AMCREST

HTTP Protocol API Specifications

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Document History

No	Release Notes	Date	Version
1	Based on Old Version	2016-6-20	2.0
2	Add API Get max remote input channels	2016-6-30	2.01
3	Add API PTZ Move directly	2016-8-10	2.02
4	Add Chapter Bosch APIs	2016-8-16	2.03
5	Add API getLimitState	2016-8-16	2.04
6	1 Modify API Control the playback stream 2 Add auxiliary gap extend header	2016-8-20	2.05
7	Add chapter Record files protection	2016-8-20	2.06
8	Modify API Find logs	2016-08-31	2.07
9	Add API Create a motion file finder	2016-09-01	2.08
10	Add API Get daylight	2016-09-01	2.09
11	Add H.265 Support	2016-09-06	2.10
12	1 Add chapter video in day night mode shift 2 Add chapter Lighting	2016-10-19	2.11
13	Delete getting real stream and playback stream APIs	2017-03-15	2.12
14	Delete GUISet command	2020-09-22	2.13

Contents

1 Overview

This document specifies the HTTP based application programming interface of video products.

The HTTP-based interface provides the functionality for requesting snapshot and media stream, for controlling camera functions (PTZ, focus etc.) and for getting and setting internal parameter values.

The video products serve as a server. The client sends requests to server, and then server handles requests and returns resources accordingly.

2 References

[1]. RFC 2616 Hypertext Transfer Protocol-HTTP/1.1
[2]. RFC 2396 Uniform Resource Identifiers (URI): Generic Syntax and Semantics
[3]. RFC 2617 HTTP Authentication: Basic and Digest Access Authentication
[4]. RFC 3986: Uniform Resource Identifiers (URI) Generic Syntax

3 Definitions

3.1 Abbreviations

The following abbreviations are used throughout this document

API Application programming interface – in the document, it especially presents application programming interface of video products.

3.2 Syntax convention

- In URL syntax and in descriptions of API parameters, text in italic within angle brackets denotes content that should be replaced with either a value or a string. When replacing the text string, the angle brackets must also be replaced. For example, <*server*> in the URL syntax is replaced with the string “192.168.1.108”.

- String shown in bold face denotes a brief explanatory note of the string close to it.

- Name-value pair in square brackets denotes content that is optional. For example, "http ://<*server*>/cgi-bin/snapshot.cgi[?channel=1]" can be like this "http ://<*server*>/cgi-bin/snapshot.cgi".

- The API syntax must follow the standard of URI. (RFC 3986: Uniform Resource Identifiers (URI) Generic Syntax); that is, spaces and other reserved characters (“;”, “/”, “?”, “:”, “@”, “=“, “+”, “,” and “$”) within a name-value pair should be replaced with %< ASCII hex>. For example, the blank should be replaced with %20.

- To describe the range of a variable, we use some symbols such as “[]” and “{}”. For example:” [0-100]” denotes an integer not less than 0 and not larger than 100. “{0, 1, 2, 3}” denotes the valid value of an integer among 0, 1, 2 and 3.

- “[]” following a string denotes an array. The index is usually an integer and starts from 0. For example, “Snap[*channel*]” may be “Snap[0]” or "Snap[1]".

- The variable may be different types: string, integer, bool or float. Integer is 32 bits. The range of bool is “true” and “false”.

3.3 API format

This section defines the syntax and semantics for APIs.

<**protocol**> ://<**server**><**abs_path**> [?**query**]

protocol: URL scheme for the particular request. The http and https protocols are both supported in this specification. So “http”, as most of the APIs’ default protocol except several RTSP APIs, can be replaced by “https”.

server: Server could be “**hostname**[: **port**]”. The **hostname** can be IP address or the fully qualified domain name of an IP device. The **port** is the port number of **server** listening for TCP connections. If the port is not given, the default port is assumed. For HTTP, the default port is 80. For HTTPS, the default port is 443.

abs_path: The Request-URI for the resources is abs_path. The abs_path in this specification is most often of the form “/cgi-bin/*.cgi”.

query: The query field is a string of information to be interpreted by the resource. It consists of resource-related parameters. And it must be listed in name-value pair syntax (p1=v1&p2=v2&…&pn=vn).

For example:

http://192.168.1.108/cgi-bin/snapshot.cgi?channel=1

3.4 Server responses

The server uses the standard HTTP status codes.

Return:

HTTP/1.1 <HTTP code> <HTTP text>\r\n

With the following HTTP code and meanings

Table 3-1

HTTP code	HTTP text	Description
200	OK	The request has succeeded. The requested resource will be returned in the HTTP text.
400	Bad Request	The request had bad syntax or was inherently impossible to be satisfied.
401	Unauthorized	The request requires user authentication, or the authorization has been refused.
404	Not Found	The server has not found anything matching the request.
500	Internal Server Error	The server encountered an unexpected condition that prevented it from fulfilling the request.

Example: request does not fit with syntax.

```
HTTP/1.1 404 Not Found\r\n
```

If the request fits with syntax but an error occurs while the server handles it, the response would like this:

```
HTTP/1.1 200 OK
…
Error
ErrorID=<Error Code>, Detail=<Error Description>
```

Example: Request spells wrong.

```
HTTP/1.1 200 OK
Error
ErrorID=2, Detail= Invalid Request!
```

All error codes are defined as below.

Table 3-2

Error Code	Detail	Description
0	Invalid Authority!	The user fails in authentication or does not include the right accessing the resource.
1	Request parses error!	Request is incomplete.
2	Invalid Request!	Request spells error.
3	Method not found!	the resource not supported
4	Request invalid param!	Parameters of request are invalid.
5	Server internal error!	An error occurs when server handles the request.
6	Request Timeout!	Timeout when server handles request.
7	Client keepalive failed!	The client fails to keep alive.

3.5 Authentication

Video products support either basic authentication or digest authentication. If the http request does not provide valid “Authorization” information, video products would return HTTP status code 401 and information for authentication. Video products return the required resource only if authorization correct.

For example:

1. When basic authentication fails, response is:

```
HTTP/1.1 401 Unauthorized
WWW-Authenticate: Basic realm=”XXXXXX”
```

The client encodes the username and password with base64, and then sends it to server. A valid Authorization like this:

```
Authorization: Basic VXZVXZ
```

2. When digest authentication fails, response is:

```
HTTP/1.1 401 Unauthorized
WWW-Authenticate: Digest realm="DH_00408CA5EA04",
nonce="000562fdY631973ef04f77a3ede7c1832ff48720ef95ad", stale=FALSE, qop="auth"
```

The client calculates the digest authorization using information like username, password, nonce, HTTP method and URI with MD5, and then sends it to server. For example:

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

4 General APIs

The requests specified in this section are supported by all video products.

4.1 APIs of RTSP

4.1.1 Get real-time stream

Table 4-1

Syntax	rtsp://<***username***>:<***password***>@<***ip***>:<***port***>/cam/realmonitor?channel=<***ChannelNo***>&subtype=<***ty peNo***>
Description	Get real-time media stream.

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
Success Return	media stream data
Comment	<***username***>: a valid user's username. <***password***>: user's password. < ***ip***>: the IP address of the video product. <***port*** >: the default port is 554. It can be omitted. <***ChannelNo***>: integer, the video channel index which 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 GetMaxExtraStreamCounts. If the stream does not exist or not enabled, response will be error. 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 Authentication.

4.1.2 Get playback stream

Table 4-2

Syntax	rtsp://<*username*>:<*password*>@<*ip*>:<*port*>/cam/playback?channel=<*ChannelNo*>&starttime=<*starttime*> &endtime=<*endtime*>
Description	Get playback media stream.
Example	rtsp://admin:admin@10.44.200.8:554/cam/playback?channel=1&starttime=2012_09_15_12_37_05&endti me=2012_09_15_18_34_14
Success Return	media stream data
Comment	It's similar with GetRtspStream. Except there are parameters "starttime" and "endtime".

4.1.3 Get file stream

Table 4-3

Syntax	rtsp://<*username*>:<*password*>@<*ip*>:<*port*>/<***filename***>
Description	Get specific file stream.
Example	rtsp://admin:admin@10.44.200.8:554//mnt/sd/2015-09-16/001/dav/20/20.32.08-20.32.28[M][0@0][0]. dav

Success Return	media stream data
Comment	It's similar with GetRtspStream. ***filename***: absolute path.

4.2 Get mjpg stream

Table 4-4

Syntax	http://<*server*>/cgi-bin/mjpg/video.cgi[?channel=<***ChannelNo***>&subtype=<***typeNo***>]
Method	GET
Description	Get a video stream encoded by mjpg.
Example	To get a video stream of channel 1, main stream, the URL can be http://192.168.1.108/cgi-bin/mjpg/video.cgi or http://192.168.1.108/cgi-bin/mjpg/video.cgi?channel=1&subtype=0
Success Return	Video stream encoded by MJPG. For example: 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	***ChannelNo***: integer, the video channel index which starts from 1, default 1 if not specified. ***typeNo***: the stream type, default 0 if not specified. It can be the following value: 0-Main Stream 1-Extra Stream 1 2-Extra Stream 2

4.3 Audio

4.3.1 Get audio input channel numbers

Table 4-5

Syntax	http://<*server*>/cgi-bin/devAudioInput.cgi?action=getCollect
Method	GET
Description	Get Audio input channel number.
Example	http://192.168.1.108/cgi-bin/devAudioInput.cgi?action=getCollect
Success Return	result=1
Comment	Above response means there are 2 audio input channels.

4.3.2 Get audio output channel numbers

Table 4-6

Syntax	http://<*server*>/cgi-bin/devAudioOutput.cgi?action=getCollect
Method	GET
Description	Get Audio output channel number.
Example	http://192.168.1.108/cgi-bin/devAudioOutput.cgi?action=getCollect
Success Return	result=1
Comment	Above response means there are 2 audio output channels.

4.3.3 Post audio stream

Table 4-7

Syntax	http://<*server*>/cgi-bin/audio.cgi?action=postAudio&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	POST
Description	Post audio

Example	Example for single part The URL of transmit a single part, channel 1 audio stream(encoded with G.711 A-law) is: http://192.168.1.108/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> Example for multipart The URL of transmit a multipart, channel 1 audio stream(encoded with G.711 A-law) is: http://192.168.1.108/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>
Success Return	OK
Comment	Params in URL: The paramName and paramValue are in the below table.

Appendix A: Parameters in URL

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

Appendix B: Audio Encode Type

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

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

4.3.4 Get audio stream

Table 4-8

Syntax	http://<*server*>/cgi-bin/audio.cgi?action=getAudio&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Get audio
Example	Example for single part The URL of Request a single part, channel 1 audio stream(encoded with G.711 A-law) is: http://192.168.1.108/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> Example for multipart The URL of Request a multipart, channel 1 audio stream(encoded with G.711 A-law) is: http://192.168.1.108/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>
Success Return	OK
Comment	Params in URL: The paramName and paramValue are in the below table.

Appendix:

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

4.4 Snapshot

4.4.1 Snap

- Get snap config

Table 4-9

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Snap
Method	GET
Description	Get Snap config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Snap
Success Return	table.Snap[0].HolidayEnable=false table.Snap[0].TimeSection[0][0]=6 00:00:00-23:59:59 table.Snap[0].TimeSection[0][1]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[0][2]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[0][3]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[0][4]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[0][5]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[1][0]=6 00:00:00-23:59:59 table.Snap[0].TimeSection[1][1]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[1][2]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[1][3]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[1][4]=0 00:00:00-23:59:59 table.Snap[0].TimeSection[1][5]=0 00:00:00-23:59:59 …

Comment	Response format: table. Snap[***channel***].TimeSection[***weekday***][***configNo***]=1 00:00:00-23:59:59 ***channel*** is video channel number, ***weekday*** range is [0-6] (Sunday - Saturday). ***configNo*** is the index of time section config. There are many time sections each day.

- Set snap config

Table 4-10

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Snap config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Snap[*0*].TimeSection[*0*][*0*]=1%2012:00:00-18:00:00
Success Return	OK
Comment	In below table, ***ch*** = channel index ***wd*** = week day index ***ts*** = time section index

Appendix:

ParamName	ParamValue type	Description
Snap[***ch***].TimeSection[***wd***][***ts***]	string	wd (week day) range is [0-6] (Sunday- Saturday) ts (time section) range is [0-23], it's time section 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

4.4.2 Get a snapshot

Table 4-11

Syntax	http://<*server*>/cgi-bin/ snapshot.cgi[?channel=1]
Method	GET

Description	Get a snapshot of a video channel.
Example	To get a snapshot of video channel 1, the URL can be http://192.168.1.108/cgi-bin/snapshot.cgi or http://192.168.1.108/cgi-bin/snapshot.cgi?channel=1

C# code snip	using (WebClient client = new WebClient())
	{
	client.Credentials = new NetworkCredential("username","password");
	client.DownloadFile(HTTPcameraURL, filename);
	}
	
	Note: There will be limited support provided if using c# coding

Success Return	Image of jpg format.
Comment	***ChannelNo***: integer, the video channel index which starts from 1, default 1 if not specified.

4.4.3 Subscribe to snapshot

Table 4-12

Syntax	http://<*server*>/cgi-bin/snapManager.cgi?action=attachFileProc&Flags[0]=Event&Events=[<***eventCode***>,<***eventCode***>,…] [&channel=<***ChannelNo***>]
Method	GET
Description	Subscribe pictures when that event of code ***eventCode*** happens.
Example	http://192.168.1.108/cgi-bin/snapManager.cgi?action=attachFileProc&Flags[0]=Event&Events=[VideoM otion%2CVideoLoss]
Success Return	--<*boundary*>\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=Z A12345 Events[0].TrafficCar. DeviceAddress=Hangzhou …… Events[1].Code=TrafficJunction …… --<*boundary*> Content-Type: image/jpeg Content-Length:<image size> <JPEG image data>

	--<*boundary*>
Comment	***ChannelNo***: integer, the video channel index which starts from 1, default 1 if not specified. ***eventCode*** : it can be any one of the standard codes defined in DHIIF. ***eventCode*** includes: VideoMotion: motion detection event VideoLoss: video loss detection event VideoBlind: video blind detection event. AlarmLocal: alarm detection event.

4.5 Video attributes

4.5.1 Get max extra stream numbers

Table 4-13

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getProductDefinition&name=MaxExtraStream
Method	GET
Description	Get max extra stream count
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getProductDefinition&name=MaxExtraStream
Success Return	table.**MaxExtraStream**=1
Comment	**MaxExtraStream:** max extra stream numbers. It can be 1, 2 or 3.

4.5.2 Video color config

- Get video color config

Table 4-14

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoColor
Method	GET
Description	Get Video Color config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoColor
Success Return	***head***. Brightness=50 ***head***. Contrast=50 ***head***. Hue=50 ***head***. Saturation=50 ***head***. TimeSection=1 00:00:00-24:00:00
Comment	Params in Response:

	head= table.VideoColor[***ChannelNo***][***ColorConfigNo***] ***ChannelNo*** = video channel index, ***colorConfigNo*** = color config index.) = Color Config 1 1 = Color Config 2 …

- Set video color config

Table 4-15

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Video Color config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoColor[1][0].Brightness=50
Success Return	OK
Comment	In below table, ***head***=VideoColor[***ChannelNo***][***ColorConfigNo***] ***ChannelNo*** = video channel index, ***colorConfigNo*** = color config index,) = Color Config 1 1 = Color Config 2 …

Appendix:

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

4.5.3 Get Encode Capability

Table 4-16

Syntax	http://<*server*>/cgi-bin/encode.cgi?action=getCaps
Method	GET
Description	Get encode capabilities.
Example	http://192.168.1.108/cgi-bin/encode.cgi?action=getCaps
Success Return	caps.PlaybackCompressSplitNumList[0]=1 caps.PlaybackCompressSplitNumList[1]=2 caps.PlaybackCompressSplitNumList[2]=4 caps.PreviewMode=SplitSnap caps.VideoEncodeDevices[0].CoverAreaPercent=100 caps.VideoEncodeDevices[0].CoverCount=4 caps.VideoEncodeDevices[0].LadenBitrate=162201600 caps.VideoEncodeDevices[0].MaxCIFPFrameSize=40 caps.VideoEncodeDevices[0].MaxExtraStream=1 caps.VideoEncodeDevices[0].MinCIFPFrameSize=7 caps.VideoEncodeDevices[0].RecordIndividualResolution=true caps.VideoEncodeDevices[0].SupportIndividualResolution=true caps.VideoEncodeDevices[0].TitleCount=4
Comment	

4.5.4 Get encode config capability

Table 4-17

Syntax	http://<*server*>/cgi-bin/encode.cgi?action=getConfigCaps&channel=<***ChannelNo***>
Method	GET
Description	Get encode config capabilities.
Example	http://192.168.1.108/cgi-bin/encode.cgi?action=getConfigCaps&channel=1
Success Return	***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	Params in URL: ***ChannelNo***: video channel index Params in Response: ***headMain***= caps[***Channel***].MainFormat[***RecordType***] ***headExtra*** = caps[***Channel***].ExtraFormat[***ExtraStream***] ***headSnap*** = caps[***Channel***].SnapFormat[***SnapType***]

	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

Appendix A: Encode Config Capabilities

Field in response	Value range	Description
BitRateOptions	string	Before comma is minimum bit rate. (kbps), after comma is maximum bit rate.(kbps) BitRateOptions=80,448 80 is the minimum bitrates, 448 is maximum.
CompressionTypes	string	To video, it contains all supported video compression types, separated by comma. Range is {MPEG4, MPEG2, MPEG1, MJPG, H.263, H.264, H.265} To audio, it contains all supported audio compression types, separated by comma. Range is {PCM, ADPCM, G.711A, G.711Mu, G.726, G.729, MPEG2, AMR}
FPSMax	integer	Maximum FPS.
ResolutionTypes	string	It contains all supported video resolutions. Range is in below Resolution list.

Appendix B: Video 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"/"2CIF"	704 x 288	704 x 240
"CIF"	352 x 288	352 x 240
"QCIF"	176 x 144	176 x 120
"NHD"	640 x 360	
"VGA"	640 x 480	
"QVGA"	320 x 240	

"SVCD"	480 x 480	
"QQVGA"	160 x 128	
"SVGA"	800 x 592	
"SVGA1"	800 x 600	
"WVGA"	800 x 480	
"FWVGA"	854 x 480	
"DVGA"	960 x 640	
"XVGA"	1024 x 768	
"WXGA"	1280 x 800	
"WXGA2"	1280 x 768	
"WXGA3"	1280 x 854	
"WXGA4"	1366 x 768	
"SXGA"	1280 x 1024	
"SXGA+"	1400 x 1050	
"WSXGA"	1600 x 1024	
"UXGA"	1600 x 1200	
"WUXGA"	1920 x 1200	
"ND1"	240 x 192	
"720P"	1280 x 720	
"1080P"	1920 x 1080	
"QFHD"	3840 x 2160	
"1_3M", "1280x960"	1280 x 960 (1.3 Mega Pixels)	
"2_5M", "1872x1408"	1872 x 1408 (2.5 Mega Pixels)	
"5M", "3744x1408"	3744 x 1408 (5 Mega Pixels)	
"3M", "2048x1536"	2048 x 1536 (3 Mega Pixels)	
"5_0M", "2432x2048"	2432 x 2048 (5 Mega Pixels)	
"1_2M", "1216x1024"	1216 x 1024 (1.2 Mega Pixels)	
"1408x1024"	1408 x 1024 (1.5 Mega Pixels)	
"3296x2472"	3296 x 2472 (8 Mega Pixels)	
"5_1M", "2560x1920"	2560 x 1920 (5 Mega Pixels)	
"960H",	960 x 576	960 x 480
"DV720P"	960 x 720	
"2560x1600"	2560 x 1600 (4 Mega Pixels)	
"2336x1752"	2336 x 1752 (4 Mega Pixels)	
"2592x2048"	2592 x 2048	
"2448x2048"	2448 x 2048	
"1920x1440"	1920x1440	
"2752x2208"	2752x2208	
"3840x2160"	3840x2160	
"4096x2160"	4096x2160	
"3072x2048"	3072x2048	

Appendix C: Audio Compression Type

Field in response	Value range	Description
Compression Types	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}

4.5.5 Encode of media

- Get encode config

Table 4-18

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Encode
Method	GET
Description	Get video encode config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Encode
Success Return	table.Encode[0].MainFormat[0].Audio.Bitrate=64 table.Encode[0].MainFormat[0].Audio.Channels[0]=0 table.Encode[0].MainFormat[0].Audio.Compression=G.711A table.Encode[0].MainFormat[0].Audio.Depth=16 table.Encode[0].MainFormat[0].Audio.Frequency=8000 table.Encode[0].MainFormat[0].Audio.Mode=0 table.Encode[0].MainFormat[0].Audio.Pack=DHAV table.Encode[0].MainFormat[0].AudioEnable=true table.Encode[0].MainFormat[0].Video.resolution=1920x1080 table.Encode[0].MainFormat[0].Video.BitRate=4096 table.Encode[0].MainFormat[0].Video.BitRateControl=CBR table.Encode[0].MainFormat[0].Video.Compression=H.264 table.Encode[0].MainFormat[0].Video.CustomResolutionName=1080P table.Encode[0].MainFormat[0].Video.FPS=18 table.Encode[0].MainFormat[0].Video.GOP=36 table.Encode[0].MainFormat[0].Video.Height=1080 table.Encode[0].MainFormat[0].Video.Pack=DHAV table.Encode[0].MainFormat[0].Video.Profile=High table.Encode[0].MainFormat[0].Video.Quality=4 table.Encode[0].MainFormat[0].Video.QualityRange=6 table.Encode[0].MainFormat[0].Video.SVCTLayer=1 table.Encode[0].MainFormat[0].Video.Width=1920 table.Encode[0].MainFormat[0].VideoEnable=true table.Encode[0].MainFormat[1].Audio.Bitrate=64

	table.Encode[0].MainFormat[1].Audio.Channels[0]=0 table.Encode[0].MainFormat[1].Audio.Compression=G.711A table.Encode[0].MainFormat[1].Audio.Depth=16 table.Encode[0].MainFormat[1].Audio.Frequency=8000 table.Encode[0].MainFormat[1].Audio.Mode=0 table.Encode[0].MainFormat[1].Audio.Pack=DHAV table.Encode[0].MainFormat[1].AudioEnable=true table.Encode[0].MainFormat[1].Video.resolution=1920x1080 table.Encode[0].MainFormat[1].Video.BitRate=4096 table.Encode[0].MainFormat[1].Video.BitRateControl=CBR table.Encode[0].MainFormat[1].Video.Compression=H.264 table.Encode[0].MainFormat[1].Video.CustomResolutionName=1080P table.Encode[0].MainFormat[1].Video.FPS=18
	table.Encode[0].MainFormat[1].Video.GOP=36 table.Encode[0].MainFormat[1].Video.Height=1080 table.Encode[0].MainFormat[1].Video.Pack=DHAV table.Encode[0].MainFormat[1].Video.Profile=High table.Encode[0].MainFormat[1].Video.Quality=4 table.Encode[0].MainFormat[1].Video.QualityRange=6 table.Encode[0].MainFormat[1].Video.SVCTLayer=1 table.Encode[0].MainFormat[1].Video.Width=1920 table.Encode[0].MainFormat[1].VideoEnable=true table.Encode[0].MainFormat[2].Audio.Bitrate=64 table.Encode[0].MainFormat[2].Audio.Channels[0]=0 table.Encode[0].MainFormat[2].Audio.Compression=G.711A table.Encode[0].MainFormat[2].Audio.Depth=16 table.Encode[0].MainFormat[2].Audio.Frequency=8000 table.Encode[0].MainFormat[2].Audio.Mode=0 table.Encode[0].MainFormat[2].Audio.Pack=DHAV table.Encode[0].MainFormat[2].AudioEnable=true table.Encode[0].MainFormat[2].Video.resolution=1920x1080 table.Encode[0].MainFormat[2].Video.BitRate=4096 table.Encode[0].MainFormat[2].Video.BitRateControl=CBR table.Encode[0].MainFormat[2].Video.Compression=H.264 table.Encode[0].MainFormat[2].Video.CustomResolutionName=1080P table.Encode[0].MainFormat[2].Video.FPS=18 table.Encode[0].MainFormat[2].Video.GOP=36 table.Encode[0].MainFormat[2].Video.Height=1080 table.Encode[0].MainFormat[2].Video.Pack=DHAV table.Encode[0].MainFormat[2].Video.Profile=High table.Encode[0].MainFormat[2].Video.Quality=4 table.Encode[0].MainFormat[2].Video.QualityRange=6 table.Encode[0].MainFormat[2].Video.SVCTLayer=1

	table.Encode[0].MainFormat[2].Video.Width=1920 table.Encode[0].MainFormat[2].VideoEnable=true table.Encode[0].MainFormat[3].Audio.Bitrate=64 table.Encode[0].MainFormat[3].Audio.Channels[0]=0 table.Encode[0].MainFormat[3].Audio.Compression=G.711A table.Encode[0].MainFormat[3].Audio.Depth=16 table.Encode[0].MainFormat[3].Audio.Frequency=8000 table.Encode[0].MainFormat[3].Audio.Mode=0 table.Encode[0].MainFormat[3].Audio.Pack=DHAV table.Encode[0].MainFormat[3].AudioEnable=true table.Encode[0].MainFormat[3].Video.resolution=704x576 table.Encode[0].MainFormat[3].Video.BitRate=2048
	table.Encode[0].MainFormat[3].Video.BitRateControl=VBR table.Encode[0].MainFormat[3].Video.Compression=H.264 table.Encode[0].MainFormat[3].Video.FPS=25 table.Encode[0].MainFormat[3].Video.GOP=50 table.Encode[0].MainFormat[3].Video.Height=576 table.Encode[0].MainFormat[3].Video.Pack=DHAV table.Encode[0].MainFormat[3].Video.Profile=Main table.Encode[0].MainFormat[3].Video.Quality=4 table.Encode[0].MainFormat[3].Video.QualityRange=6 table.Encode[0].MainFormat[3].Video.SVCTLayer=1 table.Encode[0].MainFormat[3].Video.Width=704 table.Encode[0].MainFormat[3].VideoEnable=true table.Encode[0].ExtraFormat[0].Audio.Bitrate=64 … table.Encode[0].SnapFormat[0].Audio.Bitrate=64 …
Comment	Params in Response: The format of the config is *head.configItems.* The *head* can be: *headMain*= table. Encode[*Channel*].MainFormat[*Type*] *headSnap* = table. Encode[*Channel*].SnapFormat[*Type*] *headExtra* =table. Encode[*Channel*].ExtraFormat[*ExtraStream*] *Channel*: video channel index *Type*: 0 = regular encode 1 = motion detection encode 2 = alarm encode 3= emergency encode

	ExtraStream: 0 = extra stream 1 1 = extra stream 2 2 = extra stream 3 *The configitems are listed below*

- Set encode config

Table 4-19

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set encode config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Encode[1].MainFormat[*0*].Video.Compression=MPEG4
Success Return	OK
Comment	Params in URL: In below table, ***head***=Encode[***Channel***].MainFormat[***RecordType***] (or) Encode[***Channel***].ExtraFormat[***ExtraStream***] ***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

Appendix A: Video Encode Config

ParamName	ParamValue type	Description
head.Video.BitRate	integer	Unit is Kbps Range depends on capability in GetVideoConfigCaps
head.Video.BitRateControl	string	Range is {CBR, VBR} CBR: constant bitrates VBR: variable bitrates
head.Video.Compression	String	Range is {MPEG4, MPEG2, MPEG1, MJPG, H.263, H.264, H.265}

		Depends on capacity in 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 pictures, 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

Appendix B: Audio Encode Config

ParamName	ParamValue Type	Description
head.Audio.Bitrate	integer	Unit is kbps Range depends on GetAudioConfigCaps
head.Audio.Compression	string	Range depends on 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

4.5.6 Encode of region interested

- Get encode config of region interested

Table 4-20

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoEncodeROI
Method	GET
Description	Get video encode config of region interested.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoEncodeROI
Success Return	***head***.DynamicTrack=false
Comment	Params in Response : ***head***=table.VideoEncodeROI[***ChannelNo***] ***ChannelNo*** = array index starts from 0, which means video channel.

- Set encode config of region interested

Table 4-21

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set video encode config of region interested.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoEncodeROI[0].DynamicTrack=t rue
Success Return	OK
Comment	Params in URL: paramName and paramValue are as below table. In below table, ***head*** = VideoEncodeROI[***ChannelNo***] ***ChannelNo*** = array index starts from 0, which means video channel.

Appendix:

ParamName	ParamValue type	Description

head. DynamicTrack	bool	Enable/Disable

4.5.7 Channel title

- Get channel title

Table 4-22

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=ChannelTitle
Method	GET
Description	Get the title of the video channel.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=ChannelTitle
Success Return	table.ChannelTitle[***Channel***].Name=CAM1
Comment	Params in Response: ***Channel*** = video channel index

- Set channel title

Table 4-23

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>
Method	GET
Description	Set the title of the channel.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&ChannelTitle[*1*].Name=test
Success Return	OK
Comment	If VideoWidget[*Channel*].ChannelTitle.EncodeBlend is true, this title is blended to the video frames. Please refer to SetVideoWidgetConfig. Params in URL*:* Channel Name *Format:* ChannelTitle[***Channel***].Name

	Channel : array index which means video channel, equals to video channel index -1 and start from 0.

4.5.8 Get video input channels device supported

Table 4-24

Syntax	http://<*server*>/cgi-bin/devVideoInput.cgi?action=getCollect
Method	GET
Description	Get the video input channel numbers that supported.
Example	http://192.168.1.108/cgi-bin/devVideoInput.cgi?action=getCollect
Success Return	result=1
Comment	-

4.5.9 Get video output channels device supported

Table 4-25

Syntax	http://<*server*>/cgi-bin/devVideoOutput.cgi?action=getCollect
Method	GET
Description	Get the video output channel numbers that supported.
Example	http://192.168.1.108/cgi-bin/devVideoOutput.cgi?action=getCollect
Success Return	result=2
Comment	-

4.5.10 Get max remote input channels

Table 4-26

Syntax	http://<server>/cgi-bin/magicBox.cgi?action=getProductDefinition&name=MaxRemoteInputChannels
Method	GET
Description	Get max remote input channels
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getProductDefinition&name=MaxRemoteInputCha nnels

Success Return	table.MaxRemoteInputChannels=16
Comment	MaxRemoteInputChannels: max remote input channels.

4.5.11 Video standard

- Get video standard

Table 4-27

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoStandard
Method	GET
Description	Get Video Standard config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoStandard
Success Return	table.VideoStandard=PAL
Comment	-

- Set video standard

Table 4-28

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&VideoStandard=<***paramValue***>
Method	GET
Description	Set Video Standard config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoStandard=PAL
Success Return	OK
Comment	VideoStandard: string, range is {PAL, NTSC} Video Standard.

4.5.12 Video widget

- Get video widget config

Table 4-29

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoWidget

Method	GET
Description	Video Widget config contains Channel Title, Covers and Time Title parameters, defines the background color, front color and positions of channel title and time title, and defines the regions which are not visible (cover).
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoWidget
Success Return	***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	Params in Response: ***head***=table.VideoWidget[***Channel***].ChannelTitle (or) table.VideoWidget[***Channel***].Covers[***CoReg***] (or) table.VideoWidget[***Channel***].TimeTitle ***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

- Set video widget config

Table 4-30

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Video Widget config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoWidget[*1*].Covers[*0*].BackColor[0]=128&VideoWidget[*1*].Covers[*0*].BackColor[1]=128&VideoWidget[*1*].Covers[*0*].BackColor[2]=128&VideoWidget[*1*].Covers[*0*].BackColor[3]=0
Success Return	OK
Comment	Params in URL: In below table, ***headChannelTitle*** = VideoWidget[***Channel***].ChannelTitle ***headCover*** = VideoWidget[***Channel***].Covers[***CoReg***] ***headTimeTitle*** = VideoWidget[***Channel***].TimeTitle

	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

Appendix:

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] *headChannelTitle*.FrontColor[3]	integer	
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.

4.5.13 Get video input capability

Table 4-31

Syntax	http://<*server*>/cgi-bin/devVideoInput.cgi?action=getCaps&channel=<***ChannelNo***>
Method	GET
Description	Get video input capabilities.
Example	http://192.168.1.108/cgi-bin/devVideoInput.cgi?action=getCaps&channel=1
Success Return	caps. AutoSyncPhase=false caps. Backlight=2 caps. BrightnessCompensation=true caps. ChipID=0
	caps. CoverCount=4 caps. CoverType=1 caps. CustomManualExposure=true caps. DayNightColor=true caps. DayNightColorIO=0 caps. DoubleExposure=0 caps. DownScaling=false caps. EEModeRange=100 caps. ElectricFocus=false caps. Exposure=16 caps. ExposureMode=31 caps. ExternalSyncInput=0 caps. FishEye=false caps. FlashAdjust=false caps. Flip=true caps. FormatCount=5 caps. Gain=true caps. GainAuto=true caps. Gamma=true caps. GammaModeRange=100 caps. GlareInhibition=1 caps. HorizontalBinning=0 caps. IRCUT=true caps. ImageEnhancement.LevelRange[0]=0 caps. ImageEnhancement.LevelRange[1]=100 caps. ImageEnhancement.Support=true caps. InfraRed=true caps. Iris=true
	caps. IrisAuto=true caps. LadenBitrate=972000 caps. LimitedAutoExposure=true caps. MaxExposureTime=300 caps. MaxExposureTime1=0 caps. MaxHeight=1080 caps. MaxMultiProfile=3

	caps. MaxWidth=1920 caps. MeteringRegionCount=0 caps. MinExposureTime=1 caps. MinExposureTime1=0 caps. Mirror=true caps. MultiOptions=false caps. NightOptions=true caps. ReferenceLevel=false caps. Rotate90=true caps. SetColor=true caps. SignalFormats=Inside caps. SignalType[0]=VGA caps. SnapshotExposure=false caps. SupportProfile=false caps. SupportWhiteLevel=true caps. SupportWriteLevel=false caps. SyncChipChannels=false caps. SyncFocus=0 caps. TitleCount=4 caps. TridimDenoise=2 caps. TridimDenoiseDetails=0
	caps. UTC=0 caps. UpScaling=false caps. Version=0 caps. VerticalBinning=0 caps. VideoInDenoise.2D.LevelRange[0]=0 caps. VideoInDenoise.2D.LevelRange[1]=100 caps. VideoInDenoise.2D.Support=true caps. VideoInDenoise.3D.3DAutoType.ModRange[0]=0 caps. VideoInDenoise.3D.3DAutoType.ModRange[1]=100 caps. VideoInDenoise.3D.Support=true caps. VideoInDenoise.Support=true caps. WhiteBalance=3 caps. WideDynamicRange=1
Comment	Params in URL: ***ChannelNo***: video channel index Params in Response: see below table

Appendix:

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 counts.
CoverType	integer	0: do not 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 – do not 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 … 2^n – support n+2 pixel binning
VerticalBinning	integer	

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 bitrates, 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 is 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 – do not 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

4.5.14 Adjust focus

Table 4-32

Syntax	http://<*server*>/cgi-bin/devVideoInput.cgi?action=adjustFocus&focus=<***zoomNo***>[&channel=<***ChannelNo***>]
Method	GET
Description	Adjust magnification and the focus.
Example	http://192.168.1.108/cgi-bin/devVideoInput.cgi?action=adjustFocus&focus=0.5&zoom=-0.5
Success Return	OK

Comment	Params in URL: ***focusNo*** : float, the range is between 0 and 1; -1 means reset to position 0. ***zoomNo*** : float, the range is between 0 and 1; -1 means reset to position 0. ***ChannelNo****:* integer, the video channel index which starts from 1.

4.5.15 Adjust focus continuously

Table 4-33

Syntax	http://<*server*>/cgi-bin/devVideoInput.cgi?action=adjustFocusContinuously&focus=<***focusNo***>&zoom=<***zoomNo***>[&channel=<***ChannelNo***>]
Method	GET
Description	Adjust magnification and the focus continuously.
Example	If we want to adjust focus, the API like this: http://192.168.1.108/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://192.168.1.108/cgi-bin/devVideoInput.cgi?action=adjustFocusContinuously&focus=0&zoom=-1
Success Return	OK
Comment	Params in URL: ***focusNo***: float, the range is -1 < focus < 1; 0 means stop.
	zoomNo: float, the range is -1 < zoom< 1; 0 means stop. ***ChannelNo***: integer, the video channel index which starts from 1. 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 the motor is moving, you can send this command again with "*focus*" or "*zoom*" parameter as 0 to stop it 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.

4.5.16 Auto focus

Table 4-34

Syntax	http://<*server*>/cgi-bin/devVideoInput.cgi?action=autoFocus[&channel=<*ChannelNo*>]
Method	GET
Description	Auto focus.
Example	http://192.168.1.108/cgi-bin/devVideoInput.cgi?action=autoFocus
Success Return	OK
Comment	-

4.5.17 Get focus status

Table 4-35

Syntax	http://<*server*>/cgi-bin/devVideoInput.cgi?action=getFocusStatus[&channel=<*ChannelNo*>]
Method	GET
Description	Get device focus status.
Example	http://192.168.1.108/cgi-bin/devVideoInput.cgi?action=getFocusStatus
Success Return	status.Focus=0.5 status.Zoom=0.5 status.**Status**=Normal
Comment	Params in Response : The range of status.**Status** is “Normal” and “Autofocus”. This command must be continual executed until status.Status is “Normal”.

4.5.18 Get coordinates of current window

Table 4-36

Syntax	http://<server>/cgi-bin/devVideoInput.cgi?action=getCurrentWindow&channel=<***ChannelNo***>
Method	GET
Description	Get the coordinates of the current window.
Example	http://192.168.1.108/cgi-bin/devVideoInput.cgi?action=getCurrentWindow&channel=1
Success Return	**rect**[0]=500 **rect**[1]=500 **rect**[2]=5000 **rect**[3]=5000
Comment	Params in URL: ***ChannelNo***: integer, the video channel index which starts from 1. Params in Response: **rect**[n] : relative coordinates, range is 0-8192.{0,0,0,0} top-left,

	{8192,0,0,0} top-right, {0,8192,0,0} bottom-left, {8192,8192,0,0} bottom-right

4.5.19 Set coordinates of current window

Table 4-37

Syntax	http://<*server*>/cgi-bin/devVideoInput.cgi?action=setCurrentWindow&channel=<***ChannelNo***>&rect[0]=<***rect0***>&rect[1]=<***rect1***>&rect[2]=<***rect2***>&rect[3]=<***rect3***>
Method	GET
Description	Set the coordinates of the current window.
Example	http://192.168.1.108/cgi-bin/devVideoInput.cgi?action=setCurrentWindow&channel=1&rect[0]=0&rect[1]=0&rect[2]=5000&rect[3]=5000
Success Return	OK
Comment	Params in URL: ***ChannelNo***: integer, the video channel index which starts from 1. ***rect0*** & ***rect1*** & ***rect2*** & ***rect3*** : relative coordinates, range is 0-8192.{0,0,0,0} top-left, {8192,0,0,0} top-right, {0,8192,0,0} bottom-left, {8192,8192,0,0} bottom-right

4.5.20 Video in options

- Get video in options

Table 4-38

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoInOptions
Method	GET
Description	Get Video In Options config, including Backlight, ExposureSpeed, DayNightColor, DayOptions, NightOptions, NormalOptions and so on.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoInOptions
Success Return	*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*. *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	Params in Response: ***head*** = table.VideoInOptions[***ChannelNo***] ***ChannelNo*** = video channel index.

- Set video in options

Table 4-39

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Video In Options config, including Backlight, ExposureSpeed, DayNightColor, DayOptions, NightOptions, and NormalOptions and so on.
Example	Set Auto Exposure:

	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].ExposureMode=0&VideoInOptions[0].ExposureSpeed=0 Set Low Noise: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].ExposureMode=1&VideoInOptions[0].ExposureSpeed=0&VideoInOptions[0].GainMin=0&VideoInOptions[0].GainMax=60 Set Low Motion Blur: http://192.168.1.108/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 Set Manual: http://192.168.1.108/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 Set SmartIRExposure: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].SmartIRExposure =true Set Video Rotate: Filp: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].Flip=true Mirror:
	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].Mirror=true Or turn 90°: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].Rotate90=1 Set White Balance: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].WhiteBalance=Night Or http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].WhiteBalance=Custom&VideoInOptions[0].GainRed=50&VideoInOptions[0].GainBlue=50&VideoInOptions[0].GainGreen=50 (Sometimes you should set mode first before set GainRed or GainBlue: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInOptions[0].WhiteBalance=Custom)

Success Return	OK
Comment	Params in URL: In below table, ***head*** =VideoInOptions[***ChannelNo***] ***ChannelNo*** = video channel index.

Appendix:

ParamName	ParamValue type	Description
head. Backlight	integer	Range is [0-n] n depends on capability in 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 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. 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 is threshold of brightness value: if brightness is less than this value, flash light will 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	White balance Mode.

		Range is {Disable, Auto, Custom, Sunny, Cloudy, Home, Office, Night} Some IPC supports common modes: “Disable”, “Auto”, “Sunny”, “Night”, "Outdoor",” Custom” Sometimes the device support other advanced modes: "CustomColorTemperature”, “Indoor", "ATW", "Manual", "AutoOutdoor", “ManualDatum” and so on.
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.
head. NightOptions.SunsetMinute	integer	NightOptions are used if time is after sunset time and before sunrise time.
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*. Exposure Speed.
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	NormalOptions 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	

4.5.21 Video out

- Get video out config Table 4-40

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoOut
Method	GET
Description	Get Video Out config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoOut
Success Return	***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	Params in Response: ***head*** = table.VideoOut***[channel]***. ***channel***: video channel index

- Set video out config
  Table 4-41

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Video Out config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&table.VideoOut[1].Color.Brightness=50
Success Return	OK
Comment	Params in URL: In below table, ***head*** = table.VideoOut[***channel***]. ***channel***: video channel index

Appendix:

ParamName	ParamValue type	Description
head. Margin[0] head. Margin[1]	integer	Margin

head. Margin[2] head. Margin[3]		
head. Color.Brightness	integer	Brightness
head. Color.Contrast =50	integer	Contrast
head.Color.Satuation =50	integer	Saturation
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.

4.6 System

4.6.1 General

- Get general config Table 4-42

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=General
Method	GET
Description	Get General config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=General
Success Return	table.General.MachineName=Test001 table.General. LocalNo=8
	table.General. MachineAddress="binjiangqv jiangnandadao weiyelu" table.General. MachineGroup="jiaojing yidui
Comment	-

- Set general config

Table 4-43

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set General config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&General.MachineName=MyIPC

Success Return	OK
Comment	-

Appendix:

ParamName	ParamValue type	Description
General.MachineName	string	Device name or serial number.
General. LocalNo	integer	Local number for remote controller
General. MachineAddress	string	Address machine places in
General. MachineGroup	string	Group machine belongs to

4.6.2 Get current time

Table 4-44

Syntax	http://<*server*>/cgi-bin/global.cgi?action=getCurrentTime
Method	GET
Description	Get current time.
Example	http://192.168.1.108/cgi-bin/global.cgi?action=getCurrentTime
Success Return	result = 2011-7-3 21:02:32
Comment	The time format is "Y-M-D H-m-S". It's not be affected by Locales. TimeFormat in SetLocalesConfig.

4.6.3 Set current time

Table 4-45

Syntax	http://<*server*>/cgi-bin/global.cgi?action=setCurrentTime&time=2011-7-3%2021:02:32
Method	GET
Description	Set current time.
Example	http://192.168.1.108/cgi-bin/global.cgi?action=setCurrentTime&time=2016-01-01%2021:02:32
Success Return	OK
Comment	The time format is "Y-M-D H-m-S". It's not be affected by Locales. TimeFormat in SetLocalesConfig.

4.6.4 Locales

- Get locales config

Table 4-46

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Locales
Method	GET
Description	Get Locales config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Locales
Success Return	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
Comment	-

- Set locales config

Table 4-47

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Locales config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Locales.DSTEnable=false
Success Return	OK
Comment	-

Appendix:

ParamName	ParamValue type	Description
Locales.DSTEnable	bool	Enable/Disable DST (daylight saving time)
Locales.DSTEnd.Day	integer	Range is [0-6] or [1-31])- 6]: week day, 0 = Sunday, 6 = Saturday .- 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}.) = 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 define the
Locales.DSTStart.Hour		time range of DST.
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

4.6.5 Get language capability

Table 4-48

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getLanguageCaps
Method	GET
Description	Get the list of supported languages.

Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getLanguageCaps
Success Return	Languages=SimpChinese,English,French
Comment	response is a string contains languages with comma separated. Languages include {English, SimpChinese, TradChinese, Italian, Spanish, Japanese, Russian, French, German}

4.6.6 Language

- Get language config

Table 4-49

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Language
Method	GET
Description	Get system language config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Language
Success Return	table.Language=SimpChinese
Comment	-

- Set language config

Table 4-50

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set system language config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Language=SimpChinese
Success Return	OK
Comment	NOTE: After changing language setting, system will automatically reboot!

Appendix:

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

4.6.7 Client access filter

- Get access filter config

Table 4-51

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=AccessFilter
Method	GET
Description	Get Access Filter config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=AccessFilter
Success Return	table.AccessFilter.BannedList[***bannedIndex***]=10.6.10.1 table.AccessFilter. TrustList[***trustIndex***]=1.2.3.4 table.AccessFilter.Enable=false table.AccessFilter.Type=BannedList
Comment	Params in Response: ***bannedIndex*** is the banned IP list index. ***trustIndex*** is the trust IP list index.

- Set access filter config

Table 4-52

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Access Filter config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&AccessFilter.BannedList[0]=192.168.1.1&AccessFilter.Type=BannedList
Success Return	OK
Comment	Params in Response: In below table, ***index*** is the IP list index, it's range is [0-255]

Appendix:

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: Trust list is used, banned list is not used. BannedList: Banned list is used; trust list is not used.

4.6.8 Auto maintain

- Get auto maintain config

Table 4-53

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=AutoMaintain
Method	GET
Description	Get Auto Maintain config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=AutoMaintain
Success Return	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
Comment	-

- Set auto maintain config

Table 4-54

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Auto Maintain config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&AutoMaintain.AutoRebootDay=7
Success Return	OK
Comment	-

Appendix:

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, and AutoOpenMinute
AutoMaintain. AutoShutdownHour		
AutoMaintain. AutoShutdownMinute		
AutoMaintain. AutoStartUpDay	integer	Auto shutdown time. Range is same with AutoOpenDay, AutoOpenHour, and AutoOpenMinute
AutoMaintain. AutoStartUpHour		
AutoMaintain. AutoStartUpMinute		

4.6.9 Holiday management

- Get holiday config

Table 4-55

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Holiday
Method	GET
Description	Get holiday config for record or snap.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Holiday
Success Return	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
Comment	-

- Set holiday config

Table 4-56

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set holiday config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Holiday.MonthMask[*0*]=3
Success Return	OK
Comment	Params in URL: In below table, ***monthIndex*** presents the index of a month. 0 presents January, 1 presents February, 11 presents December.

Appendix:

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.

4.6.10 Get device type

Table 4-57

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getDeviceType
Method	GET
Description	Gets the device type displaying which is not the true type.
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getDeviceType
Success Return	type=DVR
Comment	-

4.6.11 Get hardware version

Table 4-58

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getHardwareVersion
Method	GET
Description	Get the device hardware version.
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getHardwareVersion
Success Return	version=1.00
Comment	-

4.6.12 Get serial number of device

Table 4-59

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getSerialNo
Method	GET
Description	Get the device serial number.
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getSerialNo
Success Return	sn=YZC0GZ05100020
Comment	-

4.6.13 Get machine name

Table 4-60

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getMachineName
Method	GET
Description	Get the device machine name.
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getMachineName
Success Return	name=YZC0GZ05100020
Comment	-

4.6.14 Get system information

Table 4-61

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getSystemInfo
Method	GET
Description	Get the system information.

Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getSystemInfo
Success Return	serialNumber= PA1FQ15900207 deviceType=27 processor= ST7108
Comment	-

4.6.15 Get vendor information

Table 4-62

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getVendor
Method	GET
Description	Get the Vendor information.
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getVendor
Success Return	vendor=TTT
Comment	-

4.6.16 Get software information

Table 4-63

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getSoftwareVersion
Method	GET
Description	Get the software information.
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getSoftwareVersion
Success Return	version=2.212.0000.0.R,build:2013-11-14
Comment	-

4.6.17 Get version of Onvif

Table 4-64

Syntax	http://<*server*>/cgi-bin/IntervideoManager.cgi?action=getVersion&Name=Onvif
Method	GET
Description	Get Onvif version.
Example	http://192.168.1.108/cgi-bin/IntervideoManager.cgi?action=getVersion&Name=Onvif
Success Return	version=2.4.2

Comment	-

4.6.18 Get version of HTTP API

Table 4-65

Syntax	http://<*server*>/cgi-bin/IntervideoManager.cgi?action=getVersion&Name=CGI
Method	GET
Description	Get CGI version.
Example	http://192.168.1.108/cgi-bin/IntervideoManager.cgi?action=getVersion&Name=CGI
Success Return	version=2.0.0
Comment	-

4.6.19 Get device class

Table 4-66

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=getDeviceClass
Method	GET
Description	Get the Device Class.
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=getDeviceClass
Success Return	class=HDVR
Comment	-

4.6.20 Onvif service authorization

- Get config of Onvif service authorization

Table 4-67

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=UserGlobal
Method	GET
Description	Get User Global config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=UserGlobal
Success Return	table.UserGlobal.OnvifLoginCheck=false

Comment	If “OnvifLoginCheck” is false, you can get Onvif service directly; if true, you should enter your ID/username and password.

- Set config of Onvif service authorization

Table 4-68

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&UserGlobal.OnvifLoginCheck=<***flag***>
Method	GET
Description	Enable Onvif login check or not.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&UserGlobal.OnvifLoginCheck=true
Success Return	OK
Comment	Params in URL: ***flag*** *:* range is {true, false}.

4.6.21 Backup of config

Table 4-69

Syntax	http://<*server*>/cgi-bin/Config.backup?action=All
Method	GET
Description	Download all the settings of a device as a file named Config. Backup default.
Example	http://192.168.1.108/cgi-bin/Config.backup?action=All

Success Return	HTTP/1.1 200 OK
	CONTENT-LENGTH: 743087
	CONNECTION: close
	Content-type: application/binarytet-stream; charset=utf-8
	
	{
	"ATM" : {
	"DataSource" : "RS232",
	"DisplayPostion" : "lefttop",
	"EncodeBlend" : true,
	"PreviewBlend" : true,
	"ProtocolAbility" : ["POS"],
	"ProtocolName" : "ATM\/POS",
	"RecordChannels" : [0, 1, 2, 3]
	}

	…… }
Comment	-

4.6.22 Restore the config

Table 4-70

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=restore&names[0]=<***xxx***>&names[1]=<***yyy***>[&…]
Method	GET
Description	Restore config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=restore&names[0]=UPnP
Success Return	OK
Comment	Params in URL: ***xxx*** and ***yyy*** is config name which need to be restore

4.6.23 Restore except the config

Table 4-71

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=restoreExcept&names[0]=<***xxx***>&names[1]=<***yyy***>[&…]
Method	GET
Description	Restore all config except several.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=restoreExcept&names[0]=UPnP
Success Return	OK
Comment	Params in URL: All the config file but ***xxx*** and ***yyy*** will be restored.

4.6.24 Reboot

Table 4-72

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=reboot[&delay=<*paramValue*>]

Method	GET
Description	Reboot the device
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=reboot
Success Return	OK
Comment	If successful, response OK. If fail, response Error.

4.6.25 Shutdown

Table 4-73

Syntax	http://<*server*>/cgi-bin/magicBox.cgi?action=shutdown
Method	GET
Description	Shutdown the device.
Example	http://192.168.1.108/cgi-bin/magicBox.cgi?action=shutdown
Success Return	OK
Comment	If successful, response OK. If fail, response Error.

4.7 Network

4.7.1 Get network interfaces

Table 4-74

Syntax	http://<*server*>/cgi-bin/netApp.cgi?action=getInterfaces
Method	GET
Description	Get all of the system network interfaces.
Example	http://192.168.1.108/cgi-bin/netApp.cgi?action=getInterfaces
Success Return	netInterface[0].**Name**=eth0 netInterface[0].**Type**=Normal netInterface[0].**Valid**=true …
Comment	result item value:
	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.

4.7.2 Network basic config

- Get network config

Table 4-75

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Network
Method	GET
Description	Get network basic config. Basic config contains basic network parameters (Default interface, domain name, host name), and configuration of each network interface.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Network
Success Return	table.Network.DefaultInterface=eth0 table.Network.Domain=ttt 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
Comment	***interface*** in response is network interface name, such as eth0, eth2…

- Set network config

Table 4-76

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set network basic config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&NetWork.Domain=ttt&NetWork.et h0.DhcpEnable=true
Success Return	OK
Comment	***interface*** in below ParamName is network interface name, such as eth0, eth2…

Appendix:

ParamName	ParamValue type	Description
Network. DefaultInterface	string	Set default network interface when multiple interfaces exist. Range of interfaces is depending on 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

4.7.3 PPPoE

- Get PPPoE config

Table 4-77

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=PPPoE
Method	GET
Description	Get PPPoE config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=PPPoE
Success Return	table.PPPoE.Enable=false

	table.PPPoE.Password=123456 table.PPPoE.UserName=123456
Comment	-

- Set PPPoE config

Table 4-78

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set PPPoE config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&PPPoE.UserName=user1&PPPoE.P assword=123456
Success Return	OK
Comment	-

Appendix:

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

4.7.4 DDNS

- Get DDNS config

Table 4-79

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=DDNS
Method	GET
Description	Get DDNS config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=DDNS

Success Return	table.DDNS[***index***].Address=www.ttt.com table.DDNS[***index***].Enable=true table.DDNS[***index***].HostName=www.ttt.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
Comment	***index*** in response is the DDNS protocol table index, start from 0. the meaning of params can refer to *SetDDNSConfig chapter*.

- Set DDNS config

Table 4-80

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set DDNS config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&DDNS[*0*].Address=www.ttt.com&DDNS[*0*].Enable=true
Success Return	OK
Comment	***index*** in below ParamName is the DDNS protocol table index, start from 0.

Appendix:

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	Hostname 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 DDNS server
DDNS[***index***].Protocol	string	DDNS protocol type. Range is {"NO-IP DDNS", "Dyndns DDNS", "Private DDNS", "DHDDNS", "QUICK DDNS"}.
DDNS[***index***].UserName	string	DDNS username

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 default hostname. It cannot be modified.

4.7.5 Email

- Get email config

Table 4-81

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Email
Method	GET
Description	Get Email config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Email
Success Return	table.Email.Address=www.ttt.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@tttt.com table.Email.Receivers[1]=y@ttt.com table.Email.Receivers[2]=z@ttt.com table.Email.SendAddress=x@ttt.com table.Email.SslEnable=false table.Email.Title=DVRMessage table.Email.UserName=anonymity
Comment	-

- Set email config Table 4-82

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Email config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Email.Address=mail.ttt.com&Email
	.Anonymous=false
Success Return	OK
Comment	-

Appendix:

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	Username of email account.

4.7.6 WLan

- Get WLan config

Table 4-83

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=WLan
Method	GET
Description	Get Wlan config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=WLan
Success Return	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=ttt
Comment	-

- Set WLan config

Table 4-84

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set WLan config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&WLan.eth2.Enable=true&WLan.eth2.KeyType=Hex
Success Return	OK
Comment	In below ParamName, ***interface*** is name of wireless interface.

Appendix:

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, and 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	

4.7.7 Scan Wlan devices

Table 4-85

Syntax	http://<*server*>/cgi-bin/wlan.cgi?action=scanWlanDevices&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Search Wi-Fi device information
Example	http://192.168.1.108/cgi-bin/wlan.cgi?action=scanWlanDevices&SSID=xia_yuguo 13098 Internet
Success Return	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
Comment	-

Appendix:

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

4.7.8 UPnP

- Get UPnP config

Table 4-86

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=UPnP
Method	GET
Description	Get UPnP config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=UPnP
Success Return	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
Comment	***index*** in response is the UPNP map table index, start from 0.

- Set UPnP config

Table 4-87

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set UPnP config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&UPnP.Enable=true&UPnP.MapTabl
	e[*0*].Protocol=TCP
Success Return	OK
Comment	***index*** in below ParamName is UPNP map table index, range is [0-255]

Appendix:

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.

4.7.9 Get UPnP status

Table 4-88

Syntax	http://<*server*>/cgi-bin/netApp.cgi?action=getUPnPStatus
Method	GET
Description	Get UPnP Status.
Example	http://192.168.1.108/cgi-bin/netApp.cgi?action=getUPnPStatus
Success Return	status.InnerAddress=0.0.0.0 status.OuterAddress=0.0.0.0 status.PortMapStatus[0]=Failed status.PortMapStatus[1]=Failed
	status.PortMapStatus[2]=Failed status.PortMapStatus[3]=Failed status.Status=Unknown status.Working=false
Comment	-

4.7.10 NTP

- Get NTP config

Table 4-89

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=NTP
Method	GET
Description	Get NTP config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=NTP
Success Return	table.NTP.Address=clock.isc.org table.NTP.Enable=false table.NTP.Port=38 table.NTP.TimeZone=9 table.NTP.UpdatePeriod=31
Comment	-

- Set NTP config

Table 4-90

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set NTP config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&NTP.Address=time.ttt.com&NTP.E
	nable=true
Success Return	OK
Comment	-

4.7.11 RTSP

- Get RTSP config

Table 4-91

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=RTSP
Method	GET
Description	Get RTSP config.

Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=RTSP
Success Return	table.RTSP.Enable=true table.RTSP.Port=554 table.RTSP.RTP.EndPort=40000 table.RTSP.RTP.StartPort=20000
Comment	-

- Set RTSP config

Table 4-92

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set RTSP config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&RTSP.Enable=true&RTSP.Port=554
Success Return	OK
Comment	-

Appendix:

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.

4.7.12 Alarm server

- Get alarm server config

Table 4-93

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=AlarmServer
Method	GET
Description	Get AlarmServer config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=AlarmServer

Success Return	table.AlarmServer.Address=10.7.8.9 table.AlarmServer.Enable=false table.AlarmServer.Password= table.AlarmServer.Port=8888 table.AlarmServer.Protocol=ttt table.AlarmServer.ReportTime=02:00:00 table.AlarmServer.ReportWeekDay=2 table.AlarmServer.UserName=admin
Comment	-

- Set alarm server config

Table 4-94

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Alarm Server config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&AlarmServer.Address=as.ttt.com& AlarmServer.Enable=false
Success Return	OK
Comment	-

Appendix:

ParamName	ParamValue type	Description
AlarmServer. Address	string	Alarm server IP address or name.
AlarmServer. Enable	bool	Enable/Disable Alarm server.
AlarmServer. Port	integer	Range is [1-65535]. Port of Alarm server.

4.8 Motion Detection

4.8.1 Motion Detection Settings

- Get motion detect config

Table 4-95

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=MotionDetect

Method	GET
Description	Motion Detect config of a video channel contains Enable, MotionDetectWindow and EventHandler.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=MotionDetect
Success Return	table.MotionDetect[0].Enable=false
	table.MotionDetect[0].EventHandler.AlarmOut=1 table.MotionDetect[0].EventHandler.AlarmOutChannels[0]=0 table.MotionDetect[0].EventHandler.AlarmOutEnable=true table.MotionDetect[0].EventHandler.AlarmOutLatch=10 table.MotionDetect[0].EventHandler.BeepEnable=false table.MotionDetect[0].EventHandler.Dejitter=5 table.MotionDetect[0].EventHandler.Delay=0 table.MotionDetect[0].EventHandler.ExAlarmOut=1 table.MotionDetect[0].EventHandler.ExAlarmOutChannels[0]=0 table.MotionDetect[0].EventHandler.ExAlarmOutEnable=false table.MotionDetect[0].EventHandler.FlashEnable=false table.MotionDetect[0].EventHandler.FlashLatch=10 table.MotionDetect[0].EventHandler.LogEnable=true table.MotionDetect[0].EventHandler.MailEnable=false table.MotionDetect[0].EventHandler.Matrix=1 table.MotionDetect[0].EventHandler.MatrixChannels[0]=0 table.MotionDetect[0].EventHandler.MatrixEnable=false table.MotionDetect[0].EventHandler.MessageEnable=false table.MotionDetect[0].EventHandler.PtzLink[0][0]=None table.MotionDetect[0].EventHandler.PtzLink[0][1]=1 table.MotionDetect[0].EventHandler.PtzLinkEnable=false table.MotionDetect[0].EventHandler.Record=1 table.MotionDetect[0].EventHandler.RecordChannels[0]=0 table.MotionDetect[0].EventHandler.RecordEnable=true table.MotionDetect[0].EventHandler.RecordLatch=10 table.MotionDetect[0].EventHandler.Snapshot=1 table.MotionDetect[0].EventHandler.SnapshotChannels[0]=0 table.MotionDetect[0].EventHandler.SnapshotEnable=false table.MotionDetect[0].EventHandler.TimeSection[0][0]=1 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[0][1]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[0][2]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[0][3]=0 00:00:00-23:59:59

	table.MotionDetect[0].EventHandler.TimeSection[0][4]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[0][5]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[1][0]=1 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[1][1]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[1][2]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[1][3]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[1][4]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[1][5]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[2][0]=1 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[2][1]=0 00:00:00-23:59:59
	table.MotionDetect[0].EventHandler.TimeSection[2][2]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[2][3]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[2][4]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[2][5]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[3][0]=1 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[3][1]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[3][2]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[3][3]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[3][4]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[3][5]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[4][0]=1 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[4][1]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[4][2]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[4][3]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[4][4]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[4][5]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[5][0]=1 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[5][1]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[5][2]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[5][3]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[5][4]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[5][5]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[6][0]=1 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[6][1]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[6][2]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[6][3]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[6][4]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TimeSection[6][5]=0 00:00:00-23:59:59 table.MotionDetect[0].EventHandler.TipEnable=false table.MotionDetect[0].EventHandler.Tour=1

table.MotionDetect[0].EventHandler.TourChannels[0]=0
table.MotionDetect[0].EventHandler.TourEnable=false
table.MotionDetect[0].EventHandler.Voice.AudioFileName=
table.MotionDetect[0].EventHandler.VoiceEnable=false
table.MotionDetect[0].MotionDetectWindow[0].Id=0
table.MotionDetect[0].MotionDetectWindow[0].Name=Region1
table.MotionDetect[0].MotionDetectWindow[0].Region[0]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[1]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[2]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[3]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[4]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[5]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[6]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[7]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[8]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[9]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[10]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[11]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[12]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[13]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[14]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[15]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[16]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Region[17]=4194303
table.MotionDetect[0].MotionDetectWindow[0].Sensitive=60
table.MotionDetect[0].MotionDetectWindow[0].Threshold=5
table.MotionDetect[0].MotionDetectWindow[0].Window[0]=0
table.MotionDetect[0].MotionDetectWindow[0].Window[1]=0
table.MotionDetect[0].MotionDetectWindow[0].Window[2]=8191
table.MotionDetect[0].MotionDetectWindow[0].Window[3]=8191
table.MotionDetect[0].MotionDetectWindow[1].Id=1
table.MotionDetect[0].MotionDetectWindow[1].Name=Region2
table.MotionDetect[0].MotionDetectWindow[1].Region[0]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[1]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[2]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[3]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[4]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[5]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[6]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[7]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[8]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[9]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[10]=0

table.MotionDetect[0].MotionDetectWindow[1].Region[11]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[12]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[13]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[14]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[15]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[16]=0
table.MotionDetect[0].MotionDetectWindow[1].Region[17]=0
table.MotionDetect[0].MotionDetectWindow[1].Sensitive=60
table.MotionDetect[0].MotionDetectWindow[1].Threshold=5
table.MotionDetect[0].MotionDetectWindow[1].Window[0]=0
table.MotionDetect[0].MotionDetectWindow[1].Window[1]=0

table.MotionDetect[0].MotionDetectWindow[1].Window[2]=0
table.MotionDetect[0].MotionDetectWindow[1].Window[3]=0
table.MotionDetect[0].MotionDetectWindow[2].Id=2
table.MotionDetect[0].MotionDetectWindow[2].Name=Region3
table.MotionDetect[0].MotionDetectWindow[2].Region[0]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[1]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[2]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[3]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[4]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[5]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[6]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[7]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[8]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[9]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[10]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[11]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[12]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[13]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[14]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[15]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[16]=0
table.MotionDetect[0].MotionDetectWindow[2].Region[17]=0
table.MotionDetect[0].MotionDetectWindow[2].Sensitive=60
table.MotionDetect[0].MotionDetectWindow[2].Threshold=5
table.MotionDetect[0].MotionDetectWindow[2].Window[0]=0
table.MotionDetect[0].MotionDetectWindow[2].Window[1]=0
table.MotionDetect[0].MotionDetectWindow[2].Window[2]=0
table.MotionDetect[0].MotionDetectWindow[2].Window[3]=0
table.MotionDetect[0].MotionDetectWindow[3].Id=3
table.MotionDetect[0].MotionDetectWindow[3].Name=Region4
table.MotionDetect[0].MotionDetectWindow[3].Region[0]=0
table.MotionDetect[0].MotionDetectWindow[3].Region[1]=0

	table.MotionDetect[0].MotionDetectWindow[3].Region[2]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[3]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[4]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[5]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[6]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[7]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[8]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[9]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[10]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[11]=0
	table.MotionDetect[0].MotionDetectWindow[3].Region[12]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[13]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[14]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[15]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[16]=0 table.MotionDetect[0].MotionDetectWindow[3].Region[17]=0 table.MotionDetect[0].MotionDetectWindow[3].Sensitive=60 table.MotionDetect[0].MotionDetectWindow[3].Threshold=5 table.MotionDetect[0].MotionDetectWindow[3].Window[0]=0 table.MotionDetect[0].MotionDetectWindow[3].Window[1]=0 table.MotionDetect[0].MotionDetectWindow[3].Window[2]=0 table.MotionDetect[0].MotionDetectWindow[3].Window[3]=0 table.MotionDetect[0].OsdTwinkleEnable=false table.MotionDetect[0].PirMotionLevel=3
Comment	-

- Set motion detect config

Table 4-96

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Motion Detect config.
Example	Enable motion detection: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&MotionDetect[0].Enable=true Set motion detection regions: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&MotionDetect[0].MotionDetectWindow[0].Region[0]=1&MotionDetect[0].MotionDetectWindow[0].Region[1]=1&MotionDetect[0].Moti

	onDetectWindow[0].Region[2]=1&MotionDetect[0].MotionDetectWindow[0].Region[3]=1&MotionDetect[0].MotionDetectWindow[0].Region[4]=1&**MotionDetect[*Channel*].DetectVersion=V3.0**
Success Return	OK
Comment	In below table, ***head*** = MotionDetect[***Channel***] ***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 per line. Notice: When setting "MotionDetect [***Channel***].MotionDetectWindow [***WinNum***].Region", you need to contain the parameter "MotionDetect [***Channel***].DetectVersion=V3.0" along.

Appendix:

ParamName	ParamValue type	Description
head. Enable	bool	Enable/Disable motion detect feature in a channel.
head. EventHandler		Setting of EventHandler is described in SetEventHandler
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]. Sensitivity of motion detection. 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[***LineNum***	integer	It is similar with head.Region [LineNum].

		Currently, a region is divided into 18 lines and 22 blocks per line. A bit describes a block in the line. Bit = 1: motion in this block is monitored. Example: MotionDetect [0].Region [0] = 4194303 (0x3FFFFF): the 22 blocks in channel 0 line 0 is monitored. MotionDetect [0].Region [1] =0: the 22 blocks in channel 0 line 1 is not monitored. MotionDetect [0].Region [17] = 3: the left two blocks in the last line c channel 0 is monitored.

4.9 Event

4.9.1 Event handler

- Get event handler config

Table 4-97

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=<***handlerName***>
Method	GET
Description	Get EventHandler settings.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Alarm[0].EventHandler
Success Return	***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 …
Comment	Params in URL: ***handlerName*** can be one of below four formats: **Alarm**[*Channel*].EventHandler **MotionDetect** [*Channel]*. EventHandler **BlindDetect** [*Channel*]. EventHandler **LossDetect** [*Channel*]. EventHandler

- Set event handler config

Table 4-98

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Modify Event Handler settings.

Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Alarm[0].EventHandler.AlarmOutChannels[0]=1&Alarm[0].EventHandler.AlarmOutEnable=true
Success Return	OK
Comment	In below paramName, Meaning of ***handlerName*** is the same with GetEventHandler.

Appendix:

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* – 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}) – do not record on video channel *ch* – 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* – snapshot on video channel *ch*
handlerName.EventHandler.SnapshotEnable	bool	Enable/Disable snapshot function.
handlerName.EventHandler.SnapshotPeriod	integer	Range is [0-255]. Frames between snapshots. 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 an effective time period for eventHanlder everyday. ***wd*** (week day) range is [0-6] (Sunday-Saturday) ***ts*** (time section) range is [0-23], it's index of time section 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	Enable/Disable extend alarm out ability
handlerName.ExAlarmOutChannels[channels]	integer	extend alarm out channels

4.9.2 Alarm event

- Get alarm config

Table 4-99

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Alarm
Method	GET

Description	Get Alarm Config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Alarm
Success Return	table.Alarm[0].Enable=false table.Alarm[0].EventHandler….(output of EventHandler is described in GetEventHandler) table.Alarm[0].Name=Door1 table.Alarm[0].SensorType=NC table.Alarm[1]…. …
Comment	-

- Set alarm config Table 4-100

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Alarm Config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Alarm[0].Enable=true
Success Return	OK
Comment	In below ParamName, ***input*** is external alarm input channel. EventHandler defines parameter of relevant actions when alarm or event happens. It is also used in following sections about events.

Appendix:

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

4.9.3 Alarm out

- Get alarm out config

Table 4-101

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=AlarmOut
Method	GET

Description	Get Alarm Out config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=AlarmOut
Success Return	table.AlarmOut[***alarmOutChannel***].Mode=0 table.AlarmOut[***alarmOutChannel***].Name=Beep
Comment	Params in Response: ***alarmOutChannel*** the alarm out channel index.

- Set alarm out config

Table 4-102

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Alarm Out config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&AlarmOut[*0*].Mode=0&AlarmOut[*0*].Name=port1
Success Return	OK
Comment	***port*** in below ParamName is alarm out port index, start form 0.

Appendix:

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.

4.9.4 Get alarm input channels

Table 4-103

Syntax	http://<*server*>/cgi-bin/alarm.cgi?action=getInSlots
Method	GET
Description	Get alarm input channel number.
Example	http://192.168.1.108/cgi-bin/alarm.cgi?action=getInSlots
Success Return	result=2

Comment	-

4.9.5 Get alarm output channels

Table 4-104

Syntax	http://<*server*>/cgi-bin/alarm.cgi?action=getOutSlots
Method	GET
Description	Get alarm output channel number.
Example	http://192.168.1.108/cgi-bin/alarm.cgi?action=getOutSlots
Success Return	result=1
Comment	-

4.9.6 Get states of alarm input channels

Table 4-105

Syntax	http://<*server*>/cgi-bin/alarm.cgi?action=getInState
Method	GET
Description	Get alarm input state for all channels.
Example	http://192.168.1.108/cgi-bin/alarm.cgi?action=getInState
Success Return	result=3
Comment	A bit in the response result indicates a channel alarm states, result 3 means alarm channel 1 and channel 2 have alarm now.

4.9.7 Get states of alarm output channels

Table 4-106

Syntax	http://<*server*>/cgi-bin/alarm.cgi?action=getOutState
Method	GET
Description	Get alarm output state for all channels.
Example	http://192.168.1.108/cgi-bin/alarm.cgi?action=getOutState
Success Return	result=0
Comment	A bit in the response result indicates a channel, result 1 means alarm is present.

4.9.8 Video blind event

- Get video blind detect config

Table 4-107

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=BlindDetect
Method	GET
Description	Get Blind Detect config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=BlindDetect
Success Return	***head***. Enable=false ***head***. EventHandler= (output of EventHandler is described in GetEventHandler) ***head***. Level=3
Comment	Params in Response: ***head***= table.BlindDetect[***Channel***] ***Channel***: video channel number

- Set video blind detect config

Table 4-108

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Blind Detect config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&BlindDetect[*0*].Enable=true
Success Return	OK
Comment	Params in URL: In below table, ***head***= BlindDetect[***Channel***] ***Channel***: video channel number

Appendix:

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

4.9.9 Video loss event

- Get video loss detect config

Table 4-109

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=LossDetect
Method	GET
Description	Get Loss Detect config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=LossDetect
Success Return	***head***. Enable=false ***head***. EventHandler= (output of EventHandler is described in GetEventHandler)
Comment	Params in Response: ***head***=table.LossDetect [***Channel***] ***Channel***: video channel number

- Set video loss detect config

Table 4-110

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***para***
	mName>=<***paramValue***>…]
Method	GET
Description	Set Loss Detect config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&LossDetect[0].Enable=true
Success Return	OK
Comment	Params in URL: In below table, ***head***= LossDetect [***Channel***] ***Channel***: video channel number

Appendix:

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

4.9.10 Login failure event

- Get login failure event config

Table 4-111

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=LoginFailureAlarm
Method	GET
Description	Get Login Failure Alarm config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=LoginFailureAlarm
Success Return	***head***. Enable=false ***head***. EventHandler= (output of EventHandler is described in GetEventHandler)
Comment	Params in Response: ***head***= table.LoginFailureAlarm

- Set login failure alarm config

Table 4-112

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Login Failure Alarm config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&LoginFailureAlarm.Enable=true
Success Return	OK
Comment	Params in URL: In below table, ***head***= LoginFailureAlarm

Appendix:

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

4.9.11 Storage does not exist event

- Get storage does not exist event config

Table 4-113

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=StorageNotExist
Method	GET
Description	Get Storage Not Exist event config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=StorageNotExist
Success Return	StorageNotExist.Enable=false StorageNotExist.EventHandler= (output of EventHandler is described in GetEventHandler)
Comment	-

- Set storage does not exist event config

Table 4-114

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Storage Not Exist event config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&StorageNotExist.Enable=true
Success Return	OK
Comment	-

Appendix:

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

4.9.12 Storage access failure event

- Get storage access failure event config

Table 4-115

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=StorageFailure
Method	GET

Description	Get Storage Failure event config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=StorageFailure
Success Return	StorageFailure.Enable=false
	StorageFailure.EventHandler= (output of EventHandler is described in GetEventHandler)
Comment	-

- Set storage access failure event config

Table 4-116

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Storage Failure event config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&StorageFailure.Enable=true
Success Return	OK
Comment	-

Appendix:

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

4.9.13 Storage low space event

- Get storage low space event config

Table 4-117

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=StorageLowSpace
Method	GET
Description	Get Storage Low Space event config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=StorageLowSpace

Success Return	StorageLowSpace.Enable=false StorageLowSpace.EventHandler= (output of EventHandler is described in GetEventHandler)
Comment	-

- Set storage low space event config

Table 4-118

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Storage Low Space event config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&StorageLowSpace.Enable=true
Success Return	OK
Comment	-

Appendix:

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

4.9.14 Net abort event

- Get net abort event config

Table 4-119

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=NetAbort
Method	GET
Description	Get Net Abort event config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=NetAbort
Success Return	NetAbort.Enable=false NetAbort.EventHandler= (output of EventHandler is described in GetEventHandler)
Comment	-

- Set net abort event config

Table 4-120

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Net Abort event config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&NetAbort.Enable=true
Success Return	OK
Comment	-

Appendix:

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

4.9.15 IP conflict event

- Get IP conflict event config

Table 4-121

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=IPConflict
Method	GET
Description	Get IP Conflict event config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=IPConflict
Success Return	IPConflict.Enable=false IPConflict.EventHandler= (output of EventHandler is described in GetEventHandler)
Comment	-

- Set IP conflict event config

Table 4-122

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set IP Conflict event config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&IPConflict.Enable=true
Success Return	OK
Comment	-

Appendix:

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

4.9.16 Get channels event happened

Table 4-123

Syntax	http://<*server*>/cgi-bin/eventManager.cgi?action=getEventIndexes&code=<***eventCode***>
Method	GET
Description	Get channels indexes that event of code *eventCode* happens. Not all events support this command. Do not recommend to use it, use Attach command instead.
Example	http://192.168.1.108/cgi-bin/eventManager.cgi?action=getEventIndexes&code=AlarmLocal
Success Return	channels[0]=0 channels[1]=2 channels[2]=3 … (This response means event happened on channel 0, channel 2, and channel 3.)
Comment	Params in URL:
	eventCode includes: VideoMotion: motion detection event VideoLoss: video loss detection event VideoBlind: video blind detection event. AlarmLocal: alarm detection event. StorageNotExist: storage not exist event. StorageFailure: storage failure event. StorageLowSpace: storage low space event. AlarmOutput: alarm output event.

4.9.17 Subscribe to event message

Table 4-124

Syntax	http://<*server*>/cgi-bin/eventManager.cgi?action=attach&codes=[<***eventCode***>,<***eventCode***>,…][&*keep alive* = 20]
Method	GET
Description	Subscribe to messages that event of code eventCode happens.
Example	http://192.168.1.108/cgi-bin/eventManager.cgi?action=attach&codes=[AlarmLocal%2CVideoMotion%2CVideoLoss%2CVideoBlind] http://192.168.1.108/cgi-bin/eventManager.cgi?action=attach&codes=[All]
Success Return	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=<*boundary*>\r\n Body: --<*boundary*>\r\n Content-Type: text/plain\r\n
	Content-Length: <*data length*>\r\n <*eventInfo*>\r\n\r\n --<*boundary*>\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= MDResult; action=Pulse; index=0; data=61708863,61708863…\r\n\r\n -- myboundary \r\n
Comment	***eventCode*** can be any one of the standard codes defined in DHIIF, or "**All**". **All** means all kinds of the eventcode. ***eventcode*** include: 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 StorageNotExist: storage does not exist event. StorageFailure: storage failure event. StorageLowSpace: storage low space event. AlarmOutput: alarm output 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
	keepalive*:* if this param exist, the client must send any data to device by this connection in cycle. The keepalive is in range of [1,60] second. For example:

	The keeplive data can be the string “keep alive”.

4.9.18 Get capability of event management

Table 4-125

Syntax	http://<*server*>/cgi-bin/eventManager.cgi?action=getCaps
Method	GET
Description	Get event manager capabilities.
Example	http://192.168.1.108/cgi-bin/eventManager.cgi?action=getCaps
Success Return	caps.AlarmOutEnable=true caps.BeepEnable=true caps.DejitterEnable=true caps.MMSEnable=true caps.MailEnable=true caps.MonitorTourEnable=true caps.PtzLinkEnable=true caps.RecordEnable=true caps.SnapshotEnable=true caps.TimeSectionEnable=true caps.TipEnable=true
Comment	-

4.10 PTZ

4.10.1 PTZ config

- Get PTZ config

Table 4-126

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Ptz
Method	GET
Description	Get Ptz config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Ptz
Success Return	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
Comment	Params in Response: ***port*** is PTZ port index, start form 0.

- Set PTZ config

Table 4-127

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Ptz config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Ptz[0].Address=192.168.0.1&Ptz[*0*].Attribute[0]=9600
Success Return	OK
Comment	***port*** in below ParamName is PTZ port index, start form 0.

Appendix:

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	The baud rate. Range is {1200, 2400 ,4800, 9600, 19200, 38400, 57600, 115200}.
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 GetProtocolList to get the protocol list.

4.10.2 PTZ auto movement

- Get PTZ movement config

Table 4-128

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=PtzAutoMovement
Method	GET
Description	Get Ptz Auto Movement config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=PtzAutoMovement
Success Return	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
Comment	Params in Response: ***port*** 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.

- Set PTZ movement config

Table 4-129

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set PtzAutoMovement config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&PtzAutoMovement[0][0].Fuction=To ur
Success Return	OK

Comment	Params in URL: In below table, ***head***=PtzAutoMovement[***port***][***task***] ***port*** 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.

Appendix:

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 has 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".

4.10.3 Get PTZ protocol list

Table 4-130

Syntax	http://<*server*>/cgi-bin/ptz.cgi?action=getProtocolList[&channel=<*ChannelNo*>]
Method	GET
Description	Get the protocol list that PTZ can support. Unsupported now.
Example	http://192.168.1.108/cgi-bin/ptz.cgi?action=getProtocolList&channel=0
Success Return	info.RS[0]=Pelco info.RS[1]=DH-SD1 info.Coaxial[0]=HD-CVI info.Coaxial[1]=HD-CVI2.0
Comment	Response contains all support PTZ protocols of the *server*.

4.10.4 Get PTZ capability of current protocol

Table 4-131

Syntax	http://<*server*>/cgi-bin/ptz.cgi?action=getCurrentProtocolCaps[&channel=<***ChannelNo***>]

Method	GET
Description	Get Ptz channel protocol capabilities.
Example	http://192.168.1.108/cgi-bin/ptz.cgi?action=getCurrentProtocolCaps&channel=1
Success Return	caps.**AlarmLen**=0 caps.**AuxMax**=8
	caps.**AuxMin**=1 caps.**CamAddrMax**=255 caps.**CamAddrMin**=1 caps.**Flip**=false caps.**Focus**=false caps.Interval=200 caps.**Iris**=false caps.**Menu**=false caps.**MonAddrMax**=255 caps.**MonAddrMin**=0 caps.**Name**=DH-SD1 caps.**Pan**=false caps.**PanSpeedMax**=255 caps.**PanSpeedMin**=1 caps.**PatternMax**=5 caps.**PatternMin**=1 caps.**PresetMax**=80 caps.**PresetMin**=1 caps.**Tile**=false caps.**TileSpeedMax**=255 caps.**TileSpeedMin**=1 caps.**TourMax**=7 caps.**TourMin**=0 caps.**Type**=1 caps.**Zoom**=false
Comment	Params in URL: ***ChannelNo***: PTZ channel index

Appendix:

Field in response	Description
AlarmLen	Alarm length in protocol
AuxMax	Maximum/Minimum number for auxiliary functions
AuxMin	
CamAddrMax	Maximum/Minimum channel address
CamAddrMin	
Flip	True or false, support picture flip or not.
Focus	True or false, support focus or not.
Iris	True or false, support Iris adjusts or not.
Menu	True or false, support internal menu of the PTZ or not,
MonAddrMax	Maximum/Minimum monitor address
MonAddrMin	
Name	Name of the operation protocol
Pan	True or false, support pan or not.
PanSpeedMax	Maximum/Minimum pan speed.
PanSpeedMin	
PatternMax	Maximum/Minimum pattern path number.
PatternMin	
PresetMax	Maximum/Minimum preset point number.
PresetMin	

Tile	True or false, support tilt or not.
Zoom	True or false, support zoom or not.
TileSpeedMax	Maximum/Minimum tile speed.
TileSpeedMin	
TourMax	Maximum/Minimum tour path number.
TourMin	
Type	Type of PTZ protocol.

4.10.5 Get PTZ presets list

Table 4-132

Syntax	http://<*server*>/cgi-bin/ptz.cgi?action=getPresets[&channel=<***ChannelNo***>]
Method	GET
Description	Get Presets of PTZ control.
Example	http://192.168.1.108/cgi-bin/ptz.cgi?action=getPresets&channel=1
Success Return	presets. presets [0] .Index=1 presets. presets [0] .Name = preset1 presets. presets [1] .Index=2 presets. presets [1] .Name=preset2 presets. presets [1] .Index=3 presets. presets [1] .Name=preset3 …
Comment	Params in URL: ***ChannelNo***: integer, the video channel index which starts from 1. The size of presets-array is the number of presets.

4.10.6 Get PTZ tour routines list

Table 4-133

Syntax	http://<*server*>/cgi-bin/ptz.cgi?action=getTours[&channel=<***ChannelNo***>]
Method	GET
Description	Get tour routines of PTZ control.
Example	http://192.168.1.108/cgi-bin/ptz.cgi?action=getTours&channel=1
Success Return	tours. tours [0].Index = 1 tours. tours [0].Name =tour1 tours. tours [1].Index = 2 tours. tours [1].Name = tour2 tours. tours [2].Index = 3 tours. tours [2].Name = tour3 …
Comment	Params in URL: ***ChannelNo*** is PTZ channel index. The size of tours-array is the number of tours.

4.10.7 PTZ control command

Table 4-134

Syntax	http://<*server*>/cgi-bin/ptz.cgi?action=<***action***>&channel=<***ch***>&code=<***code***>&arg1=<***arg1***>&arg2=<***arg2***>&arg3=<***arg3***>
Method	GET
Description	Control Ptz.
Example	http://192.168.1.108/cgi-bin/ptz.cgi?action=start&channel=0&code=Up&arg1=0&arg2=1&arg3=0
Success Return	OK
Comment	Params in URL: ***action*** is PTZ control command, it can be *start* or *stop*. ***ch*** is PTZ channel range is [1 - n], ***code*** is PTZ operation, and ***arg1***, ***arg2***, ***arg3*** is the arguments of
	operation. ***code*** and ***argN*** values are listed in below table.

Appendix:

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	0	0	0
ZoomTele	Zoom in	0	0	0	0
FocusNear	Focus near	0	0	0	0
FocusFar	Focus far	0	0	0	0
IrisLarge	Aperture larger	0	0	0	0

IrisSmall	Aperture smaller	0	0	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
StartTour	Start PTZ tour	Tour path number	0	0	0
StopTour	Stop PTZ tour	Tour path number	0	0	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
Position	Go to position	Horizontal position	Vertical position	Zoom change	0
AuxOn	Auxiliary function on, auxiliary function is defined in product definition document.	auxiliary function number	0	0	0
AuxOff	Auxiliary function off	auxiliary function number	0	0	0
Menu		0	0	0	0
Exit		0	0	0	0
Enter		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
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
Continuously	Move Continuously	Horizontal Speed [-8-8]	Vertical Speed [-8-8]	Zoom Speed [-8-8]	Timeout

4.10.8 Get PTZ status

Table 4-135

Syntax	http://<*server*>/cgi-bin/ptz.cgi?action=getStatus[&channel=<*ChannelNo*>]
Method	GET
Description	Get Ptz status.
Example	http://192.168.1.108/cgi-bin/ptz.cgi?action=getStatus&channel=1
Success Return	status.UTC=6538920 status.MoveStatus=Idle status.ZoomStatus=Idle status.PresetID=10 status.Position=120,12,2
Comment	This URL is used to get PTZStatus.

4.10.9 PTZ Move directly

Table 4-136

Syntax	http://<*server*>/cgi-bin/ptzBase.cgi?action=moveDirectly
Method	GET
Description	Three-dimensional orientation. Move to the rectangle with screen coordinate [*startX*, *startY*], [*endX*, *endY*]
Example	http://192.168.1.108/cgi-bin/ptzBase.cgi?action=moveDirectly&channel=0&startPoint[0]=7253&startPoint[1]=2275&endPoint[0]=7893&endPoint[1]=3034
Success Return	OK
Comment	***ChannelNo***: inte the video channel index which starts from 1. ***startX, startY, endX, endY***: relative coordinates, range is 0-8192. The two points [*startX*, *startY*] and [*endX*, *endY*] makes the destination rectangle.

4.11 Record

4.11.1 Get capability of recording

Table 4-137

Syntax	http://<*server*>/cgi-bin/recordManager.cgi?action=getCaps
Method	GET
Description	Get record Manager capabilities.
Example	http://192.168.1.108/cgi-bin/recordManager.cgi?action=getCaps
Success Return	caps.MaxPreRecordTime=30 caps.PacketLengthRange[0]=1 caps.PacketLengthRange[1]=60 caps.PacketSizeRange[0]=131072
	caps.PacketSizeRange[1]=2097152 caps.SupportExtraRecordMode=true caps.SupportHoliday=true caps.SupportPacketType[0]=Time caps.SupportPacketType[1]=Size caps.SupportResumeTransmit=false

Comment	-

4.11.2 Record config

- Get record config

Table 4-138

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Record
Method	GET
Description	Get Record config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Record
Success Return	table.Record[***channel***].PreRecord=6 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
Comment	Params in Response: ***channel***: video channel number. ***weekday***: range is [0-6] (Sunday - Saturday). Record config contains pre record time and record time sections of every day.

- Set record config

Table 4-139

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Record config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Record[0].TimeSection[0][0]=6 00:00:00-23:59:59 Set record time to every Sunday all day. Record type is motion detection and alarm. In this example, “6 00:00:00-23:59:59” means motion detection and alarm record all day (6 = 4 & 2, alarm is 4, motion detection is 2.).
Success Return	OK

Comment	Params in URL: In below table, ***ch*** = channel index ***wd*** = week day index ***ts*** = time section index

Appendix:

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***].TimeSection[***wd***][***ts***]	string	*wd* (week day) range is [0-6] (Sunday - Saturday) *ts* (time section) range is [0-23], time section 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

4.11.3 Record mode

- Get record mode config

Table 4-140

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=RecordMode
Method	GET
Description	Get Record Mode config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=RecordMode
Success Return	table.RecordMode[***channel***].Mode=0
Comment	Params in Response: ***channel*** is video channel number.

- Set record mode config

Table 4-141

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>
Method	GET
Description	Set Record Mode config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&RecordMode[0].Mode=0
Success Return	OK
Comment	Params in URL: In below table, ***channel*** is video channel index, start form 0.

Appendix:

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

4.11.4 Media global

- Get media global config

Table 4-142

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=MediaGlobal
Method	GET
Description	Get Media Global config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=MediaGlobal
Success Return	table.MediaGlobal.SnapFormatAs=MainFormat
Comment	-

- Set media global config

Table 4-143

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>
Method	GET

Description	Set MediaGlobal config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&MediaGlobal.SnapFormatAs=Main Format
Success Return	OK
Comment	-

Appendix:

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

4.11.5 Find media files

1. Create a media files finder

Table 4-144

Syntax	http://<*server*>/cgi-bin/mediaFileFind.cgi?action=factory.create
Method	GET
Description	Create a media file finder.
Example	http://192.168.1.108/cgi-bin/mediaFileFind.cgi?action=factory.create
Success Return	result= 2086170840
Comment	-

2. Whether or not found media files satisfied the conditions with the finder

Table 4-145

Syntax	http://<*server*>/cgi-bin/mediaFileFind.cgi?action=findFile&object=<***objectId***>&condition.Channel=<***ChannelNo***>&condition.StartTime=<***start***>&condition.EndTime=<***end***>[&condition.Dirs[0]=<***dir***>&condition.Types[0]=<***type***>&condition.Flag[0]=<***flag***>&condition.Events[0]=<***event***>&condition.VideoStream= <***stream***>]
Method	GET
Description	Check if there are files that satisfy all the conditions.

Example	Find file in channel 1, in directory "/mnt/dvr/sda0",event type is "AlarmLocal" or "VideoMotion", file type is "dav", and time between 2014-1-1 12:00:00 and 2015-1-10 12:00:00 , URL is: http://192.168.1.108/cgi-bin/mediaFileFind.cgi?action=findFile&object=2086170840&condition.Channel=1&condition.Dirs[0]=/mnt/dvr/sda0&condition.Types[0]=dav&condition.Events[0]=AlarmLocal&con dition.Events[1]=VideoMotion&condition.StartTime=2014-1-1%2012:00:00&condition.EndTime=2015-1-10%2012:00:00&condition.VideoStream=Main
Success Return	OK
Comment	Start to find file with the above condition. If files exist, return OK, else return Error.
	Params in URL: ***objecteId***: The object Id is the finder created before. You must create a finder before finding files. ***ChannelNo***: in which channel you want to find the file, , start from 1. ***start*** / ***end***: the start/end time when recording. ***dir*** : 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. ***type*** : 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. ***flag*** : 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. ***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. ***stream*** : which video stream type you want to find. The range of *stream* is {"Main", "Extra1", "Extra2", "Extra3"}. If omitted, find files with all the stream types.

3. Get the media file information found by the finder

Table 4-146

Syntax	http://<*server*>/cgi-bin/mediaFileFind.cgi?action=findNextFile&object=<*objectId*>&count=<***fileCount***>
Method	GET
Description	Find the next files no more than ***fileCount***.

Example	http://192.168.1.108/cgi-bin/mediaFileFind.cgi?action=findNextFile&object=08137&count=100
Success Return	**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]. **VideoStream**=Main
	items[0]. **FilePath** =/mnt/dvr/sda0/2010/8/11/dav/15:40:50.jpg items[0]. **Length** =790 items[0]. **Duration** = 3600
Comment	The maximum value of ***fileCount*** is 100.

Appendix:

Field in Response	Description
found	Count of found file, found is 0 if no file is found.
Channel	Channel, equals to API findFile input condition.Channel -1;
StartTime	Start Time
EndTime	End time
Type	File type
Events	Event type.
VideoStream	Video Stream type.
FilePath	File path.
Length	File length
Duration	Duration time

4. Close the finder

Table 4-147

Syntax	http://<*server*>/cgi-bin/mediaFileFind.cgi?action=close&object=<*objectId*>

Method	GET
Description	Stop find.
Example	http://192.168.1.108/cgi-bin/mediaFileFind.cgi?action=close&object=08137
Success Return	OK
Comment	-

5. Destroy the finder

Table 4-148

Syntax	http://<*server*>/cgi-bin/mediaFileFind.cgi?action=destroy&object=<*objectId*>
Method	GET
Description	Destroy the media file finder.
Example	http://192.168.1.108/cgi-bin/mediaFileFind.cgi?action=destroy&object=08137
Success Return	OK
Comment	-

4.11.6 Download media file with the file name

Table 4-149

Syntax	http://<*server*>/cgi-bin/RPC_Loadfile/<***Filename***>
Method	GET
Description	Download a file by filename. To get filename by chapter FileFinding
Example	http://192.168.1.108/cgi-bin/RPC_Loadfile/mnt/sd/2015-01-08/001/dav/19/19.57.12-19.58.25[M][0@0] [0].dav
Success Return	HTTP Code: 200 OK Content-Type: Application/octet-stream Content-Length: <fileLength> Body: <data> <data>
Comment	Params in URL: ***Filename***: name of media files which would be downloaded.

4.11.7 Download media file between times

Table 4-150

Syntax	http://<*server*>/cgi-bin/loadfile.cgi?action=startLoad&channel=<***ChannelNo***>&startTime=<***starttime***> &endTime=<***endtime***>[&subtype=<***typeNo***>]
Method	GET
Description	Download the media data between start time and end time.
Example	http://192.168.1.108/cgi-bin/loadfile.cgi?action=startLoad&channel=1&startTime=2012-10-8%2013:00 :01&endTime=2012-10-8%2014:00:01&subtype=0
Success Return	HTTP Code: 200 OK Content-Type: Application/octet-stream Content-Length:<fileLength> Body: <data> <data>
Comment	Params in URL: ***ChannelNo***: integer, the video channel index which starts from 1. ***typeNo***: the stream type, default 0 if not specified. 0-Main Stream 1-Extra Stream 1 2-Extra Stream 2 ***starttime*** & ***endtime****:* video start time and end time. Time format: yyyy-mm-dd hh:mm:ss

4.12 User management

4.12.1 Get information of a particular user

Table 4-151

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=getUserInfo&name=<*userName*>
Method	GET
Description	Get user information with name *userName*.
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=getUserInfo&name=admin
Success Return	user.Name=admin user.Memo=admin 's account user.Group=admin user.Reserved=true user.Sharable=true user. AuthList=<*authList*>
Comment	-

4.12.2 Get information of all users

Table 4-152

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=getUserInfoAll
Method	GET
Description	Get information of all users.
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=getUserInfoAll
Success Return	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 …
Comment	-

4.12.3 Get information of all active users

Table 4-153

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=getActiveUserInfoAll
Method	GET
Description	Get active users.
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=getActiveUserInfoAll
Success Return	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
Comment	-

4.12.4 Get information of a particular group

Table 4-154

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=getGroupInfo&name=<***groupName***>
Method	GET
Description	Get group setting with name *groupName.*
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=getGroupInfo&name=admin
Success Return	group.Name=admin group.Memo=administrator group group. AuthorityList=<*authList*>
Comment	Params in URL:

	The device has one or two default user groups: “admin” or “admin” and “user”. The “admin” group has all the authorities of operating the device. The “user” group only has monitoring and replaying authorities. ***groupName***: name of the group. If the group named *groupName* does not exist, the device returns Error..

4.12.5 Get information of all groups

Table 4-155

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=getGroupInfoAll
Method	GET
Description	Get information of all groups.
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=getGroupInfoAll
Success Return	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]….
Comment	-

4.12.6 Add a new user

Table 4-156

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=addUser&user.Name=<***userName***>&user.Password=<***userPassword***>&user.Group=<***userGroup***>&user.Sharable=<***userSharable***>[&user.Memo=<***userMemo***>&user.Reserved=<***userReserved***>]
Method	GET
Description	Add a user.
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=addUser&user.Name=George&user.Password=123456&user.Group=user&user.Sharable=true&user.Reserved=false
Success Return	OK
Comment	Params in URL: ***userGroup***: string, the range is “admin” and “user”. In different group, the user has different authorities.
	userSharable: bool, true means allow multi-point login. ***userReserved***: bool, true means this user cannot be deleted.

4.12.7 Delete a user

Table 4-157

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=deleteUser&name=<*userName*>
Method	GET

Description	Delete user with name *username*.
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=deleteUser&name=George
Success Return	OK
Comment	-

4.12.8 Modify user information

Table 4-158

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=modifyUser&name=<*UserName*>&user.Memo=<*user Memo*>&user.Group=<*userGroup*>&user.Reserved=<*userReserved*>&user.Sharable=<*userSharable*>
Method	GET
Description	Modify user info.
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=modifyUser&name=George&user.Group=admin
Success Return	OK
Comment	User is identified by <UserName>, other params are the same with AddUser.

4.12.9 Modify user's password

Table 4-159

Syntax	http://<*server*>/cgi-bin/userManager.cgi?action=modifyPassword&name=<username>&pwd=<***newPwd***>&pwdOld=<***oldPwd***>
Method	GET
Description	Modify user password.
Example	http://192.168.1.108/cgi-bin/userManager.cgi?action=modifyPassword&name=George&pwd=abcdef&pwdOld=123456
Success Return	OK
Comment	Old password ***oldPwd*** should be supplied, new password is ***newPwd***.

4.13 Log

4.13.1 Find logs

1. Whether or not found logs satisfied the conditions

Table 4-160

Syntax	http://<*server*>/cgi-bin/log.cgi?action=startFind&condition.StartTime=<***start***>&condition.EndTime=<***e nd***>[&condition.Type=<***type***>]
Method	GET
Description	Start to find log.
Example	Find log between 2011-1-1 12:00:00 and 2011-1-10 12:00:00, URL is: http://192.168.1.108/cgi-bin/log.cgi?action=startFind&condition.StartTime=2011-1-1%2012:00:00&co ndition.EndTime=2011-1-10%2012:00:00
Success Return	token=1
Comment	Params in URL: ***start/end***: the start/end time of log. Format is: yyyy-mm-dd hh:mm:ss. In response, there is a token for further log finding process. If token is greater than 0, logs are found; otherwise no logs are found. ***Type***: log type. The range is { "System", "Config", "Event", "Storage", "Account", "Data", "File", "CourseRecord" }.

2. Get the number of logs

Table 4-161

Syntax	http://<*server*>/cgi-bin/log.cgi?action=doFind&token=<***TokenValue***>&count=<***logCount***>
Method	GET
Description	Find log with token ***TokenValue*** and count ***logCount***.
Example	http://192.168.1.108/cgi-bin/log.cgi?action=doFind&token=1&count=100
Success Return	**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 …
Comment	Params in URL: The ***TokenValue*** is got by startFind in above section, ***logCount*** is the count of logs for this query. The maximum value of *logCount* is 100.

Appendix:

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.

3. Stop query logs

Table 4-162

Syntax	http://<*server*>/cgi-bin/log.cgi?action=stopFind&token=<***TokenValue***>
Method	GET
Description	Stop query log by token ***TokenValue***.
Example	http://192.168.1.108/cgi-bin/log.cgi?action=stopFind&token=1
Success Return	OK
Comment	Params in URL: The ***TokenValue*** is got by startFind in above section

4.13.2 Clear all the logs

Table 4-163

Syntax	http://<*server*>/cgi-bin/log.cgi?action=clear
Method	GET
Description	Clear all the logs.
Example	http://192.168.1.108/cgi-bin/log.cgi?action=clear
Success Return	OK
Comment	-

4.13.3 Backup logs

Table 4-164

Syntax	http://<*server*>/cgi-bin/Log.backup?action=All&condition.StartTime=<***startTime***>&condition.EndTime=<***endTime***>
Method	GET

Description	Download the log information between the start time and the end time as a file named Log. Backup default.
Example	http://192.168.1.108/cgi-bin/Log.backup?action=All&condition.StartTime=2014-8-25%2000:02:32&co ndition.EndTime=2020-8-25%2001:02:32
Success Return	HTTP/1.1 200 OK CONTENT-LENGTH: 743087 CONNECTION: close Content-type: application/binarytet-stream; charset=utf-8 &w_User: default &Time: 2014-09-01 15:20:45 &Type: VideoLoss &Content: EventType: VideoLoss channel:<8> StartTime: 2014-09-01 15:20:45 …
Comment	Params in URL: ***startTime*/*endTime***: the start/end time when log info built. 24 hour Format, as: yyyy-mm-dd hh:mm:ss. For example: 2014-8-25 00:02:32 2020-8-25 01:02:32

5 SD camera APIs

5.1 Video attributes

5.1.1 Video in focus

- Get video in focus config

Table 5-1

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoInFocus
Method	GET
Description	Get Video Input focus config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoInFocus

Success Return	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
Comment	-

- Set video in focus config

Table 5-2

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Video Input focus config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInFocus[0][0].FocusLimit=1000
Success Return	OK
Comment	Params in URL: paramName and paramValue are as below table. In below table, ***head*** = VideoInFocus [***ChannelNo***] [***ConfigNo***] ***ChannelNo***: array index, equals to video channel index -1, start from 0. ***ConfigNo***: array index, can be 0,1 or 2, which means normal, day and night.

Appendix:

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 correction; 1: Correction; 2: Auto correction
head. FocusLimitSelectMode		Manual or Auto

5.1.2 Video in zoom

- Get video in zoom config

Table 5-3

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoInZoom
Method	GET
Description	Get video input zoom config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoInZoom
Success Return	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
Comment	-

- Set video in zoom config

Table 5-4

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set video input zoom config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInZoom[0][0].DigitalZoom=false&VideoInZoom[0][0].Speed=8
Success Return	OK
Comment	Params in URL:

	head = VideoInZoom [***ChannelNo***] [***ConfigNo***] ***ChannelNo***: integer, array index which equals to video channel index -1, starts from 0. ***ConfigNo***: array index, can be 0,1 or 2, which means normal, day and night.

Appendix:

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

5.1.3 Video in sharpness

- Get video in sharpness

Table 5-5

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoInSharpness
Method	GET
Description	Get Video Input Sharpness settings.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoInSharpness
Success Return	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
Comment	-

- Set video in sharpness

Table 5-6

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET

Description	Set Video Input Sharpness settings.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInSharpness[0][0].Level=10&VideoInSharpness[0][0].Mode=1&VideoInSharpness[0][0].Sharpness=0
Success Return	OK
Comment	Params in URL: paramName and paramValue are as below table. In below table, ***head*** = VideoInSharpness [***ChannelNo***] [***ConfigNo***] ***ChannelNo***: integer, array index which equals to video channel index -1, starts from 0. ***ConfigNo***: array index, can be 0,1 or 2, which means normal, day and night.

Appendix:

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

5.1.4 Video in mode

- Get video in mode config

Table 5-7

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoInMode
Method	GET
Description	Get Video Input Mode settings.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoInMode
Success Return	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
Comment	-

- Set video in mode config

Table 5-8

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Video Input Mode settings.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInMode[0].Mode=0
Success Return	OK
Comment	Params in URL: paramName and paramValue are as below table. In below table, ***head*** = VideoInMode [***ChannelNo***] ***ChannelNo*** : integer, the array index which equals to video channel index -1, starts from 0.

Appendix:

ParamName	ParamValue type	Description
head. Mode	integer	Range is {0,1} 0: No Switch. 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

5.1.5 Video in day night mode shift

- Get video in day night mode shift config

Table 5-9

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoInDayNight
Method	GET
Description	Get video in day night mode shift config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoInDayNight
Success Return	table.**VideoInDayNight[0][0]**.Delay=10 table.VideoInDayNight[0][0].Mode=Brightness table.VideoInDayNight[0][0].Sensitivity=2 table.VideoInDayNight[0][0].Type=Mechanism table.VideoInDayNight[0][1].Delay=10 table.VideoInDayNight[0][1].Mode=Brightness table.VideoInDayNight[0][1].Sensitivity=2 table.VideoInDayNight[0][1].Type=Mechanism table.VideoInDayNight[0][2].Delay=10 table.VideoInDayNight[0][2].Mode=Brightness table.VideoInDayNight[0][2].Sensitivity=2 table.VideoInDayNight[0][2].Type=Mechanism
Comment	VideoInDayNight[***ChannelNo***][***ConfigNo***]: ***ChannelNo*** is video channel index which starts from 0; ***ConfigNo***: array index, can be 0, 1 or 2, which means normal, day and night.

- Set video in day night mode shift config

Table 5-10

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set video in day night mode shift config.

Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoInDayNight[0][0].Mode=Black White
Success Return	OK
Comment	Params in URL: ParamName and paramValue are as below table. In below table, ***head*** = VideoInDayNight[***ChannelNo***][***ConfigNo***]

Appendix:

ParamName	ParamValue type	Description
head. Type	string	The range is {"Electron", "Mechanism"}, the way of ICR switching.
head. Mode	string	The range is {"**Color**", "**Brightness**", "**BlackWhite**", "**Photoresistor**", "**Gain**"}. **Color**: always in color mode. **Brightness**: shift to color or day-and- night mode according to the Brightness. **BlackWhite**: always in black-and-white mode, in contrast to **Color** mode**.** **Photoresistor**: switchingt mode by photoresistor. **Gain**: switching mode according to the gain.
head. Sensitivity	integer	Range is [0-7]. Sensitivity of switching mode
head. Delay	integer	Range is [3-30]. Delay seconds when switching mode.

5.1.6 Lighting

- Get lighting config

Table 5-11

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=Lighting
Method	GET
Description	Get Lighting config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=Lighting

Success Return	table.**Lighting[0][0]**.Correction=50 table.Lighting[0][0].FarLight[0].Angle=0 table.Lighting[0][0].FarLight[0].Light=0 table.Lighting[0][0].Mode=ZoomPrio table.Lighting[0][0].NearLight[0].Angle=0 table.Lighting[0][0].NearLight[0].Light=0 table.Lighting[0][0].Sensitive=3 table.Lighting[0][1].Correction=50 table.Lighting[0][1].FarLight[0].Angle=0 table.Lighting[0][1].FarLight[0].Light=0 table.Lighting[0][1].Mode=ZoomPrio table.Lighting[0][1].NearLight[0].Angle=0 table.Lighting[0][1].NearLight[0].Light=0 table.Lighting[0][1].Sensitive=3 table.Lighting[0][2].Correction=50 table.Lighting[0][2].FarLight[0].Angle=0 table.Lighting[0][2].FarLight[0].Light=0 table.Lighting[0][2].Mode=ZoomPrio
	table.Lighting[0][2].NearLight[0].Angle=0 table.Lighting[0][2].NearLight[0].Light=0 table.Lighting[0][2].Sensitive=3
Comment	Lighting[***ChannelNo***][***ConfigNo***]： ***ChannelNo*** is video channel index which starts from 0; ***ConfigNo***: array index, can be 0, 1 or 2, which means normal, day and night.

- Set lighting config Table 5-12

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Lighting config.
Example	Turn on light: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Lighting[0][0].FarLight[0].Light=10&Lighting[0][0].NearLight[0].Light=90&Lighting[0][0].Mode=Manual Shift the light to ZoomPrio mode: http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&Lighting[0][0].Correction=50&Lighting[0][0].Mode = ZoomPrio
Success Return	OK
Comment	Params in URL: paramName and paramValue are as below table. In below table, ***head*** = Lighting [***ChannelNo***] [***ConfigNo***]
	Lighting[0][0].FarLight[0].Light+ Lighting[0][0].NearLight[0].Light<=100.

Appendix:

ParamName	ParamValue type	Description
head. Mode	string	Light mode. The range is {"**Manual**", "Auto", "Off", "**ZoomPrio**", "Timing", "SmartLight", "LinkLight"}. **Manual**: the settings below effective only in Manual mode. **ZoomPrio**: zoom priority.
head. Correction	integer	Light compensation. The range is [0-100], effective in **ZoomPrio** mode.
head. Sensitive	integer	Range is [0-5]. Sensitivity of light
head. FarLight[Index].Angle	integer	Range is [0-100]. The angle of the far light.
head. FarLight[Index]. Light	integer	Range is [0-100]. The luminance of far light.
head. MiddleLight [Index].Angle	integer	Range is [0-100]. The angle of the middle light.
head. MiddleLight [Index]. Light	integer	Range is [0-100]. The luminance of middle light.
head. NearLight [Index].Angle	integer	Range is [0-100]. The angle of the near light.
head. NearLight [Index]. Light	integer	Range is [0-100]. The luminance of near light.

5.2 Rain brush

5.2.1 Move continuously

Table 5-13

Syntax	http://<*server*>/cgi-bin/rainBrush.cgi?action=moveContinuously&interval=<***Second***>[&channel=<***ChannelNo***>]
Method	GET
Description	Control the rain brush to move continuously.
Example	http://192.168.1.108/cgi-bin/rainBrush.cgi?action=moveContinuously&interval=5

Success Return	OK
Comment	***Second***: integer, rain brush movement time interval which start from 1. ***ChannelNo***: integer, the channel index which start from 1, default 1 if not specified.

5.2.2 Stop move

Table 5-14

Syntax	http://<*server*>/cgi-bin/rainBrush.cgi?action=stopMove[&channel=<***ChannelNo***>]
Method	GET
Description	Control the rain brush to stop move.
Example	http://192.168.1.108/cgi-bin/rainBrush.cgi?action=stopMove
Success Return	OK
Comment	***ChannelNo***: integer, the channel index which start from 1, default 1 if not specified.

5.2.3 Move once

Table 5-15

Syntax	http://<*server*>/cgi-bin/rainBrush.cgi?action=moveOnce[&channel=<***ChannelNo***>]
Method	GET
Description	Control the rain brush to move once.
Example	http://192.168.1.108/cgi-bin/rainBrush.cgi?action=moveOnce
Success Return	OK
Comment	***ChannelNo***: integer, the channel index which start from 1, default 1 if not specified.

6 Storage APIs

6.1 Storage devices

6.1.1 Get hard disk information

Table 6-1

Syntax	http://<*server*>/cgi-bin/storageDevice.cgi?action=factory.getPortInfo
Method	GET
Description	Get the storage device port info.
Example	http://192.168.1.108/cgi-bin/storageDevice.cgi?action=factory.getPortInfo
Success Return	info.Total=2 info.Plug=1 info.Mask=1 info.Bad=0 info.IDE=1 info.Esata=4

Comment	-

6.1.2 Get all the storage devices' names

Table 6-2

Syntax	http://<*server*>/cgi-bin/storageDevice.cgi?action=factory.getCollect
Method	GET
Description	Get all the storage devices' names
Example	http://192.168.1.108/cgi-bin/storageDevice.cgi?action=factory.getCollect
Success Return	list[0]="/dev/sda0" list[1]="/dev/sda1" list[2]="/dev/sg1"
Comment	-

6.1.3 Get storage device information

Table 6-3

Syntax	http://<server>/cgi-bin/storageDevice.cgi?action=getDeviceAllInfo
Method	GET
Description	Get all the storage device information.
Example	http://192.168.1.108/cgi-bin/storageDevice.cgi?action=getDeviceAllInfo
Success Return	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
Comment	-

6.1.4 Get storage capability

Table 6-4

Syntax	http://<*server*>/cgi-bin/storage.cgi?action=getCaps
Method	GET
Description	Get storage capabilities.
Example	http://192.168.1.108/cgi-bin/storage.cgi?action=getCaps
Success Return	caps.RedundantDisk.Support=false caps.SupportRemoteLimit=true
Comment	-

6.2 NAS

6.2.1 NAS information

- Get NAS config

Table 6-5

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=NAS
Method	GET
Description	Get all the directories on the NAS server.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=NAS
Success Return	table.NAS[0].Name=“ FTP1” table.NAS[0].Enable = true table.NAS[0].Protocol =“FTP” table.NAS[0].Address =“www.ttt.com” table.NAS[0].Port =21 table.NAS[0].UserName =“anonymity” table.NAS[0].Password =“none” table.NAS[0].Directory =“share”
Comment	-

- Set NAS config

Table 6-6

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set NAS config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&NAS[0].Name=nas01&NAS[0].Enab le=true
Success Return	OK
Comment	Params in URL: In below table, ***Head*** =NAS[***index***] ***index****:* The index of the NAS Server

Appendix:

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.

6.3 Storage point

6.3.1 Record storage point

- Get record storage point config

Table 6-7

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=RecordStoragePoint
Method	GET
Description	Get Record Storage Point config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=RecordStoragePoint
Success Return	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
Comment	-

- Set record storage point config

Table 6-8

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Record Storage Point config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&RecordStoragePoint[0].TimingRecord.Local=local
Success Return	OK

Comment	Params in URL: In below table, ***ch*** = channel index,
	recType: The range is {“TimingRecord”, “VideoDetectRecord”, “AlarmRecord”, “EventRecord”, “TimingSnapShot”, “VideoDetectSnapShot”, “AlarmSnapShot”, “EventSnapShot”}

Appendix:

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.

6.3.2 Storage group

- Get storage group config

Table 6-9

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=StorageGroup
Method	GET
Description	Get Storage Group config
Example	http://192.168.1.168/cgi-bin/configManager.cgi?action=getConfig&name=StorageGroup
Success Return	table.StorageGroup[0].Channels[0].MaxPictures=0
	table.StorageGroup[0].FileHoldTime=0 table.StorageGroup[0].Memo=For Reading & Writing Files table.StorageGroup[0].Name=ReadWrite table.StorageGroup[0].OverWrite=true table.StorageGroup[0].PicturePathRule=%y-

	%M-%d/%c/jpg/%h/%m/%s[%E][%O@%S][%R].jpg table.StorageGroup[0].RecordPathRule=%y-%M-%d/%c/dav/%h/%h.%m.%s-%h.%m.%s[%E][%O@%S][%R].dav table.StorageGroup[1].Channels[0].MaxPictures=0 table.StorageGroup[1].FileHoldTime=0 table.StorageGroup[1].Memo=For FTP Files table.StorageGroup[1].Name=Remote table.StorageGroup[1].OverWrite=true table.StorageGroup[1].PicturePathRule=%y-%M-%d/%c/jpg/%h/%m/%s[%E][%O@%S][%R].jpg table.StorageGroup[1].RecordPathRule=%y-%M-%d/%c/dav/%h/%h.%m.%s-%h.%m.%s[%E][%O@%S][%R].da
Comment	-

- Set storage group config

Table 6-10

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Storage Group config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&StorageGroup[*0*].Name=main
Success Return	OK
Comment	Params in URL: In below table, ***Index*** = Storage Group index ***ch*** = channel index

Appendix:

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 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.

7 Display APIs

7.2 Split screen

7.2.1 Split screen mode

- Get split screen mode

Table 7-3

Syntax	http://<*server*>/cgi-bin/split.cgi?action=getMode&channel=<***ChannelNo***>
Method	GET
Description	Get the split screen mode.
Example	http://192.168.1.108/cgi-bin/split.cgi?action=getMode&channel=1
Success Return	mode=split1 group=4
Comment	Params in URL: ***ChannelNo***: the display screen No. Start from 1 and <= 2.

- Set split screen mode

Table 7-4

Syntax	http://<*server*>/cgi-bin/split.cgi?action=setMode&channel=<***ChannelNo***>&mode=<***mode***>&group=<***gr oup***>
Method	GET
Description	Set the split screen mode.
Example	http://192.168.1.108/cgi-bin/split.cgi?action=setMode&channel=1&mode=split4&group=*1*

Success Return	OK
Comment	Params in URL: ***ChannelNo***: the display screen No. Start from 1. ***mode***:enum{split1,split2,split4,split6,split8,split9,split12,split16,split20,split25,split36,split64,split144, pip1,pip3, "Free", "CompositeSplit1" / "FitDisplayUnit1", "CompositeSplit1" / "FitDisplayUnit4"}; ***group*** : the No. of a group which contains certain number channels. For example, if 16 video channels display in split4 Mode which contains 4 video channels on Screen, then there are 4 groups and each group contains 4 video channels.

7.3 Moniter tour

7.3.1 Monitor tour

- Get monitor tour config

Table 7-5

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=MonitorTour
Method	GET
Description	Get Monitor Tour config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=MonitorTour
Success Return	table.MonitorTour[ch].Enable=128 table.MonitorTour[ch].Interval=true table.MonitorTour[ch].Mask.Split1=0,1,5 table.MonitorTour[ch].Mask.Split8=0,1,5 table.MonitorTour[ch].Collections=Favortite1, Favortite2…
Comment	-

- Set moniter tour config

Table 7-6

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Monitor Tour config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&MonitorTour[0].Enable=true
Success Return	OK.

Comment	Params in URL: The paramName and paramValue are in the below table.

Appendix:

ParamName	ParamValue type	Description
MonitorTour[ch].Enable	bool	MonitorTour or not.
MonitorTour[ch].Interval	integer	MonitorTour interval.
MonitorTour[ch].Mask.Split1		Channel array for split1
MonitorTour[ch].Mask.Split8		Channel array for split8
MonitorTour[ch].Collections		Split collections

7.3.2 Enable tour

Table 7-7

Syntax	http://<*server*>/cgi-bin/split.cgi?action=enableTour&channel=<***ChannelNo***>&enable=<***flag***>
Method	GET
Description	Enable tour in every video channel on a screen or not.
Example	http://192.168.1.108/cgi-bin/split.cgi?action=enableTour&channel=1&enable=*true*
Success Return	OK
Comment	***ChannelNo***: the display screen No. Start from 1 and <= 2. ***flag*** : true or false

7.3.3 Monitor collection

- Get monitor collection config

Table 7-8

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=MonitorCollection
Method	GET
Description	Get monitor collection config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=MonitorCollection
Success Return	table.MonitorCollection.collectionname. Mode=Split1
	table.MonitorCollection.collectionname.Windows[***winno***].Enable= true table.MonitorCollection.collectionname.Windows[***winno***].Device=device1 table.MonitorCollection.collectionname.Windows[***winno***].VideoChannel=5

	table.MonitorCollection.collectionname.Windows[***winno***].VideoStream=Main table.MonitorCollection.collectionname.Windows[***winno***].AudioChannel=5 table.MonitorCollection.collectionname.Windows[***winno***].AudioStream=Main …
Comment	Params in Response : ***winno*** : integer, the array index which equals to the window index in a screen and starts from 0.

- Set monitor collection config

Table 7-9

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set monitor collection config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&MonitorCollection.Favorite1.Mode=split4&MonitorCollection.Favorite1.Windows[1].Enable=true&MonitorCollection.Favorite1.Windows[1].VideoChannel=2
Success Return	OK
Comment	Params in URL: The paramName and paramValue are in the below table. In below table: ***Collect***= MonitorCollection.***collectionname***. ***collectionname***: can be any name. ***winno***: integer, the array index which equals to the window index in a screen and starts from 0.

Appendix:

ParamName	ParamValue type	Description
Collect. Mode	string	The range is the same as SetSplitMode.
Collect. Windows[***winno***]. Enable	bool	Enable the window or not.
Collect. Windows[***winno***]. Device	string	The device Id.
Collect. Windows[***winno***]. VideoChannel	integer	The video channel.

Collect. Windows[***winno***]. VideoStream	string	The range is {“Main”, “Extra1”, “Extra2”, “Extra3”, “Auto”}.
Collect. Windows[***winno***]. AudioChannel	integer	The audio channel.
Collect. Windows[***winno***]. AudioStream	string	The range is {“Main”, “Extra1”, “Extra2”, “Extra3”, “Auto”}.

8 Video analyse APIs

8.1 Video analyze

8.1.1 Get video analysis capability

Table 8-1

Syntax	http://<*server*>/cgi-bin/devVideoAnalyse.cgi?action=getcaps&channel=<***ChannelNo***>
Method	GET
Description	Get dev Video Analyze capabilities.
Example	http://192.168.1.108/cgi-bin/devVideoAnalyse.cgi?action=getcaps&channel=1
Success Return	caps.CalibrateBoxs[0]=2 caps.CalibrateBoxs[1]=3 caps.ComplexSizeFilter=false caps.MaxCelibateAreas=10 caps.MaxExcludeRegions=0
	caps.MaxInternalOptions=512 caps.MaxModules=1 caps.MaxPointOfLine=20 caps.MaxPointOfRegion=20 caps.MaxRules=10 caps.MaxStaffs=4 caps.SpecifiedObjectFilter=true caps.SupportedRules[0]=CrossLineDetection caps.SupportedRules[1]=CrossRegionDetection caps.SupportedRules[2]=LeftDetection caps.SupportedRules[3]=TakenAwayDetection caps.SupportedScene[0]=Normal caps.SupportedScene[1]=FaceDetection caps.SupportedScene[2]=VideoDiagnosis caps.SupportedScenes.FaceDetection.SupportedCalibrateParams.Groud.HorizontalStaffs[0]=0 caps.SupportedScenes.FaceDetection.SupportedCalibrateParams.Groud.HorizontalStaffs[1]=0 caps.SupportedScenes.FaceDetection.SupportedCalibrateParams.Groud.VerticalStaffs[0]=0 caps.SupportedScenes.FaceDetection.SupportedCalibrateParams.Groud.VerticalStaffs[1]=0
Comment	Params in URL: ***ChannelNo***: integer, the video channel index which starts from 1.

8.1.2 Video analyze global

- Get video analyze global config

Table 8-2

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoAnalyseGlobal
Method	GET
Description	Get Video Analyse Global config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoAnalyseGlobal
Success Return	***head***.Scene.Type=Normal ***head***.Scene.PtzPresetId=1 ***head***.Scene.Depth=Far ***head***.Scene.Detail.CameraAngle=30 ***head***.Scene.Detail.CameraDistance=10.000000 ***head***.Scene.Detail.CameraHeight=6.200000 ***head***.TimePeriod.Day[0]=8:00:00 ***head***.TimePeriod.Day[1]=20:00:00 ***head***.TimePeriod.Night[0]=20:00:00
	head.TimePeriod.Night[1]=8:00:00 …
Comment	Params in Response: ***head*** =table.VideoAnalyseGlobal[***ChannelNo***] ***ChannelNo*** = video channel index.

- Set video analyse global config

Table 8-3

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Video Analyse Global config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoAnalyseGlobal[0].Scene.Type=Normal&VideoAnalyseGlobal[0].Scene.PtzPresetId=1
Success Return	OK
Comment	Params in URL: paramName and paramValue are as below table. In below table, head =***VideoAnalyseGlobal***[***ChannelNo***] ***ChannelNo*** = video channel index. ParamName start with head.Scene.Detail depends on head.Scene.Type.

Appendix

ParamName	ParamValue type	Description
head.Scene.Type	string	Scene class, the range is { "Normal", "Indoor", "ATM", "Traffic", "FaceRecognition", "FaceDetection", "Prison", "NumberStat", "HeatMap", "VideoDiagnosis", "VehicleAnalyse", "TrafficPatrol", "CourseRecord", "Vehicle" }
head.Scene.PtzPresetId	integer	Range is 0-255, 0 means that the scene is unassociated with PTZ.
head.Scene.Depth	string	Picture distance feature, the range is { "Normal", "Far", "Middle", "Near" }
head.Scene.Detail.*Value*		Detail config of a scene. For example, when Scene.Type is "Normal", its detail includes CameraAngle, CameraDistance, CameraHeight, etc.
head.TimePeriod.Day[0]	string	The start time of Day, it's format is hh:mm:ss
head.TimePeriod.Day[1]	string	The end time of Day
head.TimePeriod.Night[0]	string	The start time of Night, it's format is hh:mm:ss
head.TimePeriod.Night[1]	string	The end time of Night

8.1.3 Video analyze rule

- Get video analyze rule

Table 8-4

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoAnalyseRule
Method	GET
Description	Get Video Analyse Rules config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoAnalyseRule
Success Return	***head***.Name= line1 ***head***.Type=CrossLineDetection ***head***.VideoAnalyseRule[0][0].Enable =true ***head***.VideoAnalyseRule[0][0].EventHandler= (output of EventHandler is described in GetEventHandler) **…**
Comment	Params in Response :

	head =table.VideoAnalyseRule[***ChannelNo***] [***RuleNo***] ***ChannelNo*** = video channel index. ***RuleNo*** =rule index.

- Set video analyze rule

Table 8-5

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Video Analyse Rules config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoAnalyseRule[0][0].Name=myAnalyseRule1&VideoAnalyseRule[0][0].Type=CrossLineDetection
Success Return	OK
Comment	Params in URL:
	paramName and paramValue are as below table. In below table, ***head*** =VideoAnalyseRule[***ChannelNo***] [***RuleNo***] ***ChannelNo*** = video channel index. ***RuleNo*** =rule index. ParamName start with head.Config is only effective “CrossRegionDetection”, “LeftDetection”, “TakenAwayDetection”} with {“CrossLineDetection”,

Appendix

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 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", "ParkingDetection", "MoveDetection"}. "RioterDetection",
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”}.

8.2 Number of people

8.2.1 Video widget number status

- Get video widget number status

Table 8-6

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=VideoWidgetNumberStat
Method	GET
Description	Get OSD config when display human number status information.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=VideoWidgetNumberStat
Success Return	***head***.EncodeBlend=true ***head***.ShowEnterNum=true ***head***.ShowExitNum=true ***head***.TextAlign=0 **…**
Comment	Params in Response : ***head*** =table.VideoWidgetNumberStat[***ChannelNo***] ***ChannelNo*** =array index starts from 0, which means video channel.

- Set video widget number status

Table 8-7

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET

Description	Set OSD config when display human number status information.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&VideoWidgetNumberStat[0].EncodeBlend=true&VideoWidgetNumberStat[0].ShowEnterNum=true
Success Return	OK
Comment	Params in URL: paramName and paramValue are as below table. In below table, ***head*** =VideoWidgetNumberStat[***ChannelNo***] ***ChannelNo*** = array index starts from 0, which means video channel.

Appendix

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

8.2.2 Get heat map information

Table 8-8

Syntax	http://<*server*>/cgi-bin/heatMap.cgi?action=getPicByTime&channel=<***ChannelNo***>&StartTime=<***start***>&EndTime=<***end***>
Method	GET
Description	Get binary data of heat map.
Example	http://192.168.1.108/cgi-bin/heatMap.cgi?action=getPicByTime&channel=1&StartTime=2015-08-20%2000:00:00&EndTime=2015-08-21%2023:59:59
Success Return	Content-Type: application/binarytet-stream Content-Length:<***heatMap size***> <***HeatMap data***>
Comment	Params in URL: ***ChannelNo***: video channel index, start from 1.

	start*/*end: the start/end time of Heat Map info. 24 hour Format, as: yyyy-mm-dd hh:mm:ss. Params in Response: ***heatMap size***: width*height + 16. ***HeatMap data:*** format as below table.

Appendix: HeatMap Data Format

0	1	2	3	4	…	15	16	17	18	…
Width		Height		Reserved			Data: every byte symbolize a pixel			

8.3 People counting

8.3.1 Get summary

Table 8-9

Syntax	http://<*server*>/cgi-bin/videoStatServer.cgi?action=getSummary[&channel=<***ChannelNo***>]
Method	GET
Description	Get summary information of video Stat.
Example	http://192.168.1.108/cgi-bin/videoStatServer.cgi?action=getSummary&channel=1
Success Return	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
Comment	Params in URL: ***ChannelNo***: array index starts from 1, which means video channel.

8.3.2 Query the count of people

1. Whether or not found people count information

Table 8-10

Syntax	http://<*server*>/cgi-bin/videoStatServer.cgi?action=startFind[&channel=<***ChannelNo***>]&condition.StartTime=<***start***>&condition. EndTime=<***end***>&condition.Granularity=<***granularity***>
Method	GET

Description	Start to find Video Stat info, in response, there is a token for further info finding process, and there is a totalCount shows how many data count(s).
Example	Find Video Stat info between 2011-1-1 12:00:00 and 2011-1-10 12:00:00, with information granularity is hour: http://192.168.1.108/cgi-bin/videoStatServer.cgi?action=startFind&channel=1&condition.StartTime=2011-1-1%2012:00:00&condition.EndTime=2011-1-10%2012:00:00&condition.Granularity=Hour
Success Return	token=1 totalCount=14
Comment	Params in URL: ***ChannelNo*** : video channel No. starts from 1 ***start***/***end***: the start/end time of Video Stat info. 24 hour Format, as: yyyy-mm-dd hh:mm:ss. ***granularity***: the information granularity returned by the query requirements. the range is {Hour, Day, Week, Month, Season, Year}

2. Get the particular number of people count information

Table 8-11

Syntax	http://<*server*>/cgi-bin/videoStatServer.cgi?action=doFind[&channel=<***ChannelNo***>]&token=<***TokenValue***>&beginNumber=<***beginNumber***>&count=<***Count***>
Method	GET
Description	Find Video Stat info with channel, token, begin Number and count.
Example	http://192.168.1.108/cgi-bin/videoStatServer.cgi?action=doFind&channel=1&token=1&beginNumber=0&count=14
Success Return	found=14 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 **…**
Comment	Params in URL:
	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 info for this query.

3. Stop query people count information

Table 8-12

Syntax	http://<*server*>/cgi-bin/videoStatServer.cgi?action=stopFind&token=<***TokenValue***>[&channel=<***ChannelNo***>]
Method	GET
Description	Stop query Video Stat by channel and token.
Example	http://192.168.1.108/cgi-bin/videoStatServer.cgi?action=stopFind&channel=1&token=1
Success Return	OK
Comment	Params in URL: ***ChannelNo***: video channel index, start from 1 ***TokenValue***: get by startFind in above section.

9 Intelligent traffic APIs

9.1 Traffic snap

9.1.1 Get the specific parking space status

Table 9-1

Syntax	http://<*server*>/cgi-bin/trafficSnap.cgi?action=getParkingSpaceStatus&channel=<***ChannelNo***>&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Get specific parking space(s) status
Example	http://192.168.1.108/cgi-bin/trafficSnap.cgi?action=getParkingSpaceStatus&condition.Lane[0]=0&condition.Lane[1]=255
Success Return	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	Params in URL: ***ChannelNo*** : the index of traffic Snap channel ***paramName*** and ***paramValue***: detail in below table.

	In below table, ***index***: The index of type array, start from 0 Params in Response: **TrafficCar**: the members refer to TrafficCar

Appendix

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

9.2 Traffic parking

9.2.1 Get all parking spaces' status

Table 9-2

Syntax	http://<*server*>/cgi-bin/trafficParking.cgi?action=getAllParkingSpaceStatus
Method	GET
Description	Get all valid parking spaces status of one device
Example	http://192.168.1.108/cgi-bin/trafficParking.cgi?action=getAllParkingSpaceStatus
Success Return	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	Params in Response : **Status** : Park or NoPark

10 Thermography and radiometry APIs

10.1 Thermography manager

10.1.1 Get capability of thermography

Table 10-1

Syntax	http://<*server*>/cgi-bin/ThermographyManager.cgi?action=getCaps&channel=<***ChannelNo***>
Method	GET

Description	Get thermography capability.
Example	http://192.168.1.108/cgi-bin/ThermographyManager.cgi?action=getCaps&channel=1
Success Return	caps.**PresetModes** = Indoor 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
Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1. Params in Response: **PresetModes**: the preset mode. Range is { "Indoor", "Outdoor", "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"}

10.1.2 Thermography options

- Get thermography options config

Table 10-2

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=ThermographyOptions
Method	GET
Description	Thermography options contain EZoom, Colorization, SmartOptimizer and so on
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=ThermographyOptions
Success Return	***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
Comment	Params in Response: ***head*** = table.ThermographyOptions [***ChannelNo***][0] ***ChannelNo*** = video channel index **Regions**: the region is a rectangle ***i*** : the array index starts from 0.

- Set thermography options config

Table 10-3

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set thermography options
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&ThermographyOptions[0][0].OptimizedRegion.Type=Gound
Success Return	OK
Comment	Params in URL: The paramName and paramValue are in the below table. In below table, ***head*** = ThermographyOptions[***ChannelNo***][0] ***ChannelNo*** = video channel index ***i*** = the array index starts from 0

Appendix

ParamName	ParamValue type	Description
head. EZoom	integer	Range is [0-24]. Range and step are got from interface in getCaps.
head. Colorization	String	Range is {"White Hot", "Black Hot", "Ironbow2", "IceFire" …}. Range and step are got from interface in getCaps.

head. SmartOptimizer	integer	Range is [0-100]. Range and step are got from interface in getCaps.
head. OptimizedRegion.Type	String	Range is {“Full Screen”, “Sky”, “Ground”, “Horizontal”, “Center 7 5%”, “Center 50%”, “Center 25%”, “Custom”}.
head. OptimizedRegion.Enable	bool	true: enable false: not enable
head. OptimizedRegion.Regions[***i***][0u]	integer	Range is [0~8191]. ***i*** : the region index, starts from 0.
head. OptimizedRegion.Regions[***i***][1u]	integer	Range is [0~8191]. ***i*** : the region index, starts from 0.
head. OptimizedRegion.Regions[***i***][2u]	integer	Range is [0~8191]. ***i*** : the region index, starts from 0.
head. OptimizedRegion.Regions[***i***][3u]	integer	Range is [0~8191]. ***i*** : the region index, starts from 0.
head. Agc	integer	Range is [0-255]. Range and step are got from interface in getCaps.
head. AgcMaxGain	integer	Range is [0-255]. Range and step are got from interface in getCaps.
head. AgcPlateau	integer	Range and step are got 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]

10.1.3 Get extern system information

Table 10-4

Syntax	http://<*server*>/cgi-bin/ThermographyManager.cgi?action=getExternSystemInfo&channel=<***ChannelNo***>
Method	GET
Description	Get Extern System Info.
Example	http://192.168.1.108/cgi-bin/ThermographyManager.cgi?action=getExternSystemInfo&channel=1
Success Return	sysInfo.SerialNumber = 11111111123 sysInfo.SoftwareVersion = 2222222222222 sysInfo.FirmwareVersion= 3333333333333 sysInfo.LibVersion = 4444444444

Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1

10.1.4 Get information of preset mode

Table 10-5

Syntax	http://<*server*>/cgi-bin/ThermographyManager.cgi?action=getPresetParam&channel=<***ChannelNo***>&mode=<***modeType***>
Method	GET
Description	Get preset mode info.
Example	http://192.168.1.108/cgi-bin/ThermographyManager.cgi?action=getPresetParam&channel=1&mode=D efault
Success Return	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
Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1 ***modeType***: depends on capability , get from interface in getCaps Params in Response : **Regions** : the region is a rectangle ***i*** : the array index.

10.1.5 Get optimized region information

Table 10-6

Syntax	http://<*server*>/cgi-bin/ThermographyManager.cgi?action=getOptimizedRegion&channel=<***ChannelNo***>
Method	GET
Description	Get optimized region info.
Example	http://192.168.1.108/cgi-bin/ThermographyManager.cgi?action=getOptimizedRegion&channel=1

Success Return	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
Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1
	Params in Response: **Regions** : the region is a rectangle ***i***: the region index.

10.1.6 Enable Shutter

Table 10-7

Syntax	http://<*server*>/cgi-bin/ThermographyManager.cgi?action=enableShutter&channel=<***ChannelNo***>&enable=<***Enable***>
Method	GET
Description	Shutter control, whether enable shutter.
Example	http://192.168.1.108/cgi-bin/ThermographyManager.cgi?action=enableShutter&channel=1&enable=tr ue
Success Return	OK
Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1 ***Enable***: true or false, enable or not.

10.1.7 Fix Focus

Table 10-8

Syntax	http://<*server*>/cgi-bin/ThermographyManager.cgi?action=fixFocus&linkVideoChannel[0]=<***ChannelNo***>&linkVideoChannel[1]=<***ChannelNo***>[&speed=<***SpeedValue***>]
Method	GET
Description	The visual channel change focus to the same as the thermography channel.
Example	http://192.168.1.108/cgi-bin/ThermographyManager.cgi?action=fixFocus&linkVideoChannel[0]=1&linkVideoChannel[1]=2
Success Return	OK
Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1. ***SpeedValue***: float, range is 0.0-1.0.

10.1.8 Do Flat Field Correction

Table 10-9

Syntax	http://<*server*>/cgi-bin/ThermographyManager.cgi?action=doFFC&channel=<***ChannelNo***>
Method	GET
Description	Do flat field correction.
Example	http://192.168.1.108/cgi-bin/ThermographyManager.cgi?action=doFFC&channel=1
Success Return	OK
Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1.

10.2 Radiometry

10.2.1 Get Capability of Radiometry

Table 10-10

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=getCaps[&channel=<***ChannelNo***>]
Method	GET
Description	Get the Capabilities of Radiometry Manager.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=getCaps&channel=1
Success Return	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
Comment	Params in URL: ***ChannelNo***: the channel index; start from 1

10.2.2 Heat image thermometry

- Get heat image thermometry config

Table 10-11

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=HeatImagingThermometry
Method	GET
Description	Get HeatImagingThermometry Config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=HeatImagingThermometry
Success Return	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
Comment	-

- Set heat image thermometry config

Table 10-12

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set HeatImagingThermometry Config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&HeatImagingThermometry.RelativeHumidity=50&HeatImagingThermometry.ObjectDistance=20.3
Success Return	OK

Comment	Params in URL: The paramName and paramValue are in the below table.

Appendix

ParamName	ParamValue type	Description
HeatImagingThermometry.RelativeHumidity	integer	The Relative Humidity range and step are got from interface in getCaps.
HeatImagingThermometry.AtmosphericTemperature	float	The Atmospheric Temperature range and step are got from interface in getCaps.
HeatImagingThermometry.ObjectEmissivity	float	The Object Emissivity range and step are got from interface in getCaps.
HeatImagingThermometry.ObjectDistance	float	The Object Distance range and step are got from interface in getCaps. Unit is meter.
HeatImagingThermometry.ReflectedTemperature	float	The Reflected Temperature range and step are got 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 got form interface in getCaps. MaxValue must be bigger than MinVaue
HeatImagingThermometry.Isotherm. MinValue	float	MinValue range is got form interface in getCaps. MinValue must be smaller than MaxVaue.
HeatImagingThermometry.Isotherm. ColorBarDisplay	bool	true or false
HeatImagingThermometry.HotSpotFollow	bool	true or false

HeatImagingThermometry.TemperEnable	bool	true or false

10.2.3 Thermometry rule

- Get thermometry rule config

Table 10-13

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=ThermometryRule
Method	GET
Description	Get Thermometry Rule.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=ThermometryRule
Success Return	***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
Comment	Params in Response: ***head*** =table.ThermometryRule[***ChannelNo***][***RuleNo***] ***PointNo*** = point index ***ChannelNo*** = video channel index. ***RuleNo*** =rule index. ***Alarm***= AlarmSetting[***AlarmNo***] ***AlarmNo*** = alarm index

- Set thermometry rule config

Table 10-14

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Thermometry Rule.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&ThermometryRule[0][0].Name=nam e1

Success Return	OK
Comment	Params in URL: The paramName and paramValue are in the below table. In below table, ***head*** = ThermometryRule[***ChannelNo***][***RuleNo***] ***PointNo*** = point index ***ChannelNo*** = video channel index. ***RuleNo*** =rule index.
	Alarm= AlarmSetting[***AlarmNo***] ***AlarmNo*** = alarm index

Appendix

ParamName	**ParamValue type**	**Description**
head. Enable	bool	Enable/Disable
head. PresetId	integer	Range [0- PresetMax] PresetMax is got from interface in GetCurrentProtocolCaps.
head. RuleId	integer	Range [0- MaxNum] MaxNum is got 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	Range [0-8091] The Xscale of Region/Line point
head. MeterRegion.Coordinates[***PointNo***] [1]	integer	Range [0-8091] The Yscale of Region/Line point
head. T	integer	Temperature Sample period. Unit is Second.
head. Alarm.Id	integer	Range [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, IS O}
head. Alarm. AlarmCondition	string	Range 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	Range [0 -1] Accuracy is 0.01
head. LocalParameters. ObjectDistance	float	Object distance The range is got from interface in getCaps.
head. LocalParameters. ReflectedTemp	float	Object Reflected Temperature The range is got from interface in getCaps.

10.2.4 Heat image temper event

- Get heat image temper event config

Table 10-15

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=HeatImagingTemper
Method	GET
Description	Get Heat Imaging Temper config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=HeatImagingTemper
Success Return	***head***.Enable=false ***head***.EventHandler. paramName = paramValue
Comment	Params in Response: ***head***= table.HeatImagingTemper[***Channel***] ***Channel***= video channel number

- Set heat image temper event config

Table 10-16

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Heat Imaging Temper config
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&HeatImagingTemper[0].Enable=false

	&HeatImagingTemper[0].EventHandler.BeepEnable=false
Success Return	OK
Comment	Params in URL: The paramName and paramValue are in the below table. In below table, ***head***= HeatImagingTemper[***Channel***] ***Channel***=video channel number

Appendix

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

10.2.5 Get temperature of a particular point

Table 10-17

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=getRandomPointTemper&channel=<***ChannelNo***>&coordinate [0]=***x*** &coordinate[1]=***y***
Method	GET
Description	Get temperature values of random point.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=getRandomPointTemper&channel=1&coordinate[0]=1024&coordinate[1]=1024
Success Return	TempInfo.Type=Spot TempInfo.TemperAver=27.5
Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1 ***x*** : The Xscale of the point ***y*** : The Yscale of the point

10.2.6 Get temperature of a particular condition

Table 10-18

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=getTemper&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]

Method	GET
Description	Get temperature values from rules which have been set.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=getTemper&condition.PresetId=0&conditi on. RuleId=0&condition.Type=Spot&condition.Name=Spot1&condition.channel=1
Success Return	TempInfo.Type=Spot TempInfo.TemperAver=27.5
Comment	Params in URL: The paramName and paramValue are in the below table.

Appendix

ParamName	**ParamValue type**	**Description**
condition. Channel	integer	Channel index. Start from 1
condition. PresetId	integer	Range [0- PresetMax]
		PresetMax is got from interface in GetCurrentProtocolCaps.
condition. RuleId	integer	Range [0- MaxNum] MaxNum is got from interface in getCaps.
condition. Type	string	Range is {Spot, Line, Area}.
condition. Name	string	Name is got from interface in GetThermometryRuleConfig.

10.2.7 Query temperature information

1. Start to query temperature information

Table 10-19

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=startFind&**condition.StartTime**=<*StartTimeVal ue*>&**condition.EndTime**=<*EndTimeValue*>&**condition.Type**=<*TypeValue*>&**conditio n.channel**=<*Chann elValue*>&**condition.Period**=<*PeriodValue*>
Method	GET
Description	Start to query the history data of temperature values.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=startFind&condition.StartTime=2010-0401%200:00:00&condition.EndTime=2010-04-08%200:00:00&condition.Type=Spot&condition.channel= 1&condition.Period=5
Success Return	token=46878 totalCount=333

Comment	The parameters in bold face are as below table.

Appendix

ParamName	ParamValue type	Description
condition.StartTime	string	The start time to find.
condition.EndTime	string	The end time to find.
condition.Type	string	The type of data. Range is {Spot, Line, Area}
condition.channel	integer	Channel index. Start from 1
condition.Period	integer	Range is {5, 10, 15, 30}, minute

2. Get the data of temperature

Table 10-20

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=doFind&**token**=<*tokenvalue*>&**beginNumber**=<*BeginNumber*>&**count**=<*findNum*>
Method	GET
Description	Get the history data of temperature.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=doFind&token=46878&beginNumber=16&count=16
Success Return	found=12 info[**i**].Time=2010-04-08 16:12:46 info[i].PresetId=0 info[i].RuleId=0 info[i].Type=Spot info[i].Name=xxxx info[i].Coordinate[0]=1024 info[i].Coordinate[1]=2048 info[i].Channel=0 info[i].TemperatureUnit=Centigrade info[i].QueryTemperInfo.TemperAve=50.1 info[i].QueryTemperInfo.TemperMax=50.2 info[i].QueryTemperInfo.TemperMin=50.0
Comment	Params in URL:
	token: query token, get from interface of the first step above. ***beginNumber***: the begin index in this query. ***count***: the number you want to query. Params in Resp: **i**: the array index.

3. Stop finding temperature information

Table 10-21

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=stopFind&**token**=<*tokenvalue*>
Method	GET

Description	Stop to find the history data of temperature values.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=stopFind&token=46878
Success Return	OK
Comment	**token**: query token, get from interface of the first step.

10.2.8 Subscribe to Temperature Information

Table 10-22

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=attachTemper&channel=<***ChannelNo***>
Method	GET
Description	Subscribe to temperature information of a channel.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=attachTemper&channel=2
Success Return	--<*boundary*>\r\n Content-Type: text/plain\r\n Content-Length: <data length>\r\n\r\n info[**i**].Time=2010-04-08 16:12:46 info[i].PresetId=0 info[i].RuleId=0 info[i].Type=Spot
	info[i].Name=xxxx info[i].Coordinate[0]=1024 info[i].Coordinate[1]=2048 info[i].Channel=0 info[i].TemperatureUnit=Centigrade info[i].QueryTemperInfo.TemperAve=50.1 info[i].QueryTemperInfo.TemperMax=50.2 info[i].QueryTemperInfo.TemperMin=50.0
Comment	Params in URL: ***ChannelNo***: the index of video channel, start from 1 Params in Resp : **i**: the array index.

10.2.9 Subscribe to Radiometry Data

Table 10-23

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=attachProc&channel=<***ChannelNo***>
Method	GET
Description	Subscribe to radiometry data of a channel. It needs to cooperate with interface below.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=attachProc&channel=2
Success Return	--<*boundary*>\r\n Content-Type: text/plain\r\n

	Content-Length: <data length>\r\n\r\n dataInfo.Height=0 dataInfo.Width=0 dataInfo.Channel=0 dataInfo.Time=2010-05-25 00:00:00 dataInfo.Length=0
	dataInfo.sensorType="Tau" dataInfo.Unzip.ParamR=1 dataInfo.Unzip.ParamB=1 dataInfo.Unzip.ParamF=1 dataInfo.Unzip.ParamO=1 --<*boundary*>\r\n Content-Type: application/http\r\n Content-Length: <data length>\r\n\r\n <Binary data>
Comment	***ChannelNo***: the index of video channel, start from 1

10.2.10 To Fetch Radiometry Data

Table 10-24

Syntax	http://<*server*>/cgi-bin/RadiometryManager.cgi?action=toFetch&channel=<*ChannelNo*>
Method	GET
Description	Start to fetch radiometry data.
Example	http://192.168.1.108/cgi-bin/RadiometryManager.cgi?action=toFetch&channel=2
Success Return	**status**=Ready
Comment	**status**: Range is {Ready, Busy}. “Ready” means service available and “Busy” means service busy.

11 Access Control APIs

11.1 Door

11.1.1 Open Door

Table 11-1

Syntax	http://<*server*>/cgi-bin/accessControl.cgi?action=openDoor&channel=<***ChannelNo***>[&UserID=<***UserID***>&Type=<***Type***>]
Method	GET
Description	Open the door.
Example	http://192.168.1.108/cgi-bin/accessControl.cgi?action=openDoor&channel=1&UserID=101&Type=Rem ote

Success Return	OK
Comment	Params in URL: ***ChannelNo***: the index of door. Start from 1; ***UserID***: remote User ID; ***Type***: the open type; default value is "*Remote*"

11.1.2 Get Door Status

Table 11-2

Syntax	http://<server>/cgi-bin/accessControl.cgi?action=getDoorStatus&channel=<***ChannelNo***>
Method	GET
Description	Get status of the door.
Example	http://192.168.1.108/cgi-bin/accessControl.cgi?action=getDoorStatus&channel=1
Success Return	Info.**status**=Open
Comment	Params in URL : ***ChannelNo***: the index of door. Start from 1; Params in Response :
	status : the range is {Open, Break, Close}

12 Intelligent Building APIs

12.1 Video Talk

12.1.1 Subscribe Video Talk Status

Table 12-1

Syntax	http://<*server*>/cgi-bin/VideoTalkPeer.cgi?action=attachState
Method	GET
Description	Subscribe the video talk status. When client disconnect, it will unsubscribe.
Example	http://192.168.1.108/cgi-bin/VideoTalkPeer.cgi?action=attachState
Success Return	Notify the state: SID=315 state.**State**=Answer state.Talkback.Pack=RTP state.Talkback.Protocol=UDP state.Talkback.Type=Talk state.Talkback.Audio.AudioPort=6000 state.Talkback.Audio.Format[0].Compression=PCM state.Talkback.Audio.Format[0].Frequency=44000

	state.Talkback.Audio.Format[0].Depth=16 state.Talkback.Audio.Format[1].Compression=G.711A state.Talkback.Audio.Format[1].Frequency=44000 state.Talkback.Audio.Format[1].Depth=16 state.Talkback.Video.VideoPort=7000 state.Talkback.Video.Format[0].Compression=H.264 state.Talkback.Video.Format[0].Frequency=90000 state.Talkback.Video.Format[1].Compression=MJPG …… state.Talkback. MediaAddr=224.10.10.10
Comment	Params in Response: **State**: in range of {"Ringing", "Inviting", "Answer", "Refuse", "Cancel", "Hangup", "Busying" }

12.1.2 Unsubscribe Video Talk Status

Table 12-2

Syntax	http://<*server*>/cgi-bin/VideoTalkPeer.cgi?action=detachState&SID=<***sid***>
Method	GET
Description	Unsubscribe the video talk status.
Example	http://192.168.1.108/cgi-bin/VideoTalkPeer.cgi?action=detachState&SID=101
Success Return	OK
Comment	Params in URL: ***sid***: the subscribe id, which is the response of attachState

12.1.3 Invite Server on Video Talk

Table 12-3

Syntax	http://<*server*>/cgi-bin/VideoTalkPeer.cgi?action=invite[&Talkback.Protocol=<***protocol***>&Talkback.Type=<***type***>&Talkback.MediaAddr=<***addr***>…]
Method	GET
Description	Start the video talk conversation.
Example	http://192.168.1.108/cgi-bin/VideoTalkPeer.cgi?action=invite&Talkback.Protocol=UDP&Talkback.Type=Talk&Talkback.MediaAddr=224.10.10.10
Success Return	OK
Comment	Params in URL: ***protocol***: the transmit protocol ***type***: video talk type.

	addr: addr to get stream

12.1.4 Cancel the Video Talk

Table 12-4

Syntax	http://<*server*>/cgi-bin/VideoTalkPeer.cgi?action=cancel
Method	GET
Description	Cancel video talk conversation.
Example	http://192.168.1.108/cgi-bin/VideoTalkPeer.cgi?action=cancel
Success Return	OK
Comment	-

12.1.5 Answer the Invitation

Table 12-5

Syntax	http://<*server*>/cgi-bin/VideoTalkPeer.cgi?action=answer&Talkback.Protocol=<***protocol***>&Talkback.Type=<***type***>&Talkback.MediaAddr=<***addr***>…
Method	GET
Description	Answer the call.
Example	http://192.168.1.108/cgi-bin/VideoTalkPeer.cgi?action=answer&Talkback.Protocol=UDP&Talkback.Type=Talk&Talkback.MediaAddr=224.10.10.10
Success Return	OK
Comment	Params in URL: ***protocol***: the transmit protocol ***type***: video talk type. ***addr***: addr to get stream

12.1.6 Refuse to Answer the Video Talk Invitation

Table 12-6

Syntax	http://<*server*>/cgi-bin/VideoTalkPeer.cgi?action=refuse
Method	GET
Description	Refuse answer the call.
Example	http://192.168.1.108/cgi-bin/VideoTalkPeer.cgi?action=refuse
Success Return	OK

Comment	-

12.1.7 Hang Up

Table 12-7

Syntax	http://<*server*>/cgi-bin/VideoTalkPeer.cgi?action=hangup
Method	GET
Description	Close it when the conversation is over.
Example	http://192.168.1.108/cgi-bin/VideoTalkPeer.cgi?action=hangup
Success Return	OK
Comment	-

12.2 Video Talk Log

12.2.1 Query Video Talk Log

Table 12-8

Syntax	http://<*server*>/cgi-bin/recordFinder.cgi?action=find&name=VideoTalkLog[&condition.CallType=<***Type***>&condition.EndState=<***State***>&count=<***countNo***>]
Method	GET
Description	Find the VideoTalkLog record.
Example	http://192.168.1.108/cgi-bin/recordFinder.cgi?action=find&name=VideoTalkLog&condition.CallType=Incoming&condion.EndState=Missed&count=500
Success Return	**totalCount**=1000 **found**=500 records[0].RecNo=789 records[0].CreateTime=123456789 records[0].**CallType**=Incoming records[0].**EndState**=Received records[0].PeerNumber=501 ……
Comment	Params in URL: ***Type***: call type ***State****:* end state of the call ***countNo***: the number of records to get Params in Response :

	totalCount : the record count which match condition **found** : the record count to return **CallType**: call type. The range is {"Incoming", "Outgoing" }. **EndState**: the range is { "EndState" , "Received"}

12.3 Access Control Card Record

12.3.1 Query Record

Table 12-9

Syntax	http://<*server*>/cgi-bin/recordFinder.cgi?action=find&name=AccessControlCard[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Find the access control card record.
Example	http://192.168.1.108/cgi-bin/recordFinder.cgi?action=find&name=AccessControlCard&condition.CardNo=111245&condition.UserID=112&count=500
Success Return	**totalCount** = 1000 **found** = 500 records [0].RecNo=789 records [0].CardNo =123456 records [0].UserID =101 records [0].CardStatus =0 records [0].CardType =0
Comment	Params in URL: The paramName and paramValue are in the below table. Params in Response : **totalCount** : the number of records which match the conditions. **found** : the number of records returned

Appendix:

ParamName	ParamValue type	Description
count	integer	The record count, default 1024
condition.CardNo	string	Card Number
condition.UserID	string	User ID
condition. IsValid	bool	true or false

12.3.2 Update Record

Table 12-10

Syntax	http://<*server*>/cgi-bin/recordUpdater.cgi?action=update&name=AccessControlCard&recno=<***recno***>&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]

Method	GET
Description	Update the access control card record.
Example	http://192.168.1.108/cgi-bin/recordUpdater.cgi?action=update&name=AccessControlCard&recno=121&UserID=111&CardStatus=1&CardType=2
Success Return	OK
Comment	Params in URL: ***recno*** : the index of record. Other Params are in the below table.

Appendix:

ParamName	ParamValue type	Description
UserID	integer	User ID
CardStatus	string	The Card Status. 0 Normal , 1<<0 Report Lost , 1<<1 Cancel , 1<<2 Freeze,
		1<<3 Debt , 1<<4 OverDue
CardType	string	The Card Type. 0 - Normal Card, 1 - VIP Card, 2 - Visitor Card , 3 - Patrol Card, 4 - Blacklist Card, 5 - Stress Card, 0xff - Mother Card

12.3.3 Insert record

Table 12-11

Syntax	http://<*server*>/cgi-bin/recordUpdater.cgi?action=insert&name=AccessControlCard&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Insert the access control card record.
Example	http://192.168.1.108/cgi-bin/recordUpdater.cgi?action=insert&name=AccessControlCard&CardNo=121&UserID=111&CardStatus=1&CardType=2
Success Return	OK

Comment	Params in URL: The params are in the below table.

Appendix:

ParamName	ParamValue type	Description
CardNo	string	The card index
UserID	integer	User ID
CardStatus	Integer	The Card Status. 0 Normal, 1<<0 Report Lost, 1<<1 Cancel, 1<<2 Freeze, 1<<3 Debt, 1<<4 OverDue
CardType	Integer	The Card Type. 0 Normal Card, 1 VIP Card, 2 Visitor Card, 3 Patrol Card, 4 Blacklist Card, 5 Stress Card, 0xff Mother Card

12.3.4 Remove Record

Table 12-12

Syntax	http://<*server*>/cgi-bin/recordUpdater.cgi?action=remove&name=AccessControlCard&recno=<***recno***>
Method	GET
Description	Remove the access control card record.
Example	http://192.168.1.108/cgi-bin/recordUpdater.cgi?action=remove&name=AccessControlCard&recno=121
Success Return	OK
Comment	Params in URL: ***recno*** : the index of record.

12.3.5 Get the Total Number of Records

Table 12-13

Syntax	http://<*server*>/cgi-bin/recordFinder.cgi?action=getQuerySize&name=AccessControlCard
Method	GET
Description	Get the access control card record number.
Example	http://192.168.1.108/cgi-bin/recordFinder.cgi?action=getQuerySize&name=AccessControlCard

Success Return	count = 100
Comment	-

12.4 Swiping Access Control Card Record

12.4.1 Query Swiping Card Records

Table 12-14

Syntax	http://<*server*>/cgi-bin/recordFinder.cgi?action=find&name=AccessControlCardRec[&<**paramName**>=<**paramValue**>…]
Method	GET
Description	Find the records of control door.
Example	http://192.168.1.108/cgi-bin/recordFinder.cgi?action=find&name=AccessControlCardRec&condition.CardNo=123456&StartTime=2014-8-25%200:02:32&EndTime=2014-8-25%201:02:32&count=1000
Success Return	**totalCount** = 1000 **found** = 500 records[0].RecNo=789 records [0].CardNo =123456 records[0].UserID =101 records [0].CreateTime=1386243731 records [0].**Status** =0 records [0].**Method** =1 records [0].**Door** =1 records [0].Password =654321
Comment	Params in URL: The paramName and paramValue are in the below table. Params in Response : **totalCount** : the record count which match condition **found** : the record count to return **Status** : the control result; 0 fail , 1 succeed **Method**: the way to open the door. 0 - password, 1 - card, 2 - first card then password, 3 - first password then card, 4 - remote, 5 - button, 6 - fingerprint, 7 – password + card + fingerprint, 8 - password + fingerprint, 9 - card+ fingerprint, 11 – more than one person open the door, 12 - key, 13 - Be forced to open the door with password. **Door**: the door index;

Appendix:

ParamName	**ParamValue type**	**Description**
count	integer	The record count, default 1024
condition.CardNo	string	Card Number
condition.StartTime	string	The start time, format : 2014-8-25%200:01:32

condition. EndTime	sting	The end time, format : 2014-8-25%200:02:32

12.5 Announcement Record

12.5.1 Insert Record

Table 12-15

Syntax	http://<*server*>/cgi-bin/recordUpdater.cgi?action=insert&name=Announcement&Content=<***Content***>&ExpirTime=<***ExpirTime***>&IssueTime=<***IssueTime***>&Title=<***Title***>&User=<***User***>&State=<***State***>&ReadFl ag=<***ReadFlag***>
Method	GET
Description	Insert the Announcement record.
Example	http://192.168.1.108/cgi-bin/recordUpdater.cgi?action=insert&name=Announcement&Content=string Data&ExpirTime=2012-01-01%2012:00:00&IssueTime=2012-01-01%2012:00:00&Title=Anounce1&Use r=101&State=0&ReadFlag=0
Success Return	OK
Comment	Params in URL: ***Content***: Announcement Content
	ExpirTime: the time when the Announcement expire, format: 2012-01-01%2012:00:00 ***IssueTime***: Announcement issue time, format: 2012-01-01%2012:00:00 ***Title***: title of the announcement ***User***: the number the Announcement issued to ***State***: the state of the Announcement. 0 init, 1 send , 2 overdue ***ReadFlag***: the read flag , 0 not read , 1 read.

12.6 Alarm Record

12.6.1 Query Alarm Record

Table 12-16

Syntax	http://<*server*>/cgi-bin/recordFinder.cgi?action=find&name=AlarmRecord[&StartTime=<***startTime***>&EndTime=<***endTime***>&count=<***countNo***>]
Method	GET
Description	Find the AlarmRecord record.
Example	http://192.168.1.108/cgi-bin/recordFinder.cgi?action=find&name=AlarmRecord&StartTime=2014-8-25

	%2000:02:32&EndTime=2014-8-25%2001:02:32&count=500
Success Return	**totalCount** = 1000 **found** = 500 records [0].RecNo=789 records [0].CreateTime=123456789 records [0].Channel=0 records [0].**SenseMethod**=DoorMagnetism records [0].RoomNumber=501 records [0].ReadFlag=0 records [0].**Comment**=Friend …
Comment	Params in URL: ***startTime***: The start time ,format : 2014-8-25%2000:01:32 ***endTime***: The end time, format: 2014-8-25%2000:02:32 ***countNo***: the number of records to get, The record count, default 1024 Params in Response : **totalCount** : the record count which match condition **found** : the record count to return **SenseMethod** :the range is { "DoorMagnetism", "PassiveInfrared", "GasSensor", "SmokingSensor", "WaterSensor", "ActiveInfrared", "CallButton", "UrgencyButton", "Steal", "Perimeter", "PreventRemove", "DoorBell" }

13 DVR Custom APIs

13.1 FileFindHelper

13.1.1 Create a File Finder

Table 13-1

Syntax	http://<server>/cgi-bin/FileFindHelper.cgi?action=startFind&condition.channel=<***channelNo***>&condition.startTime=<***start***>&condition.endTime=<***end***>&condition.streamType=<***stream***>[&condition.flags[0]=<***flag***>&condition.events[0]=<***event***>&combineMode.granularity=<***granularityValue***>&combineMode.ty pes[0]=<***combineType***>]
Method	GET

Description	Start Find files
Example	Find file in channel 1, event type is "AlarmLocal" or "VideoMotion", and time between 2014-1-1 12:00:00 and 2015-1-10 12:00:00 and combine "AlarmLocal" or "VideoMotion" files with granularity 16 , URL is: http://172.23.1.66/cgi-bin/fileFindHelper.cgi?action=startFind&condition.channel=1&condition.startTime=2014-1-1%2012:00:00&condition.endTime=2015-1-10%2012:00:00&condition.streamType=Main&condition.flags[0]=Event&condition.events[0]=AlarmLocal&condition.events[1]=VideoMotion&combineMode.granularity=16&combineMode.types[0]=AlarmLocal&combineMode.types[0]=VideoMotion
Success Return	result=08137
Comment	Start to find file with the above condition and combine files with certain type. If success, return find id, else return Error. Params in URL: ***channelNo***: in which channel you want to find the file, start from 1. ***start / end***: the start/end time when recording. ***flag***: which flags of the file you want to find. It is an array. The index starts from 0. The range of flag is {"Timing", "Marked", "Event", "Restrict"}. If omitted, find files with all the flags. ***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"}. This condition can be omitted. If omitted, find files of all the events. ***stream***: which video stream type you want to find. The range of stream is {"Main", "Extra1", "Extra2", "Extra3"}. ***combineType***: which types of the file you want to combined. It is an array. The index starts from 0. The range of combine type is {"AlarmLocal", "VideoMotion", "Timing", "VideoLoss"}. This condition can be omitted. If omitted, file will not be combined. ***granularityValue***: by which granularity to combine files Example: File 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]. Events[0]=AlarmLocal items[0]. VideoStream=Main items[0]. Length =790
	items[0]. Duration = 3600 File 2:

	items[0]. Channel =1 items[0]. StartTime =2011-1-1 13:00:00 items[0]. EndTime =2011-1-1 14:00:00 items[0]. Events[0]=AlarmLocal items[0]. VideoStream=Main items[0]. Length =790 items[0]. Duration = 3600 file1 and file2 will be combined to file3 File 3: items[0]. Channel =1 items[0]. StartTime =2011-1-1 12:00:00 items[0]. EndTime =2011-1-1 14:00:00 items[0]. Events[0]=AlarmLocal items[0]. VideoStream=Main items[0]. Length =1580 items[0]. Duration = 7200

13.1.2 Create a Motion File Finder

Table 13-2

Syntax	http://<server>/cgi-bin/FileFindHelper.cgi?action=startMotionFind&condition.channel=<***channelNo***>&condition.startTime=<***start***>&condition.endTime=<***end***>&condition.streamType=<***stream***>&motionRegion.senseLevel=<***level***>[&motionRegion.rects[***rectNo***][0]=<***rect0***>&motionRegion.rects[***rectNo***][1]=<***rect1***>
	&motionRegion.rects[***rectNo***][2]=<***rect2***>&motionRegion.rects[***rectNo***][3]=<***rect3***>]
Method	GET
Description	Start Find Motion files
Example	Find file in channel 1, event type is "AlarmLocal" or "VideoMotion", and time between 2014-1-1 12:00:00 and 2015-1-10 12:00:00, motion region is [0,0,21,17] URL is: http://172.23.1.66/cgi-bin/fileFindHelper.cgi?action=startMotionFind&condition.channel=1&condition.startTime=2014-1-1%2012:00:00&condition.endTime=2015-1-10%2012:00:00&condition.streamType=Main&condition.flags[0]=Event&condition.events[0]=AlarmLocal&condition.events[1]=VideoMotio&motionRegion.senseLevel=1&motionRegion.rects[1][0]=0&motionRegion.rects[1][1]=0&motionRegion.rects[1][2]=21&motionRegion.rects[1][3]=17
Success Return	result=08137
Comment	Start to find file with the above condition and combine files with certain type. If success, return find id, else return Error.

	Params in URL: ***channelNo***: in which channel you want to find the file, start from 1. ***start / end***: the start/end time when recording. ***flag***: which flags of the file you want to find. It is an array. The index starts from 0. The range of flag is {"Timing", "Marked", "Event", "Restrict"}. If omitted, find files with all the flags. ***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" }. This condition can be omitted. If omitted, find files of all the events. ***stream***: which video stream type you want to find. The range of stream is {"Main", "Extra1", "Extra2", "Extra3"}. ***level:*** the motion sensitive level, range is 0–6, 0 represent all level ***rectNo:*** the rects array index, start from 1 ***rect0*** & ***rect1*** & ***rect2*** & ***rect3*** : relative coordinates, rect0 and rect2 range is 0-21, rect1 and rect3 range is 0-17. {0,0,0,0} top-left, {21,0,0,0} top-right, {0,17,0,0} bottom-left, {21,17,0,0} bottom-right

13.1.3 Get the File Information Found by the Finder

Table 13-3

Syntax	http://<server>/cgi-bin/FileFindHelper.cgi?action=findNext&findId=<***findId***>&count=<***fileCount***>
Method	GET
Description	Find the next files no more than *fileCount* number.
Example	http://192.168.1.108/cgi-bin/FileFindHelper.cgi?action=findNext&findId=08137&count=100
Success Return	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]. fileType =dav items[0]. events[0]=AlarmLocal items[0]. streamType=Main items[0]. length =790 items[0]. duration = 3600
Comment	***findId:*** The find Id is created by API Create a file finder or API Create a motion file finder. Must create a finder before finding files.

13.1.4 Stop the Finder

Table 13-4

Syntax	http://<server>/cgi-bin/FileFindHelper.cgi?action=stopFind&findId=<***findId***>

Method	GET
Description	Stop find.
Example	http://192.168.1.108/cgi-bin/FileFindHelper.cgi?action=stopFind&findId =08137
Success Return	OK
Comment	***findId:*** The find Id is created by API Create a file finder or API Create a motion file finder. Must create a finder before finding files.

13.1.5 Get bound files

Table 13-5

Syntax	http://<server>/cgi-bin/FileFindHelper.cgi?action=getBoundFile&condition.channel=<***ChannelNo***>&condition.startTime=<***start***>&condition.endTime=<***end***>&condition.streamType=<***stream***>[&condition.flags[0]=<***flag***>&condition.events[0]=<***event***>]
Method	GET
Description	Get bound files.
Example	http://<server>/cgi-bin/FileFindHelper.cgi?action=getBoundFile&condition.channel=1&condition.startTime=2014-1-1%2012:00:00&condition.endTime=2015-1-10%2012:00:00&condition.streamType=Main&c ondition.flags[0]=Timing
Success Return	found=2 items[0]. channel =1 items[0]. startTime =2011-1-1 12:00:00 items[0]. endTime =2011-1-1 13:00:00 items[0]. flags [0]= Timing items[0]. streamType=Main items[0]. length =790 items[0]. duration = 3600
	items[1]. channel =1 items[1]. startTime =2011-1-1 13:00:00 items[1]. endTime =2011-1-1 14:00:00 items[1]. events[0]= Timing items[1]. streamType=Main items[1]. length =790 items[1]. duration = 3600
Comment	Params is same as FileFindHelper. startFind

13.2 BandLimit

13.2.1 getLimitState

Table 13-6

Syntax	http://<*server*>/cgi-bin/BandLimit.cgi?action=getLimitState
Method	GET
Description	Get bandwidth limit state.
Example	http://192.168.1.108/cgi-bin/bandLimit.cgi?action=getLimitState
Success Return	limit=true

Comment	

13.3 Record Files Protection

13.3.1 Add Protection

Table 13-7

Syntax	http://<*server*>/cgi-bin/FileManager.cgi?action=addConditionList&condition.Types[0]=<***paramValue***>&condition.StartTime=<***paramValue***>&condition.EndTime=<***paramValue***>&condition.Channel[0]=<***para mValue***>
Method	GET
Description	Add protection or access control for record files.
Example	http://192.168.1.108/cgi-bin/FileManager.cgi?action=addConditionList&condition.Types[0]=RecordRestrict&condition.Types[1]=RecordProtect&condition.StartTime=2014-7-3%2021:02:32&condition.EndT ime=2014-7-3%2023:02:32&condition.Channel[0]=0&condition.Channel[1]=3
Success Return	OK
Comment	In below table: ***TypeIndex*****:** The index of type array ***ChIndex*****:** The index of channel number array

Appendix:

ParamName	ParamValue type	Description
condition.Type[***TypeIndex***]	string	An array. The range is {“RecordProtect”, “RecordRestrict”}
condition.StartTime	string	The time format is "Y-M-D H-m-S", example 2011-7-3%2021:02:32
condition.EndTime	string	The time format is "Y-M-D H-m-S"
condition.Channel***[ChIndex]***	integer	Channel number starts from 1

13.3.2 Cancel Protection

Table 13-8

Syntax	http://<*server*>cgi-bin/FileManager.cgi?action=cancelConditionList&condition.Types[0]=<***paramValue***>&condition.StartTime=<***paramValue***>&condition.EndTime=<***paramValue***>&condition.Channel[0]=<***par amValue***>
Method	GET
Description	Cancel protection of record files.
Example	http://192.168.1.108/cgi-bin/FileManager.cgi?action=cancelConditionList&condition.Types[0]=RecordRestrict&condition.Types[1]=RecordProtect&condition.StartTime=2014-7-3%2021:02:32&condition.En dTime=2014-7-3%2023:02:32&condition.Channel[0]=0&condition.Channel[1]=3
Success Return	OK
Comment	***paramValue*** as Appendix above.

13.3.3 Remove Protection

Table 13-9

Syntax	http://<*server*>/cgi-bin/FileManager.cgi?action=removeConditionList&condition.Types[0]=<***paramValue***>&condition.StartTime=<***paramValue***>&condition.EndTime=<***paramValue***>&condition.Channel[0]=< ***paramValue***>
Method	GET
Description	Remove protection of record files.
Example	http://192.168.1.108/cgi-bin/FileManager.cgi?action=removeConditionList&condition.Types[0]=RecordRestrict&condition.Types[1]=RecordProtect&condition.StartTime=2014-7-3%2021:02:32&condition.E ndTime=2014-7-3%2023:02:32&condition.Channel[0]=0&condition.Channel[1]=3
Success Return	OK
Comment	***paramValue*** as Appendix above.

13.4 **Get Daylight**

Table 13-10

Syntax	http://<*server*>/cgi-bin/global.cgi?action=getDST

Method	GET
Description	Get daylight saving time state.
Example	http://192.168.1.108/cgi-bin/global.cgi?action=getDST
Success Return	result = 1
Comment	***result:*** 1/0, yes or not in daylight saving time

14 Other APIs

14.1 Discover Devices

14.1.1 Discover Devices on Internet

Table 14-1

Syntax	http://<*server*>/cgi-bin/deviceDiscovery.cgi?action=attach[&DeviceClass=<***deviceClass***>]
Method	GET
Description	Discover devices on internet.
Example	http://192.168.1.108/cgi-bin/deviceDiscovery.cgi?action=attach&DeviceClass=VTO
Success Return	deviceInfo[***index***].AlarmInputChannels=8 deviceInfo[***index***].AlarmOutputChannels=0 deviceInfo[***index***].DeviceClass=VTO deviceInfo[***index***].DeviceType=VTO2000A deviceInfo[***index***].HttpPort=80 deviceInfo[***index***].IPv4Address.DefaultGateway=172.12.0.1 deviceInfo[***index***].IPv4Address.DhcpEnable=false deviceInfo[***index***].IPv4Address.IPAddress=172.12.7.102 deviceInfo[***index***].IPv4Address.SubnetMask=255.255.0.0 deviceInfo[***index***].IPv6Address.DefaultGateway=2008::1 deviceInfo[***index***].IPv6Address.DhcpEnable=false deviceInfo[***index***].IPv6Address.IPAddress=2008::6/112 deviceInfo[***index***].Mac=00:01:5b:01:44:77 deviceInfo[***index***].MachineName=YZZ4DZ008D00031 deviceInfo[***index***].Port=37777 deviceInfo[***index***].RemoteVideoInputChannels=0 deviceInfo[***index***].SerialNo=YZZ4DZ008D00031 deviceInfo[***index***].Vendor=Multi deviceInfo[***index***].**Version**=1.200.0.0 deviceInfo[***index***].VideoInputChannels=1 deviceInfo[***index***].VideoOutputChannels=16
Comment	Params in URL: ***deviceClass***: in range of {VTO, VTH, VTT, VTS, VTNC, SHG} Params in Response : ***index*** : the array index which starts from 0.
	Version: Software Version

14.2 Flashlight

14.2.1 Flashlight config

- Get flashlight config

Table 14-2

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=getConfig&name=FlashLight
Method	GET
Description	Get Flashlight config. It does not recommend using it.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=getConfig&name=FlashLight
Success Return	***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	Params in Response: ***head*** = table.FlashLight

- Set flashlight config

Table 14-3

Syntax	http://<*server*>/cgi-bin/configManager.cgi?action=setConfig&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>…]
Method	GET
Description	Set Flashlight config.
Example	http://192.168.1.108/cgi-bin/configManager.cgi?action=setConfig&FlashLight.Enable=true&FlashLight.TimeSection[1][0]=1%2012:00:00-18:00:00
Success Return	OK
Comment	-

Appendix:

ParamName	ParamValue type	Description
FlashLight. Enable	bool	Enable
FlashLight. Brightness	integer	Brightness
FlashLight. TimeSection[***wd***][***ts***]	string	It is an effective time period for flash light every day. ***wd*** (week day) range is [0-6] (Sunday-Saturday)

		ts (time section) range is [0-23], it's index of time section 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 flashlight is effective between 12:00:00 and 18:00:00 at Monday.

15 Appendix

This section contains stream format. The Stream format is applied to Get real-time stream and Get playback stream.

15.1 Stream head

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;

Type=0x21 means the auxiliary packet;
Packet length means the packet total length, contains the packet header, maybe one or more extend header, and the media data.

15.2 Extend Header

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

Extend header length must be multiple of 4 bytes;

15.2.1 Audio extend header

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

Byte Order	8	9	10	11	12	13	14	15
Key	OperateId				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;
OperateId: it is valid when playback, which means this packet match with the playback control command.

15.2.2 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	OperateId			

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; OperateId is valid when playback, which means this video packet match with the playback control command.

15.2.3 Channel title extend header

Byte Order	0	1	2	3	4	5	6	…
Key	0x22	l en		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.

15.2.4 Time zone 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 Time Zone changes, the video packet must contain the Time Zone 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;

15.2.5 Event flag extend header

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

If the video frame contains 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.

15.2.6 auxiliary gap extend header

Byte	0	1	2	3	4	5	6	7
Order								
Key	0x24	Len(24)		reserved	OperateId			

Byte Order	8	9	10	11	12	13	14	15
Key	startTime				beginMs		reserved	

Byte Order	16	17	18	19	20	21	22	24
Key	endTime				endMs		reserved	

If there is a gap between the video frames, the auxiliary packet may contain the gap extend header, the first timestamp means gap start time, the second timestamp means gap end time.

OperateId: it is valid when playback, which means this packet match with the playback control command.