Grandstream Networks, Inc.

Grandstream Video Surveillance HTTP API

Version 1.0.0.29

Contents

DOCUMENT OVERVIEW

Grandstream Video Surveillance API (Application Programming Interface) supports HTTP 1.0 protocol (RFC1945). This document explains in detail the parameter of functions in client side, via the supported GET/POST method. Users will require administrator privilege to retrieve or set the parameters.

Software Version Requirement

The current official firmwares from Grandstream about the surveillance products are all supported.

URL format:

Client➔Server

http://<*servername*>/goform/<*param*>?cmd=<*value*>&<*parameter*>=<*value*>&...

Note: <param> is used to mark the different function modules

Example 1:

Get device status.

http://<*servername*>/goform/systeminfo?cmd=get

Example 2: POST

POST /goform/systeminfo HTTP/1.0\r\n Content-Type: application/x-www-form-urlencoded\r\n Context-type: text/xml;charset=utf-8\r\n Content-Length: xxx\r\n \r\n cmd=get\r\n

Server➔Client

HTTP/1.0 <HTTP code> <HTTP text>\r\n

Example:

Get device status

http/1.0 200 OK\r\n productmode=GXV3601\r\n hardwareversion=V0.2B\r\n partnumber=9670000302B\r\n bootloaderversion=1.0.2.5\r\n coreversion=1.2.0.1\r\n baseversion=1.2.0.5\r\n firmwareversion=1.2.0.5\r\n systemrun=641\r\n mac=000B821EA32F\r\n

URL Parameter Definitions

<parameter>=<value>	Values	Description
cmd=<string>	add/remove/set/get /search/reg	Operation command type (Required). add: adding client parameter remove: deleting client parameter set: setting client parameter get: getting client parameter search: searching Wi-Fi SSID reg: registering DDNS account
channel=<int>	0, 1, 2, 3	Channel 0-3: Some parameters require the assigned channel: e.g. audio/video setting and motion detection. If the channel is not assigned, the default channel 0 will be returned. For DVS, channel is: 0-3. This parameter not applied to IPCamera

Common URL Format

Format Description	The Corresponding Format
Devices with multiple channels (GXV3504) will use channel number as separators when getting parameters. All the parameters are ordered by level.	channel=0\r\n <param>=<value>\r\n …… channel=1\r\n <param>=<value>\r\n …… channel=2\r\n <param>=<value>\r\n …… channel=3\r\n <param>=<value>\r\n ……
Index is used as mark when multiple parameters with same lever are applied. e.g.: 16 motion detection regions in channel 0	channel=0\r\n ……. md.regn.index=0\r\n <param>=<value>\r\n …… md.regn.index=1\r\n <param>=<value>\r\n …… md.regn.index=2\r\n <param>=<value>\r\n ……

	md.regn.index=3\r\n <param>=<value>\r\n ……
“count” and “id” are used to differentiate when same lever of parameters with uncertain number of format used. e.g.: Schedule of motion detect region	md.regn.schedule.count=3\r\n md.regn.schedule.id=1 md.regn.index=0 md.regn.schedule.dayset=7 md.regn.schedule.starttime=0 md.regn.schedule.endtime=86399 md.regn.schedule.id=2 md.regn.index=0 md.regn.schedule.dayset=1 md.regn.schedule.starttime=0 md.regn.schedule.endtime=4879 md.regn.schedule.id=3 md.regn.index=1 md.regn.schedule.dayset=7 md.regn.schedule.starttime=0 md.regn.schedule.endtime=86399 …….

Responses from the Device

HTTP/1.0 <*HTTP code*> <*HTTP text*>\r\n

HTTP Code	HTTP Text	Description
200	OK	Request successful. It does not mean set/delete/add successful until receiving “Successful\r\n”. Successful Need Reboot\r\n: configure successful but it would take effect after reboot. No Privilege\r\n: incorrect privilege. <param> Invalid\r\n: invalid parameter. <param> Missing\r\n: missing parameter.
400	Bad Request	Bad request or request failed.
401	Unauthorized	Authorization failed.
404	Not Found	Not found due to incorrect command format or incorrect data.
503	Service Unavailable	This message returned when the server busy or unavailable (e.g.: retrieve/set/add/delete failed or busy)

Example:

Request includes invalid file names.

HTTP/1.0 404 Not Found\r\n

PARAMETERS

1. Audio/Video Parameters

Support method: **cmd = set/get**

If devices support 2 streams, they are called primary stream and secondary stream, e.g.:

http://<servername>/goform/audio_video?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
channel=<int>	0, 1, 2, 3	Channel numbers in integer. Default 0 for IP Camera.
video.primary.encoder=<int> video.secondary.encoder=<int>	96, 26	Video codec: 96: H264 26: MJPEG (not supported by some models) This parameter needs to be set along with the parameter of bitrate.
video.primary.resolution=<int> video.secondary.resolution=<int>	width(2 bytes)| height(2 bytes) First 2 bytes for width of pixels; Last 2 bytes for height of pixels.	Video resolution. Varies among different device models and the NTSC/PAL format used.
video.primary.bitrate=<int> video.secondary.bitrate=<int>	16, 32, 64, 1024…	Video bit rate. Varies among different device models.
video.primary.brtype=<int> video.secondary.brtype=<int>	0, 1	0: VBR(Variable bitrate) 1: CBR(Constant bitrate)
video.primary.framerate=<int> video.secondary.framerate=<int>	1-30	Frame rate. Varies among different device models and NTSC/PAL format.
video.primary.iframe=<int> video.secondary.iframe=<int>	1-100	I frame interval.
video.primary.imagequality=<int> video.secondary.imagequality=<int>	1-5	Image quality: Level 1-5. The lower the value the greater the image quality (only valid with VBR configuration)
audio.primary.encoder=<int> audio.secondary.encoder=<int>	0, 1, 2, 3, 4	Audio codec. 0: pcmu 1: pcma 2: g726 (valid only for

		GXV3601/350x/3611LL/3611HD/3615/3615W) 3. disabled 4. AAC (valid only for GXV3651FHD/3662HD/3615WP_HD/3500) Some device models may only support audio.primary.encoder” (share "audio.primary.encoder")
audio.primary.bitrate=<int> audio.secondary.bitrate=<int>	16, 32	Audio bitrate. Some device models may only support audio.primary.encoder” (share “audio.primary.encoder")
audio.linein=<int>	0, 1	Audio input
audio.lineout=<int>	0, 1	Audio output
audio.microphone.volume=<int>	(1-10) Valid for: GXV3601/3601LL/3601HD/3611LL/3611HD/3501/3504/3615/3615W (1-5) Valid for GXV3651FHD/3662HD/3615WP_HD/3500	Audio input volume
audio.speaker.volume=<int>	(1-10) Valid for: GXV3601/3601LL/3601HD/3611LL/3611HD/3501/3504/3615/3615W (0-31) Valid for GXV3651FHD/3662HD/3615WP_HD/3500	Audio output volume
audio.chip.type=<int>	0, 1, 0xFF	Audio chip type (Read Only, not savable) 0: AIC33 (default)

		1: AIC3104 0xFF: None
ntscpal.type=<int>	0, 1	Video format (Read Only, not savable) 0:PAL 1:NTSC
power.frequency=<int>	50, 60, 61	Power frequency. Indoor 50: 50 Indoor 60: 60 Outdoor: 61 (For GXV3651_FHD/3662_HD only, not for other models)

Example:

Set Audio/Video parameters.

```
http://192.168.86.6/goform/audio_video?cmd=set&channel=0&video.primary.encoder=96

200 OK\r\n
Successful\r\n
```

2. OSD Settings

Support method: **cmd = set/get**

http://<servername>/goform/osd?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
channel=<int>	0, 1, 2, 3	Channel numbers in integer. Default 0 for IP Camera.
osdposition=<int>	0, 1	Time OSD position. 0: top 1: bottom
osdtimeshow=<int>	0, 1	Display the time OSD 0: Not display 1: Display
osdtextshow=<int>	0, 1	OSD text: 0: Not display 1: Display
osdopacity=<int>	0, 10, 20…100.	OSD Opaque lever (%) (GXV3601/3601LL/3601HD/3611LL/3611HD/3501/3504/3615/3615W Only)
osdcolor =<string>	(GXV3601/3601LL/3601HD/3611L	OSD color 0xFFFFFE: Auto

	L/3611HD/3501/3504/3615/3615W Only)	0xFFFFFF: White 0xFF0000: Red 0x800080: Purple 0xFF6100: Orange 0x0000FF: Blue 0xFFFF00: Yellow 0x008000: Green 0x00FFFF: Cyan 0x000000: Black
osdtext=<string>		OSD; maximum 63 bytes.
osdtextindex=<int>	0, 1, 2…	OSD index number (pending)

Example:

http://192.168.86.6/goform/osd?cmd=set&osdposition=1&osdtimeshow=0&osdtextshow=0&osdopacity=20&osdcolor =0xFFFFFE&osdtext=12345 200 OK\r\n Successful\r\n

3. Network Parameters

Support **cmd = set/get**, it will take effect after the reboot.

http://<servername>/goform/network?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
httpport=<int>		HTTP port
enabledhcp=<int>	0, 1	DHCP. 0: disable 1: enable
ipaddress=<string>	192.168.1.123	IP Address. Not valid when starting DHCP.
subnetmask=<string>	255.255.255.0	Subnet mask
defaultgateway=<string>	192.168.1.1	Default gateway
autodns=<int>	0, 1	0: Preferred DNS server 1: Automatically obtain DNS server
dnsserver.primary=<string>		Primary DNS server
dnsserver.standby=<string>		Backup/secondary DNS server

Example：

http://192.168.86.6/goform/network?cmd=set&channel=0&autodns=1&ipadress=192.168.86.145

200 OK\r\n
Successful Need Reboot\r\n

4. Dynamic DNS (DDNS)

Support **cmd = set/get**

http://<servername>/goform/ddns?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
enableddns=<int>	0, 1	DDNS 0: disable 1: enable
isptype=<int>	0-6	ISP type 0: dyndns.org 1: noip.com 2: ActiveDNS 3: cn99.com 4: ipkan.net 5: ipkan.cn 6: ipkan.com.cn
sitename=<string>		Site name, max 255 Bytes
ddnsip=<string>		Custom DDNS site
account=<string>		DDNS account, max 23 Bytes
password=<string>		DDNS password, max 63 Bytes
stunserver=<string>		STUN Server, max 255 Bytes

Example:

http://192.168.86.6/goform/ddns?cmd=set&enableddns=1

200 OK\r\n
Successful\r\n

5. SIP

Support **cmd = set/get**, it will take effect on next reboot.

http://<servername>/goform/sip?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
registeredstate=<int>	0, 1	Registration state. 0: Offline

		1: Online
unregister=<int>	0, 1	Unregister on reboot. 0: No 1: Yes
accountname=<string>		Account name, max 127 Bytes.
sipserver=<string>		SIP server, max 255 Bytes.
proxyserver=<string>		Proxy server or IP address.
userid=<string>		SIP user ID, max 255 Bytes.
authenticateid=<string>		Authenticate ID. Could be the same or different as SIP UserID, max 127 Bytes.
accountpassword=<string>		Account password, max 127 Bytes. Only used for setting password, not for acquiring password.
stunserver=<string>		STUN server URI or IP: PORT, max 127 Bytes.
sipstream=<int>	0, 1	0: Secondary 1: Primary
audioencoder=<int>	0, 1	0: PCMU 1: PCMA Default is 0, PCMU.
regexpiration=<int>		Default is 3600 (in second), max 45 days.
localsipport=<int>		Local SIP port. Default is 5060.
localrtpport=<int>	1024-30000	Local RTP port, 1024~30000
autohooktimer=<int>	0-65535	Auto hook timer, in second. 0: Never onhook. Default is 0.
disable_audio=<int>	0, 1	0: No 1: Yes
enable_keep_alive=<int>	0, 1	0: No 1: Yes
direct_ip_call=<int>	0, 1	0: No 1: Yes
enable_white_list=<int>	0, 1	0: No 1: Yes
sipdoorenable=<int>	0, 1	Enable SIP open door. 0: No 1: Yes
sipdoorpwd=<string>	Number 0 to 9	SIP open door password. Valid length between 4 to 8 characters.
sipdoortime=<int>		SIP open door time (delay timer before close)

Phonebook settings. Support **cmd = add/remove/get**.

<parameter>=<value>	Values	Description
phone.count=<int>		Total phonebook entries.
phone.index=<int>	1, 2….	Index of phonebook entries.
phone.number=<string>		Phone number, max 15 Bytes.
phone.name=<string>		Name/Note of phone number, max 127 Bytes.
white_list_phone=<string>		Phone numbers of incoming call white list.
audio_warning_mode=<int>	0, 1	Audio warning mode. 0: No. Play alarm audio to the other party. 1: Yes. Establish 2-way audio. Default value is 1.

Note: phonebook entry can be added one at a time.

Example:

Add phone number.

http://192.168.86.6/goform/sip?cmd=add&phone.name=6006&phone.number=5003

200 OK\r\n
Successful Need Reboot\r\n

Example (URL)	注释
http://192.168.89.19/goform/sip?cmd=set&unregister=1&accountname=xkowen&sipserver=192.168.89.207&userid=3028&authenticateid=3028&accountpassword=123456	
http://192.168.89.19/goform/sip?cmd=add& white_list_phone=2222	
http://192.168.89.19/goform/sip?cmd=remove& white_list_phone=2222,3333,4444,	Delete phone numbers in white list

6. Date & Time

Support **cmd = set/get**

http://<servername>/goform/date_time?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	Values	Description
updatemode=<int>	1-2	Update mode. 1: Update via NTP time server (Default) 2: Self-defined
year=<int>	Greater than 1900	Current year
month=<int>	1-12	Current month
day=<int>	0-31	Current day
hour=<int>	0-23	Current hour
minute=<int>	0-59	Current minute

second=<int>	0-59	Current second
timezone=<int>	1-54	1: GMT-12 (Eniwetok,Kwajalein) 2: GMT-11 (Midway Isl., Samoa) 3: GMT-10 (Hawaii, AleutianIsl.) 4: GMT-09 (Alaska) 5: GMT-08 (LasVegas,SanFran cisco, Vancouver) 6: GMT-07 (Calgary, Denver, Salt Lake City) 7: GMT-06 (Chicago, Dallas, Mexico City) 8: GMT-05 (Cuba) 9: GMT-05 (New York, Toronto, Washington DC) 10: GMT-04 (Paraguay) 11: GMT-04 (Chile) 12: GMT-04 (Charlottetown, Manaus) 13: GMT-03 (Brazilia, Sao Paulo) 14: GMT-02 (Noronha, Mid-Atlantic) 15: GMT-01(Azores, Cap Verde Isl.) 16: GMT (Dublin, Lisbon, London, Reykjavik) 17: GMT+01 (Amsterdam, Berlin, Rome, Stockholm) 18: GMT+02 (Athens, Helsinki, Istanbul, Riga) 19: GMT+02 (Egypt) 20: GMT+02 (Israel) 21: GMT+02 (Lebanon) 22: GMT+02 (Syria) 23: GMT+03 (Moscow, Riyadh) 24: GMT+03 (Iraq) 25: GMT+03:30 (Iran) 26: GMT+04 (Abu Dubai, Baku) 27: GMT+04:30 (Kabul) 28: GMT+05 (Islamabad, Karachi, Tashkent) 29: GMT+05:30 (Bombay, Calcutta, New Delhi) 30: GMT+06 (Novosibirsk, Omsk) 31: GMT+07 (Bangkok, Hanoi, Jakarta) 32: GMT+08 (Beijing, Hong Kong, Shanghai, Taipei, Taiwan) 33: GMT+09 (Osaka, Sapporo, Tokyo) 34: GMT+09:30 (Adelaide, Darwin)

		35: GMT+10 (Hobart) 36: GMT+10 (Canberra, Melbourne, Sydney) 37: GMT+11(Solomon Isl.) 38: GMT+12(Auckland, Wellington) 39: GMT-9:00 Daylight Saving Time(Alaska Time) 40: GMT-8:00 Daylight Saving Time(Pacific Time) 41: GMT-7:00 Daylight Saving Time(Mountain Time) 42: GMT Daylight Saving Time (Dublin, Ireland) 43: GMT Daylight Saving Time (Lisbon, Portuga) 44: GMT Daylight Saving Time(London, Great Britain) 45: GMT+1:00 Daylight Saving Time(Amsterdam, Barcelona, Berlin, Brussels, Budapest, Copenhagen) 46: GMT+1:00 Daylight Saving Time(Geneva, Madrid, Oslo, Paris, Prague, Roma, Stockholm) 47: GMT+2:00 Daylight Saving Time(Athens, Helsinki, Kyiv, Tallinn) 48: GMT+3:00 Daylight Saving Time(Moscow) 49: GMT+3:00 Daylight Saving Time(St.Petersburg) 50: GMT+9:30 Daylight Saving Time(Adelaide) 51: GMT+10:00 Daylight Saving Time(Melbourne, Canberra, Sydney) 52: GMT+10:00 Daylight Saving Time(Hobart) 53: GMT+12:00 Daylight Saving Time(Auckland, Wellington) 54: Using self-defined Time Zone
deftimezone=<string>		Self-defined Time Zone. For example, ***EST+5EDT+4,M3.2.0,M11.1.0*** Valid Only when timezone= 54 (Using self-defined Time Zone)
ntpserverenable=<int>	0, 1	Enable NTP server.

		0: No 1: Yes
ntpserver=<string>		NTP server, max 255 Bytes
datestyle=<int>	1, 2, 3	OSD date format 1: YYYY-MM-DD 2: MM/DD/YYYY 3: DD MM YYYY

Note: parameter "updatemode" is required in each link.

Example:

http://192.168.86.6/goform/date_time?cmd=set&updatemode=1&year=2902&month=9&day=26&hour=22&minute=22&second=33&timezone=22&deftimezone=EST+5EDT+4,M3.2.0,M11.1.11&ntpserver=time.nist.com

200 OK\r\n
Successful\r\n

7. Status

Support **cmd = get/set** (cmd=set can only be used by "devicename").

http://<servername>/goform/systeminfo?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
productmode=<string>	GXV3501, GXV3504, GXV3601, GXV3601HD/LL, GXV3611HD/LL, GXV3615W/P, GXV3651FHD, GXV3662HD, GXV3615WP_HD GXV3500	Device model may vary.
hardwareversion=<string>	V0.2B...	Hardware version
partnumber=<string>		P/N number
bootloaderversion=<string>		BOOTLOADER version
coreversion=<string>		Core version
baseversion=<string>		Base version
firmwareversion=<string>	0-59	Firmware version
cameratype=<string>		Camera type: brand and model.
ddnsstate=<int>	0, 1, 2, 3, 4, 5, 6	DDNS Status 0 :Disable

		1 :Processing 2 :Success 3 :Account/Password Error 4 :Server blocking 5 :Stun Server error 6 :Database failed
wifistate=<int>	0, 1	Wi-Fi Status 0: Disconnected 1: Connected
systemrun=<string>		System up time
mac=<string>		MAC Address
ledstatus=<int>	0, 1	LED Status(GXV3615 series Only) 0:On 1:Off
pppoe.ip		PPPoE IP. Default is 0.0.0.0
pppoe.status	0, 1	PPPoE status 0: disconnected 1: connected
ipaddress		For display only
subnetmask		For display only
defaultgateway		For display only

8. Account Management

Support **cmd = add/remove/set/get**

http://<servername>/goform/usermanage?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
user.count=<int>	>=1	Total user numbers
user.index=<int>	1, 2…	Index of users
user.level=<int>	0, 1, 2	User Privilege. 0: administrator 1: user 2: anonymous
user.name=<string>		User name，max 23 Bytes
user.password=<string>		User password, max 63 Bytes
anonymous.enable =<int>	0, 1	Allow anonymous login. 0: No 1: Yes

Example:

http://192.168.89.43/goform/usermanage?cmd=remove&user.name=name

200 OK\r\n Successful\r\n

9. SMTP (E-mail) Settings

Support **cmd = set/get**

http://<servername>/goform/smtp?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
enablesmtp=<int>	0, 1	Enable SMTP: 0: No 1: Yes
smtpserver=<string>		SMTP Server, max 255 Bytes
smtpserverport=<int>		SMTP Server port
emailfrom=<string>		From E-Mail address, max 63 Bytes
emailuser=<string>		E-mail user name, max 63 Bytes
emailpassword=<string>		E-mail password, max 63 Bytes
emailto1=<string>		To E-Mail address 1, max 63 Bytes
emailto2=<string>		To E-Mail address 2, max 63 Bytes
emailto3=<string>		To E-Mail address 3, max 63 Bytes
enablessl=<int>	0, 1	Use SSL. 0: No 1: Yes
smtptest=<int>	1	To test SMTP uses smtptest=1. Other value does not work. Return: smtptestresult = 0: test failed with smtp error message smtptestresult = 1: test success

Example:

Set SMTP parameters. When enablesmtp=1, the Email address format will be checked.

http://192.168.86.66/goform/smtp?cmd=set&enablesmtp=0 (when enablesmtp=1, basic check will be performed to all the addresses) 200 OK\r\n Successful\r\n

10. FTP Settings

Support **cmd = set/get**

http://<servername>/goform/ftp?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
enableftp=<int>	0, 1	Enable FTP. 0: No 1: Yes
ftpserver=<string>		FTP server, max 255 Bytes
ftpserverport=<int>		FTP server port
ftpuser=<string>		FTP user name, max 23 Bytes
ftppassword=<string>		FTP password; it would not be sent along with parameters, max 63 Bytes
ftppath=<string>		FTP path, max 63 Bytes
ftptest=<int>	1	To test FTP use ftptest =1. Other values do not work. Return: ftptestresult = 0: test failed with ftperrormessage ftptestresult = 1: success

Example:

Set FTP parameters.

```
http://192.168.86.6/goform/ftp?cmd=set&ftpserver=123456&ftpserverport=111&ftpuser=admin&ftppath=admin

200 OK\r\n
Successful\r\n
```

11. PTZ Settings

Support **cmd = set/get** *(Only available to GXV3501/3504/3500)*

http://<servername>/goform/ptz?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
protocol=<int>	0, 1…	Select PTZ Protocal 0: PELCO-P 1: PELCO-D
channel=<int>	0-3	(pending)
baudrate=<int>	1200, 2400, 4800, 9600…	Baud rate. May vary among different device models.

ptzparam=<int>	0-63 (Speed) 0-127 (Default position)	PTZ speed or default position. For default position values, certain values between 0 to 127 have been already used.
ptzcontrol=<int>	0, 1…	PTZ Control. 0: Stop 1: Tilt Up 2: Tilt Down 3: Pan Left 4: Pan Rigjt 5: Pan to upper left corner 6: Pan to lower left corner 7: Pan to upper right corner 8: Pan to lower right corner 9: Zoom in 10: Zoom out 11: Focus near 12: Focus far 13: IRIS open 14: IRIS close 15: Turn to default position 16: Clear default position 17: Set default position 18: Auto Pan 19: Stop Auto Pan

Example:
Set PTZ parameter.

http://192.168.86.66/goform/ptz?cmd=set&ptzcontrol=4&ptzparam=31 (rotation and speed have to be used together) 200 OK\r\n Successful\r\n Note: ptzcontrol and ptzparam would both need to be included in the link

12. Alarm Event

Support **cmd = set/get/add/remove**

http://<servername>/goform/alarmio?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
alarmin.count=<int>	0, 1, 4…	Numbers of alarm input supported by devices.

		May vary among models. For example, IP camera supports 1 alarm input, GXV3504 supports 4.
alarmin.index=<int>	0, 1, 2, 3	Index of alarm input
alarmin.schedule.count=<int>	0, 1…	Numbers of schedules
alarmin.schedule.id=<int>	1, 2, 3…	ID of schedules
alarmin.schedule.dayset=<int>	0-7	0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday 7: Everyday(default)
alarmin.schedule.starttime=<int>	0-86399	Default is 0 (in seconds). Example: 12:39, starttime = 12*3600+39*60
alarmin.schedule.endtime=<int>	0-86399	Alarm event end time. Default is 86399 (in seconds).
alarmout.stop=<string>	yes	Stop alarm output
event.record.pretime=<int>	0-160 (video.primary.bitrate<256) 0-100 (video.primary.bitrate<512) 0-50 (video.primary.bitrate<1024) 0-25 (video.primary.bitrate>1024)	Record Video From Pre-Alarm (in seconds). The range varies among different bitrate.
event.record.aftertime=<int>	0-320 (video.primary.bitrate<256) 0-200 (video.primary.bitrate<512) 0-100 (video.primary.bitrate<1024) 0-50 (video.primary.bitrate>1024)	Record Video to Post-Alarm (in seconds). The range varies among different bitrate.
event.record.storage=<int>	1, 2…	Alarm record storage method. 0: Do not save 1: SD card

		2: USB Flash Drive 3: DISK (This may not be available for some device models)
event.record.uploadftp=<int>	0, 1	Record Video uploads to FTP Server. 0: disable 1: enable
event.sipphone.enable=<int>	0, 1	Voice Alarm to SIP phone. 0: disable 1: enable
event.alarmout.enable=<int>	0, 1	Enable/Disable alarm output. 0: disable. 1: enable. alarm in 1 corresponds alarm out 1; alarm in 2 corresponds alarm out 2; ……
event.uploadcenter.enable=<int>	0, 1	Upload to Alarm Center. This option has to be enabled for PC to receive alarm event notification 0: disable 1: enable
event.shotemail.enable=<int>	0, 1	Email snapshot and store it to SD drive. Note: e-mail and storage devices have to be existed and enabled. 0: disable 1: enable

Example:

Parameter settings.

http://192.168.86.6/goform/alarmio?cmd=add&alarmin.index=0&event.record.pretime=20&event.record.aftertime=10&event.record.storage=1&event.record.uploadftp=1&event.sipphone.enable=1&event.alarmout.enable=1&event.uploadcenter.enable=1&event.shotemail.enable=1

HTTP/1.0 200 OK\r\n
Successful\r\n

Add a schedule with ”Everyday” as default.

http://192.168.86.6/goform/alarmio?cmd=add& alarmin.index=0

HTTP/1.0 200 OK\r\n
Successful\r\n

http://192.168.86.6/goform/alarmio?cmd=add&alarmin.index=0&alarmin.schedule.dayset=4& alarmin.schedule.starttime=200& alarmin.schedule.endtime=40000

HTTP/1.0 200 OK\r\n
Successful\r\n

Delete a schedule with id=111.

http://192.168.86.6/goform/alarmio?cmd=remove&alarmin.schedule.id =111,2,3…

HTTP/1.0 200 OK\r\n
Successful\r\n

13. Motion Detection

Support **cmd = add/remove/set/get**

http://<servername>/goform/motiondetect?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
md.channel.count=<int>	1, 4	Number of channels for motion detection. IP camera has only 1 channel; GXV3504 support 4 channels.
md.channel.index=<int>	0, 1, 2, 3	Corresponding index for channels. IP camera: 1. 4 channel DVS: 0-3.
md.active.enable=<int>	0, 1	Enable Motion Detection 0: No

		1: Yes
md.regn.index=<int>	0-15	Motion Detection Region 0-15
md.regn.leftup=<int>		First 2 bytes used for X; Last 2 bytes used for Y
md.regn.rightdown=<int>		First 2 bytes used for X; Last 2 bytes used for Y. If md.regn.leftup=0 and md.regn.rightdown=0, it means invalid region.
md.regn.sensitivity=<int>	0-100	Sensitivity. The higher the value the greater the sensitivity
md.regn.schedule.count=<int>	0, 1…	Total number of schedule.
md.regn.schedule.id=<int>	0, 1, 2, 3…	Schedule ID (1-n). If ID is set to 0, all the schedules will be deleted.
md.regn.schedule.dayset=<int>	0-7	0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday 7: Everyday(default)
md.regn.schedule.starttime=<int>	0-86399	Default is 0 (in seconds). Example: 12:39, starttime = 12*3600+39*60
md.regn.schedule.endtime=<int>	0-86399	Default is 86399 (in seconds). Example: 12:39, starttime = 12*3600+39*60
md.record.storage=<int>	0, 1, 2, 3…	Alarm record storage method: 0: Do not save 1: SD card 2: USB Flash Drive 3: DISK (This may not be

		available for some device model)
event.record.pretime=<int>	0-160 (video.primary.bitrate<256) 0-100 (video.primary.bitrate<512) 0-50 (video.primary.bitrate<1024) 0-25 (video.primary.bitrate>1024)	Record Video From Pre-Alarm (in seconds). This may vary among different bitrates.
md.record.aftertime=<int>	0-320 (video.primary.bitrate<256) 0-200 (video.primary.bitrate<512) 0-100 (video.primary.bitrate<1024) 0-50 (video.primary.bitrate>1024)	Record Video to Post-Alarm (in seconds). This may vary among different bitrates.
md.record.uploadftp=<int>	0, 1	Record Video and upload to FTP Server. 0: enable 1: disable
md.sipphone.enable=<int>	0, 1	Voice Alarm to SIP Phone. 0: enable 1: disable
md.alarmout.enable=<int>	0, 1	Enable/Disable alarm output. 0: enable. 1: disable. alarm in 1 corresponds alarm out 1; alarm in 2 corresponds alarm out 2;
md.uploadcenter.enable=<int>	0, 1	Upload to Alarm Center. This option has to be enabled for PC to receive alarm event notification. 0: enable 1: disable
md.snapshot.enable=<int>	0, 1	Email snapshot and store it to USB card or SD drive.

		Note: e-mail and storage devices have to be existed and enabled. 0: enable 1: disable

Example：

Parameter settings.

Delete a schedule which has id=1.

http://192.168.86.6/goform/motiondetect?cmd=set&md.record.storage=1&md.record.aftertime=10&md.record.pretime=20&md.record.uploadftp=1&md.sipphone.enable=1&md.alarmout.enable=1&md.uploadcenter.enable=1&md.snapshot.enable=1

HTTP/1.0 200 OK\r\n
Successful\r\n

Example (URL)	Note
http://192.168.86.6/goform/motiondetect?cmd=set&md.active.enable=2	
http://192.168.86.6/goform/motiondetect?cmd=set&md.regn.index=0&md.regn.leftup=1&md.regn.rightdown=26214800&md.regn.sensitivity=1	
http://192.168.86.6/goform/motiondetect?cmd=set&md.regn.index=0&md.regn.leftup=1&md.regn.rightdown=26214800&md.regn.sensitivity=101	
http://192.168.86.6/goform/motiondetect?cmd=set&record.storage=0	
http://192.168.86.6/goform/motiondetect?cmd=set&md.record.storage=2&md.record.aftertime=30&md.record.pretime=10&md.record.uploadftp=0&md.sipphone.enable=0&md.alarmout.enable=0&md.uploadcenter.enable=0&md.snapshot.enable=0	
http://192.168.86.6/goform/motiondetect?cmd=set&md.record.storage=1&md.record.aftertime=10&md.record.pretime=20&md.record.uploadftp=1&md.sipphone.enable=1&md.alarmout.enable=1&md.uploadcenter.enable=1&md.snapshot.enable=1	
http://192.168.86.6/goform/motiondetect?cmd=remove&md.regn.schedule.id=1,2,3,...	
http://192.168.86.6/goform/motiondetect?cmd=add	
http://192.168.86.6/goform/motiondetect?cmd=add&md.regn.index=1	
http://192.168.86.6/goform/motiondetect?cmd=add&md.regn.index=1	
http://192.168.86.6/goform/motiondetect?cmd=add&md.regn.index=1&md.channel.index=2	
192.168.86.6/goform/motiondetect?cmd=set&md.regn.index=0&md.regn.leftup=0&md.regn.rightdown=0&md.regn.sensitivity=1	Delete Alarm Region

14. System Log

Support **cmd = set/get**

http://<servername>/goform/systemlog?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
logserver=<string>		Syslog server, max 127 Bytes
loglevel=<int>	0, 1, 2, 3, 45	Syslog level: 0: NONE 1: DEBUG 2: INFO 3: WARNING 4: ERROR

Example:

http://192.168.86.6/goform/systemlog?cmd=set&loglevel=1&logserver=12345464 200 OK\r\n Successful Need Reboot\r\n

Example (URL)	Note
http://192.168.86.6/goform/systemlog?cmd=get	
http://192.168.86.6/goform/systemlog?cmd=set&loglevel=1&logserver=12345464	
http://192.168.86.6/goform/systemlog?cmd=set&loglevel=6&logserver=12345464	

15. USB/SD Storage

Support **cmd = remove/get/format**

http://<servername>/goform/storage?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
storage.count=<int>	0…	Total number of storage equipments
storage.index=<int>	1, 101, 201	1: USB 101: SD 201: DISK
storage.capacity=<string>		Total storage capacity
storage.usedspace=<string>		Used space (MB)

storage.freespace=<string>		Free Space (MB)
file.count=<int>		Total numbers of saved files.
file.index=<int>	1, 2, 3	File index
file.size=<string>		File size (MB)
file.name=<string>	192.168.86.20_chn0_2011_09_21_14_43_48.jpg 0_2_2011_09_21_13_32_21_1718_1.avi	File Name with path. It can be used to download that particular file. e.g. http://serverhost:port/file.name Image file format: ip_channel_date_time.jpg AVI file format: channel_recordtype_date_time_filelength_endmark.avi
storage_type=<int>	1, 2, 3	When formatting the storage device, use the storage type to specify. 1: Flash USB 2: SD Card 3: USB Disk (Pending)

Example:

Delete a file from USB/SD card.

```
http://192.168.86.95/goform/storage?cmd=remove&file.name=/mnt/sd/192.168.86.95_chn1_2010_01_13_09_21_58.jpg

200 OK\r\n
Successful\r\n
```

16. Maintenance/Upgrade

Support **cmd = set/get**

http://<servername>/goform/maintenance?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
restart=<string>	yes	Restart the device
restore=<string>	yes	Reset settings to factory default
update.viatype=<int>	1, 2, 3	Upgrade via: 1: TFTP 2: HTTP 3: HTTPS

upgrade.serverpath=<string>	serverhost:port/dir	Firmware Server path
upgrade.cfgserverpath=<string>	serverhost:port/dir	Configuration server path, max 255 Bytes
upgrade_cfg_xml_pwd=<string>		XML config file password
upgrade.automatic=<int>	0, 1	Automatic upgrade: 0: No 1: Yes
upgrade.interval=<int>	60-525600	Automatic upgrade interval (in minutes)

Example:

Set maintenance and upgrading parameters.

```
http://192.168.86.6/goform/maintenance?cmd=set&upgrade.serverpath=192.168.86.1

200 OK\r\n
Successful\r\n
```

17. Contrast, Saturation, Brightness and Chroma

Support **cmd = set/get**

http://<servername>/goform/videocontrol?cmd=<value>&<parameter>=<value>...

Note: Contrast, saturation, brightness and chroma have to be set at the same time. Otherwise, it would be 0(default). Color may not be available for some models.

<parameter>=<value>	**Values**	**Description**
channel=<int>	0, 1, 2, 3	Assigned channel number. Default number for IP Camera is 0
brightness=<int>	For GXV3501/3504/3600/3601/3612, (0-255) For GXV3601LL/3611LL/3615/3615W, (0-60) For GXV3601HD/3611HD, (0-5) For GXV3651HD/3651FHD/3662HD/3500/ip1200/ip5150, (0-255)	Brightness

contrast=<int>	For GXV3501/3504/3600/3601/3612, (0-255) For GXV3601LL/3611LL/3615/3615W, (0-7) For GXV3601HD/3611HD, (0-3) For GXV3651HD/3651FHD/3662HD/3500/ip1200/ip5150, (0-255)	Contrast
saturation=<int>	For GXV3501/3504/3600/3601/3612, (0-255) For GXV3601LL/3611LL/3615/3615W, (0-63) For GXV3601HD/3611HD, (0-8) For GXV3651HD/3651FHD/3662HD/3500/ip1200/ip5150, (0-255)	Saturation
chroma=<int>	0-255	Chroma (Chroma may not be available for some models)
Default=<int>	3, 4	3: set default value 4: set color-enhancement default value (For GXV3601HD/3611HD only)

Example:

```
http://192.168.86.6/goform/videocontrol?cmd=set&contrast=101

200 OK\r\n
Successful\r\n
```

18. WIFI Settings

Support **cmd = set/get/search**

http://<servername>/goform/wireless?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
wifiexist=<int>	0, 1	This is only applicable on GXV3615W and GXV3615WP_HD. 0: WIFI is not supported 1: WIFI is supported
enable=<int>	0, 1	0: Disable 1: Enable
ssid=<string>		SSID
authentication=<int>	0-6	Security Mode 0:NONE 1:WEP/Shared 2:WEP/Open 3:WPA PSK TKIP 4:WPA PSK AES 5:WPA2 PSK TKIP 6:WPA2 PSK AES
keyindex=<int>	1-4	Key index
key=<string>		Encryption Key

Example:

Setting WIFI parameter.

```
http://192.168.86.6/goform/wireless?cmd=set&ssid =mywifi

200 OK\r\n
Successful Need Reboot\r\n
```

19. System Settings

Support **cmd = set/get/search**

http://<servername>/goform/device?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
devicename=<string>		Device name
channel=<int>	0-3	Channel number
alarmin.type=<int>	0,1	0:Normal Open 1:Normal Close

alarmout.type=<int>	0,1	0:Normal Open 1:Normal Close
alarmin.status=<int>	0,1	This is used to **get** the current state of the alarm in. 0: Open 1: Close
alarmout.status=<int>	0,1	This is used to **get** the current state of the alarm in. 0: Open 1: Close
alarm_output_time=<int>	0, 5,15, 30, 60, 180, 300, 600, 900,1800	0: keep alarm until manually turned off N: alarm off after N seconds
gpio_pin_multiplex=<int>	0, 1	Extension port mode. 0: control mode (RS485) (default) 1: alarm input/output mode. (For IP960/IP1200/IP5150 only)

Example 1:

Setting alarm active state.

```
http://192.168.86.6/goform/device?cmd=set&alarmout.type=1

200 OK\r\n
Successful \r\n
```

Example 2:

Alarm Type	Alarm Status	Result
alarmout.type=NORMAL OPEN	alarmout.status=OPEN	IDLE, no alarm output
alarmout.type=NORMAL OPEN	alarmout.status=CLOSE	alarm output enabled
alarmout.type=NORMAL CLOSE	alarmout.status=OPEN	alarm output enabled
alarmout.type=NORMAL CLOSE	alarmout.status=CLOSE	IDLE, no alarm output
alarmin.type=NORMAL OPEN	alarmin.status=OPEN	IDLE, no alarm input
alarmin.type=NORMAL OPEN	alarmin.status=CLOSE	alarm input detected
alarmin.type=NORMAL	alarmin.status=OPEN	alarm input detected

CLOSE		
alarmin.type=NORMAL CLOSE	alarmin.status=CLOSE	IDLE, no alarm input

20. PPPoE Settings

Support **cmd = set/get**

http://<servername>/goform/pppoe?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
pppoe.user=<string>		PPPoE username
password=<string>		PPPoE password (Not show when using **get**)
pppoe.status=<int>	0, 1	PPPoE stauts (read only) 0: disconnected 1: connected
pppoe.ip=< string >		PPPoE IP (read only)

Example:

Set PPPoE parameter.

http://192.168.86.6/goform/pppoe?cmd=set&alarmout.type=1 200 OK\r\n Successful \r\n

21. Snapshot

http://<servername>/snapshot/view0.jpg

<parameter>=<value>	**Values**	**Description**
view0.jpg view1.jpg view2.jpg view3.jpg view4.jpg view5.jpg view6.jpg view7.jpg		Capture view0.jpg in single channel. Capture view0.jpg – view7.jpg in 4 channels.

Example:

Capture a snapshot.

http://<servername>/snapshot/view0.jpg

22. Web GUI Language

http://<servername>/goform/language?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
language=<int>	0, 1, 2	0: English (default) 1: Chinese 2: Russian

Example:

http://<servername>/goform/language?cmd=set?language=1

23. Decode Settings (For GXV3500 only)

http://<servername>/gofrom/decode?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
decode_source=<int>	0, 1	Decode source. 0:RTSP 1:SIPphone
default_decode=<int>	0-7	Default decode channel
enable_patrol=<int>	0, 1	Enable patrol 0:Disable 1:Enable
video_ouput_type	0-3	0:Auto or NTSC 1:Auto or PAL 2:NTSC 3:PAL
start_patrol=<int>	0, 1	Start patrol 0: Stop patrol 1: Start patrol
channel[i]=<int>	0-4	Video channel Use i=0-7 to specify the 8 patrol decode devices
port[i]=<int>		Port i=0-7
time[i]=<int>		i=0-7
host[i]=<string>		i=0-7
user[i]=<string>		i=0-7
password[i]=<string>		i=0-7
description[i]=<string>		i=0-7

Example:

http://<servername>/goform/decode?cmd=set?channel=1

24. Stream Acquiring

http://<servername>/goform/stream?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
channel=<int>	0-7	Stream channel (default is 0) For secondary stream, the channel number used is equal to: n+4.

Example:

http://192.168.86.25/goform/stream?cmd=get&channel=0

25. CMOS Settings

Support **cmd = set/get**.

Note: This setting only applies to certain models:

GXV3651FHD/3662HD/3615WP_HD/3500

http://<servername>/goform/cmos?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
flip=<int>	0, 1	0:off 1:on
Iris=<int>	0, 1, 2	IRIS setting. 0: Mech_Manual 1: DC_Auto 2: DC_Manual
iris_open=<int>	1, 2, 3, 4, 5	IRIS aperture open range 1:100% 2:80% 3:60% 4:40% 5:20%
up_bias=<int>	6000-11000	IRIS aperture bias up range. Default value is 8160 (For GXV3662HD only)
down_bias=<int>	6000-11000	IRIS bias down range: Default value is 8150 (For GXV3662HD only)

shutter_speed=<int>	0, 30, 60, 125, 250, 500, 1000	Shutter speed 0:Auto N:1/N
ir_cut_setting=<int>	0, 1	IR CUT setting 0: Manual_Mode 1: Automatic_Mode
ir_cut_sensitivity=<int>	1, 2, 3, 4, 5	IR_CUT sensitivity
d_n_mod=<int>	0, 1	Day/Night mode. 0: day 1: night
color_mod=<int>	0, 1, 2	Color mode. 0: color 1: black-white 2: auto

Example:

Set CMOS parameters.

```
http://192.168.86.6/goform/cmos?cmd=set&lris =1

200 OK\r\n
Successful \r\n
```

Example (URL)	Note
http://192.168.86.6/goform/ cmos?cmd=get	
http://192.168.86.6/goform/cmos?cmd=set&lris=1&shutter_speed =30	

26.4*D1 Settings (For GXV3504 only)

http://<servername>/gofrom/fourdone?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
enable=<int>	0, 1	0: No 1: Yes
ntscpal.type=<int>	0, 1	0: PAL 1: NTSC Read only. To identity type for display.
Options=<int>	1-8	**H264** 1:4*704*480, 2048kbps@15fps+no secondary stream 2:4*704*480,

		1536kbps@19fps+no secondary stream 3:4*704*480, 1536kbps@15fps+secondary stream 4*QCIF (176*112) 128kbps@10fps 4:4*704*576, 2048kbps@13fps+no secondary stream 5:4*704*576, 1536kbps@16fps+no secondary stream 6:4*704*576, 1536kbps@10fps+secondary stream 4*QCIF (176*144) 128kbps@10fps **MJPEG** 7:4*704*480, 4096kbps@15fps+no secondary stream 8:4*704*576, 4096kbps@13fps+no secondary stream

Example:

http://192.168.86.25/goform/fourdone?cmd=get

27. Alarm HTTP Servers Settings

Support **cmd=set/get**

http://<servername>/goform/event_server?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
server_name=<string>		Server name
server_url=<string>		Server URL

server_username=<string >		Username
server_user_password=<string >		Password

Example:

Set Alarm HTTP Servers parameters.

```
http://192.168.86.6/goform/event_server?cmd=set&server_name=servername&server_url=http://…

200 OK\r\n
Successful \r\n
```

Example (URL)	Note
http://192.168.86.6/goform/ event_server?cmd=get	
http://192.168.86.6/goform/event_server?cmd=set&server_name=servername&server_url=serverurl&server_username=username&server_user_password=pwd	

28. Record Settings

Support **cmd = set/get**

http://<servername>/goform/sdrecord?cmd=<value>&<parameter>=<value>...

<parameter>=<value>	**Values**	**Description**
channel=<int>	0-3	Channel number. (For single channel device, this could be skipped)
state_record=<int>	0-4	0: No record 1: Manual record 2: Auto record 3: Alarm record 4: No storage device
enable_time_table=<int>	0, 1	Enable record schedule. 0: No 1: Yes
record_time_table=<string>		Record schedule. This is a 168-character string with possible values 0 and 1. 0: No 1: Yes
record_full_handle=<int>	1, 2	When the record is full, 1: Override the oldest record. 2: Stop recording. (Use channel 0 record only)

start_recort=<int>	0, 1	For record manually. 0: Stop 1: Start Manual record will fail if auto-record or alarm-record has started already.

Example:

Set Record parameters.

http://192.168.86.6/goform/sdrecord?cmd=set& channel =0& enable_time_table =1& record_time_table=010111…111 200 OK\r\n Successful \r\n

Example (URL)	Note
http://192.168.86.6/goform/ sdrecord?cmd=get	
http://192.168.86.6/goform/sdrecord?cmd=set& channel =0& enable_time_table =1& record_time_table=010111…111	
http://192.168.86.6/goform/sdrecord?cmd=set&record_full_handle =0	
http://192.168.86.6/goform/sdrecord?cmd=set& channel =0&record_start =1	

Table 1:

Device Alarm Recording Time Table				
MODEL	Preserved Memory(M)	BitRate (bps)	Pre_Record Max.Time(s)	Post_Record Max.Time(s)
GXV3662	24	<=512	100	200
GXV3651		<=1024	50	100
GXV3601HD		<=1536	45	60
GXV3611HD		<=2048	30	60
		<=3072	20	40
		<=4096	15	30
		<=6144	10	20
		>6144	10	10
IP960	8	<=512	50	70
		<=1024	20	40
		<=1536	15	25
		<=2048	10	20
		<=3072	5	15
		<=4096	5	10
		<=6144	4	5
		>6144	3	4
GXV3500	8	<=256	90	120
IP5150		<=512	50	70
		<=1024	20	40
		<=1536	15	25
		<=2048	10	20
GXV3501	24	<=256	160	320
GXV3504				
GXV3601		<=512	100	200
GXV3601LL		<=1024	50	100
GXV3611LL				
GXV3615(W)		<=1536	45	60
3615WP_HD		<=2048	30	60
IP1200	NA			