

VPort P06HC-1V Series Quick Installation Guide

Moxa IP Camera

Version 1.0, April 2021

Technical Support Contact Information
www.moxa.com/support

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P/N: 1802000064010



Overview

The VPort P06HC-1V Series square-type IP cameras provide an HD (720P, 1280 x 720) video image, and feature 3 H.264/MJPEG video streams, giving them the versatility and ruggedness to excel in many different installations and environments for IP video surveillance applications. In addition, the cameras comply with a portion of EN 50155 specifications covering operating temperature, power input voltage, surge, ESD, and vibration, making them suitable for a variety of industrial applications. The cameras feature a -40 to 55°C operating temperature, a rugged M12 Ethernet port, 1 PoE power input, and a selectable lens.

Package Checklist

Moxa's VPort P06HC-1V Series is shipped with the following items. If any of these items are missing or damaged, please contact your customer service representative for assistance.

- 1 x VPort P06HC-1V Series IP camera (lens included)
- 1 x quick installation guide
- 1 x warranty card

NOTE Check the model name on the VPort's side label to determine if the model name is correct for your order.

NOTE This product must be installed in compliance with your local laws and regulations.

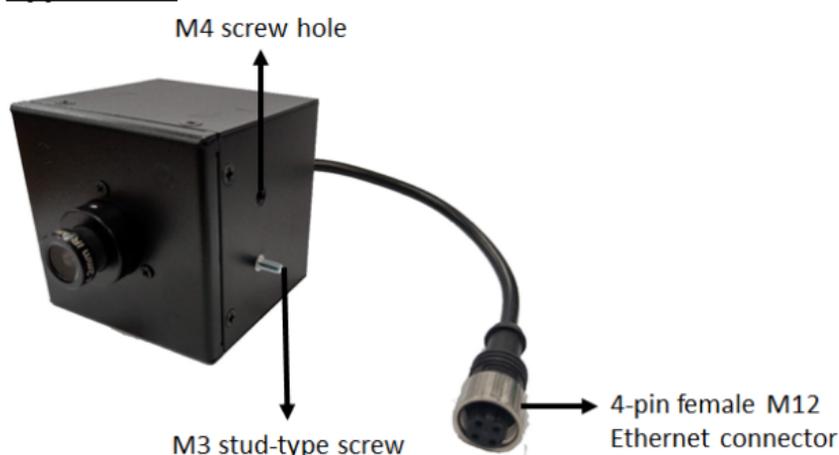
Features

- 1/2.7" HD progressive CMOS image sensor
- Video stream up to 30 frames/sec at HD (1280x720) resolution
- High image quality with WDR (wide dynamic range) and DNR (Digital Noise Reduction) supported
- Minimum illumination is up to 0.2 lux (color)
- Provides 3 video streams for H.264/MJPEG simultaneously
- Supports video quality configuration with fixed bit rate (CBR) and fixed quality (VBR)
- Video latency under 350 ms
- DynaStream™ for network efficiency with dynamic frame rate change
- HD/SVGA/Full D1/4CIF/VGA/CIF/ QCIF resolution
- TCP, UDP, and HTTP network transmission modes
- Supports DHCP OPT66/67 for automatic configuration from a TFTP server, making it easy to batch configure several units
- Supports RTSP streaming
- Supports multicast (IGMP) video streaming
- Supports SNMPv1/v2C/v3 for network system integration and management
- Supports QoS (ToS) for transmission priority
- Built-in web server for easy configuration
- Accessible IP filtering
- UPnP supported

- Complies with all EN 50155 mandatory test items (This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed statement, click here: www.moxa.com/doc/specs/EN_50155_Compliance.pdf)
- 1 10/100BaseT(X) port with M12 D-code connector
- PoE (Power-over-Ethernet, IEEE 802.3af) supported
- -40 to 55°C (EN 50155, class OT2) operating temperature for rolling stock environments
- CE, FCC, UL 62368-1
- Built-in tamper alarm and Video Motion Detection (VMD)
- Supports FTP for alarm message or image transmission
- Supports HTTP event server
- 5-year warranty

Product Description

Appearance



- **4-pin female D-code M12 Ethernet connector:** Can be used for both the PoE power supply (Mode A) and Auto MDI/MDI-X Ethernet connection

PIN	TX
1	TD+
2	RD+
3	TD-
4	RD-



NOTE To connect the VPort P06HC-1V to a network, use an Ethernet cable with D-code M12 connector and an M12 PoE switch or RJ45 PoE switch.

<p>M12 male to M12 male cable</p> 	<p>M12 PoE Switch (e.g., TN-5508-4PoE)</p> 
<p>M12 male to RJ45 cable</p> 	<p>RJ45 PoE switch (e.g., EDS-P510)</p> 

NOTE The power input current of the VPort P06HC-1V is 48 VDC, 0.17 A, with maximum power consumption of approximately 8 W.

NOTE This equipment is designed for indoor installation only; it is not intended to be used for outdoor applications.

- M3 stud-type screw/M4 screw hole:** There are 2 M3 stud-type screws and 2 M4 screw holes on 2 sides of this camera for installation in an external housing bracket. If you provide your own bracket, we suggest using a torque of 4 kg-cm for both screws. Make sure that the screws do not extend more than 6 mm into the housing.

VP-06HCBC1 Installation

The VP-06HCBC1 is an optional bracket designed for installing the VPort P06HC-1V series IP camera on the side of a train. The bracket can be used to install the camera on either the left or right side of the train. In either case, the camera's line of sight will be horizontal.

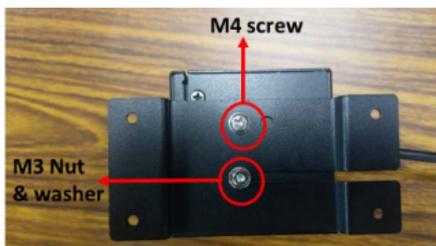
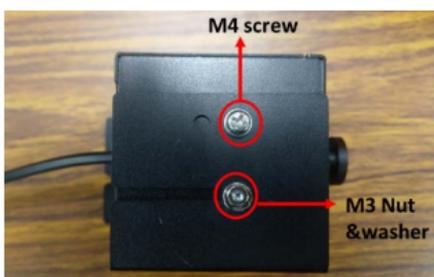
<p>VP-06HCBC1</p>	<p>2 M4 screws with washers, 2 M3 nuts, and 2 washers for attaching the VPort P06HC-1V IP camera to the VP-06HCBC1 bracket.</p>
	

Step 1: Place the VPort P06HC-1V camera on the VP-06HCB1 bracket. Point the lens in the direction indicated in the following diagrams.

Left Side: For installation on the left side of the train.	Right Side: For installation on the right side of the train.
	

To fix the camera to the bracket, extend the M3 stud-type screws through the slits in the sides of the VP-06HCBC1 bracket, as shown above.

Step 2: Confirm that the image from the camera is correct and then use the M4 screws and M3 nuts with washers to fix the camera to the bracket.



- For the M4 screws, use a torque of 6 kg-cm
- For the M3 nut with washer, use a torque of 5 kg-cm

Step 3: Install the VP-06HCBC1 bracket on the inside wall of the train using the proper M4-type screw-sets (prepared by the user).

NOTE Use M4 screws with shaft diameter of 3 mm to fix the VP-06HCBC1 on the wall of the train. We recommend using a spring washer with the screw to prevent the screw from coming loose due to vibrations.

Software Installation

Step 1: Configure the IP address of the VPort P06HC-1V Series.

When the VPort P06HC-1V Series is first powered on, the POST (Power On Self Test) will run for a few moments (about 50 seconds). The network environment determines how the IP address is assigned.

Network Environment with DHCP Server

For this type of network environment, 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 number, firmware/BIOS version, and HTTP port of the VPort will be listed in the utility's window.

Index	Model	IP Address	MAC Address	Status	Name
1	VPortP06HC-1V	10.123.42.25	00:90:E8:11:22:09		

Model Name	VPortP06HC-1V IP Camera
IP Address	10.123.42.25
Netmask	255.255.255.0
Gateway	10.123.42.1
MAC Address	00:90:E8:11:22:09
Serial No	000000000000
Firmware Ver.	2.0
BuildTime	21030510
Bios Ver.	1.0
Http port	80

You can double click the selected VPort, or use the IE web browser to access the VPort's web-based manager (web server).

Non DHCP Server Network Environment

If your VPort P06HC-1V Series 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 P06HC-1V 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. Select the **Use fixed IP address** checkbox to ensure that the IP address you assign is not deleted each time the VPort is restarted.

Step 2: Accessing the VPort P06HC-1V'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 **Yes** to install this plug-in to enable the IE web browser for viewing video images.



NOTE For Windows XP SP2 or later 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. You should unlock the ActiveX control blocked function or disable the security configuration to enable the installation of the VPort's ActiveX Control component.

Step 4: Configure authentication for accessing the VPort's web-based manager.

When accessing the VPort's web-based manager, authentication is required. The default administrator account name is "admin" and the default password is "moxamoxa". After accessing the camera using the default admin password, you will need to change the password for security reasons. The default admin password (moxamoxa) can only be used once.

Change Password

Admin Password

Admin Password:

Confirm Password:

Note: Admin password must be either blank, or from 8 to 16 characters.

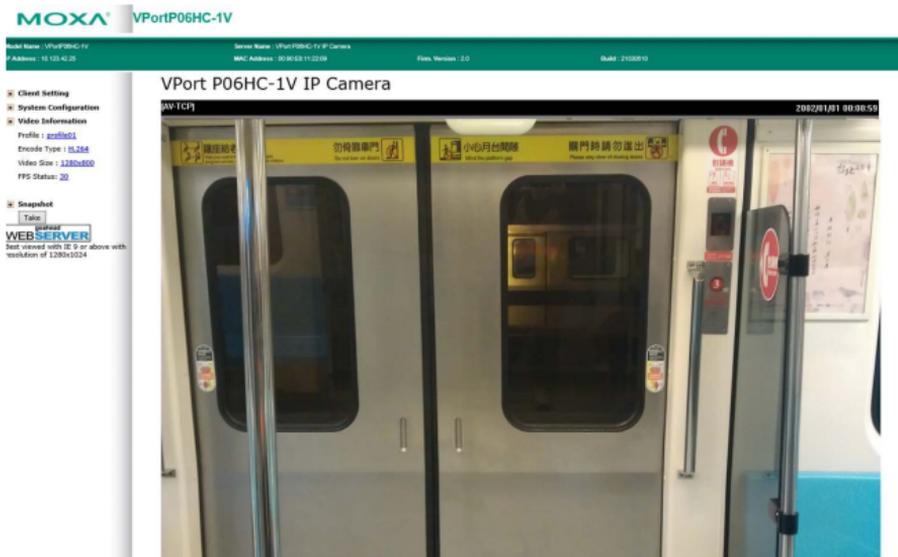
Save

NOTE For network security reasons, do not lose the new admin password. If you lose the password, you will need to send the VPort back to Moxa for repair. **Note that you will be assessed a repair charge for this service.**

Step 5: Access the homepage of the VPort web-based manager.

After installing the ActiveX Control component and changing the admin password, the homepage of the VPort P06HC-1V'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 6: Access the VPort's system configuration.

Click on **System Configuration** to access the overview of the system configuration to change the configuration. **Model Name, Server Name, IP Address, MAC Address, and Firmware Version** appear on 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, which can be downloaded from the Moxa website's download center.

Model Name : VPortP06HC-1V Server Name : VPortP06HC-1V IP Camera
IP Address : 10.101.42.21 MAC Address : 00:90:EB:11:22:35 Firm. Version : 1.0 Build : 2102016

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 HTTP Profile settings
	General	Setting host Name and Date/Time
	Account	Administrator, User and Demo Account Privileges Management
	System Log	System Log and operation information
System	System Parameter	System parameters information and Import/Export function
	Firmware Upgrade	Reboot Firmware Upgrade
	Factory Default	Reset to Factory Default
	Reboot	Device will reboot for restarting system
	General	The IP network settings of this VPort
Network	Universal HTTP	Enable/Disable function
	Web	Configure Web (Type of Service)
	Accessible IP	Set up a list to control the access permission of clients by checking their IP address
	HTTP	Configure the http settings
Video	Web	Configure Web
	Image Setting	Configure the information of video image
	Camera Setting	Configure the attributes of video image
	Privacy Mask	Configure the Privacy Mask settings
Metadata	Video Encoder	Set up the Encoder Standard (H264 or H.265), Size (Resolution), FPS, Quality and Multicast settings
	Metadata	Configure Metadata settings
Streaming	RTSP	Configure Camera 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
	Action Config	Configure detail Action activation
Actions	Action Trigger	Configure Action Trigger for Event trigger condition specify Active Config

Firmware Upgrade

Use the VPort's web-based manager UI to upgrade the firmware. The "Firmware Upgrade" page is located at:

System Configuration > System > Firmware Upgrade.

Firmware Upgrade

Browse

Upgrade

Take the following steps to upgrade the firmware:

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

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.

Model Name : VPortP06 Server Name : VPort P06HC-1V IP Camera
IP Address : 192.168.127.102 MAC Address : 00:90:EB:11:22:35 Firm. Version : 1.0 Build : 18042410

Firmware is upgrading, Please don't power off the device before the system reboot is completed!

```
Step 1/3 : Transmit Firmware File ----> Success
Step 2/3 : Update Firmware File ----> Start

--Firmware Information-----
MagicCode : 8030
Total Files : 2
Checksum : 9D5610E
Total Length : 20449260
Version : 1.0.0
-----

--File info -----
Filename:kernel
version:1.0.0
data size: 1943004
05% 10% 15% 20% 25% 30% 35% 40% 45% 50%
55% 60% 65% 70% 75% 80% 85% 90% 95% 100%

--File info -----
Filename:rootfs
version:1.0.0
data size: 18505728
05% 10% 15% 20% 25% 30% 35% 40% 45% 50%
55% 60% 65% 70% 75% 80% 85% 90% 95% 100%

Step 2/3 : Update Firmware File ----> Success
Step 3/3 : System reboot
```

NOTE Do not turn off the power or disconnect the network during the firmware upgrade process, or the system may not reboot properly if the firmware upgrade process was not completed.

Wiring Requirements



ATTENTION

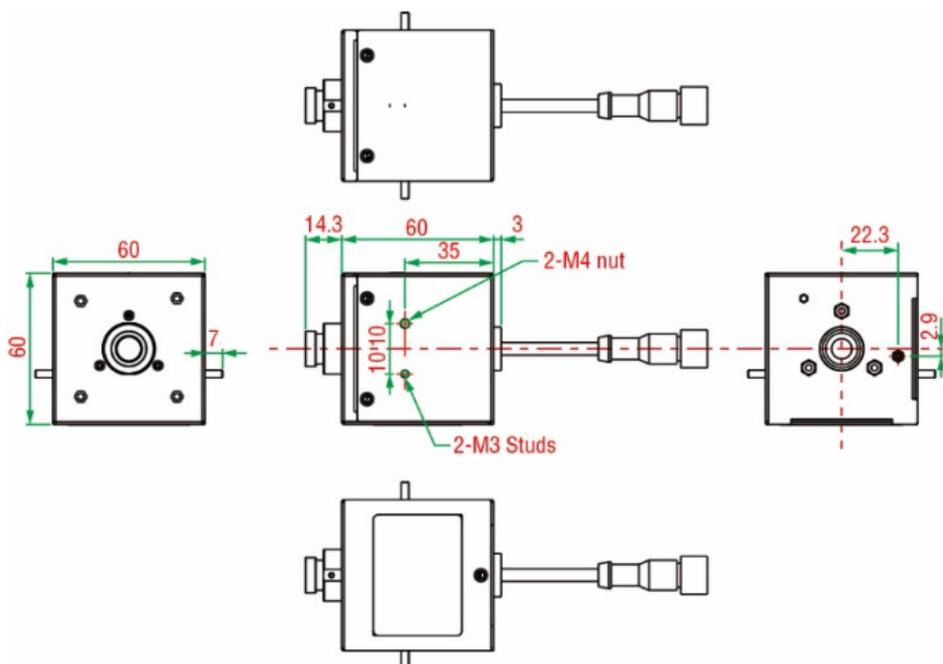
Safety First!

Be sure to disconnect the power cord before installing and/or wiring your Moxa VPort P06HC-1V. Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size. If the current goes above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.

You should also pay attention to the following:

- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.
- You can use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together.
- Keep input wiring and output wiring separated.
- We strongly advise labeling wiring to all devices in the system.

Dimensions (mm)



Specifications

Input Current	0.17 A @ 48 VDC
Operating Temperature	-40 to 55°C (-40 to 131°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)

NOTE This product is intended to be supplied by a UL Listed Power Adapter or DC Power source marked 'L.P.S' or 'Limited Power Source', rated PoE 48 VDC, 0.17 A, and Tma 55°C.

The power cord adapter should be connected to a socket outlet with an earthing connection or the power cord and adapter must comply with Class II construction.

Support and Resources

For the latest product information, please visit our website at <https://www.moxa.com/en/support>.