Grandstream Networks, Inc.

Grandstream

Video Surveillance HTTP API

Version 1.0.0.54

www.grandstream.com

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TABLE OF CONTENTS

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OVERVIEW

Grandstream Video Surveillance HTTP API (Application Programming Interface) supports RFC1945 (HTTP 1.0) and RFC3550 (RTP).

This document explains in details the parameters of functions in client side via the supported **GET/POST** method.

Administrator Privilege is required to set or retrieve those parameters. This is achieved at the HTTP command level by prefixing the username and the password in accordance to the following format: **http://username:password@...**

Software Version Requirement

All current official firmware of the Grandstream surveillance products are supported.

URL Format: Client ➔ Server

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

NOTE:

- <*param*> *is used to identify the different module of functions.*

Example 1: GET

Get device status.

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

```
GET
/goform/smtp?cmd=set&enablesmtp=0&smtpserver=&smtpserverport=25&emailfrom=&emailto1=&email
to2=&emailto3=&emailuser=&enablessl=0 HTTP/1.1
Accept: */*
Accept-Language: zh-cn
context-type: text/xml;charset=utf-8
Referrer: http://192.168.86.11/Pages/smtp.html
Cache-Control: no-cache
Content-Type: application/x-www-form-encodeURIComponent
If-Modified-Since: 0
Accept-Encoding: gzip, deflate
User-Agent: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0; .NET CLR 2.0.50727;
.NET CLR 1.1.4322; CIBA; .NET CLR 3.0.04506.648; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729)
Host: 192.168.86.11
Connection: Keep-Alive
Authorization: Basic YWRtaW46YWRtaW4=[1]
```

[1] Authentication Information encrypted via BASE64 with Format: Authorization: Basic info.
Info: User ID, Password separated via ":" encrypted via BASE64 encryption strings.
e.g.: admin:admin is: YWRtaW46YWRtaW4=

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 3: Get Device Status

```
GET /goform/smtp?cmd=get HTTP/1.1
Accept: */*
Accept-Language: zh-cn
Referer: http://192.168.86.11/Pages/smtp.html
If-Modified-Since: 0
Accept-Encoding: gzip, deflate
User-Agent: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0; .NET
            CLR 2.0.50727; .NET CLR 1.1.4322; CIBA; .NET CLR 3.0.04506.648; .NET
            CLR 3.0.4506.2152; .NET CLR 3.5.30729)
Host: 192.168.86.11
Connection: Keep-Alive
Authorization: Basic YWRtaW46YWRtaW4=

http/1.0 200 OK\r\n
productmode=XXXX\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\nq
firmwareversion=1.2.0.5\r\n
systemrun=641\r\n
mac=000B821EA32F\r\n
```

TIPS of HTTP API Usage:

- *In most situation, parameters fetched by using "GET" can be revised by using "SET", unless Status or Display parameter information.*
- *When using "SET", sometimes there are inter-action or restrictions among those related parameters, all parameters must "SET" or configure correctly together before the device taking effect.*

- *Please refer to related WebGUI page for reference if unsure about the HTTP API.*

URL Parameter Definitions

<parameter>=<value>	Values	Description
cmd=<string>	add/remove/set/get /search/reg	Operation command type (Required). add: add client parameter remove: delete client parameter set: configure client parameter get: fetch client parameter search: search parameter. e.g.: Wi-Fi ID reg: register DDNS account
channel=<int>	0, 1, 2, 3	Channel 0-3: Some parameters require assigned channel: e.g. audio/video setting and motion detection. If no channel assigned, the default channel 0 used. For GXV3504, channel is 0 ~ 3. IP Camera no need to set this parameter

Common URL Format

Format Description	Corresponding Format
Devices with multiple channels (GXV3504) will use channel number as separators when getting parameters. All parameters organized by levels.	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 used as mark when multiple parameters with same level 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” used to differentiate unidentified parameters format at the same level. 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 is successful. "Successful\r\n" indicate configuration is successful. It does not mean set/delete/add successful until receiving "Successful\r\n". Successful Need Reboot\r\n: configure successful but it need reboot in order for parameters taking effect. No Privilege\r\n: indicate incorrect privilege used. <param> Invalid\r\n: invalid parameter used. <param> Missing\r\n: missing parameters.
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
```

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PARAMETERS

1. Audio/Video Parameters

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

If devices support 2 streams, they are called primary stream and secondary stream respectively.

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_profile=<int> video_secondary_profile=<int>	0,1,2	Profile 0- baseline 1- main profile 2- high profile
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 or 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 or models, 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 HIS GXV3601HD/3504/3611HD/3615/3615W) 3. disabled Some models may only support audio.primary.encoder" (share "audio.primary.encoder")
audio.primary.bitrate=<int> audio.secondary.bitrate=<int>	16, 32	Audio bitrate. Some 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: GXV3601HD/3611HD/3501/3504/3615/3615W (1-5) Valid for GXV3651FHD/3662HD/3615WP_HD/3500/3610/3672/3674 Series.	Audio input volume HIS: 1 ~ 10 TI: 1 ~ 5

audio.speaker.volume=<int>	(1-10) Valid for: GXV3601HD/3611HD/3501/3504/3615/3615W (1-5) Valid for GXV3651FHD/3662HD/3615WP_HD/3500/3610/3672/3674 Series.	Audio output volume HIS: 1 ~ 10 TI: 1 ~ 5
audio.chip.type=<int>	0, 1, 0xFF	Audio chip type: (Read Only, non-writable) 0: AIC33 (default) 1: AIC3104 0xFF: None
ntscpal.type=<int>	0, 1	Video format (Read Only, non-writable) 0:PAL 1:NTSC
power.frequency=<int>	50, 60, 61	Power frequency Indoor 50: 50 (Europe, China) Indoor 60: 60 (US, LATAM) Outdoor: 61 (For models like GXV3651_FHD/GXV3611IR_HD/3662/3610/3672/3674 Only)
tv_output_type=<int>	0,1	0-NTSC(default) 1-PAL
video_statu=<string>	@x0@x1@x2@x3	cmd=get_video_statu ***(only for GXV3504)*** Get only Analog Camera Connection Status X0: channel 0 X1: channel 1 X2: channel 2 X3: channel 3 Status: 0 - Disconnect 1 - Connect

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 (%) (HIS Model: GXV3601HD/3611HD/3504/3615/3615W Only)
osdcolor =<string>	HIS: GXV3601HD/GXV3611HD/GXV3501/GXV3504/GXV3615/3615W Only)	OSD color 0xFFFFFE: Auto 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 (no use, reserved)

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**, 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 using 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, maximum 255 Bytes
ddnsip=<string>		Custom DDNS site
account=<string>		DDNS account, maximum 23 Bytes
password=<string>		DDNS password, maximum 63 Bytes
stunserver=<string>		STUN Server, maximum 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**, will take effect immediately after saving.

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, maximum 127 Bytes.
sipserver=<string>		SIP server, maximum 255 Bytes.
proxyserver=<string>		Proxy server domain or IP address.
userid=<string>		SIP user ID, maximum 255 Bytes.
authenticateid=<string>		Authenticate ID. Could be the same or different with SIP UserID, maximum 127 Bytes.
accountpassword=<string>		Account password, maximum 127 Bytes. Only used for setting password, not for acquiring password.
stunserver=<string>		STUN server URI or IP: PORT, maximum 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), maximum 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

sip_proxy_compatibility_mode =<int>	0,1	SIP Server Compatibility: 0 – No; 1-Yes means compatible to more SIP servers but may consume more network bandwidth
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: 1 to 8 numeric digits.
sipdoortime=<int>		Open door timer (timer before relay reset)
accessuploadaudiofile=<int>	0, 1	Chek uploaded audio file existence 0-No (not exist); 1-Yes (exist, only GET).
tel_uri=<int>	0, 1, 2	TEL URI: 0: forbidden; 1: User=Phone; 2: Enable
sip_enable_tls=<int>	0, 1, 2	SIP Transport Method: 0: UDP; 1: TCP; 2: TLS/TCP
sip_tls_certificate=<string>		SIP TLS Certificate (maximum 8192 byte)
sip_tls_private_key=<string>		SIP TLS Key (maximum 8192 byte)
sip_tls_private_key_password		SIP TLS Key Password
accesstlscrtfile=<int>	0,1	Check TLS Certificate existence 0: Not exist 1: Yes (exist, only GET)
accesstlskeyfile=<int>	0,1	Check TLS Key Existence 0: Not exist 1: Yes (exist, only GET)

Support **cmd = upload/del,**

Upload/delete self-defined audio files, TLS certificate and TLS keys.
Will take effect upon next reboot.

file_type=<int>	0,1,2	Upload/Del file: 0 –self defined file 1- SIP TLS certificate 2 - SIP TLS private key 0 - Default No file_type

e.g.:

http://192.168.86.6/goform/sip?cmd=del (delete uploaded files)

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

<parameter>=<value>	**Values**	**Description**
phone.count=<int>		Total phonebook entries.
phone.index=<int>	1, 2….	Index of phonebook entries.
phone.number=<string>		Phone number, maximum 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 entries could 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)	Notes
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, Aleutians.) 4: GMT-09 (Alaska) 5: GMT-08 (Las Vegas, San Francisco, 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 (Brazil, 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 Island) 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, Portugal) 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
ntpupdateinterval=<int>	5-1440	NTP Update Interval(minutes); Default:1440
enable_dst=<int>	0,1	Use Day Light Saving Time: 0 – No; 1-Yes
dst_str=<string>		DST Format: must in following format: GMT+05:00GDT+04:00,M3.2.0/02:00:00,M11.1.0/02:00:00 ***NOTE:*** GMT+05:00 current zone; must be one of following, starting with "GMT": "GMT+12:00", "GMT+11:00", "GMT+10:00", "GMT+09:00", etc. MDT+04:00 Start DST MUST start with MTZ e.g.: M3.2.0/02:00:00,M11.1.0/02:00:00 Start M3.2.0/02:00:00 means 2nd Sun of March, 2：00：00 AM

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=54&deftimezone=MTZ+6MDT+5,M4.1.0,M11.1.11&ntpserver=time.nist.com

200 OK\r\n
Successful\r\n

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=54&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>	**HIS:** GXV3504, GXV3601HD, GXV3611_HD, GXV3615/W, **TI:** GXV3500 GXV3651FHD GXV3662_HD/FHD GXV3615WP_HD, GXV3611IR_HD, GXV3610_HD/FHD, GXV3672_HD/FHD GXV3672_HD/FHD_36 GXV3674_HD/FHD_VF	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
Ircutstatu=<int>	1,2	IR cut:1-daytime; 2-evening

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
selfdefine_email_title=<string>		Self defined email subject
selfdefine_email_content=<string>		Self defined email content

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, maximum 63 Bytes
ftppath=<string>		FTP path, max 63 Bytes
ftptest=<int>	1	To test FTP use ftp test =1. Other values do not work. Return: ftptestresult = 0: test failed with ftp error message 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 (Only for GXV3500 and GXV3504)

Support **cmd = set/get** ***(Only apply to GXV3504 and GXV3500)***

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

<parameter>=<value>	**Values**	**Description**
protocol=<int>	0, 1…	Select PTZ Protocol 0: PELCO-P 1: PELCO-D
channel=<int>	0-3	(Pending)
baudrate=<int>	1200, 2400, 4800, 9600…	Baud rate. May vary among different device or 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 Right 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
addressid1=<int>	0-255	Channel 1 location (PTZ only), default 0;
Addressid2=<int>	0-255	Channel 2 location (GXV3504), default 1
Addressid3=<int>	0-255	Channel 3 location (GXV3504), default 2

Addressid4=<int>	0-255	Channel 4 location (GXV3504), default 3
Msgtype=<int>	0,1…	Transmission Type: 1- Transparent passing value; 2- Other - TBD
Class=<int>		Op Type: 0- Not defined; 1- Patrol Scan; 2- Pattern Scan; 3- Loop across preset positions
Group=<int>		0- not defined; 1-8 Patrol; 1-4 Pattern Scan; 1-8 Loop across preset positions
Id=<id>		Can be ID in database or chip
action_type=<int>		Action type 1- not defined; 2- predefined 3- pattern scan 4- loop across preset positions
action_id=<int>		Action ID 0: not defined; 1-128: predefined 1-8: patrolling 1-4: pattern scan; 1-8: loop across preset positions
action_time=<int>		Operation time in second; Group patrolling: 1-240s
action_speed=<int>	0-128	Speed patrolling among preset positions : 1-90 degree/s
swing_start_id=<int>	1-128	Start position of patrolling
swing_end_id =<int>	1-128	Stop position of patrolling
oprate_type=<int>		Op command: 0- no op; 1- tuning; 2- stop; 3- add; 4- edit; 5- start record 6- stop record 7- delete record 8- delete classified data
enable_proportional_pan=<int>	0/1	Enable proportional pan

enable_preset_freezing=<int>	0/1	Enable preset freezing
preset_speed=<int>	1-8	Preset speed
keyboard_controlpeed=<int>	1-3	Keyboard control speed
auto_scan_speed=<int>	1-20	Auto scan speed
zoom_status=<int>	0-11	Zoom status: 0-always close 1-always open
pt_status=<int>	0-11	PT Angel: 0 – close; 11- open
preset_status=<int>	0-11	Preset title; 0- close; 11-open
set_resume_time_point=<int>	0-600	Set resume time: 0-disable
enable_limit=<int>	0/1	Enable Limit
limit_type=<int>	0-1	Limit type
limit_type_status=<int>	0-1	Limit type status
enable_park_action=<int>	0/1	Enable parking action
park_time=<int>	1-10	Parking action time 1min-4hr
park_action_type=<int>	0-4	Park action type: 0- start 1- preset 2- Patrolling scan 3- Pattern scan 4- Group patrolling Define: origin 0-horizon 0-vertical
park_action_type_id=<int>	1-8	Park action type ID
enable_scheduled_task=<int>	0/1	Enable scheduled task
scheduled_task_park_time =<int>	1-10	Schedule park time

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 both have 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 supportted by devices. Vary among models. e.g.: IP camera only 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
event_upload_to_alarm_server =<int>	0,1	Upload HTTP alarm server
event_snapshot_prenum=<int>	1-5	Snapshot pre number (most)
event_snapshot_endnum=<int>	1-5	Snapshot end number (most)

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
```

Sample URLs:

http://192.168.86.6/goform/alarmio?cmd=get
http://192.168.86.6/goform/alarmio?cmd=set&alarmin.index=0&event.record.pretime=10&event.record.aftertime=20&event.record.storage=0&event.record.uploadftp=0&event.sipphone.enable=0&event.alarmout.enable=0&event.uploadcenter.enable=0&event.shotemail.enable=0
http://192.168.86.6/goform/alarmio?cmd=set&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://192.168.86.6/goform/alarmio?cmd=set&event.record.pretime=10&event.record.aftertime=20
http://192.168.86.6/goform/alarmio?cmd=add
http://192.168.86.6/goform/alarmio?cmd=add&alarmin.index=0
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://192.168.86.6/goform/alarmio?cmd=add&alarmin.index=0&alarmin.schedule.dayset=4&alarmin.schedule.starttime=9999&alarmin.schedule.endtime=999999999
http://192.168.86.95/goform/alarmio?cmd=remove&alarmin.schedule.id=0
http://192.168.86.95/goform/alarmio?cmd=remove&alarmin.schedule.id=1

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 only has 1 channel; GXV3504 support 4 channels.
md.channel.index=<int>	0, 1, 2, 3	Corresponding index for channels. IP camera: 1. 4 channel GXV3504: 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 better 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 (Some models Not applicable)
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.
md_upload_to_alarm_server=<int>	0,1	Upload to HTTP alarm server
md_snapshot_prenum=<int>	1-5	Snapshot pre number (maximum)
md_snapshot_endnum=<int>	1-5	Snapshot post number (maximum)
md_retrigger_interval=<int>	1-60	MD Alarm trigger interval (seconds): Default: 1
md_trigger_interval=<int>	0-5	Minimum Interval of valid Motion Detection: (second) Default: 0 ~ Auto

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.after time=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)	Remark
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&	
http://192.168.86.6/goform/motiondetect?cmd=set&md.regn.index=0&md.regn.leftup=1&	
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.alar	
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.alar	
http://192.168.86.6/goform/motiondetect?cmd=remove&md.regn.schedule.id=	
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=	
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

Support: cmd= get_md_statu

http://<*servername*>/goform/ motiondetect?cmd= get_md_statu.

<*parameter*>=<*value*>	*Values*	*Description*
md_alarm_statu =<int>	0,1	MD Alarm State: 0: No Alarm 1: Alarming now

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, 4	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)	**Remark**
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. Live Storage (Only for Supported Models)

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

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

<parameter>=<value>	**Values**	**Description**
storage.count=<int>	0…	Total storage equipment
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 number 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	Filename with the file path, can be used to download the 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 (Reserved)

Example:

```
http://192.168.86.95/goform/storage?cmd=remove&storage.index=101

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 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, maximum 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)
dhcp_option_66=<int>	0,1	0- disable; 1- enable DHCP option 66
3cx_auto_provision=<int>	0,1	0- disable; 1- enable 3CX auto configure
disable_telnet=<int>	0,1	0- disable (Default) 1- enable Telnet Access
enable_upnp=<int>	0,1	0- disable; 1- enable UPnP Discovery (Default)

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 have to be set at the same time. Otherwise 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>	0-255 (For GXV3504) 0-60 (For GXV3615/3615W) 0-5 (For GXV3601HD/3611HD) 0-255 (For GXV3651FHD, GXV3662, GXV3500, GXV3610/3672/3674, GXV3611IR_HD)	Brightness
contrast=<int>	0-255 (For GXV3504) 0-7 (For GXV3615/3615W) 0-3 (GXV3601HD/3611HD) 0-255 (For GXV3651FHD, GXV3662, GXV3500, GXV3610/3672/3674, GXV3611IR_HD)	Contrast

saturation=<int>	0-1255 (For GXV3504) 0-63 (For GXV/3615/3615W) 0-8 (For GXV3601HD/3611HD) 0-255 (For GXV3651FHD, GXV3662, GXV3500, GXV3610/3672/3674, GXV3611IR_HD)	Saturation
Default=<int>	3, 4	3: set default value 4: set color-enhancement default value (For GXV3601HD and GXV3611HD only)

Example:

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

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

Example (URL)
http://192.168.86.6/goform/videocontrol?cmd=get
http://192.168.86.6/goform/videocontrol?cmd=set&contrast=101&brightness=101&saturation=101
http://192.168.86.6/goform/videocontrol?cmd=set&contrast=101
http://192.168.86.6/goform/videocontrol?cmd=set&contrast=101234&brightness=101&saturation=101

18.WIFI Settings (Only for Supported Models)

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
```

Example (URL)	**Remark**
http://192.168.86.6/goform/ wireless?cmd=get	
http://192.168.86.6/goform/wireless?cmd=set&ssid=wid&enable=1&keyindex=1&key=1234567890	
http://192.168.86.6/goform/wireless?cmd=search Return Result: search.ssid.index=1 search.ssid=labtest(31) search.ssid.index=2 search.ssid=LINKSUM(26) search.ssid.index=3 search.ssid=YYGD(7)	*Return wifi ssid List*

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 [2] 1:Normal Close
alarmout.type=<int>	0,1	0:Normal Open 1:Normal Close
alarmin.status=<int>	0,1	Used to **get** the current status of the alarm in. 0: Open 1: Close
alarmout.status=<int>	0,1	Used to **get** the current status of the alarm out. 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

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
```

[2] "Normal Open" and "Normal Close" are respectively refer to the initial Alarm_In or Alarm_Out interface, the circuit is normally or initially at "Open" circuit, or at "Close" circuit. This could be different based on the 3rd party device (e.g.: Door Strike, Siren, etc.). Please refer to the User Manual of the 3rd party device to configure correctly the Input or Output interface of Grandstream device (IP Camera or Encoder).

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 CLOSE	alarmin.status=OPEN	alarm input detected
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 status (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 primary stream Capture view4.jpg, in 2nd stream Capture view0.jpg – view7.jpg in 4 channels with 1st and 2nd stream respectively. (GXV3504 Only)

Example:

Capture a snapshot.

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

Capture a snapshot of 2nd stream.

http://192.168.86.146/snapshot/view4.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 (Simplified) 2: Russian

Example:

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

23. Decode Settings (For GXV3500 Only)

http://<servername>/goform/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

Example (URL)	**Remark**
http://192.168.86.146/ goform/decode?cmd=set?channel=1	Set channel 1

24. Stream Acquiring (MJPEG Only)

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

<parameter>=<value>	Values	Description
channel=<int>	0-7	For IP Camera, the primary is 0 (default is 0); 2nd stream is 4 For GXV3504, the channel number and streams mapping is equal to: n+4.

Example:

http://192.168.86.25/goform/stream?cmd=get&channel=0 http://192.168.86.25/goform/stream?cmd=get&channel=4

NOTE:

- *This streaming acquiring command only works when the video codec is configured using MJPEG.*
- *For IP Cameras, the primary stream is using digit "0"; the 2nd stream is using digit "4".*

25. CMOS Settings (Only for Supported Models)

Support **cmd = set/get**.

NOTE:

- *This setting only applies to: GXV3500, GXV3651FHD, GXV3662, GXV3615WP_HD, GXV3610, GXV3672, GXV3674, GXV3611IR_HD models.*

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, 1,2,3	IR CUT setting 0: Manual_Mode 1: Automatic_Mode (IR sensor control); 2: Autotatic Mode (Algorithm control) 3: Time Schedule Mode
daytime_start=<int>	0-86399	Only for Time Schedule Mode. (second); e.g.: 12:39 start time is 12*3600 + 39*60; default is 0

daytime_end=<int>	0-86399	Only for Time Schedule Mode. (second); e.g.: 12:39 end time is 12*3600 + 39*60; default is 0
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
ir_led_setting=<int>	0,1,2	V2 Model IR_LED control 0- Auto 1- On 2- Off
privacymask=<string>		Privacy Masks String GET: Format: *%d,%d,%d,%d,%d,%d* e.g.: *ID,E,X1,Y1,X2,Y2* *SET: Format 1:* *@AE@AX1@AY1@AX2@AY2* @BE@BX1@BY1@BX2@BY2 @CE@CX1@CY1@CX2@CY2@ DE@DX1@DY1@DX2@DY2 AE: Region (A) 0 – disable 1 – enable AX1: Region (A) X1 (0<=X1<=704) AY1: Region (A) Y1 (0<Y1<=576) AX2: Region (A) X2 (0<=X2<=704) AY2: Region (A) Y2 (0<Y2<=576) Region (B,C,D) same as Region (A) Format 2: @ID@E@X1@Y1@X2@Y2 ID: Region ID E : 0-disable, 1-enable X1: x1(0<=X1<=704) Y1: y1(0<Y1<=576) X2: x2(0<=X2<=704) Y2: y2(0<Y1<=576)

Example:

Set CMOS parameters.

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

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

Example (URL)	Remark
http://192.168.86.6/goform/ cmos?cmd=get	
http://192.168.86.6/goform/cmos?cmd=set&Iris=1&shutter_spee	

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 the type for display.
ptions=<int>	1-8	**H.264** 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
channel=<int>	0-4	Channel(GXV3504)

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)	**Remark**
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=ser	

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. (Single channel device could skip this)
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_record=<int>	0, 1	For record manually. [3] 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)
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

[3] This command is used for manually start or stop the recording. It will fail if conflicting with pre-configured recording schedule or other events.

29.Time Lapse Photography

Support **cmd = set/get**

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

<parameter>=<value>	**Values**	**Description**
periodic_snapshot_enable=<int>	0,1	0-disable; 1-enable
periodic_snapshot_interval=<int>	1-999	Periodic snapshot interval (minute）
periodic_snapshot_uploadsd =<int>	0，1	Save to SD card: 0-No; 1-Yes
periodic_snapshot_uploadftp =<int>	0，1	FTP upload，0-No，1-Yes
periodic_snapshot_uploademail =<int>	0，1	Email upload，0-No，1-Yes

Example：

http://192.168.86.6/goform/periodic_snapshot?cmd=set& periodic_snapshot_enable =1& periodic_snapshot_interva =30 200 OK\r\n Successful \r\n

Example (URL)
http://192.168.86.6/goform/periodic_snapshot?cmd=get
http://192.168.86.6/goform/periodic_snapshot?cmd=set& periodic_snapshot_enable =1& periodic_snapshot_interva =30

Table 1:

Device Alarm Recording Time Table					
Model	**Memory(M)**	**Bit Rate(bps)**	**Pre_Record Max.Time (s)**	**Post_Record Max.Time (s)**	**Theoritical Max.Time(s)**
GXV3662	24	<=512	100	200	384
GXV3651 GXV3601HD GXV3611HD		<=1024	50	100	192
		<=1536	45	60	128
		<=2048	30	60	96
		<=3072	20	40	64
		<=4096	15	30	48
		<=6144	10	20	32
		>6144	10	10	24
GXV3672HD	8	<=512	50	70	128
		<=1024	20	40	64
		<=1536	15	25	42
		<=2048	10	20	32
		<=3072	5	15	21
		<=4096	5	10	16
		<=6144	4	5	10
		>6144	3	4	8
GXV3500	8	<=256	90	120	256
		<=512	50	70	128
		<=1024	20	40	64
		<=1536	15	25	42
		<=2048	10	20	32
GXV3504 GXV3601HD GXV3611HD GXV3615(W) GXV3615WP_HD	24	<=256	160	320	768
		<=512	100	200	384
		<=1024	50	100	192
		<=1536	45	60	128
		<=2048	30	60	96

Table 1:

Device Alarm Recording Time Table					
Model	**Memory(M)**	**Bit Rate(bps)**	**Pre_Record Max.Time (s)**	**Post_Record Max.Time (s)**	**Theoritical Max.Time(s)**
GXV3610 GXV3672 GXV3674 GXV3611IR_HD	3	<=512	15	25	48
		<=1024	10	10	24
		<=1536	5	8	16
		<=2048	5	5	12
		<=3072	3	3	8
		<=4096	2	3	6
		<=6144	1	2	4
		>6144	1	1	3
GXV3672HD	8	<=512	50	70	128
		<=1024	20	40	64
		<=1536	15	25	42
		<=2048	10	20	32
		<=3072	5	15	21
		<=4096	5	10	16
		<=6144	4	5	10
		>6144	3	4	8