audio/G.711A	
Audio/G.711Mu	

Audio/G.726	
Audio/G.729	
Audio/MPEG2	
Audio/AMR	
Audio/AAC	

11.2 Post Audio

URL Syntax	http://<*ip*>/cgi-bin/audio.cgi?action=postAudio&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	**paramValue** as below table.
Response	OK or ERROR

ParamName	ParamValue type	Description
httptype	string	singlepart:HTTP content is a continuous flow of audio packets multipart:HTTP content type is multipart/x-mixed-replace,and each audio packet ends with a boundary string
channel	integer	The audio channel

11.2.1 Example for singlepart

The RUL of transmit a singlepart、channel 1 audio stream(encoded with G.711 A-law) is:
http: //<ip>/cgi-bin/audio.cgi?action=postAudio&httptype=singlepart&channel=1

example:
POST /cgi-bin/audio.cgi?action=postAudio&httptype=singlepart&channel=1 HTTP/1.1
Content-Type: Audio/G.711A
Content-Length:9999999

<Audio data>
<Audio data>

11.2.2 Example for multipart

The RUL of transmit a multipart、channel 1 audio stream(encoded with G.711 A-law) is:
http: //<ip>/cgi-bin/audio.cgi?action=postAudio&httptype= multipart &channel=1

example:
POST /cgi-bin/audio.cgi?action=postAudio&httptype= multipart &channel=1 HTTP/1.1
Content-Type: multipart/x-mixed-replace; boundary=<boundary>
--<boundary>
Content-Type: Audio/G.711A

Content-Length: 800

<Audio data>
--<boundary>

11.3 Get Audio

URL Syntax	http://<*ip*>/cgi-bin/audio.cgi?action=getAudio&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Comment	**paramValue** as below table.
Response	OK or ERROR

ParamName	ParamValue type	Description
httptype	string	singlepart:HTTP content is a continuous flow of audio packets multipart:HTTP content type is multipart/x-mixed-replace,and each audio packet ends with a boundary string
channel	integer	The audio channel

11.3.1 Example for singlepart

The RUL of Request a singlepart、channel 1 audio stream(encoded with G.711 A-law) is:
http: //<ip>/cgi-bin/audio.cgi?action=getAudio&httptype=singlepart&channel=1

If the request was successful, the server returns a continuous flow of audio packets.The content type is only set at the beginning of the connection.
Return:
HTTP Code: 200 OK
Content-Type: Audio/G.711A
Body:
<Audio data>
<Audio data>

11.3.2 Example for multipart

The RUL of Request a multipart、channel 1 audio stream(encoded with G.711 A-law) is:
http: //<ip>/cgi-bin/audio.cgi?action=getAudio&httptype=multipart&channel=1

If the request was successful, the server returns a continuous flow of audio packets. The content type is “multipart/x-mixed-replace” and each audio packet ends with a boundary string.
Return:

HTTP Code: 200 OK

Content-Type: multipart/x-mixed-replace; boundary=<boundary>

--<boundary>

Content-Type: Audio/G.711A

Content-Length: 800

<Audio data>

--<boundary>

11.4 Audio Input

11.4.1 getCollect

URL Syntax	http://<*ip*>/cgi-bin/devAudioInput.cgi?action=**getCollect**
Comment	Get Audio input channel number. Below response means there are 2 audio input channels.
Response	result=2

11.5 Audio Output

11.5.1 getCollect

URL Syntax	http://<*ip*>/cgi-bin/devAudioOutput.cgi?action=**getCollect**
Comment	Get Audio output channel number. Below response means there are 2 audio output channels.
Response	result=2

12.Appendix

12.1 Stream Format

The Stream format is used by 4.1.7 GetStream By Http and 4.1.8 Playback By Http, describes the format of the data stream.

Stream Header：

Byte Order	0	1	2	3	4	5	6	7

Key	Flag	Type	reserved	packet length

Byte Order	8	9	10	11	12	13	14	15
Key	channel		Extend header length		Sequence			

Byte Order	16	17	18	19	20	21	22	23
Key	utc				utcms		reserved	Check sum

Flag=”DH”;

Type=0x10 means the audio packet;

Type=0x20 means the video packet;

Packet length means the packet total length, contains the packet header, maybe one or more extend header, and the media data;

Extend Header Format

Byte Order	0	1	2	3	4	5	6	…
Key	Type	length		reserved	data			

Extend header length must be multiple of 4 bytes;

Audio extend header:

Byte Order	0	1	2	3	4	5	6	7
Key	0x11	8		reserved	Audio Type	Tracks	Sample Freq	reserved

A audio packet must contain the audio extend header;

Audio Type:1 - PCM8;2 - G729;3 - IMA_ADPCM;4 - G711U;5 - G721;6 - PCM8_VWIS;7 - MS_ADPCM;8 - G711A;9 - AMR-NB;10 - PCM16;11- G723.1;12 – AAC;13 - G726_40;14 - G726_32;15 - G726_24;16 - G726_16

Tracks: Tracks number, support 1 and 2;

Sample Freq: audio sample frequence,1 - 4000;2 - 8000;3 - 11025;4 - 16000;5 - 20000;6 - 22050;7 - 32000;8 - 44100;9 - 48000;

Video Extend Header:

Byte Order	0	1	2	3	4	5	6	7

Key	0x21	16	reserved	Video Type	Frame Type	Width

Byte Order	8	9	10	11	12	13	14	15
Key	Height		I Frame Interval	Frame Rate	reserved			

A video packet must contain the video extend header; Video Type means the video codec type, 1-MPEG4; 2-H.264; Frame Type: 1-I frame; 2-P frame;3-B frame; Width and Height describe the frame width and height by pixel;

Channel Title Extend Header:

Byte Order	0	1	2	3	4	5	6	…
Key	0x22	len		reserved	Title …			

When a stream begin, or the device channel title changes, the video packet must contain the channel title extend header; If the channel title is Chinese, it only support utf8 format.

TimeZone Extend Header:

Byte Order	0	1	2	3	4	5	6	7
Key	0x31	8		reserved	Time Zone		Daylight saving time	reserved

When a stream begin, or the TimeZone changes, the video packet must contain the TimeZone extend header; Time Zone[0]: [-12,12](west time zone 12 to east time zone 12), Time Zone[1] modify the time by minutes; Daylight saving time: 1/0, yes or not in daylight saving time;

Event Flag Extend Header:

Byte Order	0	1	2	3	4	5	6	…
Key	0x23	len		reserved	Event Flag			

If the video frame contain one or more event flags, the video packet should contain the Event Flag Extend Header. The event flag means what event had happened by set the bit as 1;

Event Flag: bit0-exterior alarm; bit1-move detect; bit2-video lost.

13.VedioInput

13.1 AdjustFocus

URL Syntax	http://<*ip*>/cgi-bin/devVideoInput.cgi?action= **adjustFocus&**focus=<***focus***>&zoom=<***zoom***>
Comment	**focus**: float, the range is between 0 and 1; -1 means reset to position 0. **zoom**: float, the range is between 0 and 1; -1 means reset to position 0.
Response	OK or ERROR

13.2 AdjustFocusContinuously

URL Syntax	http://<*ip*>/cgi-bin/devVideoInput.cgi?action= **adjustFocusContinuously**&focus=<***focus***>&zoom=<***zoom***>
Comment	focus: float, the range is -1 < focus < 1; 0 means stop. zoom: float, the range is -1 < zoom< 1; 0 means stop. The value means the moving speed of motor lens, positive value means move forwards, negative value means move backwards. This command is used to drive the lens move continuously, until it reaches end. When motor is moving, and you send this command again with ***focus*** or ***zoom*** parameter as 0, the motor will stop immediately. In this command when you adjust the **focus** parameter, the **zoom** parameter should be -1, and the **focus** parameter should be -1 when adjust the **zoom** parameter.
Example	If we want to adjust focus, the API like this: http://172.30.1.100/cgi-bin/devVideoInput.cgi?action=adjustFocusContinuously&focus=0.02&zoom=-1 and when the motor is moving, we send below command to let it stop: http://172.30.1.100/cgi-bin/devVideoInput.cgi?action=adjustFocusContinuously&focus=0&zoom=-1
Response	OK or ERROR

13.3 AutoFocus

URL Syntax	http://<*ip*>/cgi-bin/devVideoInput.cgi?action= **autoFocus**
Comment	
Response	OK or ERROR

13.4 GetFocusStatus

URL Syntax	http://<*ip*>/cgi-bin/devVideoInput.cgi?action= **getFocusStatus**
Comment	The range of status.Status is “Normal” and “Autofocus”. This command must be continual executed until status.Status is “Normal”.

Response	status.Focus=0.5 status.Zoom=0.5 status.Status=Normal

14. SD Camera

This chapter is only effective with SD Camera.

14.1 VideoInWhiteBalance

14.1.1 GetVideoInWhiteBalance

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=VideoInWhiteBalance**
Description	Get **VideoInWhiteBalance** capabilities, ***channelNo*** is video in channel index.
Response	table.VideoInWhiteBalance[0][0].ColorTemperatureLevel=50 table.VideoInWhiteBalance[0][0].GainBlue=50 table.VideoInWhiteBalance[0][0].GainGreen=50 table.VideoInWhiteBalance[0][0].GainRed=50 table.VideoInWhiteBalance[0][0].Mode=ATW table.VideoInWhiteBalance[0][1].ColorTemperatureLevel=50 table.VideoInWhiteBalance[0][1].GainBlue=50 table.VideoInWhiteBalance[0][1].GainGreen=50 table.VideoInWhiteBalance[0][1].GainRed=50 table.VideoInWhiteBalance[0][1].Mode=Auto table.VideoInWhiteBalance[0][2].ColorTemperatureLevel=50 table.VideoInWhiteBalance[0][2].GainBlue=50 table.VideoInWhiteBalance[0][2].GainGreen=50 table.VideoInWhiteBalance[0][2].GainRed=50 table.VideoInWhiteBalance[0][2].Mode=Auto

14.2.2 SetVideoInWhiteBalance

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** =VideoInOptions[*ChannelNo*] [*ConfigNo*] *ChannelNo* = video channel index. ConfigNo=0,1,2; normal,day,night
Response	OK or ERROR

ParamName	ParamValue type	Description
head. Mode	integer	“Auto”,“Indoor", "Outdoor", "ATW", "Manual", "AutoOutdoor"
head. GainRed	integer	Range is 0-100
head. GainBlue	integer	Range is 0-100

14.2 VideoInFocus

14.2.1 GetVideoInFocus

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=VideoInDayNight**
Description	
Response	table.VideoInFocus[0][0].FocusLimit=100 table.VideoInFocus[0][0].FocusLimitSelectMode=Manual table.VideoInFocus[0][0].IRCorrection=0 table.VideoInFocus[0][0].Mode=3 table.VideoInFocus[0][0].Sensitivity=1 table.VideoInFocus[0][1].FocusLimit=100 table.VideoInFocus[0][1].FocusLimitSelectMode=Manual table.VideoInFocus[0][1].IRCorrection=0 table.VideoInFocus[0][1].Mode=3 table.VideoInFocus[0][1].Sensitivity=1 table.VideoInFocus[0][2].FocusLimit=100 table.VideoInFocus[0][2].FocusLimitSelectMode=Manual table.VideoInFocus[0][2].IRCorrection=0 table.VideoInFocus[0][2].Mode=3 table.VideoInFocus[0][2].Sensitivity=1

14.2.2 SetVideoInFocus

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** = VideoInDayNight [*ChannelNo*] [*ConfigNo*] *ChannelNo* = video channel index. ConfigNo=0,1,2; normal,day,night
Response	OK or ERROR

ParamName	ParamValue type	Description
head. Mode	integer	2-Auto focus,3-Half auto focus，4-Manual focus
head. FocusLimit	integer	100、1000、2000、3000、5000、
head. Sensitivity	integer	Range is 0,1,2 0-high，1-default，2-low
head. IRCorrection	integer	0 ： No correcetion； 1：Correction； 2:Auto correction

14.3 VideoInZoom

14.3.1 GetVideoInZoom

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=VideoInZoom**
Description	
Response	table.VideoInZoom[0][0].DigitalZoom=true table.VideoInZoom[0][0].Speed=7 table.VideoInZoom[0][0].ZoomLimit=4 table.VideoInZoom[0][1].DigitalZoom=true table.VideoInZoom[0][1].Speed=0 table.VideoInZoom[0][1].ZoomLimit=4 table.VideoInZoom[0][2].DigitalZoom=false table.VideoInZoom[0][2].Speed=7 table.VideoInZoom[0][2].ZoomLimit=4

14.3.2 SetVideoInZoom

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** = VideoInZoom [*ChannelNo*] [*ConfigNo*] *ChannelNo* = video channel index. ConfigNo=0,1,2; normal,day,night
Response	OK or ERROR

ParamName	ParamValue type	Description
head. DigitalZoom	integer	true: Enable DigitalZoom false: Disable DigitalZoom
head. Speed	integer	Range is 0-7

14.4 VideoInSharpness

14.4.1 GetVideoInSharpness

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=VideoInSharpness**
Description	
Response	table.VideoInSharpness[0][0].Level=4 table.VideoInSharpness[0][0].Mode=1 table.VideoInSharpness[0][0].Sharpness=8 table.VideoInSharpness[0][1].Level=4 table.VideoInSharpness[0][1].Mode=1 table.VideoInSharpness[0][1].Sharpness=8 table.VideoInSharpness[0][2].Level=4 table.VideoInSharpness[0][2].Mode=1 table.VideoInSharpness[0][2].Sharpness=8

14.4.2 SetVideoInSharpness

URL Syntax	http://*<ip>*/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** = VideoInSharpness [*ChannelNo*] [*ConfigNo*] *ChannelNo* = video channel index. ConfigNo=0,1,2; normal,day,night
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head. Sharpness	integer	Range is 0-15
head. Level	integer	Range is 0-15

14.5 VideoInRotate

14.5.1 GetVideoInRotate

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=**VideoInRotate
Description	

Response	table.VideoInRotate[0][0].Flip=false table.VideoInRotate[0][0].Freeze=false table.VideoInRotate[0][0].Mirror=false table.VideoInRotate[0][0].Rotate90=0 table.VideoInRotate[0][0].Stable=false table.VideoInRotate[0][1].Flip=false table.VideoInRotate[0][1].Freeze=false table.VideoInRotate[0][1].Mirror=false table.VideoInRotate[0][1].Rotate90=0 table.VideoInRotate[0][1].Stable=false table.VideoInRotate[0][2].Flip=false table.VideoInRotate[0][2].Freeze=false table.VideoInRotate[0][2].Mirror=false table.VideoInRotate[0][2].Rotate90=0 table.VideoInRotate[0][2].Stable=false

14.5.2 SetVideoInRotate

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** = VideoInRotate [*ChannelNo*] [*ConfigNo*] *ChannelNo* = video channel index. ConfigNo=0,1,2; normal,day,night
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head. Flip	integer	true: Enable flip function false: Disable flip function

14.6 VideoInMode

14.6.1 GetVideoInMode

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=**VideoInMode
Description	
Response	table.VideoInMode[0].Config[0]=1 table.VideoInMode[0].Mode=0 table.VideoInMode[0].TimeSection[0][0]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[0][1]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[0][2]=0 00:00:00-23:59:59

	table.VideoInMode[0].TimeSection[0][3]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[0][4]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[0][5]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[1][0]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[1][1]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[1][2]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[1][3]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[1][4]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[1][5]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[2][0]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[2][1]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[2][2]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[2][3]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[2][4]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[2][5]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[3][0]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[3][1]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[3][2]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[3][3]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[3][4]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[3][5]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[4][0]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[4][1]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[4][2]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[4][3]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[4][4]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[4][5]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[5][0]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[5][1]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[5][2]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[5][3]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[5][4]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[5][5]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[6][0]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[6][1]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[6][2]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[6][3]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[6][4]=0 00:00:00-23:59:59 table.VideoInMode[0].TimeSection[6][5]=0 00:00:00-23:59:59

14.6.2 SetVideoInMode

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** = VideoInMode [*ChannelNo*]

	ChannelNo = video channel index.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head. Mode	integer	Range is {0,1} 0: NoSwitch； 1: Switch depends on ***head***.TimeSection.
head. Config	integer	Mode=0 Config[0]={0、1/2} Mode=1 Config[1]={ 1 } Config[2]={ 2 }
head.TimeSection[0][0]	integer	The time format is "0 H:m: H:m:S " For example: 0 00:00:00-10:59:59

15. VideoAnalyse

This chapter is only effective with smart IP Camera.

15.1 VideoAnalyseRule

15.1.1 GetVideoAnalyseRule

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=VideoAnalyseRule**
Description	Get **VideoAnalyseRule**. In below table, ***head*** =table.VideoAnalyseRule[*ChannelNo*] [*RuleNo*] *ChannelNo* = video channel index. *RuleNo* =rule index.
Response	***head***.Name= line1 ***head.***Type=CrossLineDetection ***head***.VideoAnalyseRule[0][0].Enable =true ***head***.VideoAnalyseRule[0][0].EventHandler= (output of EventHandler is described in **6.1.1 GetEventHandler**) …

15.1.2 SetVideoAnalyseRule

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** =VideoAnalyseRule[*ChannelNo*] [*RuleNo*] *ChannelNo* = video channel index.

	RuleNo =rule index. ParamName starts with ***head***.Config is only effective with {“CrossLineDetection”, “CrossRegionDetection”, “LeftDetection”, “TakenAwayDetection”}
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head.Name	string	Rule name, it must be unique.
head.Type	string	The range is {“CrossLineDetection”, “CrossRegionDetection”, “LeftDetection”,” “TakenAwayDetection”,”VideoAbnormalDetection”,“FaceDetection”, ,”AudioMutation”,”AudioAnomaly”,”VideoUnFocus”,”WanderDetection”,” RioterDetection”,” ParkingDetection”,” MoveDetection”, “NumberStat”}”
head.Enable	bool	Enable/Disable this rule
head.EventHandler		Setting of EventHandler is described in **6.1.2 SetEventHandler**
head.Config.DetectLine[0][0]	integer	The start point of DetectLine 0;
head.Config.DetectLine[0][1]	integer	The end point of DetectLine 0;
head.Config.DetectLine[1][0]	integer	The start point of DetectLine 1;
head.Config.DetectLine[1][1]	integer	The end point of DetectLine 1;
head.Config.Direction	string	The range is {“LeftToRight”, “RightToLeft”, “Both”}
head.Config .SizeFilter.MaxSize[0]	integer	Maximum width. The width of the object must not be beyond maximum width. Adapt to {“CrossLineDetection”, “CrossRegionDetection”, “LeftDetection”, “TakenAwayDetection”,“FaceDetection”,“WanderDetection”, “RioterDetection”, “ParkingDetection”, “MoveDetection”}
head.Config .SizeFilter.MaxSize[1]	integer	Maximum height. The height of the object must not be beyond maximum height.
head.Config .SizeFilter.MinSize[0]	integer	Minimum width. The width of the object must not be less than minimum width.
head.Config .SizeFilter.MinSize[1]	integer	Minimum height. The height of the object must not be beyond minimum height.
head.Config.DetectRegion[0][0]	integer	The start point of DetectRegion 0; Adapt to {“CrossRegionDetection”, “LeftDetection”, “TakenAwayDetection”, “WanderDetection”,“RioterDetection”, “ParkingDetection”, “MoveDetection”}
head.Config.DetectRegion[0][1]	integer	The end point of DetectRegion 0;
head.Config.DetectRegion[1][0]	integer	The start point of DetectRegion 1;
head.Config.DetectRegion[1][1]	integer	The end point of DetectRegion 1;
head.Config.DetectRegion[2][0]	integer	The start point of DetectRegion 2;
head.Config.DetectRegion[2][1]	integer	The start point of DetectRegion 2;
head.Config. MinDuration	integer	Range is 1-600, adapt to {“LeftDetection”, “TakenAwayDetection”, “WanderDetection”}. Range is 10-300, adapt to {“RioterDetection”}. Range is 6-300, adapt to {“ParkingDetection”}.
head.Config. Sensitivity	integer	Range is 1-10, adapt to {“RioterDetection”, “MoveDetection”}.
Head.Config. EnterThreshold	integer	Range is 0- 100000000, adapt to {“NumberStat”}.
Head.Config. ExitThreshold	integer	Range is 0- 100000000, adapt to {“NumberStat”}.
Head.Config. InsideThreshold	integer	Range is 0- 100000000, adapt to {“NumberStat”}.

15.2 VideoWidgetNumberStat

15.2.1 GetVideoWidgetNumberStat

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=VideoWidgetNumberStat**
Description	Get **VideoWidgetNumberStat**. In below table, ***head*** =table.VideoWidgetNumberStat[*ChannelNo*] *ChannelNo* = video channel index.
Response	***head***.EncodeBlend=true ***head.***ShowEnterNum=true ***head***.ShowExitNum=true ***head***.TextAlign=0 …

15.2.2 SetVideoWidgetNumberStat

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head*** =VideoWidgetNumberStat[*ChannelNo*] *ChannelNo* = video channel index.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head.EncodeBlend	bool	Enable/Disable
head.ShowEnterNum	bool	Enable/Disable
head.ShowExitNum	bool	Enable/Disable
head.TextAlign	integer	0 for left, 2 for right

15.3 VideoEncodeROI

15.3.1 GetVideoEncodeROI

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=VideoEncodeROI**
Description	Get **VideoEncodeROI**. In below table, ***head***=table.VideoEncodeROI[*ChannelNo*] *ChannelNo* = video channel index.
Response	***Head.***DynamicTrack=false

15.3.2 SetVideoEncodeROI

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Comment	In below table, ***head***=VideoEncodeROI[*ChannelNo*] *ChannelNo* = video channel index.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head.DynamicTrack	bool	Enable/Disable

15.4 VideoStatServer

15.4.1 GetSummary

URL Syntax	http://<ip>/cgi-bin/videoStatServer.cgi?action=getSummary[&channel=<***channelNo***>]
Description	Get summary information of videoStat
Comment	***ChannelNo***: video channel index, start from 1
Response	Summary information shown summary.Channel=0 summary.RuleName=NumberStat summary.***EnteredSubtotal***.Today=0 summary.***EnteredSubtotal***.Total=14 summary.***EnteredSubtotal***.TotalInTimeSection=0 summary.***ExitedSubtotal***.Today=0 summary.***ExitedSubtotal***.Total=32 summary.***ExitedSubtotal***.TotalInTimeSection=0

15.4.2 StartFind

URL Syntax	http://<*ip*>/cgi-bin/videoStatServer.cgi?action=**startFind[**&channel=<***channelNo***>]&condition.StartTime=<***start***>&condition.EndTime=<***end***>&condition.Granularity=<***granularity***>
Description	Start to find VideoStat info, in response, there is a token for further info finding process,and threre is a totalCount shows how many data count(s).
Comment	***channelNo*** : video channel index, start from 1 ***start/end***: the start/end time of VideoStat info. 24 hour Format, as: yyyy-mm-dd hh:mm:ss. ***granularity***: the information granularity returned by the guery requirements.the range is [Hour,Day,Week,Wonth,Season,Year]

	Example: Find VideoStat info between 2011-1-1 12:00:00 and 2011-1-10 12:00:00,information granularity is hour URL is: http://<*ip*>/cgi-bin/videoStatServer.cgi?action=startFind&channel=0&condition.StartTime=2011-1-1 12:00:00 &condition.EndTime=2011-1-10 12:00:00&condition.Granularity=Hour
Response	token=1 totalCount=14

15.4.3 DoFind

URL Syntax	http://<*ip*>/cgi-bin/videoStatServer.cgi?action=**doFind[**&channel=<***channelNo***>]&token=<***tokenValue***>&beginNumber=<***begin Number***>&count=<***Count***>
Description	Find VideoStat info with channel ***channelNo***,token ***tokenValue***, beginNumber ***beginNumber*** and count ***Count***
Comment	***channelNo :*** video channel index, start from 1 ***tokenValue*** : get by startFind in above section. ***beginNumber*** : the start count, must between 0 and ***Count*** -1 ***Count*** : the count of infos for this query.
Response	found=2 info[0].Channel=0 info[0].EndTime=2015-07-06 00:59:59 info[0].EnteredSubtotal=0 info[0].ExitedSubtotal=0 info[0].RuleName= info[0].StartTime=2015-07-06 00:00:00 info[1].Channel=0 info[1].EndTime=2015-07-06 01:59:59 info[1].EnteredSubtotal=0 info[1].ExitedSubtotal=0 info[1].RuleName= info[1].StartTime=2015-07-06 01:00:00 …

15.4.4 StopFind

URL Syntax	http://<*ip*>/cgi-bin/videoStatServer.cgi?action=**stopFind[**&channel=<***channelNo***>]&token=<***tokenValue***>
Description	Stop query VideoStat by channel ***channelNo*** and token ***tokenValue***
Comment	***channelNo:*** video channel index, start from 1 ***tokenValue*** : get by startFind in above section.
Response	OK or ERROR

16 TrafficSnap

16.1 getParkingSpaceStatus

URL Syntax	http://<*ip*>/cgi-bin/trafficSnap.cgi?action=getParkingSpaceStatus&channel=<***channelNo***>&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Description	Get specific parking space(s) status For example If want to get all parking space status, the url is http://<ip>/cgi-bin/trafficSnap.cgi?action=getParkingSpaceStatus& condition.Lane[0]=0 & condition.Lane[1]=255
Response	A list of parking space status status[0].Lane=0 status[0].PictureId=5 status[0].***TrafficCar.***CountInGroup=1 … status[1].Lane=1 status[1].PictureId=4 status[1].***TrafficCar***.CountInGroup=1 …
Comment	Param : ***channelNo*** ：the index of trafficSnap channel ***index*** : The index of type array,start from 0 ***TrafficCar*** : the members refer to ***TrafficCar***

ParamName	ParamValue type	Description
condition.Lane[***index***]	int	The Lane value
condition. ResponseLevel	int	The Level value , refer to conditon

17 TrafficParking

17.1 getAllParkingSpaceStatus

URL Syntax	http://<*ip*>/cgi-bin/ trafficParking.cgi?action= getAllParkingSpaceStatus
Description	Get all valid parking spaces status of one device For example If want to get all parking space status, the url is http://<ip>/cgi-bin/trafficParking.cgi?action=getAllParkingSpaceStatus

Response	A list of parking space status status[0].Lane=0 status[0]. CustomParkNo = A2701 status[0].***Status*** = Park … status[1].Lane=1 status[1]. ***Status*** = NoPark …
Comment	Param : ***Status***: Park or NoPark

18 VideoDetect

18.1 getCaps

URL Syntax	http://<*ip*>/cgi-bin/devVideoDetect.cgi?action=**getCaps&channel=<channelNo>**
Response	caps.DetectVersion[0]=V1.0 caps.DetectVersion[1]=V3.0 caps.MotionColumns=22 caps.MotionDetectWindow=4 caps.MotionLinkPtzPattern=true caps.MotionLinkPtzPreset=true caps.MotionLinkPtzTour=true caps.MotionResult=1 caps.MotionRows=18 caps.SupportBlind=1 caps.SupportLoss=0 caps.SupportMotion=1
Comment	Get video detect capabilities, ***channelNo*** is video in channel index. Notice that When your device is using V1.0 V2.0 Motion detection, you can not get any reply while excuting the command.

19 RadiometryManager

19.1 RadioMetry Config

19.1.1 GetHeatImagingThermometryConfig

URL Syntax	http://<ip>/cgi-bin/configManager.cgi?action=getConfig&name=**HeatImagingThermometry**
Description	Get HeatImagingThermometry Config
Comment	Param out : ***TemperatureUnit*** : the range is {"Centigrade" , "Fahrenheit"}
Response	table.RelativeHumidity = 50 table.AtmosphericTemperature =20 table.ObjectEmissivity =1 table.ObjectDistance =100 table.ReflectedTemperature=20 table.***TemperatureUnit***= Centigrade table.Isotherm.Enable=true table.Isotherm.MaxValue=50 table.Isotherm.MinValue=0 table.Isotherm.ColorBarDisplay=true table.HotSpotFollow=true table.TemperEnable=true

19.1.2 SetHeatImagingThermometryConfig

URL Syntax	http://*<ip>*/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Description	Set the HeatImagingThermometry config
Comment	Param in： **paramName** and **paramValue** as below table Example： http://*<ip>*/cgi-bin/configManager.cgi?action=setConfig&HeatImagingThermometry.RelativeHumidity=50&HeatImagingThermometry.ObjectDistance=20.3
Response	OK or ERROR

ParamName	ParamValue type	Description
HeatImagingThermometry.RelativeHumidity	integer	The RelativeHumidity range and step are get from interface in **getCaps**

HeatImagingThermometry.AtmosphericTemperature	float	The AtmosphericTemperature range and step are get from interface in **getCaps**
HeatImagingThermometry.ObjectEmissivity	float	The ObjectEmissivity range and step are get from interface in **getCaps**
HeatImagingThermometry.ObjectDistance	float	The ObjectDistance range and step are get from interface in **getCaps** Unit is meter.
HeatImagingThermometry.ReflectedTemperature	float	The ReflectedTemperature range and step are get from interface in **getCaps**
HeatImagingThermometry.TemperatureUnit	string	Range is {Centigrade, Fahrenheit}.
HeatImagingThermometry.Isotherm. Enable	bool	true or false
HeatImagingThermometry.Isotherm. MaxValue	float	MaxValue range is get form interface in **getCaps**. MaxValue must bigger than MinVaue
HeatImagingThermometry.Isotherm. MinValue	float	MinValue range is get form interface in **getCaps**. MinValue must smaller than MaxVaue
HeatImagingThermometry.Isotherm. ColorBarDisplay	bool	true or false
HeatImagingThermometry.HotSpotFollow	bool	true or false
HeatImagingThermometry.TemperEnable	bool	true or false

19.1.3 GetThermometryRuleConfig

URL Syntax	http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=ThermometryRule**
Description	Get Thermometry Rule
Comment	Param out： In below table, ***head*** =table.ThermometryRule[***ChannelNo***] [***RuleNo***] ***ChannelNo*** = video channel index. ***RuleNo*** =rule index. ***Alarm***= AlarmSetting[***AlarmNo***] ***AlarmNo*** = alarm index ***PointNo*** = point index Example： http://<ip>**/cgi-bin/configManager.cgi?action=getConfig&name=ThermometryRule**
Response	***head***.Enable = true ***head.***PresetId =0 ***head.***RuleId=0 ***head***.Name=SpotName ***head***.Type =Spot ***head***.MeterRegion. Coordinates[***PointNo***] [0]= 0 ***head***.MeterRegion. Coordinates[***PointNo***] [1]= 0 ….

	head.T=3 ***head.Alarm***. Id=0 ***head.Alarm***. Enable=true ***head.Alarm***. Result =Max ***head.Alarm***. AlarmCondition=Below ***head.Alarm***. Threshold=20.0 ***head.Alarm***. Hysteresis=0.1 ***head.Alarm***. Duration=30 ***head***.LocalParameters.Enable=true ***head.***LocalParameters. ObjectEmissivity=0.95 ***head.***LocalParameters. ObjectDistance=0.95 ***head.***LocalParameters. RefalectedTemp=0

19.1.4 SetThermometryRuleConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Description	Set ThermometryRule config
Comment	Param in： In below table, ***head*** = ThermometryRule[***ChannelNo***] [***RuleNo***] ***ChannelNo*** = video channel index. ***RuleNo*** =rule index. ***Alarm***= AlarmSetting[***AlarmNo***] ***AlarmNo*** = alarm index ***PointNo*** = point index Example： http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig& ThermometryRule[***0***] [***0***].Name=name1
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head.Enable	bool	Enable/Disable
head.PresetId	integer	Ranger[0- PresetMax] PresetMax is get from interface in GetCurrentProtocolCaps
head.RuleId	integer	Ranger[0- MaxNum] MaxNum is get from interface in getCaps
head.Name	string	Radiometry rule name. char[64]
head.Type	string	Range is {Spot, Line,Area}
head.MeterRegion.Coordinates[***PointNo***] [0]	integer	Ranger[0-8091] The Xscale of Region/Line point
head.MeterRegion.Coordinates[***PointNo***] [1]	integer	Ranger[0-8091] The Yscale of Region/Line point
head.T	integer	Temperature Sample period. Unit is Second.

head.Alarm.Id	integer	Ranger[0- 65535],unique alarm id
head.Alarm.Enable	bool	Enable/Disable
head.Alarm.Result	string	Depend on the vaule of Type Spot : {Vaule} Line:{ Max,Min,Aver} Area:{Max,Min,Aver,Std,Mid,ISO}
head.Alarm. AlarmCondition	string	Ranger is {Below, Match , Above }
head.Alarm. Threshold	float	Alarm threshold
head.Alarm. Hysteresis	float	Alarm hysteresis
head.Alarm. Duration	integer	The duration time of alarm. Unit is second
head.LocalParameters.Enable	bool	Enable/Disable
Head. LocalParameters. ObjectEmissivity	float	Ranger[0 -1] Accuracy is 0.01
head.LocalParameters. ObjectDistance	float	Object distance The range get from interface in **getCaps**
Head. LocalParameters. ReflectedTemp	float	Object Reflected Temperature The range get from interface in **getCaps**

19.1.5 GetHeatImagingTemperConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name=**HeatImagingTemper**
Description	Get HeatImagingTemper config
Comment	Param in: *Channel*: video channel number ***head***= table.HeatImagingTemper[*Channel*] Param out: ***paramName,paramValue*** : output of EventHandler is described in **GetEventHandler**
Response	***head***.Enable=false ***head***.EventHandler. **paramName** = **paramValue**

19.1.6 SetHeatImagingTemperConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Description	Set HeatImagingTemper config
Comment	*Channel*: video channel number ***head***= HeatImagingTemper[*Channel*] Example: http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&HeatImagingTemper[*0*].Enable=false&HeatImagingTemper[*0*].EventHandler.BeepEnable=false

Response	OK or ERROR

ParamName	ParamValue type	Description
head.Enable	bool	Enable/Disable HeatImagingTemper feature.
head.EventHandler		Setting of EventHandler is described in SetEventHandler

19.2 getCaps

URL Syntax	http://<ip>/cgi-bin/RadiometryManager.cgi?action=getCaps[&**channel**=<**channelNo**>]
Description	Get the Capabilities of Radiometry Manager
Comment	Param in: ***channelNo*** : the channel index; start from 1 Param out: ***Type :*** the range is { "Spot","Line","Area" } ***MinPeriod*** ： Unit is Second. Example: http://<ip>/cgi-bin/RadiometryManager.cgi?action=getCaps&channel=1
Response	caps.TotalNum.MaxNum=8 caps.TotalNum.Spot.MaxSpots=8 caps.TotalNum.Line.MaxLines=1 caps.TotalNum.Area.MaxAreas=8 caps.TemperPresets.MaxPresets=256 caps.MeterInfo.***Type***[0u]=Spot caps.MeterInfo.***Type***[1u]=Area caps.MeterInfo.ObjectEmissivity.Max=100 caps.MeterInfo.ObjectEmissivity.Min=0 caps.MeterInfo.ObjectEmissivity.Default=0 caps.MeterInfo.ObjectEmissivity.Step=1 caps.MeterInfo.ObjectDistanceMeter.Max=100 caps.MeterInfo.ObjectDistanceMeter.Min=0 caps.MeterInfo.ObjectDistanceMeter.Default=0 caps.MeterInfo.ObjectDistanceMeter.Step=1 caps.MeterInfo. ReflectedTemperature.Max=100 caps.MeterInfo. ReflectedTemperature.Min=0 caps.MeterInfo. ReflectedTemperature.Default=0 caps.MeterInfo. ReflectedTemperature.Step=1 caps.MeterInfo. RelativeHumidity.Max=100 caps.MeterInfo. RelativeHumidity.Min=0 caps.MeterInfo. RelativeHumidity.Default=0 caps.MeterInfo. RelativeHumidity.Step=1 caps.MeterInfo. AtmosphericTemperature.Max=100 caps.MeterInfo. AtmosphericTemperature.Min=0 caps.MeterInfo. AtmosphericTemperature.Default=0

	caps.MeterInfo. AtmosphericTemperature.Step=1 caps.Statistics. ***MinPeriod***=60 caps.Isotherm.MaxTemp=327.0 caps.Isotherm.MinTemp=-20.0

19.3 getRandomPointTemper

URL Syntax	http://<*ip*>/cgi-bin/**RadiometryManager**.cgi?action=getRandomPointTemper&channel=<***channelNo***>&coordinate[0]=***x***&coordinate[1]=***y***
Description	Ger temperature values of random point
Comment	Param in : ***channelNo*** **：** the index of video channel,start from 1 ***x :*** The Xscale of the point ***y :*** The Yscale of the point For example: http://<ip>/cgi-bin/RadiometryManager.cgi?action=getRandomPointTemper&channel=1&coordinate[0]=1024&coordinate[1]=1024
Response	TempInfo.Type=Spot TempInfo.TemperAver=27.5

19.4 getTemper

URL Syntax	http://<*ip*>/cgi-bin/**RadiometryManager**.cgi?action=getTemper&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...]
Description	Ger temperature values from rules which have been set
Comment	Param in: **paramName** and **paramValue** as below table For example If want to get temperature values, the url is http://<ip>/cgi-bin/RadiometryManager.cgi?action=getTemper&condition.PresetId=0&condition.RuleId=0&condition.Type=Spot&condition.Name=Spot1&condition.channel=1
Response	TempInfo.Type=Spot TempInfo.TemperAver=27.5

ParamName	**ParamValue type**	**Description**
condition.channel	Integer	Channel index. Start from 1
condition.PresetId	integer	Ranger[0- PresetMax] PresetMax is get from interface in GetCurrentProtocolCaps
condition.RuleId	integer	Ranger[0- MaxNum] MaxNum is get from interface in getCaps

condition.Type	string	Range is {Spot, Line,Area}
condition.Name	string	Name is get from interface in GetThermometryRuleConfig

20 ThermographyManager

20.1 ThermographyManager Config

20.1.1 getThermographyOptionsConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=getConfig&name= **ThermographyOptions**
Description	Thermography options contain EZoom, Colorization. SmartOptimizer,and so on
Comment	Param out: ***head*** = table.ThermographyOptions [***ChannelNo***][0] ***ChannelNo*** = video channel index ***Regions***： the region is a rectangle ***i*** **：** the region index.
Response	***head***.EZoom=0 ***head***.***Colorization***=White Hot ***head***.SmartOptimizer=10 ***head***.OptimizedRegion. Type=Custom ***head***.OptimizedRegion. Enable= true ***head***.OptimizedRegion. ***Regions***[***i***][0u]=0 ***head***.OptimizedRegion. ***Regions***[***i***][1u]=0 ***head***.OptimizedRegion. ***Regions***[***i***][2u]=0 ***head***.OptimizedRegion. ***Regions***[***i***][3u]=0 ***head***.Agc=10 ***head***.AgcMaxGain=10 ***head***.AgcPlateau=10 ***head.***Mode=”HighTemperature” ***head***.Auto.LowToHigh=13 ***head***.Auto.LHROI=15 ***head***.Auto.HighToLow=12 ***head***.Auto.HLROI=95

20.1.2 setThermographyOptionsConfig

URL Syntax	http://<*ip*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...]
Description	Set thermography options
Comment	In below table, ***head*** = **ThermographyOptions**[*ChannelNo*][0] *ChannelNo* = video channel index.
Response	OK or ERROR

ParamName	**ParamValue type**	**Description**
head. EZoom	integer	Range is [0~24] range and step are get from interface in **getCaps**
head.Colorization	String	Range is {"White Hot","Black Hot","Ironbow2", "IceFire",...} range and step are get from interface in **getCaps**
head.SmartOptimizer	integer	Range is [0 ~100] range and step are get from interface in **getCaps**
head.OptimizedRegion.Type	String	Range is {"Full Screen","Sky", "Ground", "Horizontal","Center 75%", "Center 50%","Center 25%", "Custom"}
head.OptimizedRegion.Enable	bool	true: enable false: unenable
head.OptimizedRegion.Regions[***i***][0u]	integer	Range is [0~8191]. i the region index.start from 0
head.OptimizedRegion.Regions[***i***][1u]	integer	Range is [0~8191]. i the region index.start from 0
head.OptimizedRegion.Regions[***i***][2u]	integer	Range is [0~8191]. i the region index.start from 0
head.OptimizedRegion.Regions***[i]***[3u]	integer	Range is [0~8191]. i the region index.start from 0
head.Agc	integer	Range is [0-255] range and step are get from interface in **getCaps**
head.AgcMaxGain	integer	Range is [0-255] range and step are get from interface in **getCaps**
head.AgcPlateau	integer	range and step are get from interface in **getCaps**
head.Mode	string	Range is{ "HighTemperature","LowTemperature","Auto"}
head.Auto.LowToHigh	integer	UInt32
head.Auto.LHROI	integer	UInt32, percentage range is[0-100]
head.Auto.HighToLow	integer	UInt32
head.Auto.HLROI	integer	UInt32, percentage range is[0-100]

20.2 getExternSystemInfo

URL Syntax	http://<ip>/cgi-bin/**ThermographyManager**.cgi**?**action=getExternSystemInfo &channel=<***channelNo***>
Description	Ger Extern System Info
Comment	Param in : ***channelNo*** **：** the index of video channel,start from 1 Param out: ***SerialNumber*** : string ***SoftwareVersion***: string ***FirmwareVersion***: string ***LibVersion*** : string For example: http://<ip>/cgi-bin/ ThermographyManager.cgi?action=getExternSystemInfo &channel=1
Response	sysInfo. ***SerialNumber*** = 11111111123 sysInfo. ***SoftwareVersion*** = 2222222222222 sysInfo. ***FirmwareVersion***= 3333333333333 sysInfo. ***LibVersion*** = 4444444444

20.3 getPresetParam

URL Syntax	http://<ip>/cgi-bin/**ThermographyManager**.cgi**?**action=**getPresetParam** &channel=<***channelNo***>&mode=<***modeType***>
Description	Set the preset mode and return the preset mode info
Comment	Param in : ***channelNo*** **：** the index of video channel,start from 1 ***modeType*** : depends on capability , get from interface in **getCaps** ***Regions***： the region is a rectangle ***i*** **：** the region index. For example: http://<ip>/cgi-bin/ThermographyManager.cgi?action=getPresetParam&channel=1&mode=”Default”
Response	presetInfo.Brightness = 50 presetInfo.Sharpness= 50 presetInfo.EZoom= 12 presetInfo.ThermographyGamma= 0 presetInfo.Colorization= “White Hot” presetInfo.SmartOptimizer= 10 presetInfo OptimizedRegion. Type= Full Screen presetInfo.OptimizedRegion. Enable= Full Screen presetInfo.OptimizedRegion. ***Regions***[***i***][0u]=0 presetInfo.OptimizedRegion. ***Regions***[***i***][1u]=0 presetInfo.OptimizedRegion. ***Regions***[***i***][2u]=0 presetInfo.OptimizedRegion. ***Regions***[***i***][3u]=0

	presetInfo.Agc= 10 presetInfo.AgcMaxGain=10 presetInfo.AgcPlateau = 10

20.4 getCaps

URL Syntax	http://<ip>/cgi-bin/**ThermographyManager**.cgi**?**action=**getCaps** &channel=<***channelNo***>
Description	Get thermography capability
Comment	Param in : ***channelNo*** **：** the index of video channel,start from 1 Param out: ***PresetModes*** : the preset mode. Range is { "Low Contrast", "High Contrast", "Default" } ***PresetColorization***: Preset colorization mode.Range is { "WhiteHot","BlackHot","Fusion","Rainbow","Globow", "Ironbow1","Ironbow2","Sepia","Color1","Color2","Icefire","Rain","RedHot","GreenHot"}. ***PresetROIModes*** : Preset ROI mode。 Range is {"Full Screen","Sky", "Ground", "Horizontal", "Center 75%", "Center 50%","Center 25%", "Custom"} For example: http://<ip>/cgi-bin/ThermographyManager.cgi?action= getCaps &channel=1
Response	caps.***PresetModes[0u]*** = High Contrast caps.***PresetModes[1u]*** = Low Contrast caps.Brightness.Max = 100 caps.Brightness.Min = 0 caps.Brightness.Step = 1 caps.Sharpness.Max= 100 caps.Sharpness.Min = 0 caps.Sharpness.Step = 5 caps.EZoom.Max= 24 caps.EZoom.Min = 0 caps.EZoom.Step = 1 caps. ThermographyGamma.Max= 8 caps. ThermographyGamma.Min = -8 caps. ThermographyGamma.Step = 1 caps. SmartOptimizer.Max= 100 caps. SmartOptimizer.Min = 0 caps. SmartOptimizer.Step = 5 caps. Agc.Max= 255 caps. Agc.Min = 0 caps. Agc.Step = 5 caps. AgcMaxGain.Max= 255 caps. AgcMaxGain.Min = 0

	caps. AgcMaxGain.Step = 5 caps. AgcPlateau.Max= 100 caps. AgcPlateau.Min = 0 caps. AgcPlateau.Step = 5 caps.***PresetColorization[i]***= Ironbow2 caps.***PresetROIModes[j]***= Full Screen

20.5 getOptimizedRegion

URL Syntax	http://<ip>/cgi-bin/**ThermographyManager**.cgi**?**action=**getOptimizedRegion**&channel=<***channelNo***>
Description	Get optimized region info
Comment	Param in : ***channelNo*** **：** the index of video channel,start from 1 ***Regions***： the region is a rectangle ***i*** **：** the region index. For example: http://<ip>/cgi-bin/ThermographyManager.cgi?action= getOptimizedRegion &channel=1
Response	optimizedRegion.Type= Full Screen optimizedRegion.Enable= true optimizedRegion.***Regions***[***i***][0u]=0 optimizedRegion.***Regions***[***i***][1u]=0 optimizedRegion.***Regions***[***i***][2u]=0 optimizedRegion.***Regions***[***i***][3u]=0

20.6 enableShutter

URL Syntax	http://<ip>/cgi-bin/**ThermographyManager**.cgi**?**action=**enableShutter**&channel=<***channelNo***>&enable=<***enable***>
Description	Shutter control
Comment	Param in : ***channelNo*** **：** the index of video channel,start from 1 ***enable*** : bool . true enable,false disable. For example: http://<ip>/cgi-bin/ThermographyManager.cgi?action=enableShutter&channel=1&enable=true
Response	OK or ERROR

21 HeatMap

21.1 getPicByTime

<table>
<tr><td>URL Syntax</td><td>http://<ip>/cgi-bin/heatMap.cgi?action=getPicByTime&channel=channelNo&StartTime=start&EndTime=end</td></tr>
<tr><td>Description</td><td>Get binary data of heatmap</td></tr>
<tr><td>Comment</td><td>ChannelNo: video channel index,start from 1.
start/end: the start/end time of HeatMap info. 24 hour Format, as: yyyy-mm-dd hh:mm:ss.
heatMap size : width*height+16。
HeatMap Data
<table>
<tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>…</td><td>15</td><td>16</td><td>17</td><td>18</td><td>…</td></tr>
<tr><td colspan="2">Width</td><td colspan="2">Height</td><td colspan="3">Reserved</td><td colspan="4">Data： every byte symbolize a pixel</td></tr>
</table></td></tr>
<tr><td>Response</td><td>Content-Type: application/binarytet-stream
Content-Length:<<i>heatMap size</i>>
<<i>HeatMap Data</i>></td></tr>
</table>