

HTTP API , Interface Specification

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

The HTTP-based video interface provides the functionality for controlling device and for getting, setting internal parameter .

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1 Overview

1.1 References

HTTP protocol Hypertext Transfer Protocol HTTP/1.0 HTTP/1.1

URL Uniform Resource Locator

1.2 Version Management

Version	Date	Comment
V2.0	2011-9-9	Compose CGI document.
V2.1	2011-10-20	Modify.
V2.2	2011-11-10	Update.
V2.3	2011-11-16	Modify.PTZ
V2.4	2012-02-01	Add example

2 General URL and parameters syntax

2.1 URL syntax

```
http://<servername>
```

The *<servername>* can be replaced with the name of the actual server.

Example: request for a web homepage

```
http://192.168.1.100
```

Server name: 192.168.2.72

2.2 Return data

The returned data from the server lists as follows. All data is returned as HTTP format.

Syntax: HTTP/1.0 <HTTP code> <HTTP text>

Example: HTTP/1.0 200 OK

HTTP/1.0 404 File Not Found

With the following HTTP code and meanings

HTTP code	HTTP text	Description
-----------	-----------	-------------

200	OK	The request has succeeded, but an application error can still occur, which will be returned as an application error code.
204	No Content	The server has fulfilled the request, but there is no new information to send back.
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.
409	Conflict	The request could not be completed due to a conflict with the current state of the resource.
500	Internal Error	The server encountered an unexpected condition that prevented it from fulfilling the request.
503	Service Unavailable	The server is unable to handle the request due to temporary overload.

2.3 Parameters syntax

Customer can get/set parameters and query device features and parameter range through url request, and server generates http response with contents in xml format.

2.3.1 Get / Set / Query parameters

2.3.1.1 Client Request

Method: GET/POST

Syntax:

```
http://<servername>/cgi/<cginame>?<parameter>=<setValue>[&<parameter>=<setValue>...]
```

setValue – the value of parameter to be set.

[...] – ... is optional.

2.3.1.2 Server response

```
HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n

<?xml version="1.0" encoding="utf-8"?>
<Message>
  <Header class="class" ></Header>
  <result code="code">description</result>
  <group>
    <parameter><type>value</type></parameter>
  </group>
</Message>
```

Remark:

Attribute **class**: parameter class. For example, mjpeg_get, mjpeg_set, net_get, net_set...

Label **code**: response code. For example, 2xx means successfully, 4xx means client error, 5xx means server error...

Label **group**: parameter name. For example, DeviceInfo, TimeInfo, StreamInfo...

Label **parameter**: parameter name. For example, Channel, Resolution, BitRate...

Label **type**: parameter type. For example, int, string...

For example

1 Get request response

Request:

```
http://<servername>/cgi/major_stream_get?Channel=setValue&Group=StreamInfo
```

Response:

HTTP/1.0 200 OK\r\n

Content-Type: text/html\r\n

```
<?xml version="1.0" encoding="utf-8"?>
<Message>
<Header class="major_stream_get"></Header>
<result code="200">Successfully</result>
<StreamInfo>
    <Resolution><string>1920x1080</string></Resolution>
    <BitRate><int>8000</int></BitRate>
    <FrameRate><int>25</int></FrameRate>
    <IPRate><int>30</int></IPRate>
</StreamInfo>
</Message>
```

Remark:

This content means current parameter values of the device.

2 Set request response

Request:

```
http://<servername>/cgi/major_stream_set?Channel=1&Group=StreamInfo&Resolution=720x576&IP
Rate=20
```

Response:

HTTP/1.0 200 OK\r\n

Content-Type: text/html\r\n

```
<?xml version="1.0" encoding="utf-8"?>
<Message>
<Header class="major_stream_set"></Header>
<result code="200">Successfully</result>
<StreamInfo>
    <Resolution><string>720x576</string></Resolution>
    <IPRate><int>20</int></IPRate>
</StreamInfo>
```

Remark:

This content means current parameter values of the device after setting.

3 Query request response

Request:

```
http://<servername>/cgi/major_stream_query?Group=StreamInfo
```

Response:

HTTP/1.0 200 OK\r\n

Content-Type: text/html\r\n

```
<?xml version="1.0" encoding="utf-8"?>
<Message>
<Header class="major_stream_query"></Header>
<result code="200">Successfully</result>
<StreamInfo>
    <Resolution><string>1280x720</string></Resolution>
    <BitRate><int>1000, 2000, 3000, 4000</int></BitRate>
    <FrameRate><int>1 ... 30</int></FrameRate>
    <IPRate><int>1 ... 30</int></IPRate>
</StreamInfo>
<StreamInfo>
    <Resolution><string>1920x1080</string></Resolution>
    <BitRate><int>1000, 2000, 3000, 4000, 6000, 8000</int></BitRate>
    <FrameRate><int>1 ... 30</int></FrameRate>
    <IPRate><int>1 ... 30</int></IPRate>
</StreamInfo>
</Message>
```

Remark:

1. This content means features and parameter range supported by the device
2. In this case, the device supports the following features: Resolution, BitRate, FrameRate, IPRate.
3. Format 'value1, value2' means only value1 and value 2 are supported
Format 'value1 ... value2' means every value between value1 and value2 is supported.
4. If the content of an element is empty, it means that its value can only be get. For example,
<DeviceID><string></string></DeviceID> means you have the feature 'DeviceID' and you could get its value, but not set its value.
5. For elements with string type, value 'valid string' means that only reasonable strings are allowed when you set their values. For example, <IPAddress><string>valid string</string></IPAddress> means you must use legal IP address.

2.3.1.3 Return code

Code	code	Description
2xx	200	Successfully
4xx	401	Invalid Channel number.
	402	Invalid parameter value.
	403	Invalid parameter name.
5xx	501	Feature does not support by server.
	502	Feature supported by server but not available in current mode.
	503	Server failed.

3 API

3.1 System

3.1.1 Get System Information

Get Device Information

`http://<servername>/cgi/sys_get?Group=DeviceInfo`

Get Time Information

`http://<servername>/cgi/sys_get?Group=TimeInfo`

3.1.2 Set System Information

Set Time Information

`http://<servername>/cgi/sys_set?Group=TimeInfo&TimeMethod=setValue[&CameraTime=setValue][&TimeZone=setValue][&DaylightEnable=setValue][&NTPServerIP=setValue]`

Example1: Manually set device time.

`http://192.168.1.100/cgi/sys_set?Group=TimeInfo&TimeMethod=0&CameraTime=10000`

Example2: Synchronize time with NTP server 192.168.1.2.

`http://192.168.1.100/cgi/sys_set?Group=TimeInfo&TimeMethod=1&NTPServerIP=192.168.1.2`

3.1.3 Query System Information

`http://<servername>/cgi/sys_query?Group=GroupName`

GroupName All, DeviceInfo and TimeInfo

Example:

http://192.168.1.100/cgi/sys_query?Group=All

3.1.4 System parameters

group	parameter name	value type	setValue	description
DeviceInfo	DeviceID	string		
	Firmware	string		
TimeInfo	TimeMethod	int	0,1	0 = Manually set device time 1 = Synchronize time with NTP server
	CameraTime	int	1...n seconds	Remark: If you want to set time, you will count the total seconds since 1970/1/1 00:00:00.
	DaylightEnable	int	0,1	0 = disable 1 = enable
	TimeZone	int	-720=(GMT-12:00) International Date Line West -660=(GMT-11:00) Midway Island, Samoa -600=(GMT-10:00) Hawaii -540=(GMT-09:00) Alaska -480=(GMT-08:00) Pacific Time(US & Canada); Tijuana -420=(GMT-07:00) Arizona, Chihuahua, La Paz, Mazatlan, Mountain Time(US & Canada) -360=(GMT-06:00) Central America, Central Time(US & Canada), Guadalajara, Mexico City, Monterrey, Saskatchewan -300=(GMT-05:00) Bogota, Lima, Quito, Eastern Time(US & Canada), Indiana(East) -240=(GMT-04:00) Atlantic Time(Canada), Caracas, La Paz, Santiago -210=(GMT-03:30) Newfoundland -180=(GMT-03:00) Brasilia, Buenos Aires, Georgetown, Greenland -120=(GMT-02:00) Mid-Atlantic	

			<p>-60=(GMT-01:00) Azores, Cape Verde Is.</p> <p>0=(GMT)Casablanca, Monrovia, Greenwich Mean Time; Dublin, Edinburgh, Lisbon, London</p> <p>60=(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna, Belgrade, Bratislava, Budapest, Ljubljana, Prague, Brussels, Copenhagen, Madrid, Paris, Sarajevo, Skopje, Warsaw, Zagreb, West Central Africa</p> <p>120=(GMT+02:00) Athens, Beirut, Istanbul, Minsk, Bucharest, Cairo, Harare, Pretoria, Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius, Jerusalem</p> <p>180=(GMT+03:00) Baghdad, Kuwait, Riyadh, Moscow, St. Petersburg, Volgograd, Nairobi</p> <p>210=(GMT+03:30) Tehran</p> <p>240=(GMT+04:00) Abu Dhabi, Muscat, Baku, Tbilisi, Yerevan</p> <p>270=(GMT+04:30) Kabul</p> <p>300=(GMT+05:00) Ekaterinburg, Islamabad, Karachi, Tashkent</p> <p>330=(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi</p> <p>345=(GMT+05:45) Kathmandu</p> <p>360=(GMT+06:00) Almaty, Novosibirsk, Astana, Dhaka, Sri Jayewardenepura</p> <p>390=(GMT+06:30) Rangoon</p> <p>420=(GMT+07:00) Bangkok, Hanoi, Jakarta, Krasnoyarsk</p> <p>480=(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi, Irkutsk, Ulaan Bataar, Kuala Lumpur, Singapore, Perth, Taipei</p> <p>540=(GMT+09:00) Osaka, Sapporo, Tokyo, Seoul, Yakutsk</p> <p>570=(GMT+09:30) Adelaide, Darwin</p> <p>600=(GMT+10:00) Brisbane, Canberra, Melbourne, Sydney, Guam, Port Moresby, Hobart, Vladivostok</p> <p>660=(GMT+11:00) Magadan, Solomon Is., New Caledonia</p> <p>720=(GMT+12:00) Auckland, Wellington, Fiji, Kamchatka, Marshall Is.</p> <p>780=(GMT+13:00) Nuku'alofa</p>	
	NTPServerIP	string	0.0.0.0-255.255.255.255	

3.2 Video (Stream specific)

3.2.1 Major Stream

3.2.1.1 Get Major Stream Information

`http://<servername>/cgi/major_stream_get?Channel=setValue&Group=StreamInfo`

3.2.1.2 Set Major Stream Information

`http://<servername>/cgi/major_stream_set?Channel=setValue&Group=StreamInfo[&Resolution=setValue][&BitRate=setValue][&FrameRate=setValue][&IPRate=setValue][&VideoQuality=setValue]`

Example 1: Set all parameter.

`http://192.168.1.100/cgi/major_stream_set?Channel=1&Group=StreamInfo&Resolution=720P&BitRate=1000&FrameRate=10&IPRate=10&VideoQuality=2`

Example 2: Set FrameRate.

`http://192.168.1.100/cgi/major_stream_set?Channel=1&FrameRate=10`

3.2.1.3 Query Major Stream Information

`http://<servername>/cgi/major_stream_query?Group=GroupName`
GroupName: All and StreamInfo

3.2.2 Minor Stream

3.2.2.1 Get Minor Stream Information

`http://<servername>/cgi/minor_stream_get?Channel=setValue&Group=StreamInfo`

3.2.2.2 Set Minor Stream Information

`http://<servername>/cgi/minor_stream_set?Channel=setValue&Group=StreamInfo[&Resolution=setValue][&BitRate=setValue][&FrameRate=setValue][&IPRate=setValue][&VideoQuality=setValue]`

3.2.2.3 Query Minor Stream Information

`http://<servername>/cgi/minor_stream_query?Group=GroupName`
GroupName: All and StreamInfo

3.2.3 MJPEG

3.2.3.1 Get MJPEG Information

`http://<servername>/cgi/mjpeg_get?Channel=setValue&Group=StreamInfo`

3.2.3.2 Set MJPEG Information

`http://<servername>/cgi/mjpeg_set?Channel=setValue&Group=StreamInfo[&Resolution=setValue][&FrameRate=setValue][&VideoQuality=setValue]`

3.2.3.3 Query MJPEG Information

`http://<servername>/cgi/mjpeg_query?Group=GroupName`
GroupName: All and StreamInfo

3.2.4 Video parameters (Stream specific)

group	parameter name	value type	<i>setValue</i>	description
Channel	Channel	int	1 ... n	1 = Channel 1 ... n = Channel n
StreamInfo	Resolution	string	...	For example 720x480 720x576 1280x720 1920x1080 720P 960P 4CIF ...
	BitRate	int	0, 1 ...n	0 = vbr 1 = 1K ... 1000 = 1000K ...
	FrameRate	int	1 ... n.	
	IPRate	int	1 ...n.	
	VideoQuality	int	0 ... 4	0 = Lowest 1 = Low 2 = Average 3 = High 4 = Highest

3.3 Video (Image specific)

3.3.1 Get Video Information

Get Image Information

`http://<servername>/cgi/image_get?Channel=setValue&Group=ImageInfo`

Get OSD Information

`http://<servername>/cgi/image_get?Channel=setValue&Group=OSDInfo`

3.3.2 Set Video Information

Set Image Information

`http://<servername>/cgi/image_set?Channel=setValue&Group=ImageInfo[&Format=setValue][&Hue=setValue][&Brightness=setValue][&Saturation=setValue][&Contrast=setValue]`

Example 1: Set all parameter.

`http://192.168.1.100/cgi/image_set?Channel=1&Group=ImageInfo&Hue=128&Brightness=128&Saturation=128&Contrast=128`

Example 2: Set Contrast.

`http://192.168.1.100/cgi/image_set?Channel=1&Group=ImageInfo&Contrast=128`

Set OSD Information

`http://<servername>/cgi/image_set?Channel=setValue&Group=OSDInfo[&TextOSDStatus=setValue&TextOSDTitle=setValue&TextOSDX=setValue&TextOSDY=setValue][&DateOSDStatus=setValue&DateFormat=setValue&DateOSDX=setValue&DateOSDY=setValue][&TimeOSDStatus=setValue&TimeOSDX=setValue&TimeOSDY=setValue]`

Example : Set Text OSD.

`http://<servername>/cgi/image_set?Channel=1&Group=OSDInfo&TextOSDStatus=1&TextOSDTitle=Hello&TextOSDX=20&TextOSDY=30`

3.3.3 Query Video Information

`http://<servername>/cgi/image_query?Group=GroupName`
GroupName: All, ImageInfo and OSDInfo

3.3.4 Video parameters (Image specific)

group	parameter name	value type	setValue	description
Channel	Channel	int	1 ... n	1 = Channel 1 ... n = Channel n
ImageInfo	Format	int	0,1	0 = PAL 1 = NTSC
	Hue	int	0 ... 255	0 = Lowest ... 255 = Highest
	Brightness			0 = Darkest ... 255 = Brightest

	Saturation			0 = Lowest ... 255 = Highest
	Contrast			0 = Lowest ... 255 = Highest
OSDInfo	TextOSDStatus	int	0,1	0 = off 1 = on
	TextOSDTitle	string	any string	
	TextOSDX	int	0...99	X,Y coordinate
	TextOSDY			
	DateOSDStatus	int	0,1	0 = off 1 = on
	DateFormat	int	1...3	1 = MM/DD/YYYY 2 = DD/MM/YYYY 3 = YYYY/MM/DD
	DateOSDX	int	0...99	X,Y coordinate
	DateOSDY			
	TimeOSDStatus	int	0,1	0 = off 1 = on
	TimeOSDX	int	0...99	X,Y coordinate
	TimeOSDY			

3.4 Audio

3.4.1 Get Audio Information

`http://<servername>/cgi/audio_get?Channel=setValue&Group=AudioInfo`

3.4.2 Set Audio Information

`http://<servername>/cgi/audio_set?Channel=setValue&Group=AudioInfo[&AudioCodec=setValue][&SampleRate=setValue][&BitRate=setValue][&Track=setValue]`

3.4.3 Query Audio Information

`http://<servername>/cgi/audio_query?Group=GroupName`
GroupName: All and AudioInfo

3.4.4 Audio parameters

group	parameter name	value type	setValue	description
Channel	Channel	int	1 ... n	1 = Channel 1 ... n = Channel n

AudioInfo	AudioCodec	string	G711	
	SampleRate	int	8,44...n	8=8K 44=44K
	BitRate	int	...16...24...32...40...64...80...n	16 = 16K ... 80 = 80K ...
	Track	int	0,1	0 = mono 1 = stereo

3.5 PTZ

3.5.1 Get PTZ Information

Get PTZ Information

`http://<servername>/cgi/ptz_get?Channel=setValue&Group=PTZCtrlInfo`

3.5.2 Set PTZ Information

Set Stop

`http://<servername>/cgi/ptz_set?Channel=setValue&Group=PTZCtrlInfo&Stop=setValue`

Set Movement

`http://<servername>/cgi/ptz_set?Channel=setValue&Group=PTZCtrlInfo[&Direction=setValue][&PanSpeed=setValue][&TiltSpeed=setValue]`

Example : Set all parameter.

`http://19.168.1.100/cgi/ptz_set?Channel=1&Group=PTZCtrlInfo&Direction=up&PanSpeed=6&TiltSpeed=6`

Set Iris, Zoom, Focus

`http://<servername>/cgi/ptz_set?Channel=setValue&Group=PTZCtrlInfo[&Iris=setValue][&Zoom=setValue][&Focus=setValue]`

Example : Set Iris open.

`http://192.168.1.100/cgi/ptz_set?Channel=1&Group=PTZCtrlInfo&Iris=1`

Set Auto Scan

`http://<servername>/cgi/ptz_set?Channel=setValue&Group=PTZCtrlInfo[&AutoScan=setValue]`

Set Preset

`http://<servername>/cgi/ptz_set?Channel=setValue&Group=PTZCtrlInfo&PresetNumber=setValue&Preset=setValue[&PresetTitle=setValue]`

Example Set Preset 1.

`http://192.168.1.100/cgi/ptz_set?Channel=1&Group=PTZCtrlInfo&PresetNumber=1&Preset=0`

Example 2: Call Preset 1.

`http://192.168.1.100/cgi/ptz_set?Channel=1&Group=PTZCtrlInfo&PresetNumber=1&Preset=1`

Set Pattern

`http://<servername>/cgi/ptz_set?Channel=setValue&Group=PTZCtrlInfo&PatternNumber=setValue&Pattern=setValue`

Set Auto Pan

`http://<servername>/cgi/ptz_set?Channel=setValue&Group=PTZCtrlInfo&AutoPanNumber=setValue&AutoPan=setValue`

Set Current Position

`http://<servername>/cgi/ptz_set?Channel=setValue&Group=PTZCtrlInfo&Model=setValue[&Pan=setValue][&Tilt=setValue][&ZoomPosition=setValue]`

3.5.3 Query PTZ Information

`http://<servername>/cgi/ptz_query?Group=GroupName`
GroupName: All and PTZCtrlInfo

3.5.4 PTZ parameters

group	parameter name	value type	setValue	description
Channel	Channel	int	1 ... n	1 = Channel 1 ... n = Channel n
PTZCtrlInfo	Stop	int	0	All PTZ operation will be stopped
	Direction	int	1...8	1= up 2= down 3= left 4= right 5= upleft 6= downleft 7= upright 8= downright
	PanSpeed	int	0 ...63	
	TiltSpeed	int	0...63	
	Iris	int	0,1	0= Iris Close 1= Iris Open

	Zoom	int	0,1	0= Zoom Out 1= Zoom In
	Focus	int	0,1	0= Focus Far 1= Focus Near
	AutoScan	int	1	1=start
	Preset	int	0,1	0=Set Preset 1=Call Preset
	PresetNumber	int	1...255	
	PresetTitle	string		
	Pattern	int	0,1,2	0= Pattern Start Position 1= Pattern End Position 2= Pattern Run
	PatternNumber	int	1...4	
	AutoPan	int	0,1,2	0= AutoPan Start Position 1= AutoPan End Position 2= AutoPan Run
	AutoPanNumber	int	1...4	
	Model	int	0,1	0= Absolute 1= Relative
	Pan	int	0...36000	0=0° * 100 ... 36000=360° *100
	Tilt	int	0...36000	0=0° * 100 ... 36000=360° *100
	ZoomPosition	int	0...65535	<p>ZoomPosition = (desired_zoom_position/zoom_limit) *65535;</p> <p>Remark: desired_zoom_position=OpticZoom;</p> <p>zoom_limit = (Optic maximum Zoom)*(Digital maximum Zoom);</p> <p>For example: Optic Zoom = 30 Optic maximum Zoom = 35 Digital maximum Zoom = 12 ZoomPosition =(30/420) * 65535=4681</p>

3.6 Net**3.6.1 Get Net Information****Get Address Information**

`http://<servername>/cgi/net_get?Group=AddressInfo`

Get SMTP Information

`http://<servername>/cgi/net_get?Group=SMTPInfo`

Get FTP Information

`http://<servername>/cgi/net_get?Group=FTPInfo`

3.6.2 Set Net Information**Set Address Information**

`http://<servername>/cgi/net_set?Group=AddressInfo[&IPAddress=setValue][&SubnetMask=setValue][&Gateway=setValue]`

Set SMTP Information

`http://<servername>/cgi/net_set?Group=SMTPInfo[&SMTPServerIP=setValue][&SMTPUsername=setValue&SMTPPassword=setValue&SMTPAuth=setValue][&ToMail=setValue][&FromMail=setValue][&CcMail=setValue]`

Set FTP Information

`http://<servername>/cgi/net_set?Group=FTPInfo[&FTPServerIP=setValue][&FTPUsername=setValue&FTPPassword=setValue]`

3.6.3 Query Net Information

`http://<servername>/cgi/net_query?Group=GroupName`
 GroupName: All, AddressInfo, SMTPInfo, and FTPInfo

3.6.4 Net parameters

Parameter	Parameter Name	Value type	setValue	Description
AddressInfo	IPAddress	string	0.0.0-255.255.255.255	
	SubnetMask			
	Gateway			
	AddressType	int	0,1	0 =Manually Configured 1 = Assigned by DHCP

SMTPInfo	SMTPServerIP	string	0.0.0.0-255.255.255.255	
	SMTPUsername		Any valid string	
	SMTPPassword			
	ToMail	string		
	CcMail		xxx@xxx.com	
	FromMail			
	SMTPAuth	int	0,1	0 = Authentication off 1 = Authentication on
FTPInfo	FTPServerIP	string	0.0.0.0-255.255.255.255	
	FTPUsername		Any valid string	
	FTPPassword			

3.7 Alarm

3.7.1 Get Alarm Information

Get I/O Trigger Information

`http://<servername>/cgi/alarm_get?Group=IOTrigInfo`

Get Motion Detection Information

`http://<servername>/cgi/alarm_get?Channel=setValue&Group=MDInfo`

Get Alarm Access Scope

`http://<servername>/cgi/alarm_get?Group=AccessScopeInfo`

Get I/O Access Information

`http://<servername>/cgi/alarm_get?Group=IOAccessInfo`

Get Motion Detection Access Information

`http://<servername>/cgi/alarm_get?Channel=setValue&Group=MDAccessInfo`

3.7.2 Set Alarm Information

Set I/O Trigger Information

`http://<servername>/cgi/alarm_set?Group=IOTrigInfo[&IOTrigNum=setValue][&IOTrig=setValue]`

Example Set IO Trigger 1 Grounded Circuit.

`http://192.168.1.100/cgi/alarm_set?Group=IOTrigInfo&IOTrigNum=1&IOTrig=0`

Set Motion Detection Information

`http://<servername>/cgi/alarm_set?Channel=setValue&Group=MDInfo&MDArea=setValue[&MDEnable=setValue][&MDSensitivity=setValue][&X0=setValue&Y0=setValue&X1=setValue&Y1=setValue]`

Example: Set Motion Detection Area 1, enable, sensitivity is 15,area is (5, 10), (20, 30).

`http://192.168.1.100/cgi/alarm_set?Channel=1&Group=MDInfo&MDArea=1&MDEnable=1&MDSensitivity=15&X0=5&Y0=10&X1=20&Y1=30`

Set Alarm Access Scope

`http://<servername>/cgi/alarm_set?Group=AccessScopeInfo&AlarmAccessScope=setValue`

Set I/O Access Information

`http://<servername>/cgi/alarm_set?Group=IOAccessInfo&IOTrigNum=setValue[&IOAlarm1=setValue][&...][&IOAlarmI=setValue][&Mail=setValue][&FTP=setValue][&Audio=setValue][&SDSave=setValue]`

Example: Set I/O Trigger 1, IO Alarm1 on, IO Alarm2 off, Mail Alarm off, FTP Alarm on, Audio Alarm on.

`http://192.168.1.100/cgi/alarm_set?Group=IOAccessInfo&IOTrigNum=1&IOAlarm1=1&IOAlarm2=0&Mail=0&FTP=1&Audio=1`

Set Motion Detection Alarm Access

`http://<servername>/cgi/alarm_set?Channel=setValue&Group=MDAccessInfo&MDArea=setvalue[&IOAlarm1=setValue][&...][&IOAlarmI=setValue][&Mail=setValue][&FTP=setValue][&Audio=setValue][&SDSave=setValue]`

Example: Set Motion Detection Area 2, IO Alarm1 on, IO Alarm2 off, Mail Alarm off, FTP Alarm on, Audio Alarm on.

`http://192.168.1.100/cgi/alarm_set?Channel=1&Group=MDAccessInfo&MDArea=2&IOAlarm1=1&IOAlarm2=0&Mail=0&FTP=1&Audio=1`

3.7.3 Query Alarm Information

`http://<servername>/cgi/alarm_query?Group=GroupName`

GroupName: All, IOTrigInfo, MDInfo, AccessScopeInfo, IOAccessInfo, and MDAccessInfo

3.7.4 Alarm parameters

Parameter	Parameter Name	Value type	<i>setValue</i>	Description
Channel	Channel	int	1 ... n	1 = Channel 1 ... n = Channel n

IOTrigInfo	IOTrigNum	int	1...n	
	IOTrig	int	0,1	0 = Grounded Circuit 1 = Open Circuit
MDInfo	MDArea	int	0,1...n	0 = All Area 1 = Area 1 ... n = Area n
	MDEnable	int	0,1	0 = disable 1 = enable
	MDSensitivity	int	1...100	1=the most sensitive 100=the least sensitive
	(X0, Y0), (X1, Y1),	int	0...99	X,Y coordinate
AccessScopeInfo	AlarmAccessScope	int	0,1	0 = Net Access 1 = Local Access
IOAccessInfo	IOTrigNum	int	1...n	
	IOAlarms <i>i</i>	int	0,1	1 = I/O Alarm on 0 = I/O Alarm off
	<i>i</i>	int	1...n	<i>i</i> = I/O Alarm Number
	Mail	int	0,1	1 = Mail Alarm on 0 = Mail Alarm off
	FTP	int	0,1	1 = FTP Alarm on 0 = FTP Alarm off
	Audio	int	0,1	1 = Audio Alarm on 0 = Audio Alarm off
	SDSave	int	0,1	1 = SDSave Alarm on 0 = SDSave Alarm off
MDAccessInfo	MDArea	int	1...n	0 = All Area 1 = Area 1 ... n = Area n
	IOAlarms <i>i</i>	int	0,1	1 = I/O Alarm on 0 = I/O Alarm off
	<i>i</i>	int	1...n	<i>i</i> = I/O Alarm Number
	Mail	int	0,1	1 = Mail Alarm on 0 = Mail Alarm off
	FTP	int	0,1	1 = FTP Alarm on 0 = FTP Alarm off
	Audio	int	0,1	1 = Audio Alarm on 0 = Audio Alarm off

	SDSave	int	0,1	1 = SDSave Alarm on 0 = SDSave Alarm off
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3.8 JPEG / MJPEG

3.8.1 Get JPEG

<http://<servername>/jpgimage/Channel/image.jpg>

3.8.2 Get MJPEG

<http://<servername>/mjpgstreamreq/Channel/image.jpg>

Remark: If you want to stop get MJPEG; you can close the connection of request.

3.8.3 JPEG / MJPEG parameters

parameter name	value type	<i>setValue</i>	description
Channel	int	1 ... n	1 = Channel 1 ... n = Channel n