

Moxa VPort IP Video Devices Software User's Manual ONVIF Profile S Version

First Edition, September 2014

www.moxa.com/product

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Moxa VPort IP Video Devices Software User's Manual ONVIF Profile S Version

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Before Getting Started

Before using your VPort IP camera, be sure to read the following instructions:

- ❑ To prevent damage or problems caused by improper use, read the **Quick Installation Guide** (the printed handbook included in the package) before assembling and operating the device and peripherals.

Important Note

- ❑ Surveillance devices may be prohibited by law in your country. Since the VPort is both a high performance surveillance system and networked video server, verify that the operation of such devices is legal in your locality before installing this unit for surveillance purposes.

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Introduction

This software user's manual is designed for the VPort IP camera's ONVIF Profile S firmware.

The following topics are covered in this chapter:

- **Overview**
- **Version Information**

Overview

ONVIF Profile S is an open standard used to identify the communication interface between different IP video hardware (NVT) and software (NVC). VPort IP cameras with ONVIF Profile S compliance can work with most VMS software for building a complete IP surveillance system immediately, without needing to spend time integrating your hardware and software. ONVIF Profile S saves both time and resources when using VPort IP cameras with VMS software.

Version Information

The current version information is listed below:

- ONVIF Core specifications: V2.2
- ONVIF Test tool: 13.12
- VPort Models

Model	Firmware Version
VPort 36-1MP series	V2.2
VPort 26A-1MP series	V2.2
VPort P06-1MP-M12 series	V2.2
VPort P16-1MP-M12 series	V1.0

NOTE The version information given here may change as new versions of the firmware are developed. Check www.moxa.com/support for the latest firmware information, and to download updated user's manuals.

NOTE To see which VPort models support Profile S, check the ONVIF website at <http://www.onvif.org/> for updated information related to VPort models.

NOTE Different VPort IP cameras support different sets of functions. For this reason, not all of the functions described in this user's manual are supported by all VPort IP cameras. Please check your own VPort's specifications to see which functions are supported by your camera.

Getting Started

This chapter includes information about how to get started with the VPort's software configuration.

The following topics are covered in this chapter:

- ❑ **Introduction**
- ❑ **Software Installation**

Introduction

In what follows, “user” refers to those who can access the IP camera, and “administrator” refers to the person who knows the root password that allows changes to the IP camera’s configuration and has the right to assign general access to other users. Administrators should read this part of the manual carefully, especially during installation.

Software Installation


Step 1: Configure the VPort’s IP address

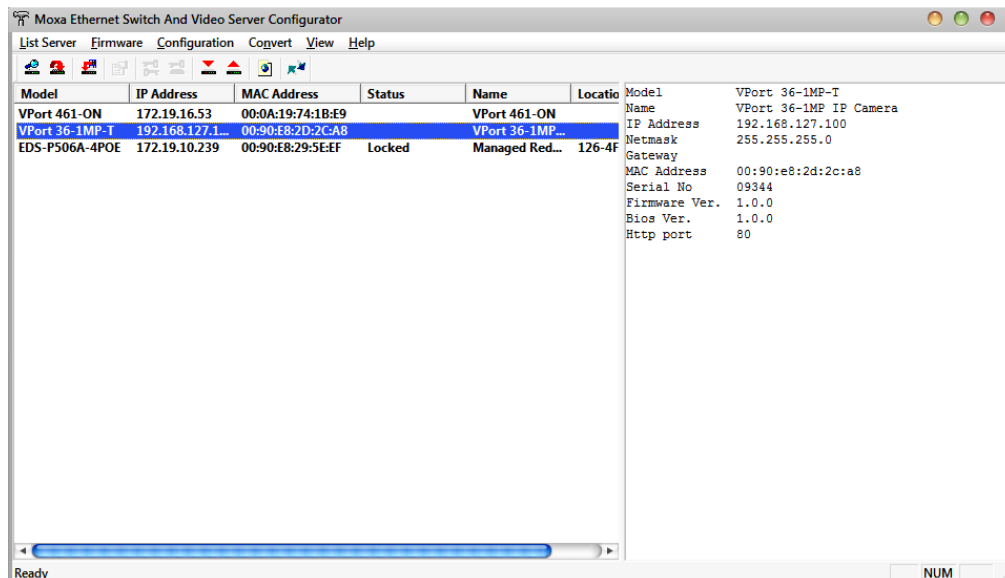
When the VPort is first powered on, the POST (Power On Self Test) will run for about 30 to 40 seconds. The network environment determines how the IP address is assigned.

Network environments with a DHCP server

In this case, the unit’s IP address will be assigned by the network’s DHCP server. Refer to the DHCP server’s IP address table to determine the unit’s assigned IP address. You may also use the Moxa VPort and EtherDevice Configurator Utility (edscfgui.exe), as described below:

Using the Moxa VPort and EtherDevice Configurator Utility (edscfgui.exe)

1. Run the **edscfgui.exe** program to search for the VPort. After the utility’s window opens, you may also click on the **Search** button  to initiate a search.
2. When the search has concluded, the Model Name, MAC address, IP address, serial port, and HTTP port of the VPort will be listed in the utility’s window.



3. Double click the selected VPort, or use the IE web browser to access the VPort’s web-based manager (web server).

Network environments that do NOT have a DHCP server

If your VPort is connected to a network that does not have a DHCP server, then you will need to configure the IP address manually. The default IP address of the VPort is 192.168.127.100 and the default subnet mask is 255.255.255.0. Note that you may need to change your computer’s IP address and subnet mask so that the computer is on the same subnet as the VPort.

To change the IP address of the VPort manually, access the VPort’s web server, and then navigate to the **System Configuration** → **Network** → **General** page to configure the IP address and other network settings. Checkmark **Use fixed IP address** to ensure that the IP address you assign is not deleted each time the VPort is restarted.

Step 2: Access the VPort's web-based manager

Type the IP address in the web browser's address input box and then press enter.

Step 3: Install the ActiveX Control plug-in

A security warning message will appear the first time you access the VPort's web-based manager. The message is related to installing the VPort ActiveX Control component on your PC or notebook. Click **Install** to install this plug-in to enable the IE web browser for viewing video images.

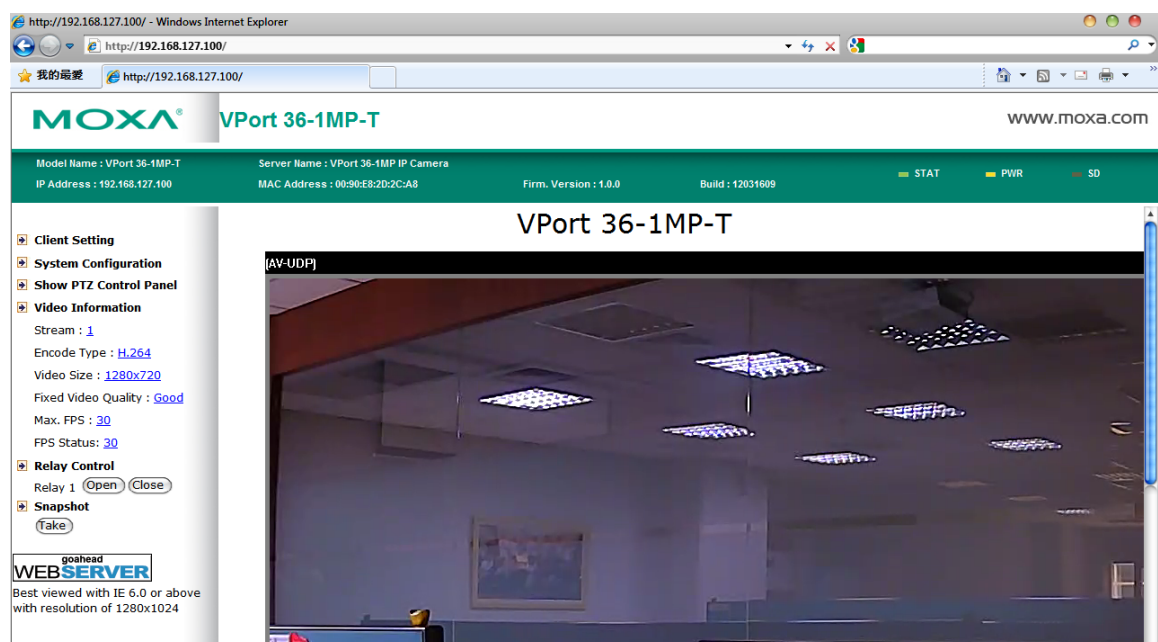


NOTE For Windows XP SP2 or above operating systems, the ActiveX Control component will be blocked for system security reasons. In this case, the VPort's security warning message window may not appear. Unlock the ActiveX control blocked function or disable the security configuration so that you can install the VPort's ActiveX Control component.

Step 4: Access the homepage of the VPort 36-1MP's web-based manager

After installing the ActiveX Control component, the homepage of the VPort's web-based manager will appear. Check the following items to make sure the system was installed properly:

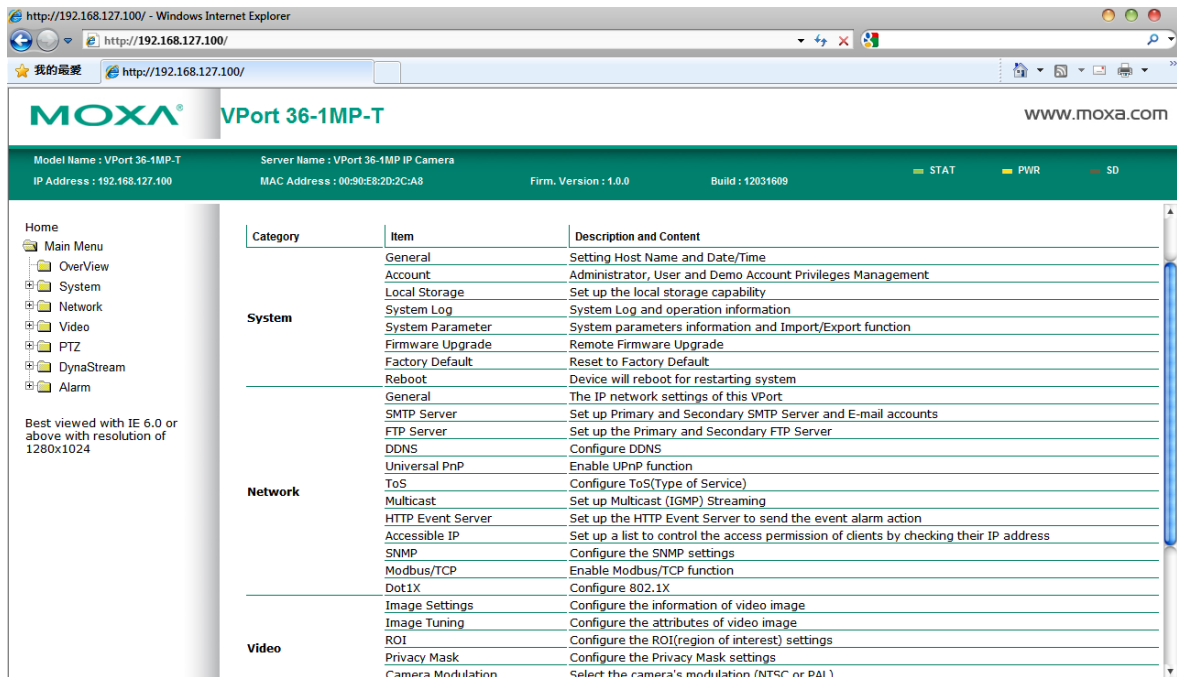
1. Video Images
2. Video Information



Step 5: Access the VPort’s system configuration

Click on **System Configuration** to access the system configuration overview to change the configuration. **Model Name, Server Name, IP Address, MAC Address, and Firmware Version** appear in the green bar near the top of the page. Use this information to check the system information and installation.

For details of each configuration, check the user’s manual of your VPort IP camera. The manual can be found on the software CD, or downloaded from Moxa’s website.



Accessing the VPort's Web-based Manager

This chapter includes information about how to access the VPort IP camera for the first time.

The following topics are covered in this chapter:

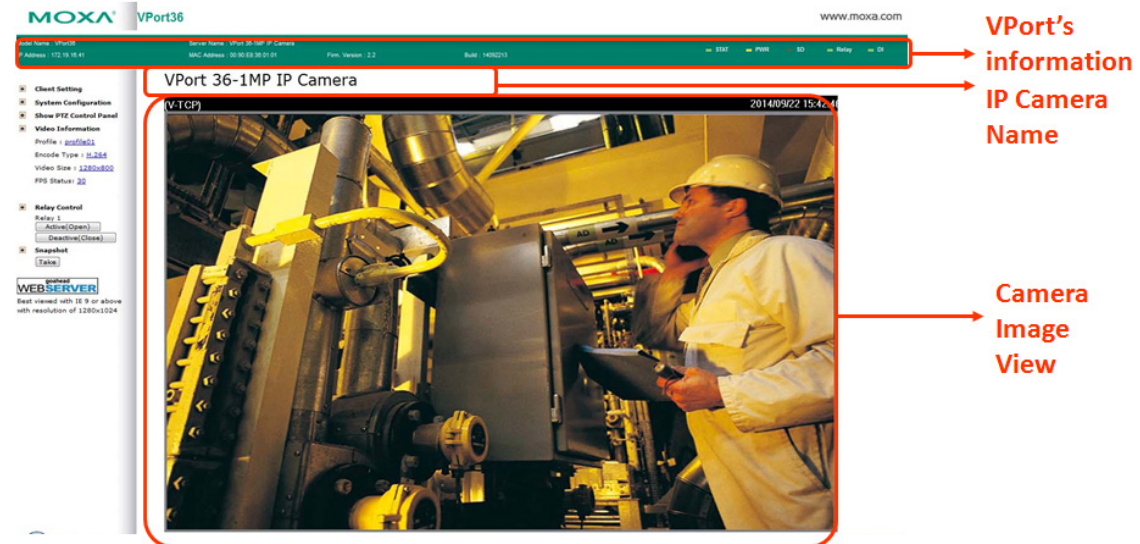
□ Functions Featured on the VPort's Web Homepage

- VPort's Information
- IP Camera Name
- Camera Image View
- Client Settings
- System Configuration
- Video Information
- Show PTZ Control Panel (not supported for all VPorts)
- Snapshot
- Relay Control (not supported for all VPorts)

Functions Featured on the VPort's Web Homepage

The homepage of the VPort's web console shows information specific to that VPort, the camera image, and configurations for the client and server.

NOTE The VPort's web homepage is best viewed in 1280 x 1024 screen resolution. This is because the camera image can be viewed at a resolution up to HD (1280 x 720). We strongly recommend using IE 6.0 (Microsoft Internet Explorer) or above to avoid incompatibility with the ActiveX Plug-in.



VPort's Information

This section shows the VPort's model name, server name, IP address, MAC address, firmware version, and the display status of the LEDs located on the VPort's front panel.

NOTE The VPort LEDs shown on the VPort's web homepage are updated every 10 seconds. (Applies only to those VPort products that have LED indicators.)

IP Camera Name

A server name can be assigned to each server. Administrators can change the name in **System Configuration/System/General**. The maximum length of the server name is 40 bytes.

Camera Image View

The assigned image description and system date/time will be displayed in the caption above the image window. You may disable the caption or change the location of the image information in **System Configuration/Video/Image Setting**. Note that if the VPort's motion detection function is active, some windows in the video picture might be framed in red.

Client Settings

The following functions can be configured in **Client Settings**.

1. **Display profile:** Shows the profile currently being used. There are 3 default profiles: profile01, profile02, and profile03. Each profile refers to one independent video stream with a unique codecs, resolution, frame rate (FPS), and video quality. If you need to, you can create additional profiles, but keep in mind that more profiles mean more video streams. Enabling too many video streams could reduce the frame rate and overall video performance of each stream. For configuring the profile, go to **System Configuration/profile**.
2. **Media options:** Some VPort IP cameras support a line-in or microphone audio input. In this case, you can select from the following options: Video/Audio, Video Only, Audio Only.
3. **Protocol Options:** Choose one of four protocols to optimize your usage—Multicast (RTSP or Push) or Unicast (UDP, TCP, HTTP).
 - **Multicast Protocol** can be used to send a single video stream to multiple clients. In this case, a lot of bandwidth can be saved since only one video stream is transmitted over the network. However, the network gateway (e.g., a switch) must support the multicast protocol (e.g., IGMP snooping). Otherwise, the multicast video transmission will not be successful.
 - **RTSP:** Enable the multicast video stream to be sent using RTSP control, which means the multicast video stream will be sent only if it receives the client's request.
 - **Push:** Enable the multicast video stream to be sent using Push control, which means that after this setting is selected, the multicast video stream will be sent continuously even without any client requests.
 - **Unicast Protocol** is used to send a single video stream to one client.
 - **UDP** can be used to produce audio and video streams that are more real-time. However, some packets may be lost due to network burst traffic, and images may become blurred.
 - **TCP** can be used to prevent packet loss, which results in a more accurate video display. The downside of using TCP is that the real-time delay is worse than with UDP protocol.
 - **HTTP** can be used to prevent being blocked by a router's firewall. The downside of using HTTP is that the real-time delay is worse than with UDP protocol.
 - **Network Interface** designates the connection interface for multicast video streams selection. The box lists the current NIC interfaces. Select which NIC interface will receive multicast streams.

Once the IP camera is connected successfully, **Protocol Options** will indicate the selected protocol. The selected protocol will be stored on the user's PC, and will be used for the next connection.

NOTE For multicast video stream settings, see **System Configuration → Network → Multicast**.

Client Setting

IP Camera

Display Profile
 profile01 ▼

Media Option
 Video/Audio Video Only Audio Only

Protocol Option
 Multicast RTSP ▼ Unicast TCP ▼

Network Interface 172.19.16.2 ▼

Save

System Configuration

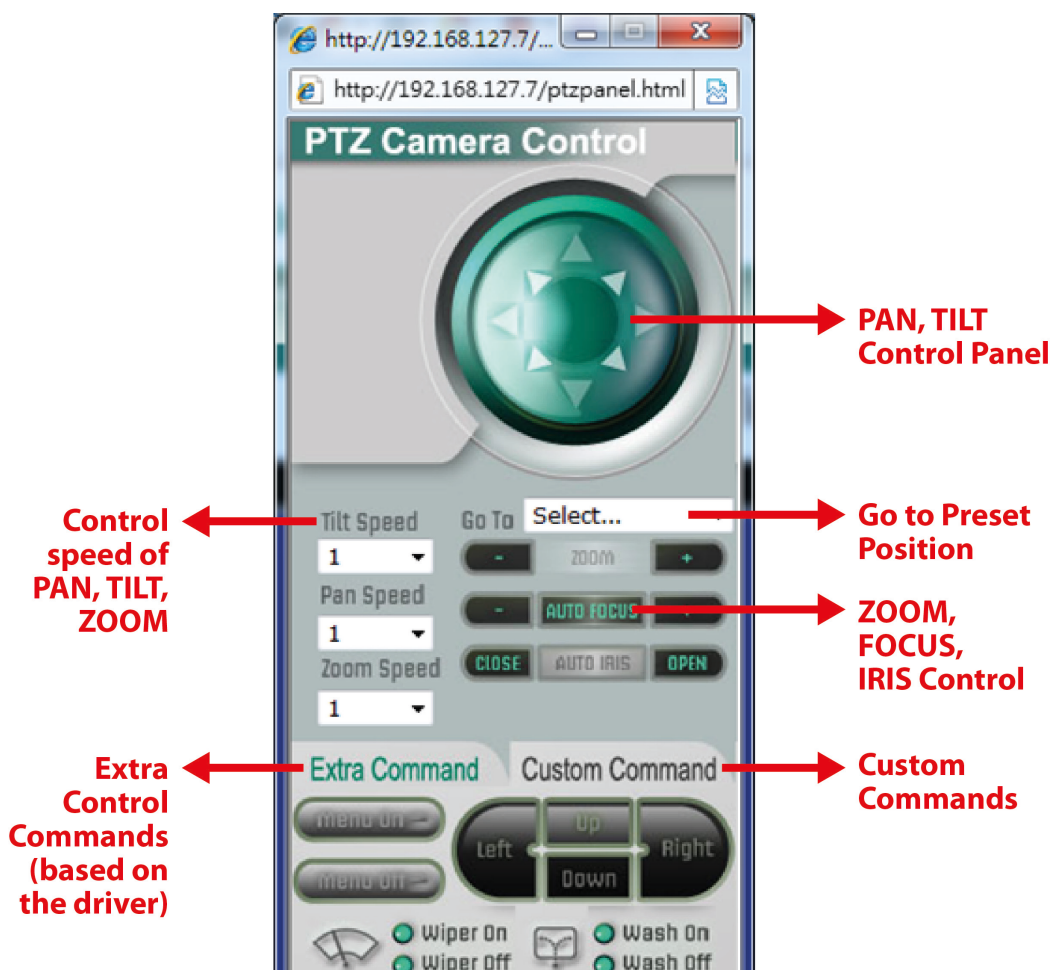
A button or text link on the left side of the system configuration window only appears on the administrator's main page. For detailed system configuration instructions, refer to Chapter 4, **System Configuration**.

Video Information

You can easily monitor the current video performance by looking at the **Video Information** section on the left side of the homepage. The following properties are shown: Profile, Encoder type, Video Size, and FPS status. For multichannel encoders, you can select the target camera image to view the camera's video performance.

Show PTZ Control Panel (not supported for all VPorts)

Some VPort IP cameras support PTZ (Pan, Tilt, Zoom) or digital zoom capability. You can control PAN, TILT, ZOOM from the PTZ control panel.



NOTE Some VPorts only support digital zoom. In this case, only the PTZ control panel's Zoom function will work.

Custom PTZ Camera Commands

In addition to the default pan, tilt, zoom, and focus controls, an additional 24 buttons are available for custom commands to control the attached motorized (PTZ) cameras. Custom commands are set up by administrators, and are used for functions such as activating or deactivating the dome wiper. Refer to the attached motorized device's user's manual to see which functions can be controlled with these additional buttons.



Snapshot

You can take snapshot images for storing, printing, and editing by clicking the **Snapshot** button. To save the image, right-click and select the **Save** option.

Relay Control (not supported for all VPorts)

Some VPort models have relay outputs for external devices, such as alarms. Administrators and permitted users can click on **Active (Open)** to short the Common and Normal Open digital output pins, or click on **Deactive (Close)** to short the Common and Normal Close digital output pins.

System Configuration

After installing the hardware, the next step is to configure the VPort's settings. You can do this with the web console.

The following topics are covered in this chapter:

□ System Configuration by Web Console

- Profiles
- System
- Network
- Video
- Audio (not supported by all VPorts)
- Streaming
- PTZ (not supported by all VPorts)
- Event
- Action

System Configuration by Web Console

System configuration can be done remotely with Internet Explorer. To access the server, type the system configuration URL, **http://<IP address of Video Server>/overview.asp**, to open the configuration main page.

Each of the configuration categories—**Profiles, System, Network, Video, Audio, Streaming, PTZ, Event, Action**—are described below:

Category	Item	Description and Contents
Profiles	Configuration	Configure ONVIF Profile settings
System	General	Set Host Name and Date/Time
	Accounts	Administrator, User, and Demo Account Privileges Management
	System Log	System Log and operation information
	System Parameter	System parameter information and Import/Export functions
	Firmware Upgrade	Remote Firmware Upgrade
	Factory Default	Reset to Factory Default
	Reboot	Device will reboot to restart the system
Network	General	IP network settings of this VPort
	DDNS	Configure Dynamic DNS service
	Universal PnP	Enable UPnP function
	ToS	Configure ToS (Type of Service)
	Accessible IP	Set up a list to control access permission of clients by IP address
	SNMP	Configure SNMP settings
	Modbus/ TCP	Enable Modbus/TCP function
	Telnet	Configure Telnet
	LLDP	Configure LLDP
Video	Image Settings	Configure video image information
	Camera Setting	Configure the camera's attributes
	Privacy Mask	Configure Privacy Mask settings
	Video Encoder	Set up the Encode Standard (MJPEG or H.264), Size (Resolution), FPS, Quality, and Multicast settings
Audio	Audio Encoder	Configure Audio Encoder Multicast settings
Streaming	CBR Pro	Configure CBR Pro Settings
PTZ	PTZ Config	Configure PTZ settings and Add/Modify/Remove the Presets
	Serial Port	Configure Serial Port usage and settings
Event	Enable Event	Enable/Disable all Event Producer
	Motion Detection	Configure Motion Detection settings
	Camera Tamper	Configure Camera Tamper settings
	Digital Input	Configure the Digital Input Alarm
	Sequential Snapshot	Configure Sequential Snapshot settings, Schedule, and transmit destinations
Action	Action Config	Configure detailed Action activation settings
	Action Trigger	Configure the Action Trigger for the Event trigger condition based on the specific Action Config chosen for this trigger.

This table can also be found on the **System Configuration → Overview** webpage.

NOTE Not all of the functions listed in this user's manual are supported for all VPort IP cameras. Please check your VPort's specifications to see which functions are supported.

System Configuration

Welcome to the System Configuration pages. A brief description of each configuration group is given below. Click on a plus sign in the left pane to expand a group, and then click on the name of the page you would like to open.

Category	Item	Description and Content
Profiles	Configuration	Configure ONVIF Profile settings
	General	Setting Host Name and Date/Time
	Account	Administrator, User and Demo Account Privileges Management
System	System Log	System Log and operation information
	System Parameter	System parameters information and Import/Export function
	Firmware Upgrade	Remote Firmware Upgrade
	Factory Default	Reset to Factory Default
	Reboot	Device will reboot for restarting system
	General	The IP network settings of this VPort
	DDNS	Configure DDNS
Network	Universal PnP	Enable UPnP function
	ToS	Configure ToS(Type of Service)
	Accessible IP	Set up a list to control the access permission of clients by checking their IP address
	SNMP	Configure the SNMP settings
	Modbus/TCP	Enable Modbus/TCP function
	Telnet	Configure Telnet
	LLDP	Configure LLDP
	Image Setting	Configure the information of video image
	Camera Setting	Configure the attributes of video image
	Privacy Mask	Configure the Privacy Mask settings
Video	Video Encoder	Set up the Encode Standard(MJPEG or H.264), Size (Resolution), FPS, Quality and Multicast settings
	Audio Encoder	Configure Audio Encoder Multicast settings
Streaming	CBRPro	Configure CBRPro settings
	Enable Event	Enable/Disable all Event Producer
Event	Motion Detection	Configure Motion Detection settings
	Camera Tamper	Configure Camera Tamper settings
	Sequential Snapshot	Configure Sequential Snapshot settings, Schedule and transmit destinations
Actions	Action Config	Configure detail Action activation.
	Action Trigger	Configure Action Trigger for Event trigger condition specify Action Configs

Profiles

In the ONVIF Profiles specifications, one video profile represents one video stream, which can have a unique codecs (H.264, MJPEG), resolution, FPS (frame rate), and video quality.

Configuration

Profile List

profile01

profile02

profile03

Profile Token: def-profile01

Profile Name:

Channel 1

Video Encoder:

Audio Encoder:

Video

Codec:H.264

Resolution:1280 x 800

Multicast:239.127.0.100 5556

Audio Encoder

Multicast:239.127.0.100 5572

New Profile:

Profile List

Setting	Description	Default
profile01	Chose the video profile. Profile information shown on this page includes Profile Token, Profile Name, Channel number, Video encoder, Audio Encoder	profile01
profile02		
profile03		

Profile Information

Setting	Description	Default
Profile Token*	Reply when queried by another device asks	<variable>
Profile Name	Configure the profile name, max. 40 bytes	profile01
Channel*	Current video channel of this ONVIF device	<variable>
Video Encoder	Select which video encoder this profile will use	VideoEncoder01
Audio Encoder	Select which audio encoder this profile will use	AudioEncoder01
Video*	Video Codec (H.264 or MJPEG), Resolution, Multicast address	<variable>
Audio*	Multicast address	<variable>

***This item cannot be edited.**

New Profile

You can create additional profiles if needed. Input the name of the new profile and then click **Create**. When the new profile appears in the Profile List, select the new profile and then configure its video encoder and audio encoder to generate the video streams. Click **Save** to save the new profile. To remove a profile, select the profile you wish to remove, and then click **Remove**.

Profile List

profile01
profile02
profile03
profile04

Profile Token: customProfile04
 Profile Name:
 Channel 1
 Video Encoder: [Disable] ▾
 Audio Encoder: [Disable] ▾

Video Disabled
 Audio Encoder Disabled

New Profile:

System

General Settings

On the **General Settings** page, administrators can set up the IP camera **Server name** and the **Date and Time**, which is included in the caption of all images.

General Settings

Server name :

Server contact :

Server location :

Time zone:

Time zone: GMT ▾

Manual TimeZone (POSIX 1003.1):

Enable daylight saving time

Date and Time:

Keep current date and time

Sync with computer time

PC date: [yyyy/mm/dd]

PC time: [hh:mm:ss]

Manual

Date: [yyyy/mm/dd]

Time: [hh:mm:ss]

Automatic

NTP from DHCP

NTP Manual

1st NTP server:

2nd NTP server:

Update interval: 15 min ▾

Server name

Setting	Description	Default
Max. 40 characters	Use a different server name for each server to help identify your servers. The name appears on the web homepage.	VPort XXXX IP camera

Server contact

Setting	Description	Default
Max. 40 characters	Input the name of the operator who is responsible for this camera server	Blank

Server location

Setting	Description	Default
Max. 40 characters	Input the location of this camera server	Blank

Time zone

Setting	Description	Default
Time Zone	Configure the time zone	GMT
Manual TimeZone (POSIX 1003.1):	Manually configure the specified time zone. To enable this configuration, select manual setting from the Time Zone drop-down box	Blank
Enable daylight saving time	Enable/disable daylight saving time	Disable

Date and Time

Setting	Description	Default
Keep current date and time	Use the current date and time as the VPort's time setting	Keep current date and time
Sync with computer time	Synchronize the VPort's date and time setting with the local computer time	
Manual	Manually change the VPort's date and time setting	
Automatic	Use the NTP server to set the VPort's date and time setting	

NOTE Select the **Automatic** option to force the VPort to synchronize automatically with timeservers over the Internet. However, synchronization may fail if the assigned **NTP server** cannot be reached, or the VPort is connected to a local network. Leaving the **NTP server** blank will force the VPort to connect to default timeservers. Enter either the Domain name or IP address format of the timeserver if the DNS server is available.

You can configure two NTP servers as backups; the update interval can be configured from a minimum of 15 minutes up to one month.

Don't forget to set the **Time zone** for local settings. Refer to Appendix B for your region's time zone.

Account

Different account privileges are available for different purposes.

Account Privileges

Authentication Enable

Disabled ▾

Save

Admin Password

Admin Password:

Confirm Password:

Note: Admin's password must be blank or 8 to 15 characters.

Save

User's Privileges

No.	User Name	Password	Onvif Role
1	<input type="text"/>	<input type="password"/>	Anonymous ▾
2	<input type="text"/>	<input type="password"/>	Anonymous ▾
3	<input type="text"/>	<input type="password"/>	Anonymous ▾
4	<input type="text"/>	<input type="password"/>	Anonymous ▾
5	<input type="text"/>	<input type="password"/>	Anonymous ▾
6	<input type="text"/>	<input type="password"/>	Anonymous ▾
7	<input type="text"/>	<input type="password"/>	Anonymous ▾
8	<input type="text"/>	<input type="password"/>	Anonymous ▾
9	<input type="text"/>	<input type="password"/>	Anonymous ▾
10	<input type="text"/>	<input type="password"/>	Anonymous ▾

Save

Authentication Enable

Setting	Description	Default
Authentication Enable	Enable/disable the account password protection of web-based manager access	disabled

Admin password

Setting	Description	Default
Admin Password (max. 14 characters)	Input the administrator password	Default admin password is "admin"
Confirm Password (max. 14 characters)	If a new password is typed in the Admin Password box, you will need to retype the password in the Confirm Password box before updating the new password.	

NOTE The default account name for administrator is **admin**; the administrator account name cannot be changed.

User's Privileges

VPort products provide 10 user accounts for accessing the VPort.

Setting	Description	Default
User Name	Type a specific user name for user authentication.	None
Password	Type a specific password for user authentication.	
ONVIF Role	You may select from 4 onvif roles: administrator, operator, user, and anonymous. Different roles have different privileges. Refer to ONVIF Specifications for the user's access policy.	anonymous

NOTE The FPS of the video stream will be reduced as more and more users access the same VPort. Currently, the VPort 36-1MP is only allowed to send 10 unicast video streams. To avoid performance problems, limit the number of users who can simultaneously access a VPort 36-1MP.

Local Storage(not supported for all VPorts)

Some VPorts support an SD card slot (SDHC interface) for recording video when an event/alarm is detected. The administrator can download these recorded videos via FTP, or directly copy the files from the SD card using a card reader device.

Local Storage Setting

This VPort supports local storage function for recording the video once there is an event/alarm. Users can download the recoded video files via FTP access.

FTP Server Daemon

Enable FTP Server Daemon

Server Port

SD Card Setting

Reboot the system once the mounting of SD card is failed

SD Card Information

Status: Not Insert

Size: 0 MB

Free: 0 MB

SD Card Utility

Force mount / unmount SD card

FTP Daemon

Setting	Description	Default
Enable FTP daemon	Enable FTP service to allow the administrator to download recorded video files	Disable
Server Port	The FTP server port number	21

SD card setting

Setting	Description	Default
Reboot the system when the SD card fails to mount	This function can reboot the system when the SD card mount fails to re-detect the SD mount	Disable

SD Card Utility

Setting	Description	Default
Mount SD card	Force mount/ unmount the SD card	Disable

NOTE The recorded videos are stored in the "/VPortfolder" folder. Ten seconds of video is recorded on each file. The videos are stored as AVI files, which can be played back using any popular media player.

NOTE Due to file system limitations, the maximum number of files that can be stored is 16584. When the number of files in the SD card reaches 16584, or the free space is less than 100 MB, the system will start deleting the oldest files.

System Log History

The system log contains useful information, including current system configuration and activity history with timestamps for tracking. Administrators can save this information in a file (system.log) by clicking the **Export to a File** button, or send the file by email by clicking the **Send a Report via Email** button. In addition, the log can also be sent to a **Log Server** for backup. The administrator can configure "Syslog Server 1" and "Syslog Server 2" below the system log list.

System Log History

Index	Time	Type	Description
0001	Wed Nov 11 10:35:56 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0002	Wed Nov 11 10:35:57 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0003	Wed Nov 11 10:35:58 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0004	Wed Nov 11 10:35:59 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0005	Wed Nov 11 10:36:00 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0006	Wed Nov 11 10:36:01 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0007	Wed Nov 11 10:36:02 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0008	Wed Nov 11 10:36:03 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0009	Wed Nov 11 10:36:04 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0010	Wed Nov 11 10:36:05 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0011	Wed Nov 11 10:36:06 2009	FTP	Connect to Server 192.168.127.9:21 Failed
0012	Wed Nov 11 10:36:07 2009	FTP	Connect to Server 192.168.127.9:21 Failed

Export to a File Send a Report via E-mail Clear

Send to system log Server

Syslog Server 1

Port Destination

Syslog Server 2

Port Destination

Send to system log Server

Setting	Description	Default
Send to system log server	Enables sending the system log to the log sever	Disable
Syslog Sever 1	The address of the first system log server	Blank
Port Destination	The port number of the first system log server	514
Syslog Sever 2	The address of the second system log server	Blank
Port Destination	The port number of the second system log server	514

NOTE A maximum of 500 lines is displayed in the log. Earlier log entries are stored in the VPort's database, which the administrator can export at any time.

System Parameters

The **System Parameters** page allows you to view all system parameters, which are listed by category. The content is the same as the VPort's sys_config.ini file. Administrators can also save this information in a file (sys_config.ini) by clicking the **Export to a File** button, or import a file by clicking the **Browse** button to search for a sys_config.ini file and then clicking the **Import a System Parameter File** button to update the system configuration quickly.

System Parameters

```

VPort06 Configuration File
[security]
username01=admin
username02=
username03=
username04=
username05=
username06=
username07=
username08=
username09=
username10=
username11=
userpass01=moxaivn1234
userpass02=
userpass03=
userpass04=
userpass05=
userpass06=
  
```

Export to a File

Import a System Parameter File Browse

NOTE The system parameter import/export functions allow the administrator to back up and restore system configurations. The Administrator can export this sys_config.ini file (in a special binary format) for backup, and import the sys_config.ini file to restore the system configurations of VPort IP cameras. System configuration changes will take effect after the VPort is rebooted.

Firmware Upgrade

Firmware Upgrade

Take the following steps to upgrade the firmware:

Step 1: Press the **Browse** button to select the firmware file.

NOTE For the VPort, the firmware file extension should be **.rom**.

Step 2: Click on the **Upgrade** button to upload the firmware to the VPort.

Step 3: The system will start the firmware upgrade process.

Step 4: Once **SuccessStep 3/3 : System reboot** is displayed, wait 30 seconds for the VPort to reboot.

NOTE Upgrading the firmware will not change most of the original settings.

Reset to Factory Default

From the "Reset to Factory Default" page, choose **Hard** or **Soft** factory default to reset the VPort to its factory default settings.

Reset to Factory Default

Reset to Factory Default will restart the system and click **Hard** to delete all the changes that have been made to the configuration.

Hard

Click **Soft** to delete all the changes that have been made to the configuration, but the network setting. You can use original network setting to connect this device.

Soft

NOTE Only some VPorts support the hardware reset button. Refer to your product's QIG for operation instructions.

Reboot

From the "Device Reboot" page, click **OK** (as shown in the following figure) to restart the VPort's system.

Device Reboot

This device will reboot for restarting system.
Are you sure you want to reboot?

OK

Network

General Network Settings

The **General Network Settings** page includes some basic but important network configurations that enable the VPort to be connected to a TCP/IP network.

General Network Settings

Access Method

- DHCP
- DHCP + DHCP option 66/67
- Use fixed IP address

General Settings

IP address	<input type="text" value="172.19.16.234"/>
Subnet mask	<input type="text" value="255.255.255.0"/>
Gateway	<input type="text"/>
<input type="radio"/> DNS From DHCP	
Primary DNS	<input type="text"/>
Secondary DNS	<input type="text"/>
<input checked="" type="radio"/> DNS Manual	
Primary DNS	<input type="text"/>
Secondary DNS	<input type="text"/>
DHCP Client ID	<input type="text"/>
DHCP Server ID	<input type="text"/>

HTTP

HTTP port	<input type="text" value="80"/>
HTTPS port	<input type="text" value="443"/>
HTTP mode	<input type="text" value="HTTP Only"/>

RTSP Streaming

RTSP port	<input type="text" value="554"/>
-----------	----------------------------------

Access Method

VPort products support the DHCP protocol, which means that the VPort can get its IP address from a DHCP server automatically when it is connected to a TCP/IP network. The Administrator should determine if it is more appropriate to use DHCP, or assign a fixed IP.

Setting	Description	Default
DHCP	Get the IP address automatically from the DHCP server.	DHCP
DHCP + DHCP Option 66/67	Get the IP address automatically from the DHCP server, and download the configurations from the TFTP server with Opt 66/67 mechanism.	
Use fixed IP address	Use the IP address assigned by the administrator.	

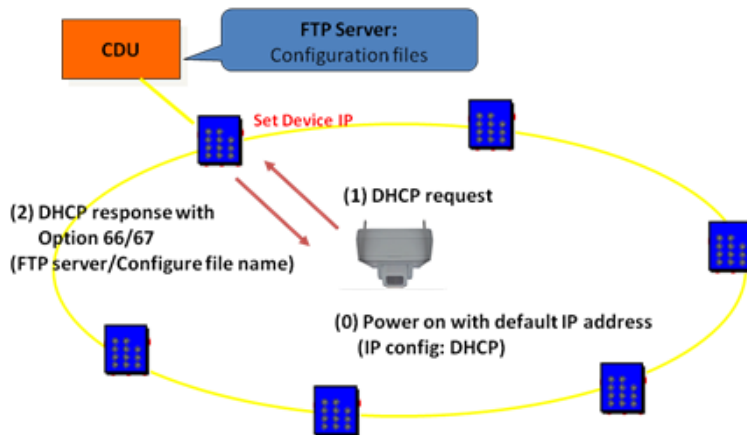
NOTE We strongly recommend that the administrator assign a fixed IP address to the VPort, since all of the functions and applications provided by the VPort are active when the VPort is connected to the network. Use DHCP to determine if the VPort's IP address may change when then network environment changes, or the IP address is occupied by other clients.

DHCP Option 66/67 for auto configuration (not supported by all VPorts)

If you need to install a large number of devices, it can be extremely time consuming to configure each of the many devices one by one. DHCP Opt 66/67 provides a mechanism whereby configurations can be saved on a TFTP server, and then once a new device is installed, the configurations can be downloaded to this new device automatically. Follow the steps below to use the Opt 66/67 auto-configuration function. We use VPort 16-M12 to illustrate.

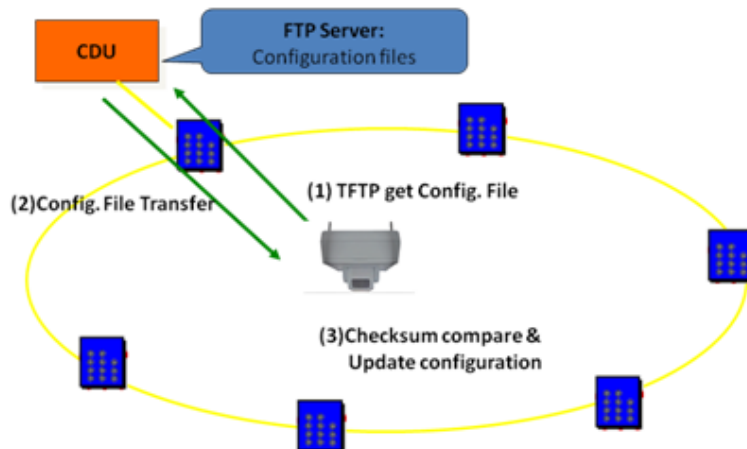
Step 1:

When the VPort 36-1MP enables the auto-configuration function, it will ask for an IP address from the DHCP server, and the path of the TFTP server and configuration file.



Step 2:

Once the VPort 36-1MP completes the IP settings, it will acquire the configuration file from the TFTP server, and then check if this configuration file is the right one or not.



NOTE

- For the auto-configuration function to work, the system should
1. Have a DHCP Server that supports DHCP Opt 66/67 in the network switches and routers.
 2. Have a TFTP server that supports the TFTP protocol.

General Settings

Setting	Description	Default
IP address	Variable IP assigned automatically by the DHCP server, or fixed IP assigned by the Administrator.	192.168.127.100
Subnet mask	Variable subnet mask assigned automatically by the DHCP server, or a fixed subnet mask assigned by the Administrator.	255.255.255.0
Gateway	Assigned automatically by the DHCP server, or assigned by the Administrator.	Blank
DNS from DHCP	The DNS server is assigned by DHCP server	Disable
Primary DNS	Enter the IP address of the DNS Server used by your network. After entering the DNS Server's IP address, you can input the VPort's url (e.g., www.VPort.company.com) in your browser's address field, instead of entering the IP address.	Obtained automatically from the DHCP server, or left blank in non-DHCP environments.
Secondary DNS	Enter the IP address of the DNS Server used by your network. The VPort will try to locate the secondary DNS Server if the primary DNS Server fails to connect.	Obtained automatically from the DHCP server, or left blank in non-DHCP environments.
DHCP Client ID	Configure the DHCP Client ID if it is required	Blank
DHCP Server ID	Configure the DHCP Server ID if it is required	Blank

HTTP

Setting	Description	Default
HTTP Port (80, or 1024 to 65535)	HTTP port enables connecting the VPort to the web.	80
HTTPS port	HTTPS port enables HTTPS encryption	443
HTTP Mode	Configure HTTP mode to HTTP only, or HTTP+HTTPS	HTTP only

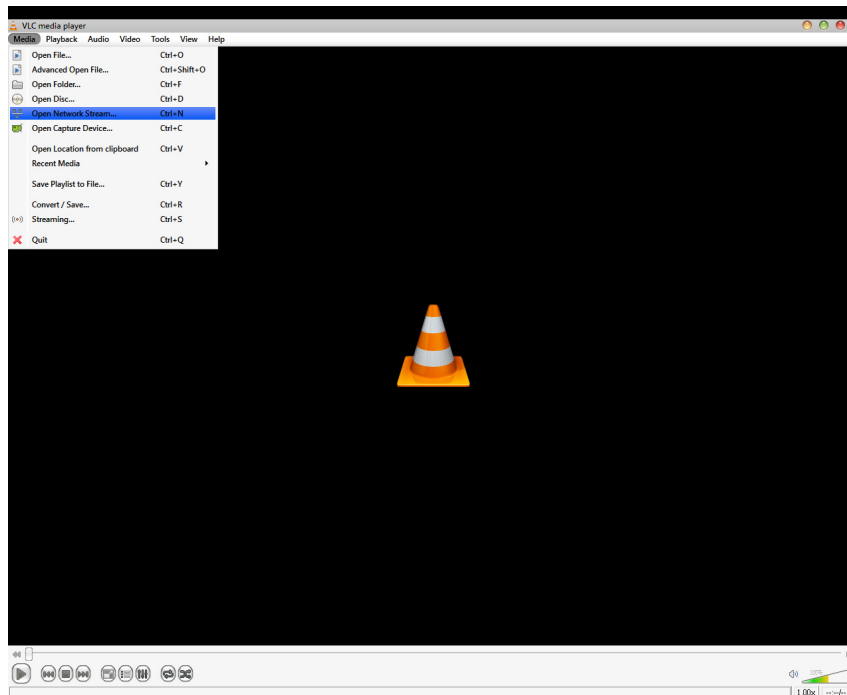
RTSP Streaming

The VPort supports standard RTSP (Real Time Streaming Protocol) streaming, which means that all devices and software that support RTSP can directly acquire and view the video images sent from the VPort without any proprietary codec or SDK installations. This makes network system integration much more convenient. For different connection types, the access name is different. For UDP and TCP streams, the access name is udpStream. For HTTP streams, the access name is moxa-cgi/udpstream_ch<channel number>. For multicast streams, the access name is multicastStream_ch<channel number>. You can access the media through the following URL: rtsp://<IP address>:<RTSP port>/<Access name> for software that supports RTSP.

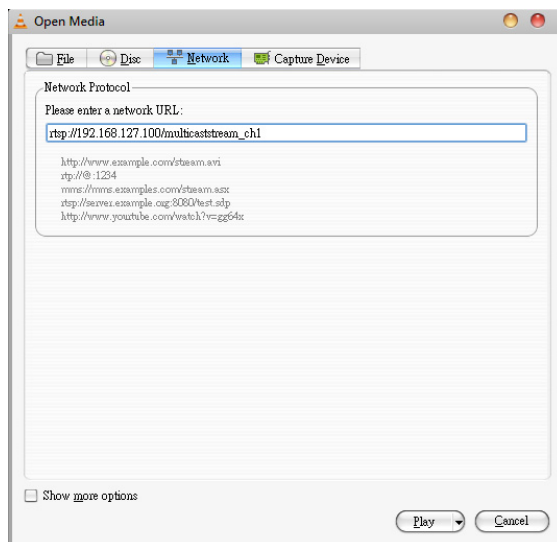
Setting	Description	Default
RTSP Port	An RTSP port is similar to an HTTP port, which can enable the connection of video/audio streams by RTSP.	554

The VLC media player is used here as an example of an RTSP streaming application:

Step 1: Open VLC Player and select **Media - Open network streaming**



Step 2: When the following pop-up window appears, type the URL in the input box. E.g., type **rtsp://<VPort's IP address>[:<RTSP Port>]/udpstream_ch1_stream< 1 or 2>** **rtsp://<VPort's IP address>[:<RTSP Port>]/multicaststream_ch1_stream<1 or 2>** **RTSP Port: 554** (the default), and then click **OK** to connect to the VPort.



Step 3: Wait a few seconds for VLC Player to establish the connection.

Step 4: After the connection has been established, the VPort 36-1MP’s video will appear in the VLC Player display window.



NOTE The video performance of the VPort may vary when using other media players. For example, you will notice a greater delay when viewing the VPort’s video from the VLC player compared to viewing it directly from the VPort ’s built-in web server. In addition, viewing the VPort’s video from the VLC player through a router or Internet gateway could result in a broken connection.

NOTE For the time being, the VPort’s RTSP video/audio stream can be identified and viewed by Apple QuickTime Ver. 6.5 and above, and the VLC media player. System integrators can use these 2 media players to view the VPort 36-1MP’s video directly, without needing to use the VPort’s SDK to create customized software.

NOTE When using RTSP, the video stream format should be H.264 or MPEG4. MJPEG does not support RTSP.

DDNS

DDNS (Dynamic Domain Name System) is a combination of DHCP, DNS, and client registration. DDNS allows administrators to alias the VPort’s dynamic IP address to a static hostname in any of the domains provided by the DDNS service providers listed on the VPort’s Network/DDNS configuration page. DDNS makes it easier to access the VPort from various locations on the Internet.

Dynamic DNS

The Dynamic DNS function allows your VPort to get a domain name linked to a changeable IP address with IP address if you want to remote access this VPort from Internet.

Enable DDNS

Provider:

Host name:

Username/E-mail:

Password/Key:

Note: If you don't have a DDNS account, please follow the application procedure on the website listed above.

Setting	Description	Default
Enable DDNS	Enable or disable DDNS	Disable
Provider	Select the DDNS service providers, including DynDNS.org (Dynamic), DynDNS.org (Custom), TZO.com, and dhs.org.	None
Host Name	The Host Name you use to link to the VPort.	None
Username/ E-mail	The Username/E-mail and Password/Key are used to enable the service from the DDNS service provider (based on the rules of DDNS websites).	None
Password/ Key		None

NOTE Dynamic DNS is a very useful tool for accessing a VPort over the Internet, especially for xDSL connections with a non-fixed IP address (DHCP). The administrator and users can simplify connecting to a VPort with a non-fixed IP address, by using the unique host name in the URL to establish a connection with the VPort.

NOTE Different DDNS service providers have different application rules. Some applications are free of charge, but most require an application fee.

Universal PnP

UPnP (Universal Plug & Play) is a networking architecture that provides compatibility among the networking equipment, software, and peripherals of the 400+ vendors that are part of the Universal Plug and Play Forum. This means that they are listed in the network devices table for the operating system (such as Windows XP) supported by this function. Users can link to the VPort directly by clicking on the VPort listed in the network devices table.

Universal PnP

UPnP (Universal Plug & Play) is a function that provides compatibility among networking equipment, software and peripherals. By enabling this function, you can find this VPort directly from the operating system's network device list.

Enable UPnP

Note: Please make sure your OS or software supports UPnP first if you want to enable VPort's UPnP function.

Save

Setting	Description	Default
Enable UPnP	Enable or disable the UPnP function.	Enable

ToS

Quality of Service (QoS) provides traffic prioritization capabilities to ensure that important data is delivered consistently and predictably. The VPort can inspect layer 3 ToS (Type of Service) information to provide a consistent classification of the entire network. The VPort's ToS capability improves your industrial network's performance and determinism for mission critical applications.

QoS(ToS)

Configure the QoS (ToS) to add the ToS (Type of Service) tag onto the video streaming data for transmitting this video stream with higher priority compared to other data.

Enable ToS

DSCP Value

Save

Setting	Description	Factory Default
Enable ToS	Enable ToS to transmit the video stream with the given priority.	Disable
DSCP Value	Configure the mapping table with different ToS values.	0, 0

NOTE To configure the ToS values, map to the network environment settings for QoS priority service.

Accessible IP List

The VPort uses an IP address-based filtering method to control access to the VPort.

Accessible IP List

Enable accessible IP list ("Disable" will allow all IPs to connect)

Index	IP	NetMask
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Save

Accessible IP Settings allow you to add or remove "Legal" remote host IP addresses to prevent unauthorized access. Access to the VPort is controlled by IP address. That is, if a host's IP address is in the accessible IP table, then the host will be allowed access to the VPort. In particular, an **IP** together with a **NetMask** is used to specify a range of IP addresses. Here are some examples:

- Allow only one host with a specific "IP address" to access the VPort. For example, IP = 192.168.1.16 NetMask = 255.255.255.255 will only allow the host with IP = 192.168.1.16 to access the VPort.
- Allow all hosts on a specific subnet to access the VPort. For example: IP = 192.168.1.0 NetMask = 255.255.255.0 will allow all hosts with IP addresses of the form 192.168.1.xxx to access the VPort.
- Allow any host to access the VPort.
Do not checkmark the "Enable accessible IP list" checkbox.

The following table gives additional IP/NetMask configuration examples.

Allowable Hosts	Input Formats
Any host	Disable
192.168.1.120	192.168.1.120/255.255.255.255
192.168.1.1 to 192.168.1.254	192.168.1.0/255.255.255.0
192.168.0.1 to 192.168.255.254	192.168.0.0/255.255.0.0
192.168.1.1 to 192.168.1.126	192.168.1.0/255.255.255.128
192.168.1.129 to 192.168.1.254	192.168.1.128/255.255.255.128

SNMP

The VPort supports three SNMP protocols. The available protocols are SNMP V1, SNMP V2c, and SNMP V3. SNMP V1 and SNMP V2c use a community string match for authentication, which means that SNMP servers access all objects with read-only or read/write permissions using the community string public/private (default value). SNMP V3, which requires you to select an authentication level of MD5 or SHA, is the most secure protocol. You can also enable data encryption to enhance data security. SNMP security modes and security levels supported by the VPort are shown in the following table. Select one of these options to communicate between the SNMP agent and manager.

Protocol Version	Security Mode	Authentication Type	Data Encryption	Method
SNMP V1, V2c	V1, V2c Read Community	Community string	No	Use a community string match for authentication
	V1, V2c Write/Read Community	Community string	No	Use a community string match for authentication
SNMP V3	No-Auth	No	No	Use account with admin or user to access objects
	MD5 or SHA	MD5 or SHA	No	Provides authentication based on HMAC-MD5, or HMAC-SHA algorithms. 8-character passwords are the minimum requirement for authentication.
	MD5 or SHA	MD5 or SHA	Data encryption key	Provides authentication based on HMAC-MD5 or HMAC-SHA algorithms, and data encryption key. 8-character passwords and a data encryption key are the minimum requirements for authentication and encryption.

Configuring SNMP Settings

The following figures indicate which SNMP parameters can be configured. A more detailed explanation of each parameter is given below the figure.

SNMP

SNMP Read/Write Settings

SNMP Versions: V1, V2c, V3 ▼

V1,V2c Read Community:

V1,V2c Write/Read Community:

V3 Admin Read/Write Auth. Mode: No-Auth ▼

V3 Admin Read/Write Private Mode: Key:

Trap Settings

1st Trap Server IP/Name:

1st Trap Community:

2nd Trap Server IP/Name:

2nd Trap Community:

Private MIB information

Object ID: enterprise.8691.8.4.2

Save

SNMP Read/Write Settings

SNMP Versions

Setting	Description	Default
V1, V2c, V3	Select SNMP protocol versions V1, V2c, V3 to manage the VPort	V1, V2c, V3
V1, V2c	Select SNMP protocol versions V1, V2c to manage the VPort	
V3 only	Select SNMP protocol versions V3 only to manage the VPort	

V1, V2c Read Community

Setting	Description	Default
V1, V2c Read Community	Use a community string match for authentication. This means that the SNMP agent accesses all objects with read-only permissions using the community string public.	public (max. 30 characters)

V1, V2c Read/Write Community

Setting	Description	Default
V1, V2c Read/Write Community	Use a community string match for authentication. This means that the SNMP agent accesses all objects with read-only permissions using the community string public.	public (max. 30 characters)

For SNMP V3, there are two levels of privilege for different accounts to access the VPort. Admin privilege allows access and authorization to read and write MIB files. User privilege only allows reading the MIB file, but does not authorize writing to the file.

Root Auth. Type (For SNMP V1, V2c, V3 and V3 only)

Setting	Description	Default
No-Auth	Use admin. account to access objects. No authentication.	No
MD5-Auth	Provide authentication based on the HMAC-MD5 algorithms. 8-character passwords are the minimum requirement for authentication.	No
SHA- Auth	Provide authentication based on the MAC-SHA algorithms. 8-character passwords are the minimum requirement for authentication.	No

Root Data Encryption Key (for SNMP V1, V2c, V3 and V3 only)

Setting	Description	Default
Enable	8-character data encryption key is the minimum requirement for data encryption. Maximum 30-character encryption key.	No
Disable	No data encryption.	No

User Auth. Type (for SNMP V1, V2c, V3 and V3 only)

Setting	Description	Default
No-Auth	Use account of admin or user to access objects. No authentication.	No
MD5-Auth	Provide authentication based on the HMAC-MD5 algorithms. 8-character passwords are the minimum requirement for authentication.	No
SHA- Auth	Provide authentication based on the HMAC-SHA algorithms. 8-character passwords are the minimum requirement for authentication.	No

User Data Encryption Key (for SNMP V1, V2c, V3 and V3 only)

Setting	Description	Default
Enable	8-character data encryption key is the minimum requirement for data encryption. Maximum 30-character encryption key.	No
Disable	No data encryption.	No

Trap Settings

Setting	Description	Default
Trap Server IP/Name	Enter the IP address or name of the Trap Server used by your network.	No
Trap Community	Use a community string match for authentication; Maximum of 30 characters.	No

Private MIB information

Different VPorts have different object IDs.

NOTE The MIB file is MOXA-VPORTXX-MIB.mib (or.my). You can find it on the software CD or the download center of the Moxa website.

Modbus/TCP (not supported by all VPorts)

Modbus is a serial communications protocol that is often used to connect a supervisory computer with a remote terminal unit (RTU) in supervisory control and data acquisition (SCADA) systems. To transmit Modbus over a TCP/IP network, a standard Modbus/TCP protocol is provided. With the support of the Modbus/TCP protocol, the SCADA/HMI system can directly communicate with the VPort to acquire its operational status.

ModBus/TCP

Modbus is a serial communications protocol for the industrial devices' communications with the SCADA/HMI system. With the Modbus/TCP protocol, the SCADA/HMI system can directly communicate with VPort for acquiring the working status.

Enable ModBus/TCP

Save

Setting	Description	Factory Default
Enable Modbus/TCP	Enable the Modbus/TCP protocol	Enable

NOTE For the Modbus address table, refer to Modbus_Address_Define.pdf. You can find it on your VPort's software CD or in download center on the Moxa website.

LLDP (not supported by all VPorts)

LLDP is an OSI Layer 2 protocol defined by IEEE 802.11AB. LLDP standardizes the self-identification advertisement method, and allows each networking device to periodically send its system and configuration information to its neighbors. Because of this, all LLDP devices are kept informed of each other's status and configuration, and with SNMP, this information can be transferred to Moxa's MXview for auto-topology and network visualization.

From the VPort's web interface, you can enable or disable LLDP, and set the LLDP transmit interval. In addition, you can view each VPort's neighbor-list, which is reported by its network neighbors. Most importantly, enabling the LLDP function allows Moxa's MXview to automatically display the network's topology and system setup details for the entire network.

LLDP (IEEE 802.1AB)

Operating Mode

Transmit interval second(s) (1 ~ 3600 secs)

Save

Setting	Description	Default
Operation mode	Choose the LLDP operation mode: Disabled, Transmit only, Receive only, or Transmit and receive.	Transmit and receive
Transmit interval	Sets the transmit interval of LLDP messages, in seconds.	30

Video

Image Settings

Image Settings

Image Information

Description:

Image Appearance

Image Information:

Not Shown

Shown on the caption

Shown on the image

Position X: (0~400)

Position Y: (0~300)




Image Information Setting

Setting	Description	Default
Description (max. of 14 characters)	The customized description shown on the caption to identify this video camera.	None

Image Appearance Setting

Setting	Description	Default
Image Information	Determines how image information is shown. Options are: Not Shown, Show on the Caption, and Show on image	Not Shown

Image Appearance Position

The position of the Image Appearance window can be changed by configuring Position X (0 to 400) and Position Y (0 to 300).

Camera Setting

Different environments require different camera settings to ensure acceptable image quality.

Camera Setting

Environment

Automatic
 50Hz anti-flicker
 60Hz anti-flicker

Image Adjustments

Saturation Contrast Sharpness
 AGC BLC AWB
 Appearance

Digital Noise Reduction

Enable

Day / Night

Day (Color)
 Night (Black and white)
 Light Sensor (automatic switch the Day/ Night mode)
 Switch lux level:
 Detect duration sec (1 ~ 60sec)
 Force color at night mode:

Auto Exposure Shutter

Auto Level:

Wide Dynamic Range

WDR:

Image View

(AV-TCP) 2006/02/08 04:59:53

Environment

Setting	Description	Default
Environment	Choose the kind of environment the VPort camera will be installed in; parameters will be optimized depending on which environment is specified. Automatic: This setting is usually for cameras used in an outdoor environment. 50 Hz anti-flicker: This setting should be enabled when the camera is installed in a 50 Hz power frequency environment. 60 Hz anti-flicker: This setting should be enabled when the camera is installed in a 60 Hz power frequency environment.	Automatic

Image Adjustment

Setting	Description	Default
Saturation	Select a value from -4 to +6.	0
Contrast & Sharpness	Select a value from -4 to + 4	0
Auto Gain Control (AGC)	The AGC function produces clear images in low light conditions. The setting controls an amplifier that is used to boost the video signal when the light dims so to increase the camera’s sensitivity. In some bright environments, the amplifier may be overloaded, which may distort the video signal.	16x
Back light control (BLC)	This function corrects the exposure of objects that are in front of a bright light source.	Off
AWB (Auto White Balance)	For most conditions, we suggest using ATW to allow the camera to automatically adjust the white balance. We suggest using AWB when your camera is monitoring a scene in which one color occupies most of the view. If you like to use AWB, follow these steps:	ATW

Setting	Description	Default
	<p><u>Step 1</u>: Move the camera to a white color, real-world environment with normal lighting.</p> <p><u>Step 2</u>: Select AWB and then click "Save".</p> <p><u>Step 3</u>: Move the camera back to the location that is to be monitored.</p>	
Appearance	<p>Normal: Normal view</p> <p>Mirror: Image will be displayed as in a mirror</p> <p>Flip: 180 degree rotation followed by mirrored display</p> <p>180 Rotation: Display image after a 180 degree rotation</p>	Normal

Digital Noise Reduction

Setting	Description	Default
Enable	Enable digital noise reduction function	Off

Day / Night

Setting	Description	Default
Day (Color)	Manually set the camera to day mode (color mode)	checked
Night (Black and White)	Manually set the camera to night mode (monochrome mode)	Unchecked
Light Sensor	<p>Allow the camera's light sensor to switch between day and night modes based on the ambient illumination level (L1 to L5; L1: means the day/night switch is in a higher lux value L5: means a lower lux value).</p> <p>Set the duration in seconds to define how long the illumination level should persist before switching between day and night mode.</p>	Unchecked
Force color at night mode	This function can force the image to be in color when the light sensor is switched to night mode.	Unchecked
DI Control	<p>Switch day/night by DI</p> <ul style="list-style-type: none"> • High Low Switch: Camera switches between day and night modes whenever the DI status changes. • Pull High: Camera switches between day and night modes whenever the DI status is high. • Pull Low: Camera switches between day and night modes whenever the DI status is low. 	unchecked
Trigger relay output when switching between day and night modes	Triggers a relay output when the day/night mode switches; the relay status for day/night mode can be configured separately.	unchecked

Auto Exposure Shutter

Setting	Description	Default
Auto Level	Configure the exposure mode from -5 to +5. Higher levels cause a slower shutter speed (hence brighter images); lower levels do the opposite.	0

WDR

Setting	Description	Default
WDR Wide Dynamic Range	Configure the exposure mode from Level 1 to Level 8. A higher level causes a stronger WDR effect. Choose a higher WDR level when your camera is monitoring a scene with both bright and dark areas.	Level 8

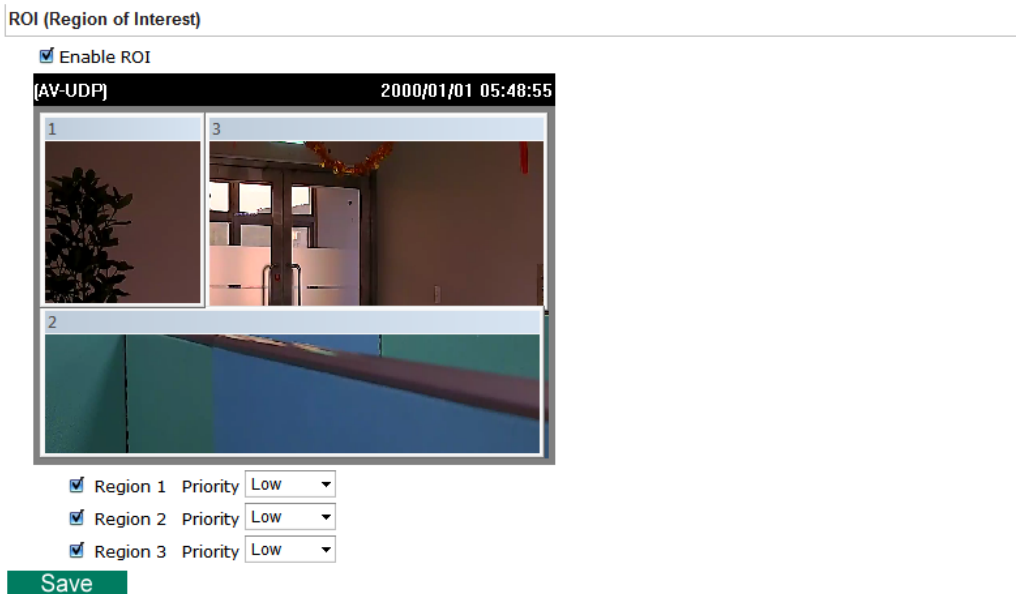
Auto Iris

Setting	Description	Default
Enable	Enable auto-iris function	checked

ROI (Region of Interest) (not supported by all VPorts)

When network bandwidth is limited, HD video streams may be extremely large, making it difficult to send the video streams over the network in real-time. In these conditions, the VPort 36-1MP can automatically allocate available bandwidth to those parts of the video that of most interest. For example, when watching a factory entrance, you can allocate more bandwidth for an entryway, while allocating less bandwidth for the wall.

ROI Settings



ROI

Setting	Description	Default
Enable	Enable ROI function	Off
Region 1/2/3	Assign priority to up to 3 different regions in the camera view.	unchecked
High/Medium/Low	High: The camera will reserve most of the bandwidth for this part of the video. Medium: The camera will reserve a moderate amount of bandwidth for this part of the video. Low: The camera will reserve a minimal amount of bandwidth for this part of video.	Low

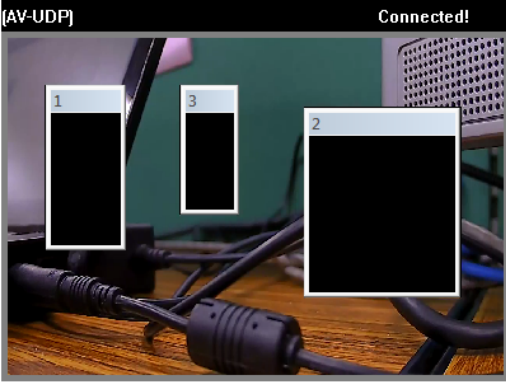
Privacy Mask(not supported by all VPorts)

In some conditions, you may want to block part of the view so that your surveillance system won't display private information that would otherwise be visible; the information will be blocked when displaying live video and during video playback.

Privacy Mask Settings

Privacy Mask

Enable Privacy Mask



Mask 1
 Mask 2
 Mask 3

Save

Privacy Mask

Setting	Description	Default
Enable	Enable the privacy mask function	Off
Mask 1/2/3	Enable up to 3 different privacy mask areas. Once enabled, you can drag the masked areas to different parts of the camera scene.	unchecked

NOTE There is no way to recover masked video. The masked areas are not displayed when viewing the video live, or during playback, so be sure to use this function carefully.

Video Encoder

The VPort supports up to three video encoders for generating video stream profiles. The three video encoders can each be configured with different codecs (H.264 or MJPEG), resolution, FPS (frame rate), and video quality.

Encoder Settings

Resolution Type

NTSC PAL

Save

Video Encoder

VideoEncoder01

Codec Type: H264

Resolutions: 1280x800

Frame Rate Limit (FPS): 30

Quality: Good

Advance Mode

Save

Resolution Type

Setting	Description	Default
NTSC or PAL	Choose NTSC or PAL resolution type for your system	NTSC

Video Encoder

Setting	Description	Default
Videoencoder01 Videoencoder02 Videoencoder03	To configure the attributes of the video encoder	Videoencoder01

Codec Type

This codec type shows the codec of each video stream.

Setting	Description	Default
Codec type	Configure the codec type of the video encoder: H.264, MJPEG	H.264

Resolution

The VPort 36-1MP supports 7 different resolutions: 1MP, HD, SVGA, Full D1, 4CIF, VGA, CIF

Setting	Description	Default
Select the image size	9 image resolutions (size) are provided. The administrator can choose each option with NTSC or PAL modulation.	1280x800

Resolution	NTSC	PAL
WXGA	1280 x 800	1280 x 800
HD 720P	1280 x 720	1280 x 720
SVGA	800 x 600	800x 600
Full D1	720 x 480	720 x 576
4CIF	704 x 480	704 x 576
VGA	640 x 480	640 x 480
CIF	352 x 240	352 x 288
QVGA	320 x 240	320 x 240
QCIF	176 x 112	176 x 144

NOTE Some resolutions may not be supported by some VPort models. Check your VPort's specifications in the product's QIG to see which resolutions are supported by your VPort.

Max. FPS (Frame per second)

Setting	Description	Default
Frame Rate Limit (FPS)	Configure the maximum FPS (frames per second); up to 30	30

NOTE Frame rate (frames per second) is determined by the resolution, image data size (bit rate), and transmission traffic status. The Administrator and users can check the frame rate status in the FPS Status on the VPort's web homepage.

NOTE Enabling more video streams can lower the frame rate of each video stream.

Quality

Setting	Description	Default
Quality	The administrator can set the image quality to one of 5 standards: Medium, Standard, Good, Detailed, or Excellent . The VPort will tune the bandwidth and FPS automatically to the optimum combination.	Good

The video encoder setting supports an **Advance Mode**. Click on the Advance Mode button to view the following configuration options.

Bitrate Limit (kBits):

H.264 Key Frame Interval:

Multicast Setting

IP Address:

Port:

TTL:

Session Timeout (sec):

Multicast Send Userdata:

Auto Start:

Save

Setting	Description	Default
Bitrate Limit (kbps) (only for H.264)	The administrator can fix the bandwidth to tune the video quality and FPS (frames per second) to the optimum combination. Different resolutions have different bandwidth parameters. The VPort will tune the video performance according to the bandwidth. A higher bandwidth means better quality and higher FPS.	4000
H.264 Key Frame Interval	Configure the key frame interval of the H.264 stream. A low number means higher video quality (due to more key frames), but more bandwidth will be consumed. If you have concerns about bandwidth, then select a higher number for <i>key frame interval</i> .	15

Multicast Setting

Setting	Description	Default
IP Address	Multicast Group address for sending a video stream.	239.127.0.100
Port	Video port number.	Videoecncoder01: 5556 Videoencoder02: 5558 Videoencoder03: 5560
TTL	Multicast-TTL (Time-to-live) threshold. A certain TTL threshold is defined for each network interface or tunnel. A multicast packet's TTL must be larger than the defined TTL for that packet to be forwarded across that link.	128
Session Timeout (sec)	Timeout between the client and the stream	15 (seconds)
Multicast Send Userdata	Configure the video stream with or without userdata	Enable
Auto Start	Enable/disable the Multicast stream push mode	Disable

NOTE Image quality, FPS, and bandwidth are influenced significantly by network throughput, system network bandwidth management, applications the VPort runs (such as VMD), how complicated the image is, and the performance of your PC or notebook when displaying images. The administrator should take into consideration all of these variables when designing the video over IP system, and when specifying the requirements for the video system.

NOTE [Click here](#) to access Moxa's "Bandwidth & Storage Calculator" to estimate the network bandwidth based on different resolutions, FPS values, and video content.

Audio (not supported by all VPorts)

Some VPorts support an audio input (line-in or microphone in), or audio output (line out). The audio streaming configuration is required for video/audio streams.

Audio Encoder

Encoder Settings

Audio Encoder

AudioEncoder01 ▼

Multicast Setting

IP Address:

Port:

TTL:

Session Timeout (sec):

Auto Start:

Save

Setting	Description	Default
AudioEncoder01	Select the audio encoder. Currently, VPorts only support one audio encoder.	Audioencoder01

Multicast Setting

Setting	Description	Default
IP Address	Multicast Group address for sending an audio stream.	239.127.0.100
Port	Audio port number.	Audioecncoder01: 5572
TTL	Multicast-TTL (Time-to-live) threshold. A certain TTL threshold is defined for each network interface or tunnel. A multicast packet's TTL must be larger than the defined TTL for that packet to be forwarded across that link.	128
Session Timeout (sec)	Timeout between the client and the stream	15 (seconds)
Auto Start	Enable/disable the Multicast stream push mode	Disable

NOTE Currently, VPorts only support PCM (G.711) mono audio.

Streaming

CBRPro. Settings

Limit the maximum throughput of each connection in (4~5000)kbits within (1~1000)milliseconds

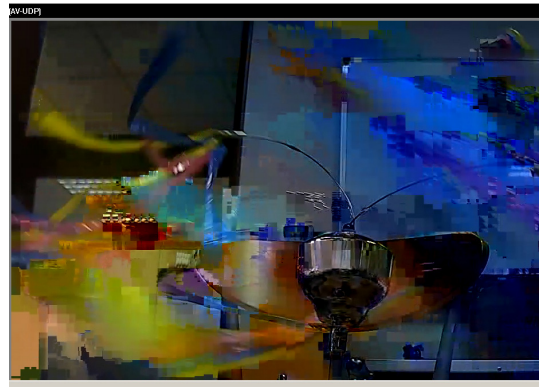
Save

General CBR (constant bit rate) configuration limits throughput to 1 second, but since video streaming is designed to transmit immediately to shorten latency, network throughput may experience a burst in action during short time periods, in which case packet loss will occur if the network bandwidth buffer is not large enough. When packet loss occurs, images will show a mosaic effect. For this reason, the VPort supports an advanced CBR Pro™ function, which can enable the flow control of image packets to ensure no packet loss for limited bandwidth transmissions, such as on xDSL or wireless networks.

Image without packet loss



Image with packet loss



Setting	Description	Default
Limit the maximum throughput of each connection to <input type="text"/> kbits within <input type="text"/> milliseconds	Configure how much throughput is allowed on the network within the given number of milliseconds. For example, if the configuration is 20 kbits within 5 milliseconds, the video packet throughput will be limited to 20 kbits within 5 milliseconds.	20 kbits within 5 milliseconds

PTZ (not supported by all VPorts)

Some VPorts support PTZ (PAN, TILT, ZOOM) control, with either a built-in PTZ mechanism, a digital Zoom function, or external PT scanner.

PTZ Configuration

PTZ Configuration

PTZ Config Content

Config Name: Camera ID:

Default Setting:

Pan Speed: Tilt Speed:

Zoom Speed: Timeout:

[Save](#)
[Set up Custom Commands](#)

Note: There are 24 custom commands for users to define PTZ camera actions (except for PAN, TILT, ZOOM, FOCUS and preset positions). To do this, users need to refer to the control protocols provided by the supplier of PTZ camera.

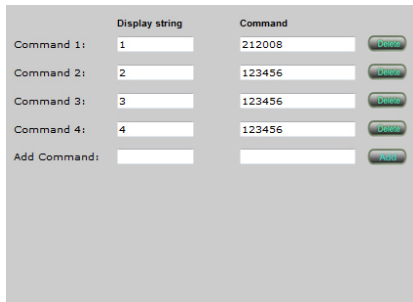


PTZ config content

Setting	Description	Default
Config Name	Configure the name of these PTZ settings	PTZConfig01
Camera ID	ID of the PTZ camera.	1
Pan Speed	Speed of the PAN motion	16
Tilt Speed	Speed of the TILT motion	16
Zoom Speed	Speed of the Zoom motion	16
Timeout	Configure the timeout period when there is no response after a command is sent	3000 (sec)

Set Up Custom Commands

VPort products provide 24 custom commands, in addition to the general pan, tilt, zoom, and preset functions, which are also shown on the PTZ Control Panel. Administrators can click on Setup Custom Commands to configure the commands, and refer to the manual enclosed with the attached PTZ camera to set up frequently-used functions. Commands should be entered in ASCII format. The VPort will translate the commands into binary code and then send the data out through the serial port. For instance, the text string 8101ABCDEF will be translated into five bytes of hexadecimal: 81, 01, AB, CD, and EF. The maximum length of a command string is 60, which is equivalent to 30 hexadecimal bytes. The Display string is for the text on the command buttons and should be fewer than 8 characters. If Custom Camera is selected, more PTZF commands will be available.



Setting Up a Preset Position

Administrators can use the Preset Position function to set up the behavior of the PTZ camera in advance, and then users with camera control privilege can move the camera’s lens to a preset position without the need to control the pan, tilt, and zoom buttons on the PTZ control panel.

Setting	Description	Default
Position Alias	Customized name of the preset position	blank
Preset Position	25 preset positions are available for the VPort.	01
Go to	The administrator can use “Go to” to select or test the preset position before the save.	Select
Set Home	This button can decide the Home position of PTZ control	
ZOOM Auto Focus Auto IRIS	These buttons are to fine tune the PTZ camera’s lens positions.	
TILT SPEED PAN SPEED ZOOM SPEED	These items are used to change the speed of TILT, PAN and ZOOM.	1

NOTE When the VPort is used with a PT scanner, the digital Pan/Tilt function will be disabled automatically to allow the PT scanner to perform Pan/Tilt functions without interference from the digital Pan/Tilt function.

NOTE The direction button on the wheel will not be displayed until a digital zoom is performed. When the camera image is zoomed out to its original size, the direction button will again disappear.

NOTE For those VPorts that support digital zoom, press the “+” button to zoom in on the image.

Serial Port (not supported by all VPorts)

Some VPorts have RS-485 serial ports for connecting to an external PT scanner. Check your product’s quick installation guide for information on how to wire the connection between the VPort and the PT scanner.

SerialPort Configuration

Interface Mode

Select the serial interface:

Control Mode

Transparent PTZ Control

Specific PTZ Driver

Port Settings

Baud rate (bps)

Data bits

Stop bits

Parity bit

PTZ Camera Driver

Select the camera driver:

Interface mode

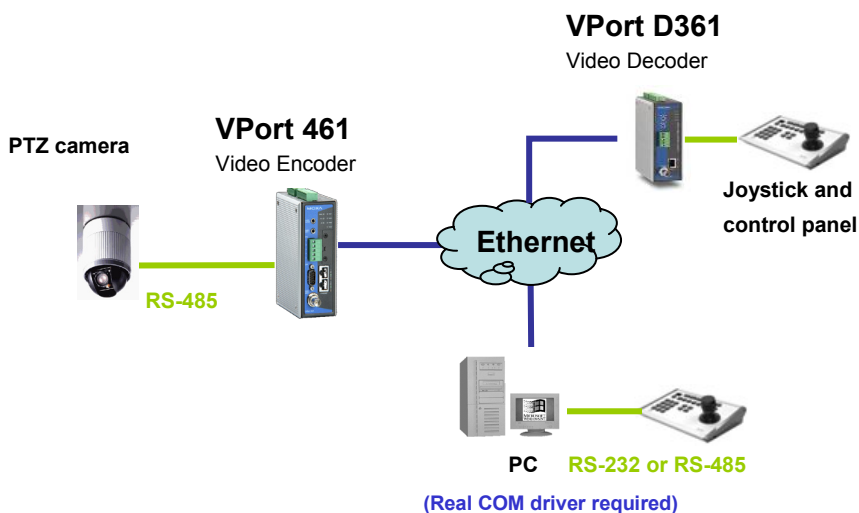
Setting	Description	Default
Select the serial interface	The serial port interface: RS232, RS422, RS485	RS485

Control mode

The VPort supports 2 PTZ control modes: “Transparent PTZ” control and “PTZ driver.”

- Transparent PTZ Control:**

Select Transparent PTZ Control to control the PTZ camera with a legacy PTZ control panel or joystick connected to the CCTV system. The application is illustrated in the following figures.



In Transparent PTZ Control mode, the serial data from the legacy PTZ control panel or joystick will be transformed into IP packets for transmission over a TCP/IP network, and once the VPort video encoder receives these IP packets, the PTZ control commands will be transformed back to serial data format for controlling the PTZ camera’s action. You do not need to install a PTZ driver to control the PTZ camera’s

action, which means that a large variety of different PTZ cameras can be used with the VPort video encoders and their supported PTZ control panel or joystick.

NOTE The legacy PTZ control panel or joystick should be connected to the VPort's PTZ port or the COM port of a PC. But, when it is connected to a PC's COM port, you will need to install a real COM driver on the PC and map the COM ports. For detailed information, refer to the VPort SDK PLUS-ActiveX Control SDK for the Real COM driver and COM port mapping function sample codes. You can download this SDK from Moxa's website (www.moxa.com).

Specific PTZ Driver:

A PTZ driver is usually required to control a PTZ camera over a TCP/IP network. This is because each PTZ camera supplier has their own proprietary PTZ control protocol. VPort video encoders support all popular PTZ drivers for controlling PTZ cameras.

Setting	Description	Default
Control Mode	Select the PTZ control mode in Transparent PTZ Control or PTZ Driver	PTZ driver

The configurations described below are only available in PTZ Driver mode.

Port Settings

Setting	Description	Default
Baud rate (bps)	The baud rate specified by the PTZ camera's serial communication specs.	2400
Data bits	The parameters used to define the serial communication.	8
Stop bits		1
Parity bits		None

PTZ Camera Drivers

VPort products come with PTZ camera drivers for some of the popular PTZ cameras. Administrators can select the correct PTZ driver in the "Select the Camera Driver" menu. If the attached PTZ camera is not supported by the VPort, administrators can use the Custom Camera function to enter the proprietary commands for pan, tilt, zoom, and focus control.

Setting	Description	Default
Select the camera driver	Use the built-in PTZ drivers, including: <ol style="list-style-type: none"> 1. Custom Camera 2. Pelco D 3. Pelco P 	Pelco D

Setting Up a Custom Camera

If the PTZ camera's driver is not in the list, the administrator can select the custom camera from the **Select Camera driver** menu to program the PTZ camera with ASCII code. A custom camera window will pop up when the **Setup Custom Camera** button is clicked. Input the ASCII code into this window. **Port Settings (Data bits, Stop bits, and Parity bits)** are for the serial communication parameters and **Control Settings** are for programming the **TILT (Move Up, Move Down)**, **PAN (Move Left, Move right)**, **HOME**, **ZOOM (Zoom in, Zoom out)**, and **FOCUS (Focus near, Focus Far)** actions.

The screenshot shows a web browser window titled 'http://192.168.127.7/cuscampztz.asp - Windows Interne...'. The address bar shows 'http://192.168.127.7/cuscampztz.asp'. The main content area is titled 'Control settings' and contains the following controls:

Up	<input type="text"/>
Down	<input type="text"/>
Left	<input type="text"/>
Right	<input type="text"/>
Zoom in	<input type="text"/>
Zoom out	<input type="text"/>
Focus near	<input type="text"/>
Focus far	<input type="text"/>
Home	<input type="text"/>
Stop	<input type="text"/>

At the bottom of the form are two buttons: 'Save' and 'Close'.

NOTE The control protocols are available from the PTZ camera's supplier. You will need to get the protocols from the supplier before programming the PTZ camera.

Uploading a PTZ Camera Driver

In addition to the PTZ camera drivers and custom camera functions supported by the VPort, an alternative user-friendly **Upload a PTZ Camera Driver** function is available for implementing the PTZ camera control. Moxa will release new PTZ camera drivers to Moxa's website as they become available. Administrators can click on **Browse** to upload the new PTZ camera drivers to the VPort. In addition, the administrator can also remove the PTZ driver by selecting the PTZ driver and clicking the **Remove Camera Driver** button.

Event

Enable Event

Checkmark those events you would like to enable. Events without a checkmark are disabled.

Event Configure Settings

Enable Event Producer:

- DI, Digital Input
- VMD, Video Motion Detection
- CGI Event
- Camera Tamper
- Ether Link Status Change

Save


Video Motion Detection

Video Motion Detection (VMD) is an intelligent event alarm for video surveillance network systems. With three area-selectable VMDs and sensitivity/percentage tuning, administrators can easily set up the VMD alarm to be active 24 hours a day, 7 days a week.

VMD (Video Motion Detection)

Enable VMD alarm
 Show alert on the image when VMD is triggered

Set up VMD Alarm



Stream1 Stream2

Enabled	Window Name	Percent %
<input checked="" type="checkbox"/>	VMD1	80
<input checked="" type="checkbox"/>	VMD2	80
<input checked="" type="checkbox"/>	VMD3	80

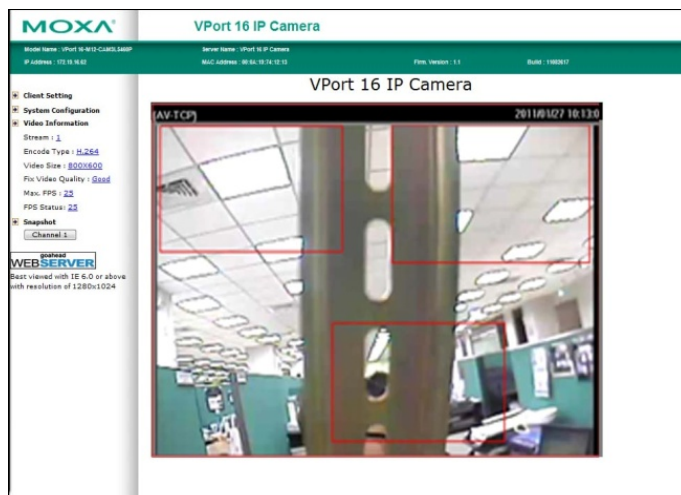
Sensitive

1

Save

Setting	Description	Default
Enable VMD alarm	Enable or disable the Video Motion Detection alarm	Disabled
Show alert on the image when VMD is triggered	Enable or disable "show alert on the image..." When enabled, when a VMD alarm notification is received, a red square frame will be displayed on the video image.	Disabled

NOTE Once "Show alert on the image when VMD is triggered" is enabled, the red frames that appear on the homepage image indicate the size of the VMD window set up by the administrator.



Setup a VMD Alarm

Setting	Description	Default
Enable	Enable or disable the VMD1, VMD2, or VMD3	Disabled
Window	The name of each VMD window	Blank
Percent	The minimum percentage of change to an image that will trigger VMD. Decrease the percentage to make it easier to trigger VMD.	80
Sensitive	The measurable difference between two sequential images for triggering VMD. Increase the sensitivity to make it easier for VMD to be triggered.	1

NOTE After setting the VMD Alarm, click the Save button to save the changes.

Camera Tamper (not supported by all VPorts)

Use the VPort's camera tamper function to detect malicious behavior done to the camera, such as spray painting, view blocking, angle adjustment, etc. This page allows you to configure the parameters and alarm condition/action of the camera tamper alarm.

Camera Tamper

Enable camera tamper event
 Alarm osd ▼
 Cover Area %
 Duration Sec.

Setting	Description	Default
Enable camera tamper event	Enable or disable the digital input alarm	Disabled
Alarm osd	Determines whether or not the camera will display an onscreen warning square when the camera tamper alarm is triggered	Not Display

Trigger Conditions

Setting	Description	Default
Cover Area	What percentage of the camera view should be affected before the camera tamper alarm is triggered.	30%
Duration	How long should the camera tamper behavior persist before the alarm is triggered.	5 sec

Sequential Snapshot

Sequential Snapshot

Enable Sequential Snapshot

Profile : profile01 ▾

Send sequential snapshot image every [1~30] second(s)

SMTP enable:

SMTP Server Host:

SMTP Username:

SMTP Password:

SMTP Sender's email address:

SMTP Recipient's Email Address:

FTP enable:

FTP Server Host:

FTP Server Port:

FTP Username:

FTP Password:

FTP Upload Folder:

FTP Passive Mode:

Sequential Snapshot are active all the time

Sequential Snapshot are active based on weekly schedule

SUN Begin Duration [hh:mm]

MON Begin Duration [hh:mm]

TUE Begin Duration [hh:mm]

WED Begin Duration [hh:mm]

THU Begin Duration [hh:mm]

FRI Begin Duration [hh:mm]

SAT Begin Duration [hh:mm]

Save

With this feature, the VPort can upload snapshots periodically to an external E-mail or FTP server as a live video source.

Setting	Description	Default
Enable Sequential Snapshots	Enable or disable Sequential Snapshot.	Disable
Profile	Select which video profile will take snapshot images.	Profile01
Send sequential snapshot image every seconds	The time interval between successive snapshot images.	30 seconds (from 1 second to 30 seconds)

SMTP

Setting	Description	Default
SMTP enable	Enable the SMTP system for emailing the snapshot images	disable
SMTP server host	SMTP Server's IP address or URL address.	None
SMTP username	For security reasons, most SMTP servers require the account name and password to be authenticated.	None
SMTP password		None
SMTP Sender's email address	For security reasons, SMTP servers must see the exact sender email address.	None
SMTP Recipient's email address	For security reasons, SMTP servers must see the exact recipient's email address.	None

NOTE Note that if the **Sender's email address** is not set, a warning message will pop up and the e-mail system will not be allowed to operate.

FTP

Setting	Description	Default
FTP enable	Enable the FTP system to save snapshot images remotely.	Disable
FTP server host	FTP server's IP address or URL address.	None
FTP server port	FTP server's authentication.	21
FTP user name		None
FTP password		None
FTP upload folder	FTP file storage folder on the remote FTP server.	None
FTP passive mode	Passive transfer solution for FTP transmission through a firewall.	Disabled

Weekly Schedule

Setting	Description	Default
Sequential Snapshot are active all the time	The Sequential Snapshot function is always active.	Sequential Snapshot are active all the time
Sequential Snapshot are active based on weekly schedule	The Sequential Snapshot is activated based on the configured weekly schedule.	

Setting	Description	Default
<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	Select which days of the week to schedule event alarms.	None
Begin 00:00	Set the start time of the event alarm.	00:00
Duration 00:00	Set how long the event alarm will be active.	00:00

Action

Action Config

To set up an event alarm, the corresponding action needs to be configured first.

Action Configs Settings

Empty Action Config

Step 1: Click the "Create New Config" button.

Step 2: Create the new action.

Setting	Description	Default
Config Name	Configure the name of the new action	None
Action Type	Select the Action Type: Active Relay, Dynastream, HTTP Post, Snapshot via Email, Snapshot via FTP, SD record	Active Relay

Different actions have different configuration items.

Active Relay (not supported by all VPorts)

Create New Action Config

Config Name:

Action type:

- Active Relay
- DynaStream
- HTTP Post
- Snapshot via EMail
- Snapshot via FTP
- SD Record

Item Name	Item Value
Relay Token:	do01
Active Mode:	Active

Settings	Description	Default
Relay token	Select the relay output	Do01
Active mode	Select Active or Deactive for the relay behavior	Active

DynaStream

DynaStream™ is a unique and innovative function that allows for adaptive frame rates in response to events on the network, such as event triggers and system commands. When network traffic becomes congested, DynaStream™ allows VPort products to respond to CGI, SNMP, and Modbus commands from SCADA systems (as well as the MxNVR-MO4’s VMD, DI, CGI events, and video loss triggers), and automatically decrease the frame rates to reduce bandwidth consumption. This reserves bandwidth for the SCADA system to maintain Quality of Service (QoS) and guarantees that the SCADA performance will not be impacted by video traffic. For example, the frame rate can be set to low during regular streaming to reduce bandwidth usage and automatically switch to a high frame rate during triggered events to ensure quick transmission of critical video data or video streams, or to provide detailed visual images for problem analysis.

Create New Action Config

Config Name:

Action type:

- Active Relay
- DynaStream
- HTTP Post
- Snapshot via EMail
- Snapshot via FTP
- SD Record

Item Name	Item Value
Video Encoder Token:	videoEnc01
Alarm FPS:	1
Duration Sec:	3

Settings	Description	Default
Video Encoder	Select the video encoder.	Videoencoder01
Alarm FPS	Configure what the frame rate will be set to when the event is triggered.	1
Duration	Configure how long Dynastream will be active.	3 seconds

NOTE To enable the DynaStream function from CGI commands and Modbus TCP, refer to the CGI Commands User’s Manual for VPort SDK PLUS.

HTTP Post

Create New Action Config

Config Name:

Action type:

- Active Relay
- DynaStream
- HTTP Post**
- Snapshot via EMail
- Snapshot via FTP
- SD Record

Item Name	Item Value
Server HTTP URI: *	<input type="text"/>
User name:	<input type="text"/>
User password:	<input type="text"/>
POST String:	<input type="text"/>

Save

Settings	Description	Default
Server HTTP URL	URL of the HTTP server.	None
User name	Authentication information for the HTTP server.	None
User Password		
POST String	Configure the string that will be posted.	None

Snapshot via Email

Create New Action Config

Config Name:

Action type:

- Active Relay
- DynaStream
- HTTP Post
- Snapshot via EMail**
- Snapshot via FTP
- SD Record

Item Name	Item Value
Server Host: *	<input type="text"/>
User name:	<input type="text"/>
User password:	<input type="text"/>
Sender Address: *	<input type="text"/>
Recipient Address: *	<input type="text"/>
Pre-Snapshot sec (0: Disable):	0 ▾
Post-Snapshot sec (0: Disable):	0 ▾
Enable Datetime prefix string:	Disable ▾
Customer prefix string:	<input type="text"/>

Save

Settings	Description	Default
Server host	SMTP server's IP address or URL address.	None
User name	For security reasons, most SMTP servers require the account name and password to be authenticated.	None
User password		None
Sender's address	For security reasons, SMTP servers must see the exact sender email address.	None
Recipient's address	For security reasons, SMTP servers must see the exact recipient's email address.	None
Pre-Snapshot sec (0: disabled)	= 0: A pre-snapshot image will not be generated. > 0: The image this many seconds before the event will be used	0

Settings	Description	Default
	as the pre-snapshot image.	
Post-Snapshot sec (0: disabled)	= 0: A post-snapshot image will not be generated. > 0: The image this many seconds after the event will be used as the post-snapshot image.	0
Enable Datetime prefix string	Add the date & time to the file name of snapshot images	disable
Customer prefix string	The file names of snapshot images will be prefixed with this string.	none

Snapshot via FTP

Create New Action Config

Config Name:

Action type:

- Active Relay
- DynaStream
- HTTP Post
- Snapshot via EMail
- Snapshot via FTP**
- SD Record

Item Name	Item Value
Server Host:	* <input type="text"/>
Server Port:	* <input type="text"/>
User name:	<input type="text"/>
User password:	<input type="text"/>
Upload Path:	<input type="text"/>
Passive Mode:	Disable ▾
Pre-Snapshot sec (0: Disable):	0 ▾
Post-Snapshot sec (0: Disable):	0 ▾
Enable Datetime prefix string:	Disable ▾
Customer prefix string:	<input type="text"/>

Setting	Description	Default
Server Host	FTP server's IP address or URL address.	None
Server Port	FTP server's authentication information.	21
User name		None
User password		None
Upload path		FTP file storage folder on the remote FTP server.
Passive Mode	Passive transfer solution for FTP transmission through a firewall.	Disabled
Pre-Snapshot sec (0: Disable)	= 0: A pre-snapshot image will not be generated. > 0: The image this many seconds before the event will be used as the pre-snapshot image.	0
Post-Snapshot sec (0: Disable)	= 0: A post-snapshot image will not be generated. > 0: The image this many seconds after the event will be used as the post-snapshot image.	0
Enable Datetime prefix string	Add the date & time to the file name of snapshot image	disable
Customer prefix string	The file names of snapshot images will be prefixed with this string.	none

SD Record (not supported by all VPorts)

Create New Action Config

Config Name:

Action type:

- Active Relay
- DynaStream
- HTTP Post
- Snapshot via EMail
- Snapshot via FTP
- SD Record

Item Name	Item Value
Profile Token:	<input type="text" value="profile01"/>
Post-Record Sec:	<input type="text" value="1"/>

Settings	Description	Default
Profile Token	Select the profile being recorded on the SD card.	Profile01
POST-record sec	Configure the time (1 to 60 seconds) for recording the video on the SD card after the event.	1

Step 3: An action list will be displayed on the webpage.

Action Configs Settings

Config

- event1 (SD Record) ▼
- event1 (SD Record)
- event2 (Active Relay)

Config Name:

Action type: [SD Record]

Action Enabled:

Item Name	Item Value
Profile Token:	<input type="text" value="profile01"/>
Post-Record Sec:	<input type="text" value="1"/>

Action Trigger

After the action type is configured, users can configure how to trigger the action.

Action Triggers Settings

Trigger

Empty Action Trigger

Step 1: Click the “Create New Trigger” button.

Step 2: Create the new trigger.

Setting	Description	Default
Trigger Name	Configure the name of the new trigger	None
Trigger event	Select the event Type: Digital input, VMD, Tamper, CGI trigger, Link status	Active Relay

Different triggers have different configuration items.

Digital input (not supported by all VPorts)

Create New Action Trigger

Trigger Name:

Trigger Events:

Param Name	Param Value
DI Number	<input type="text" value="di01"/>
LogicalState	<input type="text" value="High"/>

Settings	Description	Default
DI number	Select digital input	DI01
Logical State	Configure the DI status to High or Low	High

VMD

Create New Action Trigger

Trigger Name:

Trigger Events:

Param Name	Param Value
Channel Number	<input type="text" value="videoSrcCfg01"/>
State	<input type="text" value="true"/>

Settings	Description	Default
Channel Number	Select the video source. Currently, VPort IP cameras only have one video source.	videoSrcCfg01
State	Enable (true) or disable (false) the VMD trigger	true

CGI trigger

Create New Action Trigger

Trigger Name:

Trigger Events:

Param Name	Param Value
CGITrigger	<input type="text" value="1"/>

Settings	Description	Default
CGITrigger	Select from 5 CGI triggers.	1

Tamper (not supported by all VPorts)

Create New Action Trigger

Trigger Name:

Trigger Events:

Param Name	Param Value
Channel Number	<input type="text" value="videoSrcCfg01"/>
State	<input type="text" value="true"/>

Settings	Description	Default
Channel Number	Select the video source. Currently, VPort IP cameras only have one video source.	videoSrcCfg01
State	Enable (true) or disable (false) the Tamper trigger	true

Link Status

Create New Action Trigger

Trigger Name:

Trigger Events:

Param Name	Param Value
Token	<input type="text" value="eth0"/>
Link	<input type="text" value="LinkDown"/>

Settings	Description	Default
Token	Select the Ethernet port number. Some VPorts have 2 Ethernet ports.	Eth0
Link	Configure the trigger to Linkdown or Linkup	Linkdown

NOTE When the Ethernet link is down, you will not be able to access the VPort via the IP network. In this case, the the local relay output will be active, and video can be recorded on the VPort’s SD card.

Step 3: Select the corresponding actions.

After the triggers are configured, you need to select corresponding trigger actions. In the example shown below, there are 2 actions: event 1 and event 2. For each trigger, either one or both of the actions can be selected as the corresponding trigger action.

Action Configurations:

[SD Record] event1

[Active Relay] event2

Step 4: Configure the schedule of the trigger actions.

Action Configurations:

- Event Alarms are active all the time
- Event Alarms are active based on weekly schedule
- SUN Begin Duration [hh:mm]
- MON Begin Duration [hh:mm]
- TUE Begin Duration [hh:mm]
- WED Begin Duration [hh:mm]
- THU Begin Duration [hh:mm]
- FRI Begin Duration [hh:mm]
- SAT Begin Duration [hh:mm]

Trigger Delay Sec:

Save

Setting	Description	Default
Event Alarms are active all the time	The trigger action configurations are always active.	Event Alarms are active all the time
Event Alarms are active based on weekly schedule	The trigger action configurations are activated based on the configured weekly schedule	
<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	Select which days of the week to schedule event alarms.	None
Begin 00:00	Set the start time of the event alarm.	00:00
Duration 00:00	Set how long the event alarm will be active.	00:00
Trigger Delay Sec	The amount of time the system will wait before acting on the next trigger.	10 seconds

Frequently Asked Questions

Q: What if I forget my password?

A: Unless the authentication is disabled, you will need to log in every time you access the VPort IP camera. If you are *not* the administrator, you will need to ask the administrator to create a new account for you. If you *are* the administrator, there is no way to recover the admin password. The only way to regain access to the IP camera is to use the **RESET** button to restore the camera to its factory default settings.

Q: Why can't I see video from the IP camera after logging in?

A: There are several possible reasons:

- (a) If the IP camera is installed correctly and you are accessing the IP camera for the first time using Internet Explorer, adjust the security level of Internet Explorer to allow installation of plug-ins.
- (b) If the problem still exists, the number of users accessing the IP camera at the same time may exceed the maximum that the system allows.
- (c) If the video is still not displayed, try resetting the camera to its factory default settings to see if that solves the problem.

Q: What is the plug-in for?

A: The plug-in provided by the IP camera is used to display videos. The plug-in is needed because Internet Explorer does not support streaming technology. If your system does not allow installation of plug-in software, the security level of the web browser may need to be lowered. We recommend consulting the network supervisor in your office before adjusting the security level of your browser.

Q: Why is the timestamp different from the system time of my PC or notebook?

A: The timestamp is based on the system time of the IP camera. It is maintained by an internal real-time clock, and automatically synchronizes with the time server if the VPort is connected to the Internet and the function is enabled. If the time zone is changed, subsequent timestamps could be several hours earlier or later than timestamps that were already generated.

Q: How many users are allowed to access the IP camera at the same time?

A: Basically, there is no limitation. However the video quality also depends on the network. To achieve the best effect, the VPort IP camera will allow 5 video streams for udp/tcp/http connections. We recommend using an additional web server that retrieves images from the IP camera periodically if you need to host a large number of users.

Q: What is the IP camera's video rate?

A: The codec can process 30 frames per second internally. However, the actual performance is affected by many factors, as listed below:

1. Network throughput
2. Bandwidth share
3. Number of users
4. More complicated objects result in larger image files
5. The speed of the PC or notebook that is responsible for displaying images

Q: How can I keep the IP camera as private as possible?

A: The IP camera is designed for surveillance purposes and has many flexible interfaces. Enabling user authentication during installation can prevent the VPort from being accessed by people without authorization. You may also change the HTTP port to a non-public number. Check the system log to analyze any abnormal activities and trace the origin of the activity.

Q: Why can't I access the IP camera after activating certain configuration options?

A: When the IP camera is triggered by events, video and snapshots will take more time to write to memory. If the events occur too often, the system will always be busy storing video and images. We recommend using sequential mode or an external recorder program to record video if the event you're monitoring occurs frequently. If you prefer to retrieve images by FTP, the time could be smaller since an FTP server responds more quickly than a web server. When the system is "too busy to configure" (i.e., it hangs), use the restore factory default and reset button to restart the system.

B

Time Zone Table

The hour offsets for different time zones are shown below. You will need this information when setting the time zone in automatic date/time synchronization. GMT stands for Greenwich Mean Time, which is the global time that all time zones are measured from.

(GMT-12:00)	International Date Line West
(GMT-11:00)	Midway Island, Samoa
(GMT-10:00)	Hawaii
(GMT-09:00)	Alaska
(GMT-08:00)	Pacific Time (US & Canada), Tijuana
(GMT-07:00)	Arizona
(GMT-07:00)	Chihuahua, La Paz, Mazatlan
(GMT-07:00)	Mountain Time (US & Canada)
(GMT-06:00)	Central America
(GMT-06:00)	Central Time (US & Canada)
(GMT-06:00)	Guadalajara, Mexico City, Monterrey
(GMT-06:00)	Saskatchewan
(GMT-05:00)	Bogota, Lima, Quito
(GMT-05:00)	Eastern Time (US & Canada)
(GMT-05:00)	Indiana (East)
(GMT-04:00)	Atlantic Time (Canada)
(GMT-04:00)	Caracas, La Paz
(GMT-04:00)	Santiago
(GMT-03:30)	Newfoundland
(GMT-03:00)	Brasilia
(GMT-03:00)	Buenos Aires, Georgetown
(GMT-03:00)	Greenland
(GMT-02:00)	Mid-Atlantic
(GMT-01:00)	Azores
(GMT-01:00)	Cape Verde Is.
(GMT)	Casablanca, Monrovia
(GMT)	Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London
(GMT+01:00)	Amsterdam, Berlin, Bern, Stockholm, Vienna
(GMT+01:00)	Belgrade, Bratislava, Budapest, Ljubljana, Prague (GMT+01 :00) Brussels, Copenhagen, Madrid, Paris
(GMT+01:00)	Sarajevo, Skopje, Warsaw, Zagreb
(GMT+01:00)	West Central Africa
(GMT+02:00)	Athens, Istanbul, Minsk
(GMT+02:00)	Bucharest
(GMT+02:00)	Cairo
(GMT+02:00)	Harare, Pretoria
(GMT+02:00)	Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius
(GMT+02:00)	Jerusalem
(GMT+03:00)	Baghdad
(GMT+03:00)	Kuwait, Riyadh
(GMT+03:00)	Moscow, St. Petersburg, Volgograd

(GMT+03:00)	Nairobi
(GMT+03:30)	Tehran
(GMT+04:00)	Abu Dhabi, Muscat (GMT+04:00) Baku, Tbilisi, Yerevan (GMT+04:30) Kabul
(GMT+05:00)	Ekaterinburg
(GMT+05:00)	Islamabad, Karachi, Tashkent (GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi
(GMT+05:45)	Kathmandu
(GMT+06:00)	Almaty, Novosibirsk (GMT+06:00) Astana, Dhaka
(GMT+06:00)	Sri Jayawardenepura (GMT+06:30) Rangoon
(GMT+07:00)	Bangkok, Hanoi, Jakarta (GMT+07:00) Krasnoyarsk
(GMT+08:00)	Beijing, Chongqing, Hongkong, Urumqi
(GMT+08:00)	Taipei
(GMT+08:00)	Irkutsk, Ulaan Bataar (GMT+08:00) Kuala Lumpur, Singapore (GMT+08:00) Perth
(GMT+09:00)	Osaka, Sapporo, Tokyo (GMT+09:00) Seoul
(GMT+09:00)	Yakutsk
(GMT+09:30)	Adelaide
(GMT+09:30)	Darwin
(GMT+10:00)	Brisbane
(GMT+10:00)	Canberra, Melbourne, Sydney
(GMT+10:00)	Guam, Port Moresby (GMT+10:00) Hobart
(GMT+10:00)	Vladivostok
(GMT+11:00)	Magadan, Solomon Is., New Caledonia
(GMT+12:00)	Auckland, Wellington (GMT+ 12:00) Fiji, Kamchatka, Marshall Is.
(GMT+13:00)	Nuku'alofa