General CGI URL syntax and parameters

CGI parameters are written in lower-case and as one word without any underscores or other separators. When the CGI request includes internal camera parameters, the internal parameters must be written exactly as they are named in the camera or video server. The CGIs are organized in function related directories under the cgi-bin directory. The file extension of the CGI is required.

Syntax:

http://*<servername>*/cgi-bin/*<subdir>*[/*<subdir>*…]/*<cgi>.<ext>*
[?<parameter>=<value>[&<parameter>=<value>…]]

Example: Setting digital output #1 to active
http://mywebserver/cgi-bin/dido/setdo.cgi?do1=1

Security level

SECURITY LEVEL	SUB-DIRECTORY	DESCRIPTION
0	anonymous	Unprotected.
1 [view]	anonymous, viewer, dido, camctrl	1. Can view, listen, talk to camera 2. Can control dido, ptz of camera
4 [operator]	anonymous, viewer, dido, camctrl, operator	Operator's access right can modify most of camera's parameters except some privilege and network options
6 [admin]	anonymous, viewer, dido, camctrl, operator, admin	Administrator's access right can fully control the camera's operation.
7	N/A	Internal parameters. Unable to be changed by any external interface.

Get server parameter values

Note: The access right depends on the URL directory.
Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/anonymous/getparam.cgi?[*<parameter>*]
[&<parameter>…]

```
http://<servername>/cgi-bin/viewer/getparam.cgi?[<parameter>]
[&<parameter>...]


http://<servername>/cgi-bin/operator/getparam.cgi?[<parameter>]
[&<parameter>...]


http://<servername>/cgi-bin/admin/getparam.cgi?[<parameter>]
[&<parameter>...]
```

where the *<parameter>* should be *<group>*[_*<name>*] or *<group>*[.*<name>*] If you do not specify the any parameters, all the parameters on the server will be returned. If you specify only *<group>*, the parameters of related group will be returned.

When query parameter values, the current parameter value are returned.

Successful control request returns paramter pairs as follows.

Return:

```
HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n
Context-Length: <length>\r\n
\r\n
<parameter pair>
```

where <parameter pair> is

=<value>\r\n

[<parameter pair>]

<length> is the actual length of content.

Example: request IP address and it's response

```
Request:
http://192.168.0.123/cgi-bin/admin/getparam.cgi?network_ipaddress


Response:
HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n
Context-Length: 33\r\n
\r\n
network.ipaddress=192.168.0.123\r\n
```

Set server parameter values

Note: The access right depends on the URL directory.

Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/anonymous/setparam.cgi? *<parameter>=<value>*

[&<parameter>=<value>...][&update=<value>][&return=<return page>]

http://*<servername>*/cgi-bin/viewer/setparam.cgi? *<parameter>=<value>*

[&<parameter>=<value>...][&update=<value>] [&return=<return page>]

http://*<servername>*/cgi-bin/operator/setparam.cgi? *<parameter>=<value>*

[&<parameter>=<value>...][&update=<value>] [&return=<return page>]

http://*<servername>*/cgi-bin/admin/setparam.cgi? *<parameter>=<value>*

[&<parameter>=<value>...][&update=<value>] [&return=<return page>]

PARAMETER	VALUE	DESCRIPTION
<group>_<name>	value to assigned	Assign *<value>* to the parameter *<group>_<name>*
update	<boolean>	set to 1 to actually update all fields (no need to use update parameter in each group)
return	*<return page>*	Redirect to the page *<return page>* after the parameter is assigned. The *<return page>* can be a full URL path or relative path according to the current path. If you omit this parameter, it will redirect to an empty page. (note: The return page can be a general HTML file(.htm, .html) or a VIVOTEK server script executable (.vspx) file. It can not be a CGI command. It can not have any extra parameters. This parameter must be put at end of parameter list)

Return:

HTTP/1.0 200 OK\r\n

Content-Type: text/html\r\n

Context-Length: <length>\r\n

```
\r\n
<parameter pair>
```

where <parameter pair> is

=<value>\r\n

[<parameter pair>]

Only the parameters that you set and readable will be returned.

Example: Set the IP address of server to 192.168.0.123

Request:

http://myserver/cgi-bin/admin/setparam.cgi?network_ipaddress=192.168.0.123

Response:

HTTP/1.0 200 OK\r\n

Content-Type: text/html\r\n

Context-Length: 33\r\n

\r\n

network.ipaddress=192.168.0.123\r\n

Available parameters on the server

Valid values:

VALID VALUES	DESCRIPTION
string[<n>]	Text string shorter than 'n' characters. The characters ",', <,>,& are invalid.
password[<n>]	The same as string but display '*' instead
integer	Any number between $(-2^{31} - 1)$ and $(2^{31} - 1)$
positive integer	Any number between 0 and $(2^{32} - 1)$
<m> ~ <n>	Any number between 'm' and 'n'
domain name[<n>]	A string limited to contain a domain name shorter than 'n' characters (eg. www.ibm.com)
email address [<n>]	A string limited to contain a email address shorter than 'n' characters (eg. joe@www.ibm.com)
ip address	A string limited to contain an ip address (eg. 192.168.1.1)
mac address	A string limited to contain mac address without hyphen or colon connected
boolean	A boolean value 1 or 0 represents [Yes or No], [True or False], [Enable or Disable].
<value1>, <value2>,	Enumeration. Only given values are valid.

<value3>, ...	
blank	A blank string
everything inside <>	As description

NOTE: The camera should prevent to restart when parameter changed.

Group: **system**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
hostname	string[40]	1/6	host name of server (Network Camera, Wireless Network Camera, Video Server, Wireless Video Server)
ledoff	<boolean>	6/6	turn on(0) or turn off(1) all led indicators
date	<yyyy/mm/dd>, keep, auto	6/6	Current date of system. Set to 'keep' keeping date unchanged. Set to 'auto' to use NTP to synchronize date.
time	<hh:mm:ss>, keep, auto	6/6	Current time of system. Set to 'keep' keeping time unchanged. Set to 'auto' to use NTP to synchronize time.
datetime	<MMDDhhmmYYYY.ss>	6/6	Another current time format of system.
ntp	<domain name>, <ip address>, <blank>	6/6	NTP server *do not use "skip to invoke default server" for default
timezoneindex	-489 ~ 529	6/6	Indicate timezone and area -480: GMT-12:00 Eniwetok, Kwajalein -440: GMT-11:00 Midway Island, Samoa -400: GMT-10:00 Hawaii -360: GMT-09:00 Alaska -320: GMT-08:00 Las Vegas, San_Francisco, Vancouver -280: GMT-07:00 Mountain Time, Denver -281: GMT-07:00 Arizona -240: GMT-06:00 Central America, Central Time, Mexico City, Saskatchewan

			-200: GMT-05:00 Eastern Time, New York, Toronto
			-201: GMT-05:00 Bogota, Lima, Quito, Indiana
			-160: GMT-04:00 Atlantic Time, Canada, Caracas, La Paz, Santiago
			-140: GMT-03:30 Newfoundland
			-120: GMT-03:00 Brasilia, Buenos Aires, Georgetown, Greenland
			-80: GMT-02:00 Mid-Atlantic
			-40: GMT-01:00 Azores, Cape_Verde_IS.
			0: GMT Casablanca, Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London
			40: GMT 01:00 Amsterdam, Berlin, Rome, Stockholm, Vienna, Madrid, Paris
			41: GMT 01:00 Warsaw, Budapest, Bern
			80: GMT 02:00 Athens, Helsinki, Istanbul, Riga
			81: GMT 02:00 Cairo
			82: GMT 02:00 Lebanon, Minsk
			83: GMT 02:00 Israel
			120: GMT 03:00 Baghdad, Kuwait, Riyadh, Moscow, St. Petersburg, Nairobi
			121: GMT 03:00 Iraq
			140: GMT 03:30 Tehran
			160: GMT 04:00 Abu Dhabi, Muscat, Baku, Tbilisi, Yerevan
			180: GMT 04:30 Kabul
			200: GMT 05:00 Ekaterinburg, Islamabad, Karachi, Tashkent
			220: GMT 05:30 Calcutta, Chennai, Mumbai, New Delhi
			230: GMT 05:45 Kathmandu
			240: GMT 06:00 Almaty, Novosibirsk, Astana, Dhaka, Sri Jayawardenepura
			260: GMT 06:30 Rangoon
			280: GMT 07:00 Bangkok, Hanoi, Jakarta, Krasnoyarsk

			320: GMT 08:00 Beijing, Chongging, Hong Kong, Kuala Lumpur, Singapore, Taipei
			360: GMT 09:00 Osaka, Sapporo, Tokyo, Seoul, Yakutsk
			380: GMT 09:30 Adelaide, Darwin
			400: GMT 10:00 Brisbane, Canberra, Melbourne, Sydney, Guam, Vladivostok
			440: GMT 11:00 Magadan, Solomon Is., New Caledonia
			480: GMT 12:00 Aucklan, Wellington, Fiji, Kamchatka, Marshall Is.
			520: GMT 13:00 Nuku'Alofa
daylight_enable	<boolean>	6/6	enable automatic daylight saving to time zone
daylight_dstactual mode	<boolean>	6/7	check if current time is under daylight saving time.
daylight_auto_beg intime	string[19]	6/7	display the current daylight saving begin time. (product dependent)
daylight_auto_end time	string[19]	6/7	display the current daylight saving end time. (product dependent)
updateinterval	0, 3600, 86400, 604800, 2592000	6/6	0 to Disable automatic time adjustment, otherwise, it means the seconds between NTP automatic update interval.
restore	0, <positive integer>	7/6	Restore the system parameters to default value after <value> seconds.
reset	0, <positive integer>	7/6	Restart the server after <value> seconds if <value> is non-negative.
restoreexceptnet	<Any value>	7/6	Restore the system parameters to default value except (ipaddress, subnet, router, dns1, dns2, pppoe). This command can cooperate with other "restoreexceptXYZ" commands. When cooperating with others, the system

			parameters will be restored to default value except a union of combined results.
restoreexceptdst	<Any value>	7/6	Restore the system parameters to default value except all daylight saving time settings. This command can cooperate with other "restoreexceptXYZ" commands. When cooperating with others, the system parameters will be restored to default value except a union of combined results.
restoreexceptlang	<Any Value>	7/6	Restore the system parameters to default value except custom language file user uploaded. This command can cooperate with other "restoreexceptXYZ" commands. When cooperating with others, the system parameters will be restored to default value except a union of combined results.

SubGroup of **system**: **info** (The fields in this group are unchangeable.)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
modelname	string[40]	0/7	Internal model name of server (eg. IP7139)
extendedmodelname	string[40]	0/7	ODM specific model name of server (eg. DCS-5610). If it is not ODM case, this field will be equal to "modelname"
serialnumber	<mac address>	0/7	12 characters mac address without hyphen connected
firmwareversion	string[40]	0/7	The version of firmware, including model, company, and version number in the format <MODEL-BRAND-VERSION>
language_count	<integer>	0/7	number of webpage language available on the server
language_i<0~(count-1)>	string[16]	0/7	Available language lists
customlanguage_maxcount	<integer>	0/7	Maximum number of custom language supported on the server
customlanguage_count	<integer>	0/7	Number of custom language which has been uploaded to the server

customlanguage_i<0~(max count-1)>	string	0/7	Custom language name

Group: **status**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
di_i<0~(ndi-1)>	<boolean>	1/7	0 => Inactive, normal 1 => Active, triggered
do_i<0~ndi-1)>	<boolean>	1/7	0 => Inactive, normal 1 => Active, triggered
daynight	day, night	7/7	The day/night status judge by light sensor
onlinenum_rtsp	integer	6/7	current RTSP connection numbers
onlinenum_httppush	integer	6/7	current HTTP push server connection numbers
eth_i0	string	1/99	The connection information of ethernet

Group: **di_i<0~(ndi-1)>** (capability.ndi > 0)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
normalstate	high, low	1/1	indicate whether open circuit or closed circuit represents inactive status

Group: **do_i<0~(ndo-1)>** (capability.ndo > 0)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
normalstate	open, grounded	1/1	indicate whether open circuit or closed circuit represents inactive status

Group: **security**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
privilege_do	view, operator, admin	6/6	Indicate which privilege and above can control digital output
privilege_camctrl	view, operator, admin	6/6	Indicate which privilege and above can control PTZ
user_i0_name	string[64]	6/7	User's name of root
user_i<1~20>_name	string[64]	6/7	User's name
user_i0_pass	password[64]	6/6	root's password

user_i<1~20>_pass	password[64]	7/6	User's password
user_i0_privilege	viewer, operator, admin	6/7	root's privilege
user_i<1~20>_ privilege	viewer, operator, admin	6/6	User's privilege.

Group: **network**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
type	lan, pppoe	6/6	Network connection type
resetip	<boolean>	6/6	1 => get ipaddress, subnet, router, dns1, dns2 from DHCP server at next reboot 0 => use preset ipaddress, subnet, rounter, dns1, and dns2
ipaddress	<ip address>	6/6	IP address of server
subnet	<ip address>	6/6	subnet mask
router	<ip address>	6/6	default gateway
dns1	<ip address>	6/6	primary DNS server
dns2	<ip address>	6/6	secondary DNS server
wins1	<ip address>	6/6	primary WINS server
wins2	<ip address>	6/6	secondary WINS server

Subgroup of **network: ieee8021x**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	6/6	Enable/disable IEEE 802.1x
eapmethod	eap-peap, eap-tls	6/6	Selected EAP method
identity_peap	String[64]	6/6	PEAP identity
identity_tls	String[64]	6/6	TLS identity
password	String[254]	6/6	Password for TLS
privatekeypassword	String[254]	6/6	Password for PEAP
ca_exist	<boolean>	6/6	CA installed flag
ca_time	<integer>	6/7	CA installed time. Represented in EPOCH
ca_size	<integer>	6/7	CA file size (in bytes)

certificate_exist	\<boolean\>	6/6	Certificate installed flag (for TLS)
certificate_time	\<integer\>	6/7	Certificate installed time. Represented in EPOCH
certificate_size	\<integer\>	6/7	Certificate file size (in bytes)
privatekey_exist	\<boolean\>	6/6	Private key installed flag (for TLS)
privatekey_time	\<integer\>	6/7	Private key installed time. Represented in EPOCH
privatekey_size	\<integer\>	6/7	Private key file size (in bytes)

Subgroup of **network: qos**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
cos_enable	\<boolean\>	6/6	Enable/disable CoS (IEEE 802.1p)
cos_vlanid	1~4095	6/6	VLAN ID
cos_video	0~7	6/6	Video channel for CoS
cos_audio	0~7	6/6	Audio channel for CoS
cos_eventalarm	0~7	6/6	Event/alarm channel for CoS
cos_management	0~7	6/6	Management channel for CoS
dscp_enable	\<boolean\>	6/6	Enable/disable DSCP
dscp_video	0~7	6/6	Video channel for DSCP
dscp_audio	0~7	6/6	Audio channel for DSCP
dscp_eventalarm	0~7	6/6	Event/alarm channel for DSCP
dscp_management	0~7	6/6	Management channel for DSCP

Subgroup of **network**: **ipv6**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	\<boolean\>	6/6	Enable IPv6
addonipaddress	\<ip address\>	6/6	IPv6 IP address
addonprefixlen	0~128	6/6	IPv6 prefix length
addonrouter	\<ip address\>	6/6	IPv6 router address
addondns	\<ip address\>	6/6	IPv6 DNS address
allowoptional	\<boolean\>	6/6	Allow Manually setup the IP address setting

Subgroup of **network**: **ftp**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
port	21, 1025~65535	6/6	local ftp server port

Subgroup of **network**: **http**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
port	80, 1025 ~ 65535	6/6	HTTP port
alternateport	1025~65535	6/6	Alternative HTTP port
authmode	basic, digest	1/6	HTTP authentication mode
s0_accessname	string[32]	1/6	Http server push access name for stream 1 (capability.protocol.spush_mjpeg =1 and video.stream.count>0)
s1_accessname	string[32]	1/6	Http server push access name for stream 2 (capability.protocol.spush_mjpeg =1 and video.stream.count>1)
s2_accessname	string[32]	1/6	Http server push access name for stream 3 (capability.protocol.spush_mjpeg =1 and video.stream.count>2)
s3_accessname	string[32]	1/6	Http server push access name for stream 4 (capability.protocol.spush_mjpeg =1 and video.stream.count>3)
s4_accessname	string[32]	1/6	Http server push access name for stream 5 (capability.protocol.spush_mjpeg =1 and video.stream.count>4)
anonymousviewing	<boolean>	1/6	Enable anoymous streaming viewing.

Subgroup of **network**: **https**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
port	443, 1025 ~ 65535	6/6	HTTPS port

Subgroup of **network**: **rtsp**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
port	554, 1025 ~ 65535	1/6	RTSP port (capability.protocol.rtsp=1)
anonymousviewing	<boolean>	1/6	Enable anoymous streaming viewing.
authmode	disable, basic, digest	1/6	RTSP authentication mode (capability.protocol.rtsp=1)

s0_accessname	string[3b;42]	1/6	RTSP access name for stream1 (capability.protocol.rtsp=1 and video.stream.count>0)
s1_accessname	string[32]	1/6	RTSP access name for stream2 (capability.protocol.rtsp=1 and video.stream.count>1)
s2_accessname	string[32]	1/6	RTSP access name for stream3 (capability.protocol.rtsp=1 and video.stream.count>2)
s3_accessname	string[32]	1/6	RTSP access name for stream4 (capability.protocol.rtsp=1 and video.stream.count>3)
S4_accessname	string[32]	1/6	RTSP access name for stream5 (capability.protocol.rtsp=1 and video.stream.count>4)
s0_audiotrack	<integer>	6/6	The current audio track for stream1. -1 => audio mute
s1_audiotrack	<integer>	6/6	The current audio track for stream2. -1 => audio mute

Subgroup of **rtsp_s<0~(n-1)>**: **multicast**, n is stream count (capability.protocol.rtp.multicast=1)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
alwaysmulticast	<boolean>	4/4	Enable always multicast
ipaddress	<ip address>	4/4	Multicast IP address
videoport	1025 ~ 65535	4/4	Multicast video port
audioport	1025 ~ 65535	4/4	Multicast audio port
ttl	1 ~ 255	4/4	Mutlicast time to live value

Subgroup of **network**: **sip**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
port	554, 1025 ~ 65535	6/6	SIP port (capability.protocol.sip=1)

Subgroup of **network**: **rtp**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
videoport	1025 ~ 65535	6/6	video channel port for RTP (capability.protocol.rtp_unicast=1)
audioport	1025 ~ 65535	6/6	audio channel port for RTP (capability.protocol.rtp_unicast=1)

Subgroup of **network**: **pppoe**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
user	string[128]	6/6	PPPoE account user name
pass	password[64]	6/6	PPPoE account password

Group: **ipfilter**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	6/6	Enable or disable ipfilter settings
admin_enable	<boolean>	6/6	Enable or disable the function always allow the admin IP address to access this device
admin_ip	1.0.0.0 ~ 255.255.255.255	6/6	Always allow this IP connect to camera when admin_enable=1
maxconnection	0~10	6/6	Maximum number of concurrent streaming connection(s) limit
allow_i<0~9>_start	1.0.0.0 ~ 255.255.255.255	6/6	Allowed starting IP address for RTSP connection
allow_i<0~9>_end	1.0.0.0 ~ 255.255.255.255	6/6	Allowed ending IP address for RTSP connection
deny_i<0~9>_start	1.0.0.0 ~ 255.255.255.255	6/6	Denied starting IP address for RTSP connection
deny_i<0~9>_end	1.0.0.0 ~ 255.255.255.255	6/6	Denied ending IP address for RTSP connection
ipv6_allow_i<0~9>_start	<ip address>	6/6	Allowed IPv6 starting IP address for RTSP connection
ipv6_allow_i<0~9>_end	<ip address>	6/6	Allowed IPv6 ending IP address for RTSP connection
ipv6_deny_i<0~9>_start	<ip address>	6/6	Denied IPv6 starting IP address for RTSP connection

ipv6_deny_i<0~9>_end	<ip address>	6/6	Denied IPv6 ending IP address for RTSP connection

Group: **videoin**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
cmosfreq	50, 60	4/4	CMOS frequency (videoin.type=2) (product dependent)
whitebalance	<product dependent>	4/4	auto, auto white balance manual indoor, 3200K fluorescent, 5500K outdoor, > 5500K
atwbvalue1	0 ~ 9999999999	4/4	The auto white balance value.
atwbvalue2	0 ~ 9999999999	4/4	The auto white balance value.
exposurelevel	1 ~ 8	4/4	The target brightness adjust by exposure options 1: darkest 8: brightness
autoiris	<boolean>	4/4	Enable auto Iris (product dependent)
enableblc	<boolean>	4/4	Enable backlight compensation (product dependent)
agc	normal, max	4/4	Set auto gain control to normal level or MAX level (product dependent)

Group: **videoin_c<0~(n-1)>** for n channel products, m is stream number

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
color	0, 1	4/4	0 =>monochrome 1 => color
flip	<boolean>	4/4	flip the image
mirror	<boolean>	4/4	mirror the image
ptzstatus	<integer>	1/7	An 32-bits integer, each bit can be set separately as follows: Bit 0 => Support camera control

			function 0(not support), 1(support)
			Bit 1 => **Build-in** or **external** camera. 0(external), 1(build-in)
			Bit 2 => Support **pan** operation. 0(not support), 1(support)
			Bit 3 => Support **tilt** operation. 0(not support), 1(support)
			Bit 4 => Support **zoom** operation. 0(not support), 1(support)
			Bit 5 => Support **focus** operation. 0(not support), 1(support)
text	string[16]	1/4	enclosed caption
imprinttimestamp	<boolean>	4/4	Overlay time stamp on video
maxexposure	1~120	4/4	Maximum exposure time
options	quality, framerate	4/4	To customize video quality first or video frame rate first. (product dependent)
enablepreview	<boolean>	1/4	0: normal mode 1: preview mode (capability_nvideoinprofile > 0)
profile_i<0~(k-1)>_enable	<boolean>	4/4	Enable this profile (capability_nvideoinprofile > 0)
profile_i<0~(k-1)>_policy	day, night, schedule	4/4	When the condition match the policy, use this profile (capability_nvideoinprofile > 0)
profile_i<0~(k-1)>_begintime	hh:mm	4/4	If choose "schedule" mode as profile policy, the begin time of this profile when enabled (capability_nvideoinprofile > 0)
profile_i<0~(k-1)>_endtime	hh:mm	4/4	If choose "schedule" mode as profile policy, the end time of this profile when enabled (capability_nvideoinprofile > 0)
profile_i<0~(k-1)>_maxexposure	1~120	4/4	Maximum exposure time (capability_nvideoinprofile > 0)
profile_i<0~(k-1)>_enableblc	1~8	4/4	Enable backlight compensation
profile_i<0~(k-1)>_exposurelevel	1~8	4/4	The target brightness adjust by exposure options

			1: darkest
			8: brightness
			(capability_nvideoinprofile > 0)
profile_i<0~(k-1)>_agc	0~2	4/4	Set auto gain control to: 0: 2X level
			1: 4X level
			2: 8X level
			(capability_nvideoinprofile > 0)
profile_i<0~(k-1)>_autoiris	<boolean>	4/4	Enable auto Iris
			(capability_nvideoinprofile > 0)
s<0~(m-1)>_codectype	mpeg4, mjpeg	4/4	video codec type
s<0~(m-1)>_resolution	176x144, 320x240, 640x480, 800x600, 1280x960, 1600x1200	4/4	Video resolution in pixel
s<0~(m-1)>_mpeg4_intraperiod	250, 500, 1000, 2000, 3000, 4000	4/4	The period of intra frame in milliseconds
s<0~(m-1)>_mpeg4_ratecontrolmode	cbr, vbr	4/4	cbr, constant bitrate vbr, fix quality
s<0~(m-1)>_mpeg4_quant	1~5, 99	4/4	quality of video when choosing vbr in "ratecontrolmode". 99 is customized manual input setting. 1 is worst quality and 5 is the best quality.
s<0~(m-1)>_mpeg4_qvalue	1~31	7/4	The specific quality parameter of mpeg4 encoder. 1 is best quality and 31 is the worst quality.
s<0~(m-1)>_mpeg4_bitrate	1000~4000000	4/4	Set bit rate in bps when choose cbr in "ratecontrolmode"
s<0~(m-1)>_mpeg4_maxframe	1~15 for quality mode 1~30 for frame rate mode	4/4	set maximum frame rate in fps (for MPEG-4)
s<0~(m-1)>_mjpeg_quant	1 ~ 5, 999	4/4	quality of jpeg video. 999 is customized manual input setting.

			1 is worst quality and 5 is the best quality.
s<0~(m-1)>_mjpeg_qvalue	10~200	7/4	The specific quality parameter of jpeg encoder. 10 is best quality and 200 is the worst quality.
s<0~(m-1)>_mjpeg_maxframe	1~25, 26~30 (only for NTSC or 60Hz CMOS)	4/4	set maximum frame rate in fps (for JPEG)
s<0~(m-1)>_forcei	1	7/6	Force I frame

Group: **videoinpreview**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
maxexposure	1~120	4/4	Maximum exposure time
exposurelevel	1 ~ 8	4/4	The target brightness adjust by exposure options 1: darkest 8: brightness
enableblc	<boolean>	4/4	Enable backlight compensation (product dependent)
agc	0~2	4/4	Set auto gain control to: 0: 2X level 1: 4X level 2: 8X level (product dependent)
autoiris	<boolean>	4/4	Enable auto Iris (product dependent)

Group: **audioin_c<0~(n-1)>** for n channel products (capability.audioin>0)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
source	micin, linein	4/4	micin => use external microphone input linein => use line input
mute	0, 1	4/4	Enable audio mute
gain	1~37	4/4	Gain of input
gain2	1~37	4/4	Gain of input
s<0~(m-1)>_codectype	aac4, gamr	4/4	set audio codec type for input
s<0~(m-1)>_aac4_bitrate	16000,	4/4	set AAC4 bitrate in bps

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
	32000, 48000, 64000, 96000, 128000		
s<0~(m-1)>_gamr_bitrate	4750, 5150, 5900, 6700, 7400, 7950, 10200, 12200	4/4	set AMR bitrate in bps

Group: **image_c<0~(n-1)>** for n channel products

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
brightness	-5 ~ 5	4/4	Adjust brightness of image according to mode settings.
saturation	-5 ~ 5	4/4	Adjust saturation of image according to mode settings.
contrast	-5 ~ 5	4/4	Adjust contrast of image according to mode settings.
sharpness	-5 ~ 5	4/4	Adjust sharpness of image according to mode settings.
IBPE_edgeenable	<boolean>	4/4	Enable edge enhancement.
IBPE_edgestrength	1 ~ 128	4/4	Adjust edge enhancement strength. 1 is minimum and 128 is maximum.
IBPE_nrenable	<boolean>	4/4	Enable noise reduction.
IBPE_nrmode	1 ~ 3	4/4	Adjust noise reduction mode. 1 => DeGaussian 2 => DeImpulse 3 => DeGaussian + DeImpulse
IBPE_nrstrength	1 ~ 63	4/4	Adjust noise reduction strength. 1 is minimum and 63 is maximum.

Group: **imagepreview_c<0~(n-1)>** for n channel products

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
brightness	-5 ~ 5	4/4	Preview of adjusting brightness of image according to mode settings.
saturation	-5 ~ 5	4/4	Preview of adjusting saturation of image according to mode settings.
contrast	-5 ~ 5	4/4	Preview of adjusting contrast of image according to mode settings.
sharpness	-5 ~ 5	4/4	Preview of adjusting sharpness of image according to mode settings.
IBPE_edgeenable	<boolean>	4/4	Preview of adjusting enabling edge enhancement.
IBPE_edgestrength	1 ~ 128	4/4	Preview of adjusting edge enhancement strength. 1 is minimum and 128 is maximum.
IBPE_nrenable	<boolean>	4/4	Preview of adjusting enabling noise reduction.
IBPE_nrmode	1 ~ 3	4/4	Preview of adjusting noise reduction mode. 1 => DeGaussian 2 => DeImpulse 3 => DeGaussian + DeImpulse
IBPE_nrstrength	1 ~ 63	4/4	Preview of adjusting noise reduction strength. 1 is minimum and 63 is maximum.
videoin_whitebalance	auto, manual	4/4	Preview of adjusting white balance of image according to mode settings
videoin_restoreatwb	0, 1~	4/4	Restore of adjusting white balance of image according to mode settings

Group: **timeshift**, c for n channel products, m is stream number

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	4/4	Enable time shift streaming.
c<0~(n-1)>_s<0~(m-1)>_allow	<boolean>	4/4	Enable time shift streaming for specific stream. (product dependent)

Group: **motion_c<0~(n-1)>** for n channel product

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	4/4	enable motion detection
win_i<0~2>_enable	<boolean>	4/4	enable motion window 1~3
win_i <0~2>_name	string[14]	4/4	name of motion window 1~3
win_i <0~2>_left	0 ~ 320	4/4	Left coordinate of window position.
win_i <0~2>_top	0 ~ 240	4/4	Top coordinate of window position.
win_i <0~2>_width	0 ~ 320	4/4	Width of motion detection window.
win_i<0~2>_height	0 ~ 240	4/4	Height of motion detection window.
win_i<0~2>_objsize	0 ~ 100	4/4	Percent of motion detection window.
win_i<0~2>_sensitivity	0 ~ 100	4/4	Sensitivity of motion detection window.

Group: **motion_ c<0~(n-1)>_profile_i<0~(m-1)>** for n channel, m motion profile product

(capability_nmotionprofile > 0)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	4/4	enable motion detection
policy	day, night, schedule	4/4	When the condition match the policy, use this profile
begintime	hh:mm	4/4	If choose "schedule" mode as profile policy, the begin time of this profile when enabled
endtime	hh:mm	4/4	If choose "schedule" mode as profile policy, the end time of this profile when enabled
win_i<0~2>_enable	<boolean>	4/4	enable motion window 1~3
win_i <0~2>_name	string[14]	4/4	name of motion window 1~3
win_i <0~2>_left	0 ~ 320	4/4	Left coordinate of window position.
win_i <0~2>_top	0 ~ 240	4/4	Top coordinate of window position.
win_i <0~2>_width	0 ~ 320	4/4	Width of motion detection window.
win_i<0~2>_height	0 ~ 240	4/4	Height of motion detection window.
win_i<0~2>_objsize	0 ~ 100	4/4	Percent of motion detection window.
win_i<0~2>_sensitivity	0 ~ 100	4/4	Sensitivity of motion detection window.

Group: tampering_c<0~(n-1)> for n channel,

NAME	VALUE	DEFAULT	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	0	4/4	Enable or disable camera tampering detection
threshold	0 ~ 255	32	4/4	The sensitivity to judge if camera has been tampered 0: lowest sensitivity 255: highest sensitivity
duration	10 ~ 600	10	4/4	Judge camera has been tampered if exceeding this duration

Group: **ddns**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	6/6	Enable or disable the dynamic dns.
provider	Safe100, DyndnsDynamic, DyndnsCustom, TZO, DHS, DynInterfree, CustomSafe100	6/6	Safe100 => safe100.net DyndnsDynamic => dyndns.org (dynamic) DyndnsCustom => dyndns.org (custom) TZO => tzo.com DHS => dhs.org DynInterfree =>dyn-interfree.it CustomSafe100 => Custom server using safe100 method
<provider>_hostname	string[128]	6/6	Your dynamic hostname.
<provider>_usernameemail	string[64]	6/6	Your user or email to login ddns service provider
<provider>_passwordkey	string[64]	6/6	Your password or key to login ddns service provider
<provider>_servername	string[128]	6/6	The server name for safe100. (This field only exists for provider is customsafe100)

Group: **upnppresentation**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	6/6	Enable or disable the UPNP presentation service.

Group: **upnpportforwarding**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	6/6	Enable or disable the UPNP port forwarding service.
upnpnatstatus	0~3	6/7	The status of UpnP port forwarding, used internally. 0 is OK, 1 is FAIL, 2 is no IGD router, 3 is no need to do port forwarding

Group: **syslog**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enableremotelog	<boolean>	6/6	enable remote log
serverip	<IP address>	6/6	Log server IP address
serverport	514, 1025~65535	6/6	Server port used for log
level	0~7	6/6	The levels to distinguish the importance of information. 0: LOG_EMERG 1: LOG_ALERT 2: LOG_CRIT 3: LOG_ERR 4: LOG_WARNING 5: LOG_NOTICE 6: LOG_INFO 7: LOG_DEBUG

Group: **camctrl_c<0~(n-1)>** for n channel product (capability.ptzenabled)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
panspeed	-5 ~ 5	1/4	Pan speed
tiltspeed	-5 ~ 5	1/4	Tilt speed
zoomspeed	-5 ~ 5	1/4	Zoom speed
focusspeed	-5 ~ 5	1/4	Auto focus speed
patrolseq	0 ~ 64	1/4	Patrol sequence
patroldwelling	0 ~ 128	1/4	Patrol dwelling time
preset_i<0~19>_name	string[40]	1/4	The name of preset location
preset_i<0~19>_dwelling	0 ~ 255	1/4	The dwelling time of each preset location

uart	0 ~ (m-1), m is uart count	1/4	select correspond uart (capability.nuart>0)
cameraid	0~255	1/4	Camera ID to control external PTZ camera
isptz	0 ~ 2	1/7	0: disable PTZ commands. 1: enable PTZ commands with PTZ driver. 2: enable PTZ commands with UART tunnel.
disablemdonptz	<boolean>	1/4	disable motion detection on PTZ operation

Group: **uart** (capability.nuart>0) (product dependent)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
ptzdrivers_i<0~19, 127>_name	string[40]	1/4	The name of the PTZ driver
ptzdrivers_i<0~19, 127>_location	string[128]	1/4	The full path of the PTZ driver
update	1	7/4	update the list of built-in external PTZ drivers
enablehttptunnel	<boolean>	4/4	Enable HTTP tunnel channel to control UART

Group:**uart_i<0~(n-1)>** n is uart port count (capability.nuart>0)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
baudrate	110,300,600,1200,2400,3600,4800,7200,9600,19200,38400,57600,115200	4/4	set baud rate of COM port
databit	5,6,7,8	4/4	data bits in a character frame
paritybit	none, odd, even	4/4	For error checking
stopbit	1,2	4/4	1 2-1.5 , data bit is 5 2-2
uartmode	rs485, rs232	4/4	rs485 or rs232
customdrvcmd_i<0~9>	string[128]	1/4	PTZ command for custom camera.

speedlink_i<0~4>_name	string[40]	1/4	Additional PTZ command name
speedlink_i<0~4>_cmd	string[128]	1/4	Additional PTZ command list
updatecustomdrvcmd	1	7/4	set this flag to true to apply change of custom command configuration
updatespeedlinkcmd	1	7/4	set this flag to true to apply change of additional PTZ command configuration
ptzdriver	0~19, 127 (custom), 128 (no driver)	4/4	which PTZ driver is used by this COM port

Group: **snmp** (capability.snmp) (product dependent)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
versions	1 ~ 3	6/6	SNMP version to use.
rocomm	string[14]	6/6	V1, V2c Read only community.
rwcomm	string[14]	6/6	V1, V2c Read write community.
adminauthtype	0 ~ 2	6/6	Authority type for root authentication.
admindpvcy	string[64]	6/6	Root data encryption key.
enableadpvcy	<boolean>	6/6	Enable root data encryption key.
userauthtype	0 ~ 2	6/6	User authority authentication.
userdpvcy	string[64]	6/6	User data encryption key.
enableudpvcy	<boolean>	6/6	Enable user data encryption key.
trapserver	<ip address>, <domain name> [128]	6/6	Trap server
trapcomm	string[14]	6/6	Trap community
objectid	string[40]	6/6	Object ID

Group: **layout** (product dependent)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
logo_default	<boolean>	1/6	0 => Custom logo 1 => Default logo

logo_link	string[40]	1/6	Hyperlink of the logo
theme_option	1~4	1/6	1~3: One of the default themes 4: Custom definition
theme_color_font	string[7]	1/6	Font color
theme_color_configfont	string[7]	1/6	Font color of configuration area
theme_color_titlefont	string[7]	1/6	Font color of video title
theme_color_controlbackground	string[7]	1/6	Background color of control area
theme_color_configbackground	string[7]	1/6	Background color of configuration area
theme_color_videobackground	string[7]	1/6	Background color of video area
theme_color_case	string[7]	1/6	Frame color

Group: **privacymask_c<0~(n-1)>** for n channel product

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
enable	<boolean>	4/4	Enable the privacy mask
win_i<0~4>_enable	<boolean>	4/4	Enable the privacy mask window
win_i<0~4>_name	string[14]	4/4	The name of privacy mask window
win_i<0~4>_left	0 ~ 320/352	4/4	Left coordinate of window position.
win_i<0~4>_top	0 ~ 240/288	4/4	Top coordinate of window position.
win_i<0~4>_width	0 ~ 320/352	4/4	Width of privacy mask window
win_i<0~4>_height	0 ~ 240/288	4/4	Height of privacy mask window
win_i<0~4>_color	0 ~ 13	4/4	Color of privacy mask window

Group: **capability**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
api_httpversion	0200a	0/7	The HTTP API version.
bootuptime	<positive integer>	0/7	The server bootup time
nir	0, <positive integer>	0/7	number of IR interface
ndi	0, <positive integer>	0/7	number of digital input

ndo	0, <positive integer>	0/7	number of digital output
naudioin	0, <positive integer>	0/7	number of audio input
naudioout	0, <positive integer>	0/7	number of audio output
nvideoin	<positive integer>	0/7	number of video input
nmediastream	<positive integer>	0/7	number of media stream per channel
nvideosetting	<positive integer>	0/7	number of video settings per channel
naudiosetting	<positive integer>	0/7	number of audio settings per channel
nuart	0, <positive integer>	0/7	number of UART interface
nvideoinprofile	0, <positive integer>	0/7	number of sensor profiles
nmotionprofile	0, <positive integer>	0/7	number of motion profiles
ptzenabled	< positive integer >	0/7	An 32-bits integer, each bit can be set separately as follows: Bit 0 => Support camera control function 0(not support), 1(support) Bit 1 => Build-in or external camera. 0(external), 1(build-in) Bit 2 => Support pan operation. 0(not support), 1(support) Bit 3 => Support tilt operation. 0(not support), 1(support) Bit 4 => Support zoom operation. 0(not support), 1(support) Bit 5 => Support focus operation. 0(not support), 1(support) Bit 6 => Support iris operation. 0(not support), 1(support) Bit 7 => External or build-in PT. 0(build-in), 1(external) Bit 8 => Invalidate bit 1 ~ 7. 0(bit 1 ~ 7 are valid), 1(bit 1 ~ 7 are invalid)

			Bit 9 => Reserved bit; Invalidate lens_pan, Lens_tilt, lens_zoon, lens_focus, len_iris. 0(fields are valid), 1(fields are invalid)
eptz	<positive integer>	0/7	A 32-bit integer, each bit can be set separately as follows: Bit 0 => stream 1 supports ePTZ or not. Bit 1 => stream 2 supports ePTZ or not. The rest may be deduced by analogy
protocol_https	<boolean>	0/7	indicate whether to support http over SSL
protocol_rtsp	<boolean>	0/7	indicate whether to support rtsp
protocol_sip	<boolean>	0/7	indicate whether to support sip
protocol_maxconnection	<positive integer>	0/7	The maximum allowed simultaneous connections
protocol_rtp_multicast_ scalable	<boolean>	0/7	indicate whether to support scalable multicast
protocol_rtp_multicast_ backchannel	<boolean>	0/7	indicate whether to support backchannel multicast
protocol_rtp_tcp	<boolean>	0/7	indicate whether to support rtp over tcp
protocol_rtp_http	<boolean>	0/7	indicate whether to support rtp over http
protocol_spush_mjpeg	<boolean>	0/7	indicate whether to support server push motion jpeg
protocol_snmp	<boolean>	0/7	indicate whether to support snmp
protocol_ipv6	<boolean>	0/7	indicate whether to support ipv6
videoin_type	0, 1, 2	0/7	0 => Interlaced CCD 1 => Progressive CCD 2 => CMOS
videoin_resolution	<a list of the available resolution separates by comma)	0/7	available resolutions list
videoin_maxframerate	<a list of the available max frame rate separates by comma>	0/7	available framerate at the videoin_resolution list index

videoin_codec	<a list of the available codec types separaters by comma)	0/7	available codec list
videoout_codec	<a list of the available codec types separaters by comma)	0/7	available codec list
audio_aec	<boolean>	0/7	indicate whether to support acoustic echo cancellation
audio_extmic	<boolean>	0/7	indicate whether to support external microphone input
audio_linein	<boolean>	0/7	indicate whether to support external line input
audio_lineout	<boolean>	0/7	indicate whether to support line output
audio_headphone out	<boolean>	0/7	indicate whether to support headphone output
audioin_codec	<a list of the available codec types separaters by comma)	0/7	available codec list
audioout_codec	<a list of the available codec types separaters by comma)	0/7	available codec list
uart_httptunnel	<boolean>	0/7	Indicate whether to support the http tunnel for uart transfer
camctrl_httptunne l	<boolean>	0/7	Indicate whether to support the http tunnel for camera control
camctrl_privilege	<boolean>	0/7	Indicate whether to support "Manage Privilege" of PTZ control in Security page
transmission_mod e	Tx, Rx, Both	0/7	Indicate what kind of transmission mode the machine used. TX: server, Rx: receiver box, Both: DVR?.
network_wire	<boolean>	0/7	Indicate whether to support the Ethernet
network_wireless	<boolean>	0/7	Indicate whether to support the wireless
wireless_802dot1 1b	<boolean>	0/7	Indicate whether to support the wireless 802.11b+

wireless_802dot11g	<boolean>	0/7	Indicate whether to support the wireless 802.11g
wireless_encrypt_wep	<boolean>	0/7	Indicate whether to support the wireless WEP
wireless_encrypt_wpa	<boolean>	0/7	Indicate whether to support the wireless WPA
wireless_encrypt_wpa2	<boolean>	0/7	Indicate whether to support the wireless WPA2
derivative_brand	<boolean>	0/7	Indicate whether to support upgrade function for the derivative brand. For example, if the value is true, the VVTK product can be upgraded to VVXX. (TCVV<->TCXX is excepted)
evctrlchannel	<boolean>	0/7	Indicate whether to support the http tunnel for event/control transfer
joystick	<boolean>	0/7	Indicate whether to support the joystick control
nanystream	<positive integer>	0/7	number of any media stream per channel

Group: **event_customtaskfile**

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
_i<0~2>_name	string[40]	6/6	Name of custom event task file
_i<0~2>_date	string[20]	6/6	Date of custom event task file
_i<0~2>_time	string[20]	6/6	Time of custom event task file

Group: **event_i<0~2>**

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
name	string[40]	6/6	The identification of this entry
enable	0, 1	6/6	To enable or disable this event.
priority	0, 1, 2	6/6	Indicate the priority of this event. "0" indicates low priority. "1" indicates normal priority. "2" indicates high priority.
delay	1~999	6/6	Delay seconds before detect next event.

trigger	boot, di, motion, seq, visignal	6/6	Indicate the trigger condition. "boot" indicates system boot. "di" indicates digital input. "motion" indicates video motion detection. "seq" indicates periodic condition. "visignal" indicates video input signal loss
di	<integer>	6/6	Indicate which di detected. This field is required when trigger condition is "di". One bit represents one digital input. The LSB indicates DI 0.
mdwin	<integer>	6/6	Indicate which motion detection windows detected. This field is required when trigger condition is "md". One bit represents one window. The LSB indicates the 1st window. For example, to detect the 1st and 3rd windows, set mdwin as 5.
inter	1~999	6/6	Interval of period snapshot in minute. This field is used when trigger condition is "seq".
weekday	<interger>	6/6	Indicate which weekday is scheduled. One bit represents one weekday. The bit0 (LSB) indicates Saturday. The bit1 indicates Friday. The bit2 indicates Thursday. The bit3 indicates Wednesday. The bit4 indicates Tuesday. The bit5 indicates Monday. The bit6 indicates Sunday. For example, to detect events on Friday and Sunday, set weekday as 66.
begintime	hh:mm	6/6	Begin time of weekly schedule.
endtime	hh:mm	6/6	End time of weekly schedule. (00:00 ~ 24:00 means always.)
lowlightcondition	0, 1	6/6	Turn on IR led in some condition: 0: all conditions 1: low light condition

action_do_i<0~(ndo-1)>_enable	0, 1	6/6	To enable or disable trigger digital output.
action_do_i<0~(ndo-1)>_duration	1~999	6/6	The duration of digital output is triggered in seconds.
action_cf_enable	0. 1	6/6	To enable put media on CF.
action_cf_folder	string[128]	6/6	The path to store media.
action_cf_media	NULL, 0~4	6/6	The index of attached media.
action_cf_datefolder	<boolean>	6/6	Enable or disable create folders by date time and hour automatically
action_server_i<0~4>_enable	0, 1	6/6	To enable or disable this server action. The default value is 0.
action_server_i<0~4>_media	NULL, 0~4	6/6	The index of attached media.
action_server_i<0~4>__datefolder	<boolean>	6/6	Enable or disable create folders by date time and hour automatically

Group: **server_i<0~4>**

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
name	string[40]	6/6	The identification of this entry
type	email, ftp, http, ns	6/6	Indicate the server type. "email" is email server. "ftp" is ftp server. "http" is http server. "ns" is network storage.
http_url	string[128]	6/6	The url of http server to upload.
http_username	string[64]	6/6	The username to login in the server.
http_passwd	string[64]	6/6	The password of the user.
ftp_address	string[128]	6/6	The ftp server address
ftp_username	string[64]	6/6	The username to login in the server.
ftp_passwd	string[64]	6/6	The password of the user.
ftp_port	0~65535	6/6	The port to connect the server.
ftp_location	string[128]	6/6	The location to upload or store the media.

ftp_passive	0, 1	6/6	To enable or disable the passive mode.
			0 is to disable the passive mode.
			1 is to enable the passive mode.
email_address	string[128]	6/6	The email server address
email_sslmode	<boolean>	6/6	To enable or disable the SSL mode
			0 is to disable the SSL mode
			1 is to enable the SSL mode
email_username	string[64]	6/6	The username to login in the server.
email_httpsmode	0, 1	6/6	Enable support SSL
email_port	0~65535	6/6	The port to connect the server.
email_passwd	string[64]	6/6	The password of the user.
email_senderemail	string[128]	6/6	The email address of sender.
email_recipientemail	string[128]	6/6	The email address of recipient.
ns_location	string[128]	6/6	The location to upload or store the media.
ns_username	string[64]	6/6	The username to login in the server.
ns_passwd	string[64]	6/6	The password of the user.
ns_workgroup	string[64]	6/6	The workgroup for network storage.

Group: **media_i<0~4>**(media_freespace is used internally.)

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
name	string[40]	6/6	The identification of this entry
type	snapshot, systemlog videoclip	6/6	The media type to send to the server or store by the server.
snapshot_source	<integer>	6/6	Indicate the source of media stream.
			0 means the first stream.
			1 means the second stream and etc.
			2 means the third stream and etc.
			3 means the fourth stream and etc.
snapshot_prefix	string[16]	6/6	Indicate the prefix of the filename.
snapshot_datesuffix	0, 1	6/6	To add date and time suffix to filename or not.
			1 means to add date and time suffix.
			0 means not to add it.
snapshot_preevent	0 ~ 7	6/6	It indicates the number of pre-event images.

snapshot_postevent	0 ~ 7	6/6	The number of post-event images.
videoclip_source	<integer>	6/6	Indicate the source of media stream. 0 means the first stream. 1 means the second stream and etc. 2 means the third stream and etc. 3 means the fourth stream and etc.
videoclip_prefix	string[16]	6/6	Indicate the prefix of the filename.
videoclip_preevent	0 ~ 9	6/6	It indicates the time of pre-event recording in seconds.
videoclip_maxduration	1 ~ 10	6/6	The time of maximum duration of one video clip in seconds.
videoclip_maxsize	50 ~ 1500	6/6	The maximum size of one video clip file in Kbytes.

Group: **recording_i**<0~1>

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
name	string[40]	6/6	The identification of this entry
enable	0, 1	6/6	To enable or disable this recoding.
priority	0, 1, 2	6/6	Indicate the priority of this recoding. "0" indicates low priority. "1" indicates normal priority. "2" indicates high priority.
source	<integer>	6/6	Indicate the source of media stream. 0 means the first stream. 1 means the second stream and etc. 2 means the third stream and etc. 3 means the fourth stream and etc.

weekday	<interger>	6/6	Indicate which weekday is scheduled.
			One bit represents one weekday.
			The bit0 (LSB) indicates Saturday.
			The bit1 indicates Friday.
			The bit2 indicates Thursday.
			The bit3 indicates Wednesday.
			The bit4 indicates Tuesday.
			The bit5 indicates Monday.
			The bit6 indicates Sunday.
			For example, to detect events on Friday and Sunday, set weekday as 66.
begintime	hh:mm	6/6	Begin time of weekly schedule.
endtime	hh:mm	6/6	End time of weekly schedule. (00:00~24:00 means always.)
prefix	string[16]	6/6	Indicate the prefix of the filename.
limitsize	0,1	6/6	0: Entire free space mechanism 1: Limit recording size mechanism
cyclesize	20~	6/6	The maximum size for cycle recording in Kbytes when choose limit recording size.
cyclic	0,1	6/6	0: Disable cyclic recording 1: Enable cyclic recording
notify	0,1	6/6	0: Disable recording notification 1: Enable recording notification
notifyserver	0~31	6/6	Indicate which notification server is scheduled. One bit represents one application server (server_i0~i4). The bit0 (LSB) indicates server_i0. The bit1 indicates server_i1. The bit2 indicates server_i2. The bit3 indicates server_i3. The bit4 indicates server_i4. For example, enable server_i0, server_i2 and server_i4 to be notification server. The notifyserver value is 21.
reserveamount	10~	6/6	The reserve amount in Mbytes when choose cyclic recording mechanism.

dest	cf, 0~4	6/6	The destination to store the recording data. "cf" means CF card. "0~4" means the index of network storage.
cffolder	string[128]	6/6	folder name.

Group: **path**

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
encoder1_start	<boolean>	7/7	Specify the http push server is active for stream 1
encoder2_start	<boolean>	7/7	Specify the http push server is active for stream 2

Group: **https** (product dependent)

NAME	VALUE	SECURITY (get/set)	DESCRIPTION
connect	1025 ~ 65535	7/7	Specify the stunnel connect port
enable	<boolean>	6/6	To enable or disable this secure http
policy	<Boolean>	6/6	If the value is 1, it will force http connection redirect to https connection
method	auto, manual, install	6/6	auto => Create self-signed certificate automatically manual => Create self-signed certificate manually install => Create certificate request and install
status	-2 ~ 1	6/6	Specify the https status. -2=>invalid public key -1=>waiting for certificated 0=>not installed 1=>active
countryname	string[2]	6/6	country name in certificate information
stateorprovincename	string[128]	6/6	state or province name in in certificate information
localityname	string[128]	6/6	the locality name in certificate information
organizationname	string[64]	6/6	organization naem in certificate information
unit	string[32]	6/6	organizational unit name in certificate

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
			information
commonname	string[64]	6/6	common name in certificate information
validdays	0 ~ 9999	6/6	certicatation valid period

Group: **disk_i<0~(n-1)>** n is the total number of storage devices.

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
name	string[16]	6/6	Disk name.
cyclic_enabled	<boolean>	6/6	Enable cyclic storage method.
autocleanup_enabled	<boolean>	6/6	Enable automatic clean up method. Expired and not locked media files will be deleted.
autocleanup_maxage	<positive integer>	6/6	To specify the expired days for automatic clean up.

Group: **roi_c<0~(n-1)>** for n channel product, and m is the number of streams which support ROI.

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
s<0~(m-1)>_home	<coordinate>	6/6	ROI left-top corner coordinate.
s<0~(m-1)>_size	<window size>	6/6	ROI width and height.

Group: **eptz_c<0~(n-1)>** for n channel product.

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
osdzoom	<boolean>	1/4	Indicates multiple of zoom in is "on-screen display" or not
smooth	<boolean>	1/4	Indicates ePTZ is smooth or not.
tiltspeed	-5 ~ 5	1/7	Tilt speed (It should be set by eCamCtrl.cgi rather than by setparam.cgi.)
panspeed	-5 ~ 5	1/7	Pan speed (It should be set by eCamCtrl.cgi rather than by setparam.cgi.)
zoomspeed	-5 ~ 5	1/7	Zoom speed (It should be set by eCamCtrl.cgi rather than by setparam.cgi.)

autospeed	1 ~ 5	1/7	Auto pan/patrol speed (It should be set by eCamCtrl.cgi rather than by setparam.cgi.)

Group: **eptz_c<0~(n-1)>_s<0~(m-1)>** for n channel product. and m is the number of streams which support ePTZ.

PARAMETER	VALUE	SECURITY (get/set)	DESCRIPTION
patrolseq	string[120]	1/4	The indexes of patrol points, separated by ","
patroldwelling	string[160]	1/4	The dwelling time of each patrol point, separated by ","
i<0~19>_name	string[40]	1/7	Name of ePTZ preset. (It should be set by eCamCtrl.cgi rather than by setparam.cgi.)
i<0~19>_pos	<coordinate>	1/7	Left-top corner coordinate of the preset. (It should be set by eCamCtrl.cgi rather than by setparam.cgi.)
i<0~19>_size	<window size>	1/7	Width and height of the preset. (It should be set by eCamCtrl.cgi rather than by setparam.cgi.)

Drive the digital output

Note: This request requires the privilege of viewer.
Method: GET/POST

Syntax:

```
http://<servername>/cgi-bin/dido/setdo.cgi?do1=<state>[&do2=<state>]
[&do3=<state>][&do4=<state>][&return=<return page>]
```

Where state is 0, 1. "0" means inactive or normal state while "1" means active or triggered state.

PARAMETER	VALUE	DESCRIPTION
do<num>	0, 1	0 – inactive, normal state
		1 – active, triggered state
return	<return page>	Redirect to the page <return page> after the parameter is assigned. The <return page> can be a full URL path or relative

		path according to the current path. If you omit this parameter, it will redirect to an empty page.

Example: Drive the digital output 1 to triggered state and redirect to an empty page

http://myserver/cgi-bin/dido/setdo.cgi?do1=1

Query status of the digital input

Note: This request requires the privilege of viewer.

Method: GET/POST

Syntax:

http://<*servername*>/cgi-bin/dido/getdi.cgi?[di0][&di1][&di2][&di3]

If no parameter is specified, all the status of digital input will be returned.

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: *<length>*\r\n
\r\n
[di0=<state>]\r\n
[di1=<state>]\r\n
[di2=<state>]\r\n
[di3=<state>]\r\n

where *<state>* can be 0 or 1.

Example: Query the status of digital input 1

Request:
http://myserver/cgi-bin/dido/getdi.cgi?di1
Response:
HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: 7\r\n
\r\n
di1=1\r\n

Query status of the digital output

Note: This request requires the privilege of viewer.

Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/dido/getdo.cgi?[do0][&do1][&do2][&do3]

If no parameter is specified, all the status of digital output will be returned.

Return:

HTTP/1.0 200 OK\r\n

Content-Type: text/plain\r\n

Content-Length: *<length>*\r\n

\r\n

[do0=<state>]\r\n

[do1=<state>]\r\n

[do2=<state>]\r\n

[do3=<state>]\r\n

where *<state>* can be 0 or 1.

Example: Query the status of digital output 1

Request:

http://myserver/cgi-bin/dido/getdo.cgi?do1

Response:

HTTP/1.0 200 OK\r\n

Content-Type: text/plain\r\n

Content-Length: 7\r\n

\r\n

do1=1\r\n

Capture single snapshot

Note: This request require normal user privilege

Method: GET/POST

Syntax:

> http://<*servername*>/cgi-bin/viewer/video.jpg?[channel=<value>][&resolution=<value>]
>
> [&quality=<value>]

If the user requests the size larger than all stream setting on the server, this request will failed!

PARAMETER	VALUE	DEFAULT	DESCRIPTION
channel	0~(n-1)	0	the channel number of video source
resolution	*<available resolution>*	0	The resolution of image
quality	*1~5*	3	The quality of image

Server will return the most up-to-date snapshot of selected channel and stream in JPEG format. The size and quality of image will be set according to the video settings on the server.

Return:

> *HTTP/1.0 200 OK\r\n*
>
> *Content-Type: image/jpeg\r\n*
>
> *[Content-Length: <image size>\r\n]*
>
>
> *<binary JPEG image data>*

Account management

Note: This request requires administrator privilege

Method: GET/POST

Syntax:

> http://<*servername*>/cgi-bin/admin/editaccount.cgi?
>
> method=<value>&username=*<name>*[&userpass=*<value>*][&privilege=*<value>*]
>
> [&privilege=<value>][...][&return=*<return page>*]

PARAMETER	VALUE	DESCRIPTION
method	Add	Add an account to server. When using this method, "username" field is necessary. It will use default value of other fields if not specified.

	Delete	Remove an account from server. When using this method, "username" field is necessary, and others are ignored.
	edit	Modify the account password and privilege. When using this method, "username" field is necessary, and other fields are optional. If not specified, it will keep original settings.
username	<name>	The name of user to add, delete or edit
userpass	<value>	The password of new user to add or that of old user to modify. The default value is an empty string.
privilege	<value>	The privilege of user to add or to modify.
	viewer	viewer's privilege
	operator	operator's privilege
	admin	administrator's privilege
return	<return page>	Redirect to the page *<return page>* after the parameter is assigned. The *<return page>* can be a full URL path or relative path according to the current path. If you omit this parameter, it will redirect to an empty page.

System logs

Note: This request require administrator privilege
Method: GET/POST

Syntax:

```
http://<servername>/cgi-bin/admin/syslog.cgi
```

Server will return the up-to-date system log.

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: <syslog length>\r\n
\r\n
<system log information>\r\n

Configuration file (optional)

Note: This request requires administrator privilege

Method: GET/POST

Syntax:

http://<*servername*>/cgi-bin/admin/configfile.cgi?[format=<value>]

Server will return the up-to-date configuration file.

PARAMETER	VALUE	DEFAULT	DESCRIPTION
format	xml	xml	the format for config file.

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: <configuration file length>\r\n
\r\n
<configuration data>\r\n

Upgrade firmware

Note: This request requires administrator privilege

Method: POST

Syntax:

http://<*servername*>/cgi-bin/admin/upgrade.cgi

Post data:

fimage=<file name>[&return=<return page>]\r\n
\r\n
<multipart encoded form data>

Server will accept the upload file named <file name> to be upgraded the firmware and return with <return page> if indicated.

Camera Control (capability.ptzenabled=1)

Note: This request requires privilege of viewer

Method: GET/POST

Syntax:

http://<*servername*>/cgi-bin/viewer/camctrl.cgi?[channel=<value>][&camid=<value>][&move=<value>]

[&focus=<value>][&iris=<value>][&speedpan=<value>][&speedtilt=<value>][&speedzoom=<value>]

[&speedapp=<value>][&auto=<value>][&zoom=<value>][&zooming=<value>][&speedlink=<value>]

[&vx=<value>&vy=<value>&vs=<value>] [&return=<*return page*>]

PARAMETER	VALUE	DESCRIPTION
channel	<0~(n-1)>	Channel of video source
camid	0,<positive integer>	Camera ID
move	home	Move to camera to home position
	up	Move camera up
	down	Move camera down
	left	Move camera left
	right	Move camera right
speedpan	-5 ~ 5	Set the pan speed
speedtilt	-5 ~ 5	Set the tilt speed
speedzoom	-5 ~ 5	Set the zoom speed
speedapp	-5 ~ 5	Set the auto pan/patrol speed
auto	pan	Auto pan
	patrol	Auto patrol
	stop	Stop camera
zoom	wide	To zoom for larger view with current speed
	tele	To zoom for farer view with current speed
	stop	To stop zoom
zooming	wide	To zoom without stop for larger view with current speed

	tele	To zoom without stop for farer view with current speed
vx	<integer , excluding 0>	The slope of movement = vy/vx, used for joystick control.
vy	<integer>	
vs	0 ~ 7	Set the speed of movement, "0" means stop.
focus	auto	To do auto focus
	far	To focus on farer distance
	near	To focus on nearer distance
iris	auto	Let the Network Camera control iris size
	open	Manually control the iris for bigger size
	close	Manually control the iris for smaller size
speedlink	0 ~ 4	Issue speed link command.
return	<return page>	Redirect to the page *<return page>* after the parameter is assigned. The *<return page>* can be a full URL path or relative path according to the current path. If you omit this parameter, it will redirect to an empty page.

ePTZ Camera Control

Note: This request requires camctrl privileges.
Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/camctrl/eCamCtrl.cgi?channel=<value>&stream=<value>

[&move=<value>][&auto=<value>][&zoom=<value>]

[&zooming=<value>&zs=<value>]

[&vx=<value>&vy=<value>&vs=<value>]

[&speedpan=<value>][&speedtilt=<value>][&speedzoom=<value>][&speedapp= <value>]

[&return=<return page>]

PARAMETER	VALUE	DESCRIPTION
channel	<0~(n-1)>	Channel of video source.
stream	<0~(m-1)>	Stream.

move	home	Move to home ROI.
	up	Move up.
	down	Move down.
	left	Move left.
	right	Move right.
auto	pan	Auto pan.
	patrol	Auto patrol.
	stop	Stop auto pan/patrol.
zoom	wide	Zoom larger view with current speed.
	tele	Zoom further with current speed.
zooming	wide or tele	Zoom without stopping for larger view or further view with zs speed, used for joystick control.
zs	0 ~ 6	Set the speed of zooming, "0" means stop.
vx	<integer>	The direction of movement, used for joystick control.
vy	<integer>	
vs	0 ~ 7	Set the speed of movement, "0" means stop.
speedpan	-5 ~ 5	Set the pan speed.
speedtilt	-5 ~ 5	Set the tilt speed.
speedzoom	-5 ~ 5	Set the zoom speed.
speedapp	1 ~ 5	Set the auto pan/patrol speed.
return	<return page>	Redirect to the page *<return page>* after the parameter is assigned. The *<return page>* can be a full URL path or relative path according to the current path.

Recall (capability.ptzenabled=1)

Note: This request requires privilege of viewer

Method: GET

Syntax:

http://*<servername>*/cgi-bin/viewer/recall.cgi?

recall=<value>[&channel=<value>][&return=*<return page>*]	

PARAMETER	VALUE	DESCRIPTION
recall	Text string less than 30 characters	One of the present positions to recall.
channel	<0~(n-1)>	channel of video source
return	*<return page>*	Redirect to the page *<return page>* after the parameter is assigned. The *<return page>* can be a full URL path or relative path according to the current path. If you omit this parameter, it will redirect to an empty page.

ePTZ Recall

Note: This request requires camctrl privileges.
Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/camctrl/eRecall.cgi?channel=<value>&stream=<value>& recall=<value>[&return=*<return page>*]

PARAMETER	VALUE	DESCRIPTION
channel	<0~(n-1)>	Channel of the video source.
stream	<0~(m-1)>	Stream.
recall	Text string less than 40 characters	One of the present positions to recall.
return	*<return page>*	Redirect to the page *<return page>* after the parameter is assigned. The *<return page>* can be a full URL path or relative path according to the current path.

Preset Locations (capability.ptzenabled=1)

Note: This request requires operator privilege

Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/operator/preset.cgi?[channel=<value>]
[&addpos=<value>][&delpos=<value>][&return=*<return page>*]

PARAMETER	VALUE	DESCRIPTION
addpos	<Text string less than 30 characters>	Add one preset location to preset list.
channel	<0~(n-1)>	channel of video source
delpos	<Text string less than 30 characters>	Delete preset location from preset list.
return	*<return page>*	Redirect to the page *<return page>* after the parameter is assigned*.* The *<return page>* can be a full URL path or relative path according to the current path. If you omit this parameter, it will redirect to an empty page.

ePTZ Preset Locations

Note: This request requires Operator privileges.

Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/operator/ePreset.cgi?channel=<value>&stream=<value>
[&addpos=<value>][&delpos=<value>][&return=*<return page>*]

PARAMETER	VALUE	DESCRIPTION
channel	<0~(n-1)>	Channel of the video source.
stream	<0~(m-1)>	Stream.
addpos	<Text string less than 40 characters>	Add one preset location to the preset list.
delpos	<Text string less than 40 characters>	Delete preset location from the preset list.

return	*<return page>*	Redirect to the page *<return page>* after the parameter is assigned. The *<return page>* can be a full URL path or relative path according to the current path.

System Information

Note: This request requires normal user privilege (obsolete)

Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/sysinfo.cgi

Server will return the system information. In HTTP API version 2, the CapVersion will be 0200. All the fields in the previous version (0100) is obsolete. Please use "getparam.cgi?capability" instead.

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: <system information length>\r\n
\r\n
Model=<model name of server>\r\n
CapVersion=0200\r\n

PARAMETER(supported capability version)	VALUE	DESCRIPTION
Model	system.firmwareversion	Model name of server. Ex:IP3133-VVTK-0100a
CapVersion	*MMmm, MM is major version from 00 ~ 99* *mm is minor version from 00 ~ 99* *ex: 0100*	The capability field version

IP filtering

Note: This request requires administrator access privilege

Method: GET/POST

Syntax:

http://<*servername*>/cgi-bin/admin/ipfilter.cgi?
method=<value>&[start=<*ipaddress*>&end=<*ipaddress*>][&index=<*value*>]
[&return=<return page>]

PARAMETER	VALUE	DESCRIPTION
Method	addallow	Add a set of allow IP address range to server. Start and end parameters must be specified. If the index parameter is specified, it will try to add starting from index position.
	adddeny	Add a set of deny IP address range to server. Start and end parameters must be specified. If the index parameter is specified, it will try to add starting from index position.
	deleteallow	Remove a set of allow IP address range from server. If start and end parameters are specified, it will try to remove the matched IP address. If index is specified, it will try to remove the address from given index position. [start, end] parameters have higher priority then the [index] parameter.
	deletedeny	Remove a set of deny IP address range from server. If start and end parameters are specified, it will try to remove the matched IP address. If index is specified, it will try to remove the address from given index position. [start, end] parameters have higher priority then the [index] parameter.
start	<ip address>	The start IP address to add or to delete.
end	<ip address>	The end IP address to add or to delete.
index	<value>	The start position to add or to delete.
return	<return page>	Redirect to the page <*return page*> after the parameter is assigned. The <*return page*> can be a full URL path or relative path according to the current path. If you omit this parameter, it will redirect to an empty page.

UART HTTP tunnel channel (capability.nuart>0)

Note: This request requires operator privilege

Method: GET and POST

Syntax:

```
http://<servername>/cgi-bin/operator/uartchannel.cgi?[channel=<value>]

--------------------------------------------------------------------

GET /cgi-bin/operator/uartchannel.cgi?[channel=<value>]

x-sessioncookie: string[22]

accept: application/x-vvtk-tunnelled

pragma: no-cache

cache-control: no-cache


--------------------------------------------------------------------

POST /cgi-bin/operator/uartchannel.cgi

x-sessioncookie: string[22]

content-type: application/x-vvtk-tunnelled

pragma : no-cache

cache-control : no-cache

content-length: 32767

expires: Sun, 9 Jam 1972 00:00:00 GMT
```

User must use GET and POST to establish two channels for downstream and upstream. The x-sessioncookie in the GET and POST should be the same to be recognized as a pair for one session. The contents of upstream should be base64 encoded to be able to pass through some proxy server.

This channel will help to transfer the raw data of UART over network.

PARAMETER	VALUE	DESCRIPTION
channel	0 ~ (n-1)	The channel number of UART.

Event/Control HTTP tunnel channel

Note: This request requires admin privilege
Method: GET and POST

Syntax:

```
http://<servername>/cgi-bin/admin/ctrlevent.cgi

--------------------------------------------------------------------

GET /cgi-bin/admin/ctrlevent.cgi
```

```
x-sessioncookie: string[22]

accept: application/x-vvtk-tunnelled

pragma: no-cache

cache-control: no-cache



-------------------------------------------------------------------------

POST /cgi-bin/admin/ ctrlevent.cgi

x-sessioncookie: string[22]

content-type: application/x-vvtk-tunnelled

pragma : no-cache

cache-control : no-cache

content-length: 32767

expires: Sun, 9 Jam 1972 00:00:00 GMT
```

User must use GET and POST to establish two channels for downstream and upstream. The x-sessioncookie in the GET and POST should be the same to be recognized as a pair for one session. The contents of upstream should be base64 encoded to be able to pass through some proxy server.

This channel will help to do real-time event notification and control. The event and control format are described in another document.

Get SDP of Streamings

Note: This request requires viewer access privilege
Method: GET/POST

Syntax:

http://<*servername*>/<network_rtsp_s<0~m-1>_accessname>

"m" is the stream number.
"network_accessname_<0~(m-1)>" is the accessname for stream "1" to stream "m". Please refer to the "subgroup of network: rtsp" for setting the accessname of SDP.
You can get the SDP by HTTP GET method.

Open the network streamings

Note: This request requires viewer access privilege

Syntax:

For http push server (mjpeg):

http://<*servername*>/<network_http_s<0~m-1>_accessname>

For rtsp (mp4), user needs to input the url below for a rtsp compatible player.

rtsp://<*servername*>/<network_rtsp_s<0~m-1>_accessname>

"m" is the stream number.

For detailed streaming protocol, please refer to "control signaling" and "data format" documents.

Senddata (capability.nuart>0)

Note: This request requires privilege of viewer

Method: GET/POST

Syntax:

http://<*servername*>/cgi-bin/viewer/senddata.cgi? [com=<value>][&data=<value>][&flush=<value>] [&wait=<value>] [&read=<value>]

PARAMETER	VALUE	DESCRIPTION
com	1 ~ <max. com port number>	The target com/rs485 port number
data	<hex decimal data>[,<hex decimal data>]	The <hex decimal data> is s series of digit within 0 ~ 9, A ~ F. Each comma separates the commands by 200 milliseconds.
flush	yes,no	yes: receive data buffer of COM port will be cleared before read. no: do not clear the receive data buffer.
wait	*1 ~ 65535*	wait time in milliseconds before read data
read	*1 ~ 128*	the data length in bytes to read. The read data will be in return

		page.

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: <system information length>\r\n
\r\n
<hex decimal data>\r\n

Where is hex decimal data is a series of digit within 0 ~ 9, A ~ F

Storage managements (capability.storage.dbenabled=1)

Note: This request requires administrator privileges.

Method: GET and POST

Syntax:

http://<*servername*>/cgi-bin/admin/lsctrl.cgi?cmd=<cmd_type>[&<parameter>=<value>...]

The commands usage and their input arguments are as follows.

PARAMETER	VALUE	DESCRIPTION
cmd_type	<string>	Required. Command to be executed, including *search*, *insert*, *delete*, *update*, and *queryStatus*.

Command: **search**

PARAMETER	VALUE	DESCRIPTION
label	<integer primary key>	Optional. The integer primary key column will automatically be assigned a unique integer.
triggerType	<text>	Optional. Indicate the event trigger type. Please embrace your input value with single quotes. Ex. mediaType='motion' Support trigger types are product dependent.
mediaType	<text>	Optional. Indicate the file media type.

		Please embrace your input value with single quotes.
		Ex. mediaType='videoclip'
		Support trigger types are product dependent.
destPath	<text>	Optional.
		Indicate the file location in camera.
		Please embrace your input value with single quotes.
		Ex. destPath ='/mnt/auto/CF/NCMF/abc.mp4'
resolution	<text>	Optional.
		Indicate the media file resolution.
		Please embrace your input value with single quotes.
		Ex. resolution='800x600'
isLocked	<boolean>	Optional.
		Indicate if the file is locked or not.
		0: file is not locked.
		1: file is locked.
		A locked file would not be removed from UI or cyclic storage.
triggerTime	<text>	Optional.
		Indicate the event trigger time. (not the file created time)
		Format is "YYYY-MM-DD HH:MM:SS"
		Please embrace your input value with single quotes.
		Ex. triggerTime='2008-01-01 00:00:00'
		If you want to search for a time period, please apply "TO" operation.
		Ex. triggerTime='2008-01-01 00:00:00'+TO+'2008-01-01 23:59:59' is to search for records from the start of Jan 1st 2008 to the end of Jan 1st 2008.
limit	<positive integer>	Optional.
		Limit the maximum number of returned search records.
offset	<positive integer>	Optional.
		Specifies how many rows to skip at the beginning of the matched records.
		Note that the offset keyword is used after limit keyword.

To increase the flexibility of search command, you may use "OR" connectors for logical "OR" search operations. Moreover, to search for a specific time period, you can use "TO" connector.

Ex. To search records triggered by motion or di or sequential and also triggered between 2008-01-01 00:00:00 and 2008-01-01 23:59:59.

```
http://<servername>/cgi-bin/admin/lsctrl.cgi?cmd=search&triggerType='motion'+OR+'di'+OR+'seq'&tr
iggerTime='2008-01-01 00:00:00'+TO+'2008-01-01 23:59:59'
```

Command: **delete**

PARAMETER	VALUE	DESCRIPTION
label	<integer primary key>	Required. Identify the designated record. Ex. label=1

Ex. Delete records whose key numbers are 1, 4, and 8.

```
http://<servername>/cgi-bin/admin/lsctrl.cgi?cmd=delete&label=1&label=4&label=8
```

Command: **update**

PARAMETER	VALUE	DESCRIPTION
label	<integer primary key>	Required. Identify the designated record. Ex. label=1
isLocked	<boolean>	Required. Indicate if the file is locked or not.

Ex. Update records whose key numbers are 1 and 5 to be locked status.

```
http://<servername>/cgi-bin/admin/lsctrl.cgi?cmd=update&isLocked=1&label=1&label=5
```

Ex. Update records whose key numbers are 2 and 3 to be unlocked status.

```
http://<servername>/cgi-bin/admin/lsctrl.cgi?cmd=update&isLocked=0&label=2&label=3
```

Command: queryStatus

PARAMETER	VALUE	DESCRIPTION
retType	xml or javascript	Optional. Ex. retype=javascript The default return message is in XML format.

Ex. Query local storage status and call for javascript format return message.

```
http://<servername>/cgi-bin/admin/lsctrl.cgi?cmd=queryStatus&retType=javascript
```