VPort 1-channel CGI Commands User's Manual

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www.moxa.com/product

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Overview

This document describes the CGI commands that are used for the Moxa VPort 1-ch video encoder and IP camera series. Commands are included for set/get configuration parameters and PTZ control.

Release Notes

Version 1.0

Features

- Includes VPort 351, VPort 251 and VPort 25 CGI Commands.

General CGI URL Syntax and Parameters

The CGIs are organized in function-related directories under the moxa-cgi directory, and are followed by one of two actions: ***setParam.cgi*** or ***getParam.cgi***. The file extension of the CGI is required. Parameters are written in lower-case and composed by section and item parts. When the CGI request includes parameters, the parameters must be written exactly as shown in this document.

Syntax:

http://<*servername*>/moxa-cgi/<action>.cgi?[<s*ection*>_<item>=<*value*>[&<s*ection*>_<item>=<*value*>...]]

Example:

http://videoserver.moxanet.net/moxa-cgi/setParam.cgi?http_httpport=80&rtsp_rtspport=554

Method:

GET/POST

Response:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
\r\n
<*parameter pair*>
where <*parameter pair*> is
<*section*>_<item>=<*value*>\n
[<*parameter pair*>]

When the action of the CGI command is setParam.cgi, <parameter pair> will not be returned. If the CGI command of getParam.cgi includes an invalid parameter name, the server will not return the value of the invalid parameter. When the CGI command of setParam includes an invalid parameter name, the server will not return the value of the invalid parameter.

Example:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
\r\n
http_httpport=80\n
rtsp_rtspport=554\n

Set/Get Configuration Parameter

These parameters are used for different VPort 351 function sections. The parameters include system information, security, network, video, audio, and alarm. Every section has one or many items. Detailed information about sections and items is shown in the following table.

- Section names are typed in bold-face at the top of each table (e.g., system).
- Parameters are case-sensitive. For example:
  G: getParam.cgi available
  S: setParam.cgi available
- Character set

Character Set Name	Available Characters
BasicString	abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789
ExtensiveString	BasicString!^*()_{}[]|:./?-
UsernameString	BasicString_.
PasswordString	BasicString !^_-~`|
MailAddressString	BasicString@.-_
HostAddressString	BasicString_.-
FolderString	BasicString:\/_-
URLString	BasicString._-/:
CGIString	BasicString_-%+&=
CustCamString	abcdefABCDEF0123456789,

system

Item	Action	Value	Description
hostname	G/S	Max 40 char (ExtensiveString)	Server name
timezone	G/S	-12 to 12	Time zone setting, for NTP usage
date	G/S	yyyy/mm/dd	date in server
time	G/S	hh:mm:ss	time in server
timemethod	G/S	1: Keep current date and time 2: Sync with computer time 3: Manual 4: Automatic (NTP)	Server time adjustment method
ntpserver	G/S	Char or IP, max length 40 (HostAddressString)	NTP server IP or URL
updateinterval	G/S	3600: One hour	Sync interval with NTP

		86400: One day 604800: One week 259200: One month	Server
firmwareversion	G	xx.yy.zz	Firmware version
firmwarebuildtime	G	yymmddhh	Firmware build time
serialnumber	G	xxxxx	Product serial number
macaddress	G	aa:bb:cc:dd:ee:ff	Mac address
modelname	G	VPort 351	Model name

Example:

Change Server Time:

http://videoserver.moxanet.net/moxa-cgi/setParam.cgi?system_timemethod=3&date=yyyy/mm/dd&time=hh:mm:ss

Set NTP

http://videoserver.moxanet.net/moxa-cgi/setParam.cgi?system_timemethod=4&ntpserver=bitsy.mit.edu&timezone=8&updateinterval=3600

systemio

Item	Action	Value	Description
do01	G/S	0: Close 1: Open	DO1 Status
do02	G/S	0: Close 1: Open	DO2 Status (VPort351)

security

Item	Action	Value	Description
username01	G	admin	Administrator account
userpass01	G/S	Max 14 char (BasicString)	Administrator password
userattr01	G	talk|camctrl|do1|do2|conf talk : Audio Output camctrl : PTZ Control do1 : DO1 Control do2 : DO2 Control conf : Configuration	Administrator privileges
username02 to username11	G/S	Max 16 char (BasicString)	User2 to User 10 account
userpass02 to userpass11	G/S	Max 14 char (BasicString)	User1 to User10 password
userattr 02 to userattr11	G/S	Camctrl|do1|do2 Camctrl : PTZ Control do1 : DO1 Control do2 : DO2 Control	User2 to User 10 privileges of PTZ, DO1, and DO2 control right.

Note: "do2" is only for the VPort 351 and "camctrl" for the VPort 351 and VPort 251.

network

Item	Action	Value	Description
networktype	G/S	1: Get IP address automatically 2: Use fixed IP address	Method used to get the IP address
ipaddress	G/S	xxx.yyy.zzz.www	IP address
subnet	G/S	xxx.yyy.zzz.www	Subnet mask
router	G/S	xxx.yyy.zzz.www	Router IP address
dns01	G/S	xxx.yyy.zzz.www	First DNS IP address
dns02	G/S	xxx.yyy.zzz.www	Second DNS IP address

http

Item	Action	Value	Description
httpport	G/S	1 to 65535	http server port number

rtsp

Item	Action	Value	Description
rtspport	G/S	1 to 65535	rtsp server port number
udpaccessname	G	udpStream	Rtsp unicast access name
multicastaccessname	G	multicastStream	Rtsp multicast access name
httpaccessname	G	udpStream	http unicast access name

Note that in the RTSP procedure, the Moxa video product uses the keep-alive mechanism to check whether the client is still alive or not. For the "SETUP" response, the "timeout" item is inserted into the "session" header. The value of the "timeout" item is 60 seconds. The client needs to send an "OPTIONS" request to reset the timeout timer. If the client doesn't send an "OPTIONS" value of more than 30 seconds, then the Moxa video product sends the "SET_PARAMETER" request to the client. The client should respond to the request ("200 OK" is the usual response, but any response is okay). When the client doesn't send an "OPTIONS" request or "SET_PARMETER" response of over 60 seconds, then the Moxa video product will shut down the client's connection.

smtp

Item	Action	Value	Description
serverip01, serverip02	G/S	Max 40 char (HostAddressString)	First and second SMTP IP or URL
username01, username02	G/S	Max 16 char (UsernameString)	Username of first and second SMTP server
password01, password02	G/S	Max 16 char (PasswordString)	Password of first and second SMTP server
returnemail01, returnemail02	G/S	Max 80 char (MailAddressString)	Sender's email address of first and second SMTP server

mailto01, mailto02	G/S	Max 80 char (MailAddressString)	First and second recipient's email address

ftp

Item	Action	Value	Description
serverip01, serverip02	G/S	Max 40 char (HostAddressString)	First and second FTP server IP or URL
port01, port02	G/S	1 to 65535	Port Number of first and second FTP server
username01, username02	G/S	Max 60 char (UsernameString)	Username of first and second FTP server
password01, password02	G/S	Max 15 char (PasswordString)	Password of first and second FTP server
folder01, folder02	G/S	Max 40 char (FolderString)	Folder path of first and second FTP server
pasvmode01, pasvmode02	G/S	1: enable passive mode 0: disable passive mode	Passive mode of first and second SMTP server

ipfilter

Item	Action	Value	Description
allowip01 to allowip10	G/S	xxx.yyy.zzz.www	IP address of Accessible IP List 01 to 10
allowmask01 to allowmask10	G/S	xxx.yyy.zzz.www	Subnet mask of Accessible IP List 01 to 10
enable	G/S	1: enable "Accessible IP list"function 0: disable "Accessible IP list" function	Enable or disable "Accessible IP list" function

ddns

Item	Action	Value	Description
enable	G/S	1: enable ddns function 0: disable ddns function	Enable or disable ddns function
provider	G/S	1: DynDNS.org(Dynamic) 2: DynDNS.org(Custom) 3: TZO.com 4: dhs.org	Select the DDNS provider
hostname	G/S	Max 60 char (HostAddressString)	Registration host name for DDNS server
usernameemail	G/S	Max 60 char (HostAddressString)	Registration host name for DDNS server
passwordkey	G/S	Max 20 char (PasswordString)	Password or key for the DDNS account

snmp

Item	Action	Value	Description
versions	G/S	1: V1, V2c, V3 2: V1, V2c 3: V3 only	SNMP version
rocomm	G/S	Max 40 char (ExtensiveString)	V1,V2c Read Community
rwcomm	G/S	Max 40 char (ExtensiveString)	V1,V2c Write/Read Community
adminauthtype	G/S	1: No-Auth 2: MD5 3: SHA	Administrator authentication type
admindpvcy	G/S	Max 40 char (ExtensiveString)	Administrator Data Encryption Key
enableadpvcy	G/S	1: enable administrator encryption key 0: disable administrator encryption key	Enable/Disable administrator encryption key
trapserver01, trapserver02	G/S	Max 40 char (HostAddressString)	First and second TRAP server IP or URL
trapcomm01, trapcomm02	G/S	Max 40 char (ExtensiveString)	First and second TRAP community

httpevent

Item	Action	Value	Description
server01, server02, server03, server04	G/S	Max 100 char (URLString)	URL of HTTP event server (1~4)
username01, username02, username03, username04	G/S	Max 40 char (UsernameString)	Username of HTTP event server (1~4)
password01, password02, password03, password04	G/S	Max 40 char (PasswordString)	Password of HTTP event server (1~4)

video

Item	Action	Value	Description
text	G/S	Max 14 char (ExtensiveString)	Information about the video
imprinttimestamp	G/S	0: Not Shown 1: Shown in the caption 2: Shown in the image	The location of shown video information
codectype	G/S	1,[1,1,(1,1)]: MPEG4 1,[1,1,(1,2)]: MJPEG	Video codec type selection
size	G/S	1: 720x480(NTSC), 720x576(PAL) 2: 640x480(NTSC), 640x576(PAL) 3: 352x240(NTSC), 352x288(PAL) 4: 320x240(NTSC), 320x288(PAL) 5: 704x480(NTSC), 704x576(PAL)	Video resolution
maxframe	G/S	1: 1 (NTSC), 1(PAL) 2: 3(NTSC), 3(PAL) 3: 10(NTSC), 8(PAL) 4: 15(NTSC), 12(PAL) 5: 30(NTSC), 25(PAL)	Maximum frame rate per second
keyinterval	G/S	5, 13, 30, 60, 90	Key frame interval
bitrate	G/S	20: B1 Kbps 40: B2 Kbps 60: B3 Kbps 80: B4 Kbps 100: B5 Kbps 120: B6 Kbps 140: B7 Kbps 160: B8 Kbps 180: B9 Kbps	Video bit rate: The B1 to B9 values are different for different video resolutions,. The values are listed in the table below. NOTE: This item only works with MPEG4. MJPEG does not support this setting.
quant	G/S	13: Medium 11: Standard 8: Good 6: Detailed 4: Excellent	Video quality
quality	G/S	1: Fixed bit rate 2: Fixed quality	Video quality type. NOTE: This item only works with MPEG4. MJPEG does not support this setting.
modulation	G/S	0: Auto (auto detection) 1: NTSC 2: PAL	Select video input modulation format
actualmodulation	G	1: NTSC 2: PAL	The auto detection result of video input Modulation format

NOTE: "modulation" in VPort25 is read-only.

Bitrate \ Video Size	720x480(NTSC) 720x576(PAL)	704x480(NTSC) 704x576(PAL)	640x480(NTSC) 640x576(PAL)	352x240(NTSC) 352x288(PAL)	320x240(NTSC) 320x288(PAL)
B1	600 Kbps	570 Kbps	534 Kbps	144 Kbps	132 Kbps
B2	1200 Kbps	1140 Kbps	1068 Kbps	288 Kbps	264 Kbps
B3	1800 Kbps	1710 Kbps	1602 Kbps	432 Kbps	396 Kbps
B4	2400 Kbps	2280 Kbps	2136 Kbps	576 Kbps	528 Kbps
B5	3000 Kbps	2850 Kbps	2670 Kbps	720 Kbps	660 Kbps
B6	3600 Kbps	3420 Kbps	3204 Kbps	864 Kbps	792 Kbps
B7	4200 Kbps	3990 Kbps	3738 Kbps	1008 Kbps	924 Kbps
B8	4800 Kbps	4560 Kbps	4272 Kbps	1152 Kbps	1056 Kbps
B9	5400 Kbps	5130 Kbps	4806 Kbps	1296 Kbps	1188 Kbps

image

Item	Action	Value	Description
mode	S	save	Save the adjusted image setting to the server
brightness	G/S	-5 to 5	Video brightness adjustment
contrast	G/S	-5 to 5	Video contrast adjustment
hue	G/S	-5 to 5	Video hue adjustment
saturation	G/S	-5 to 5	Video saturation adjustment

audio

Item	Action	Value	Description
source	G/S	1: Line in 2: Microphone	Audio input type

upnp

Item	Action	Value	Description
enable	G/S	0: disable UPnP 1: enable UPnP	Enable/disable UPnP function

multicast

Item	Action	Value	Description
ipaddress	G/S	xxx.yyy.zzz.www	Media multicast IP address
videoport	G/S	1024 to 65535 (video port & audio port; must be separated by at least 2)	Video multicast port number
audioport	G/S	1024 to 65535 (video port & audio port; must be separated by at least 2)	Audio multicast port number
ttl	G/S	1 to 255	TTL value of multicast packet

Serial

Item	Action	Value	Description
camid	G/S	0 to 255	Camera ID
uartmode	G/S	0: RS232 1: RS485 2: RS422	Uart mode
baudrate	G/S	110, 300, 600, 1200, 2400, 3600, 4800, 7200, 9600, 19200, 38400, 57600	Baudrate (bps)
databit	G/S	5 to 8	Data bit
stopbit	G/S	1, 1.5, 2	Stop bit
paritybit	G/S	0: None 1: Odd 2: Even	Parity bit
ptzdriver	G/S	1: Transparent PTZ 2: Custom Camera 3: Pelco D 4: Pelco P 5: DynaColor	PTZ camera selection

Note: This section is for the VPort 351 and VPort 251.

custcam

Item	Action	Value	Description
customcmd01	G/S	Max 60 char (CustCamString)	Custom "Up" command
customcmd02	G/S	Max 60 char (CustCamString)	Custom "Down" command
customcmd03	G/S	Max 60 char (CustCamString)	Custom "Left" command
customcmd04	G/S	Max 60 char (CustCamString)	Custom "Right" command
customcmd05	G/S	Max 60 char (CustCamString)	Custom "Zoom in" command
customcmd06	G/S	Max 60 char (CustCamString)	Custom "Zoom out" command
customcmd07	G/S	Max 60 char (CustCamString)	Custom "Focus near" command
customcmd08	G/S	Max 60 char (CustCamString)	Custom "Focus far" command
customcmd09	G/S	Max 60 char (CustCamString)	Custom "Home" command
customcmd10	G/S	Max 60 char (CustCamString)	Custom "Stop" command

Note: This section is for the VPort 351 and VPort 251.

custcommand

Item	Action	Value	Description
speedlinkname01 to speedlinkname10	G/S	Max 8 char (BasicString)	User defined command name
speedlinkcmd01 to speedlinkcmd10	G/S	Max 60 char (CustCamString)	User defined command instruction

Note: This section is for the VPort 351 and VPort 251.

videolosssch

Item	Action	Value	Description
all	G/S	1: Event Alarms are active all the time 0: Event Alarms are active based on weekly schedule	Time period of video loss event alarm action
sunenable, monenable, tueenable, wenenable, thuenable, frienable, satenable	G/S	0: disable 1: enable	Enable/Disable video loss event alarm action from Sunday to Saturday
sunbegin, monbegin, tuebegin, wenbegin, thubegin, fribegin, satbegin,	G/S	hh:mm	Begin time of video loss event alarm action from Sunday to Saturday
sunend, monend, tueend, wenend, thuend, friend, satend,	G/S	hh:mm	Time duration of video loss event alarm action from Sunday to Saturday

disch

Item	Action	Value	Description
all	G/S	1: Event Alarms are active all the time 0: Event Alarms are active based on weekly schedule	Time period of DI event alarm action
sunenable, monenable, tueenable, wenenable, thuenable, frienable, satenable	G/S	0: disable 1: enable	Enable/Disable DI event alarm action from Sunday to Saturday
sunbegin, monbegin, tuebegin, wenbegin, thubegin, fribegin, satbegin,	G/S	hh:mm	Begin time of DI event alarm action from Sunday to Saturday
sunend, monend, tueend, wenend, thuend, friend, satend,	G/S	hh:mm	Time duration of DI event alarm action from Sunday to Saturday

motionsch

Item	Action	Value	Description
all	G/S	1: Event Alarms are active all the time 0: Event Alarms are active based on weekly schedule	Time period of motion detection event alarm action
sunenable, monenable, tueenable, wenenable, thuenable, frienable, satenable	G/S	0: disable 1: enable	Enable/Disable motion detection event alarm action from Sunday to Saturday
sunbegin, monbegin, tuebegin, wenbegin, thubegin, fribegin, satbegin,	G/S	hh:mm	Begin time of motion detection event alarm action from Sunday to Saturday
sunend, monend, tueend, wenend, thuend, friend, satend,	G/S	hh:mm	Time duration of motion detection event alarm action from Sunday to Saturday

sequentialsch

Item	Action	Value	Description
all	G/S	1: Event Alarms are active all the time 0: Event Alarms are active based on weekly schedule	Time period of sequential snapshot action
sunenable, monenable, tueenable, wenenable, thuenable, frienable, satenable	G/S	0: disable 1: enable	Enable/Disable sequential snapshot action from Sunday to Saturday
sunbegin, monbegin, tuebegin, wenbegin, thubegin, fribegin, satbegin,	G/S	hh:mm	Begin time of sequential snapshot action from Sunday to Saturday
sunend, monend, tueend, wenend, thuend, friend, satend,	G/S	hh:mm	Time duration of sequential snapshot action from Sunday to Saturday

alarm

Item	Action	Value	Description
enablepowerfail	G/S	0: disable power fail alarm 1: enable power fail alarm	Enable/disable power failure alarm
triggerpower01, triggerpower02	G/S	0: disable power failure trigger relay alarm 1: enable power failure trigger relay alarm	Enable/Disable power (01, 02) failure to trigger relay alarm
poweraction01, poweraction02	G/S	1: Relay1 2: Relay2	power (01, 02) failure triggers relay1 or relay2 alarm
powerfailsendemail01, powerfailsendemail02	G/S	0: disable power failure from triggering alarm by sending mail 1: enable power failure to trigger alarm by sending mail	Enable/Disable power (01, 02) failure to trigger sending warning mail
enablenetworkfail	G/S	0: disable network from disconnecting alarm 1: enable network to disconnect alarm	Enable/disable network to disconnect alarm
triggernetworkfail01	G/S	0: disable network disconnect from triggering relay alarm 1: enable network disconnect to trigger relay alarm	Enable/Disable network disconnect to trigger relay alarm
networkfailaction01	G/S	1: Relay1 2: Relay2	Network disconnect triggers relay1 or relay2 alarm

Note: "enablepowerfail", "triggerpowerxx", "poweractionxx" and "powerfailsendemailxx" are only for the VPort 351.

sequential

Item	Action	Value	Description
enable	G/S	0: disable sequential snapshot 1: enable sequential snapshot	Enable/disable sequential snapshot
snapshotsec	G/S	1 to 99999	Sequential snapshot time interval in second
sendsnapaction	G/S	1: Send snapshot image via E-mail 2: Send snapshot image via FTP	Snapshot image sent by E-mail or FTP

alarmbasic

Item	Action	Value	Description
delaysec	G/S	10 to 999	Alarm time interval
enablebefore	G/S	0: disable pre-alarm snapshot 1: enable pre-alarm snapshot	Enable/disable pre-alarm snapshot
beforesec	G/S	1 to 6	Time before alarm that pre-alarm snapshots are active
enableafter	G/S	0: disable post-alarm snapshot 1: enable post-alarm snapshot	Enable/disable post-alarm snapshot
aftersec	G/S	1 to 999	Time after alarm that post-alarm snapshots are active
attachdate	G/S	0: don't suffix date/time information in snapshot file name 1: suffix date/time information in snapshot file name	suffix date/time information in snapshot file name
enablecustword	G/S	0: don't suffix customized words in snapshot file name 1: suffix customized words in snapshot file name	suffix customized words in snapshot file name
customerword	G/S	Max 60 char (ExtensiveString)	customized words to append to snapshot file name
overriderelay01, overriderelay02	G/S	0: disable override Relay1 or Relay2 warning setting 1: enable override Relay1 or Relay2 warning setting	Enable/disable override Relay1 or Relay2 warning setting
sendvideo	G/S	1: Digital Input 1 2: Digital Input 2 3: Motion Detection Area 1 4: Motion Detection Area 2 5: Motion Detection Area 3 6: Video Loss	Select the event to trigger for video recording.
maxrecordsize	G/S	1, 2, 3, 4, 5, 6, 7, 8, 9	Set the maximum size of recorded video in MB unit
Item	**Action**	**Value**	**Description**
prerecordsize	G/S	0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100	Ratio of Pre-recorded video size to total recorded video size in percentage

Note: "overriderelay02", "sendvideo", "maxrecordsize" and "prerecordsize" are only for the VPort 351

dialarm

Item	Action	Value	Description
enable	G/S	0: disable DI alarm 1: enable DI alarm	Enable/disable DI alarm
triggercond01, triggercond02	G/S	0: High 1: Low 2: Rising 3: Falling	DI (01, 02) trigger condition
triggerdo1_01, triggerdo1_02	G/S	0: disable DO1 alarm 1: enable DO1 alarm	Enable/disable DI (01, 02) trigger DO1 alarm
triggerdo2_01, triggerdo2_02	G/S	0: disable DO2 alarm 1: enable DO2 alarm	Enable/disable DI (01, 02) trigger DO alarm
sendviaemail01, sendviaemail02	G/S	0: disable sending snapshot image by email 1: enable sending snapshot image by email	Enable/disable DI (01, 02) trigger to send snapshot images by email
sendviaftp01, sendviaftp02	G/S	0: disable sending snapshot images by ftp 1: enable sending snapshot images by ftp	Enable/disable DI (01, 02) trigger to send snapshot images by ftp
eventserver01, eventserver02	G/S	0 to 15 0x01: Enable http event server 1 0x02: Enable http event server 2 0x04: Enable http event server 3 0x08: Enable http event server 4 These values can be ORed to enable multiple http event servers.	Supported http event server (1-4) for DI (01, 02).
customcgicmd01, customcgicmd02	G/S	Max 100 char (CGIString)	CGI command for DI (01, 02) to send to http event server
sendhttpevent01, sendhttpevent02	G/S	0: disable sending http event server 1: enable sending http event server	Enable/disable DI (01, 02) trigger to send message to http event server.

Note: In this section, all "xx02" are only for the VPort 351.

videoalarm

Item	Action	Value	Description
enable	G/S	0: disable DI alarm 1: enable DI alarm	Enable/disable video loss alarm
triggerdo01, triggerdo02	G/S	0: disable trigger Relay1/Relay2 1: enable trigger Relay1/Relay2	Enable/disable video loss alarm triggers Relay1/Relay2
sendviaemail	G/S	0: disable sending snapshot image by email 1: enable sending snapshot image by email	Enable/disable video loss alarm triggers to send snapshot images by email
sendviaftp	G/S	0: disable sending snapshot images by ftp 1: enable sending snapshot images by ftp	Enable/disable video loss alarm triggers to send snapshot images by ftp
eventserver	G/S	0 to 15 0x01: Enable http event server 1 0x02: Enable http event server 2 0x04: Enable http event server 3 0x08: Enable http event server 4 These values can be ORed to enable multiple http event servers.	Supported http event server (1-4) for video loss alarm.
customcgicmd	G/S	Max 100 char (CGIString)	CGI command for video loss alarm to send to http event server
sendhttpevent	G/S	0: disable sending http event server 1: enable sending http event server	Enable/disable video loss alarm triggers to send message to http event server.

Note: In this section, all "xx02" are only for the VPort 351.

motiondetect

Item	Action	Value	Description
enable	G/S	0: disable Video Motion Detection alarm 1: enable Video Motion Detection alarm	Enable/disable Video Motion Detection alarm
showalert	G/S	0: disable show alert on the image when VMD is triggered 1: enable show alert on the image when VMD is triggered	Enable/disable Show alert on the image when VMD is triggered
triggerdo1_01, triggerdo1_02, triggerdo1_03	G/S	0: disable trigger Relay1 1: enable trigger Relay1	Enable/disable VMD (1, 2, 3) trigger Relay1 alarm
triggerdo2_01, triggerdo2_02, triggerdo2_03	G/S	0: disable trigger Relay2 1: enable trigger Relay2	Enable/disable VMD (1, 2, 3) trigger Relay2 alarm
sendviaemail01, sendviaemail02, sendviaemail03	G/S	0: disable sending snapshot image by email 1: enable sending snapshot image by email	Enable/disable VMD (1, 2, 3) trigger to send snapshot images by email
sendviaftp01, sendviaftp02, sendviaftp03	G/S	0: disable sending snapshot images by ftp 1: enable sending snapshot images by ftp	Enable/disable VMD (1, 2, 3) trigger to send snapshot images by ftp
eventserver01, eventserver02, eventserver03	G/S	0 to 15 0x01: Enable http event server 1 0x02: Enable http event server 2 0x04: Enable http event server 3 0x08: Enable http event server 4 These value can be ORed to enable multiple http event server.	Supported http event server (1-4) for VMD (1, 2, 3).
customcgicmd01, customcgicmd02, customcgicmd03	G/S	Max 100 char (CGIString)	CGI command for VMD (1,2,3) to send to http event server
sendhttpevent01, sendhttpevent02, sendhttpevent03	G/S	0: disable sending http event server 1: enable sending http event server	Enable/disable VMD (1, 2, 3) trigger to send message to http event server.
winenable01, winenable02, winenable03	G/S	0: disable VMD(1, 2, 3) 1: enable VMD(1, 2, 3)	Enable/disable VMD (1, 2, 3) working

winname01, winname02, winname03	G/S	Max 15 char (ExtensiveString)	Name of VMD(1, 2, 3)
winleft01, winleft02, winleft03	G/S	Range of values is limited by the video size.	The x coordinate of the left-top point of VMD(1, 2, 3) window
wintop01, wintop02, wintop03	G/S	Range of values is limited by the video size.	The y coordinate of the left-top point of VMD(1, 2, 3) window
winwidth01, winwidth02, winwidth03	G/S	Range of values is limited by the video size and coordinates of upper left point of motion window.	The width of VMD(1, 2, 3) window
winheight01, winheight02, winheight03	G/S	Range of values is limited by the video size and coordinates of upper left point of motion window.	The height of VMD(1, 2, 3) window
winobjsize01, winobjsize02, winobjsize03	G/S	1 to 100	Threshold to judge the motion of VMD(1, 2, 3) window in percentage
winsensitivity	G/S	1 to 5	Sensitivity to judge the motion of VMD(1, 2, 3) window in 5 degrees

Note: In this section, all "triggerdo2_xx" are only for the VPort 351.

camctrl

Item	Action	Value	Description
presetname01 to presetname20	G	Max 60 char	Name of preset position of camera control
drivers01 to drivers10	G	Max 60 char	Name of camera control driver

Note: This section is for the VPort 351 and VPort 251.

event

Item	Action	Value	Description
di01status, di02status	G	0: High 1: Low	Status of di01 and di02
do01status, do02status	G	0: Close 1: Open	Status of do01 and do02
power01status, power02status	G	0: Disconnected 1: Connected	Status of power01 and power02
video01status	G	0: Disconnected 1: Connected	Video input 01 connection status
audioteststatus	G	0: Off 1: On	Audio test switch status
faultstatus	G	0: Off 1: On	Fault led status

PTZ Control CGI URL syntax and parameters

PTZ Control CGIs are used to control the PTZ action of cameras or devices. The CGIs are organized in function-related directories under the moxa-cgi directory and followed by one of two actions: ***setptzctrl*** and ***setpreset***. The file extension of the CGI is required. The first parameter is "move". It indicates the command of this request. The next parameter is "item"; note that "item" must be written exactly the same as shown in this document.

Note: This section is for the VPort 351 and VPort 251.

Syntax:

http://<*servername*>/moxa-cgi/<action>.cgi?move=<value>&[<item>=<*value*>[&<item>=<*value*>...]]

Example:

http://videoserver.moxanet.net/moxa-cgi/setpreset.cgi?move=clearpreset&presetindex=6

Method:

GET/POST

Response:

HTTP/1.0 200 OK\r\n

\r\n

If the parameter of the CGI command includes an invalid value, the server will modify the invalid setting to a reasonable value.

setptzctrl

This function is used to control the PTZ movement. PTZ movement includes ***up, down, left, right, upleft, upright, downleft, downright, gopreset, home, sethome*** (set current position as home tag), ***zoomspeed, zout, zin, focusnear, focusfar, autofocus, irisclose, autoiris, irisopen, stop*** (stop all action), ***pstop*** (pan stop), ***tstop*** (tilt stop), ***fstop*** (focus stop), ***zstop*** (zoom stop), ***irisstop*** (iris stop), ***osdon, osdoff, osdup, osddown, osdleft, osdright, wiperon, wiperoff, washon and washoff***. For different movements, the value of "move" and validate parameters are different. The detailed description is classified by the "move" value and is listed as follows.

Example:

http://videoserver.moxanet.net/moxa-cgi/setptzctrl.cgi?move=up&speedtilt=3

up / down

Item	Value	Description
speedtilt	1 to 16	Increase or decrease the tilt speed of PTZ device

left / right

Item	Value	Description
speedpan	1 to 16	Increase or decrease the pan speed of PTZ device

upleft / upright

Item	Value	Description
speedpan	1 to 16	Increase or decrease the pan speed of PTZ device

downleft / downright

Item	Value	Description
speedpan	1 to 16	Increase or decrease the pan speed of PTZ device
speedtilt	1 to 16	Increase or decrease the tilt speed of PTZ device

zin / zout

Item	Value	Description
speedzoom	1 to 16	Increase or decrease the zoom speed of PTZ device

zoomspeed

Item	Value	Description
speedzoom	-5 to +5	Increase or decrease the zoom speed of PTZ device

gopreset

Item	Value	Description
recall	1 to 25	Preset position index

home / sethome / focusnear / focusfar / autofocus / irisclose / irisopen / autoiris / stop / pstop / tstop / zstop / fstop / irisstop / osdon / osdoff / osdup / osddown / osdleft / osdright / wiperon / wiperoff / washon / washoff

These "move" values do not have "item" parameters.

setpreset

This function is used to control the preset tag of the PTZ movement. There are three "move" values, ***clearpreset***, ***addpreset***, and ***gopreset***. ***addpreset*** is used to add the current PTZ position to a preset tag. ***clearpreset*** is used to remove a preset tag. ***gopreset*** is used to move the PTZ device to a preset position.

Example:

http://videoserver.moxanet.net/moxa-cgi/setpreset.cgi?move=gopreset&presetindex=3

addpreset

Item	Value	Description
presetindex	1 to 25	Preset position index
name	Max 15 char	Name of preset

clearpreset / addpreset / gopreset

Item	Value	Description
presetindex	1 to 25	Preset position index

Remove PTZ Driver CGI URL

The Remove PTZ driver CGI is used to remove the customer uploaded PTZ driver. This CGI is organized in function-related directories under the moxa-cgi directory and followed by "removeptzdriver.cgi". The only parameter is "index" and its value specifies which camera driver is to be removed.

Note: This section is for the VPort 351 and VPort 251.

Syntax:

http://<*servername*>/moxa-cgi/removeptzdriver.cgi?index=<value>

Example:

http://videoserver.moxanet.net/moxa-cgi/removeptzdriver.cgi?index=6

Method:

GET/POST

Response:

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

Reboot CGI URL

The Reboot CGI is used to reboot Moxa video devices. This CGI is organized in function-related directories under the moxa-cgi directory and followed by "reboot.cgi".

Syntax:

http://<*servername*>/moxa-cgi/reboot.cgi

Example:

http://videoserver.moxanet.net/moxa-cgi/reboot.cgi

Method:

GET/POST

Response:

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

Get I/O Status CGI URL

The get I/O status CGI is used to get the LED status on the front panel of the VPort 351. This CGI is organized in function-related directories under the moxa-cgi directory and followed by "getiostatus.cgi".

Syntax:

http://<servername>/moxa-cgi/getiostatus.cgi

Example:

http://videoserver.moxanet.net/moxa-cgi/getiostatus.cgi

Method:

GET/POST

Response:

HTTP/1.0 200 OK\r\n
Server: MOXA VPort 351\r\n
Cache-Control: no-cache\r\n
Content-Length: 49\r\n
\r\n
VIDEO=3 AUDIO=3 PTZ=0 PW1=3 PW2=0 FAULT=2 SYS=1\n

There are 2 statuses for VIDEO Item:

0: Video Loss.

3: Video Connected.

There are 2 statuses for AUDIO Item:

0: Normal mode.

3: Audio test mode on.

There are 2 statuses for PTZ Item:

0: No data transferring.

3: Data transferring.

There are 2 statuses for PW1 and PW2 Items:

0: Power Disconnected.

3: Power Connected.

There are 2 statuses for FAULT Items:

0: No error occurred. If power fail and network disconnect alarm were disabled, FAULT Status will be always 0.

2: Errors occurred, if power fail or network disconnect alarm were enabled.

There are 2 statuses for SYS Items:

1: System ready.

0.1: Firmware upgrading. SYS will be interlaced in 0 and 1.

System Information CGI URL

The System information CGI is used to get the system information of Moxa video devices. This CGI is organized in function-related directories under the moxa-cgi directory and followed by "systeminfo.cgi".

Syntax:

http://<*servername*>/moxa-cgi/systeminfo.cgi

Example:

http://videoserver.moxanet.net/moxa-cgi/systeminfo.cgi

Method:

GET/POST

Response:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
\r\n
Model=VPort 351\n
HostName=Video Encoder\n
RTSPPort=554\n
CameraNumber=1\n
UartNumber=1\n
DINumber=2\n
DONumber=2\n
VideoCodec=MP4V,MJPG\n
AudioCodec=PCMU\n
FirmwareVersion=2.0\n
MotionDetectionMethod=3\n
StreamingSupport=1,[1,1,(1,3,2)]\n
StreamingNowCodec=1,[1,1,(1,1)]\n
MagicCode=00008001

Item	Value	Description
Model	N char	Model name
HostName	Max 40 char	Server name
RTSPPort	1 to 65535	RTSP port number
CameraNumber	1 to N	Camera number
UartNumber	0 to N	Uart number
DINumber	0 to N	DI number
DONumber	0 to N	DO number
VideoCodec	MP4V, MJPG	Supported video codec type. (MP4V: MPEG4, MJPG: MJPEG)
AudioCodec	PCMU	Supported audio codec type.
FirmwareVersion	xx.yy.zz	Firmware version
MotionDetectionMethod	3	Number of motion detection windows
StreamingSupport	1,[1,1,(1,3,2)]	All supported codec type

StreamingNowCodec	1,[1,1,(1,1)]	Codec type for now
MagicCode	00008001	To identified module type

Syntax:

StreamingSupport: Channels, [Channel1,Streams,(S1,Codectype,Mode),(S2,CodecType,Mode)…],[Channel2,Streams,(S1,Codectype,Mode),(S2,CodecType,Mode)…],……

Channels:

video input numbers for Moxa video device.

Streams:

video stream numbers for one video input.

Mode:

1. Inclusive mode, Dual stream
2. Exclusive mode, Single stream

Codectype (this value can be ORed for supporting multiple codec types):

1. MPEG4
2. MJPEG

Channel(n):

Settings for nth channel.

S(n):

Settings for nth stream.

StreamingNowCodec:

Channels, [Channel1,Streams,(S1,Codectype),(S2,CodecType)…],[Channel2,Streams,(S1,Codectype),(S2,CodecType)…],…….

Channels:

video input numbers in video device.

Streams:

video stream numbers for one video input.

Codectype (this value can be ORed for supporting multiple codec types):

1. MPEG4
2. MJPEG

Channel(n):

Settings for nth channel.

S(n):

Settings for nth stream for channel.

Examples:

Example 1:

StreamingSupport =1,[1,1,(1,3,2)]

There is only one video input channel. Channel can only output one video stream. Stream1 can only provide MPEG4 or MJPEG stream at the same time.

Example 2:

StreamingSupport =2,[1,2,(1,2,1),(2,3,1)],[2,1,(1,3,2)]

There are two video input channels.

First channel provides two different streams. Stream1 can only support MJPEG stream. Stream2 can provide MJPEG and MPEG4 at the same time.

Second channel provides one video stream. This stream can only provide MJPEG or MPEG4 stream at the same time.

Example 3:

StreamingNowCodec =1,[1,1,(1,1)]

There is one video input channel. This input channel only provides one stream and the stream codec type is MPEG4.

Example 4:

StreamingNowCodec =1,[1,1,(1,2)]

There is one video input channel. This input channel only provides one stream and the stream codec type is MJPEG.

MJPEG Mode Media Stream CGI URL

The MJPEG mode media stream CGI is used to get the audio/video stream from Moxa video devices in MJPEG mode. This CGI is organized in function-related directories under the moxa-cgi directory and followed by one of two media: ***mjpeg*** and ***pcmu***. The file extension of the CGI is required. There are two parameters: "channel" and "stream". The "stream" value indicates which channel is selected to provide the media stream.

Syntax:

http://<*servername*>/moxa-cgi/<media>.cgi?channel=<value>&stream=<value>

Example:

http://videoserver.moxanet.net/moxa-cgi/mjpeg.cgi?channel=1&stream=1

Method:

GET

In the request header, "media" (***mjpeg*** or ***pcmu***) means which media is requested and "value" means which channel is selected to provide the media stream. The "x-sessioncookie" item is used to associate which streams of audio and video are from the same request. It is not required. When the request header doesn't contain the "x-sessioncookie" item, it means this request is a new request. The Moxa video server will produce a new session ID in the "x-sessioncookie" of the response message. When the request header contains the "x-sessioncookie" item, it means this request needs to be associated with another request with the same session ID. "sessionID" is a character string and its maximize size is 256 characters.

Request Header:

GET /moxa-cgi/<media>.cgi?channel=<value>&stream=<value> HTTP/1.0\r\n
x-sessioncookie: <sessionID>\r\n
\r\n

The response message contains the response header and bodies. The response header contains the formal http responses, "boundary" and "x-sessioncookie". "boundary" is the boundary for every response body. "x-sessioncookie" is the session ID of this request. "randomstring" and "sessionID" are character strings and their maximize size is 256 characters.

The response body contains "--<randomstring>", "Content-Type", "Content-Length" and "media data". "--<randomstring>" is the boundary of the response body. "Content-Type" is the media data type, "image/jpeg" is for video, and "audio/basic" is for audio. "Content-Length" is the size of the media data. "media data" is the media bit-stream.

Response:

HTTP/1.1 200 OK\r\n
Content-Type: multipart/x-mixed-replace;boundary=<randomstring>\r\n
x-sessioncookie: <sessionID>\r\n
\r\n
--<randomstring>\r\n
Content-Type: <media type>\r\n
Content-Length: <length>\r\n
\r\n
<media data>\r\n
--<randomstring>\r\n
Content-Type: <media type>\r\n
Content-Length: <length>\r\n
\r\n
<media data>\r\n

Get Snapshot CGI URL

The Get Snapshot CGI is used to get one JPEG snapshot from Moxa video devices. The time period between two "get snapshot" CGI commands should not be less than one second. This CGI is organized in function-related directories under the moxa-cgi directory, and followed by "getsnapshot.cgi".

Syntax:

http://<*servername*>/moxa-cgi/getsnapshot.cgi

Example:

http://videoserver.moxanet.net/moxa-cgi/getsnapshot.cgi

Method:

GET

Request Header:

GET /moxa-cgi/getsnapshot.cgi HTTP/1.0\r\n
\r\n

Response:

HTTP/1.1 200 OK\r\n
Server: <Hostname>\r\n
Pragma: no-cache\r\n
Content-Type: image/jpeg\r\n
Content-Length: <Image Length>\r\n
\r\n

:
:
:
<Image Data>
:
:
:

Sending Commands to Serial Port

This CGI applies to the attached serial port device including supported PTZ cameras or non-supported custom camera. Note that the serial port settings of custom cameras must be correctly defined in "Camera Control".

Note: This section is for the VPort 351 and VPort 251.

Syntax:

http://<servername>/moxa-cgi/senddata.cgi?data=<Hex Data String>

Example:

http://videoserver.moxanet.net/moxa-cgi/senddata.cgi?data=01020304,,,ABCDEF

This hyperlink will inform Video Server to send out binary format commands to serial port with "0x01,0x02, 0x03,0x04" followed by "0xAB,0xCD,0xEF". Each comma separates the commands by 250msec. Data length must less than 240 characters and command length must be even.

Method:

GET

Request Header:

GET /moxa-cgi/senddata.cgi?data=<HEX Data String> HTTP/1.0\r\n
\r\n

Response:

Send OK

HTTP/1.1 200 OK\r\n
Server: <Hostname>\r\n
Pragma: no-cache\r\n
Cache-control: no-cache\r\n
\r\n
ok\r\n

Data Length Error

HTTP/1.1 200 OK\r\n

Server: <Hostname>\r\n

Pragma: no-cache\r\n

Cache-control: no-cache\r\n

\r\n

data length error\r\n

How to Connect to the VPort Server

If you want to connect to the VPort351, you must follow these steps:

a) Get Codec Type

b) Send Request

http://Server_Address/moxa-cgi/getparam.cgi?video_codectye&rtsp udpaccessname&rtsp_rtspport

c) Get Response

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
\r\n
video_codectype=1,[1,1,(1,1)]
rtsp_udpaccessname=udpstream
rtsp_rtspport=554

In this case, the video server has one channel, one stream, and the codec type is MPEG4. You will need to connect to the video server using RTSP, as shown in the following URL:

rtsp://Server_Address:554/udpstream_ch1_stream1_mp4v
or default URL:

rtsp://ServerIP:554/udpstream

If the video_codectype is "1,[1,1,(1,2)]", then the video server has one channel ,one stream, and the codec type is MJPEG. You must use the method described in the "MJPEG Mode Media Stream CGI URL" section to connect to the video server.