

# VPort 06EC-2V Series Quick Installation Guide

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**Moxa IP Camera**

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## Overview

The VPort 06EC-2V series is an exterior IP dome camera that supports FHD (1080P, 1920 x 1080) video image and H.264/MJPEG. It is designed for mobile video surveillance applications and features EN 50155 compliance, operating temperature of -25 to 55°C or -40 to 70°C (T model), rugged M12 Ethernet port, and 24 VDC power inputs for heater and digital output, IP67 rain and dust protection, and selectable lens models, for the versatility and ruggedness required to excel in many different installations and environments for mobile IP video surveillance applications.

## Ordering Information

The following VPort 06EC-2V series models are available:

| Model                 | Lens (mm) | Temperature | Conformal Coating |
|-----------------------|-----------|-------------|-------------------|
| VPort 06EC-2V36M      | 3.6       | -25 to 55°C | -                 |
| VPort 06EC-2V42M      | 4.2       | -25 to 55°C | -                 |
| VPort 06EC-2V60M      | 6         | -25 to 55°C | -                 |
| VPort 06EC-2V80M      | 8         | -25 to 55°C | -                 |
| VPort 06EC-2V36M-T    | 3.6       | -40 to 70°C | -                 |
| VPort 06EC-2V42M-T    | 4.2       | -40 to 70°C | -                 |
| VPort 06EC-2V60M-T    | 6         | -40 to 70°C | -                 |
| VPort 06EC-2V80M-T    | 8         | -40 to 70°C | -                 |
| VPort 06EC-2V36M-CT   | 3.6       | -25 to 55°C | ✓                 |
| VPort 06EC-2V42M-CT   | 4.2       | -25 to 55°C | ✓                 |
| VPort 06EC-2V60M-CT   | 6         | -25 to 55°C | ✓                 |
| VPort 06EC-2V80M-CT   | 8         | -25 to 55°C | ✓                 |
| VPort 06EC-2V36M-CT-T | 3.6       | -40 to 70°C | ✓                 |
| VPort 06EC-2V42M-CT-T | 4.2       | -40 to 70°C | ✓                 |
| VPort 06EC-2V60M-CT-T | 6         | -40 to 70°C | ✓                 |
| VPort 06EC-2V80M-CT-T | 8         | -40 to 70°C | ✓                 |

### Accessory package

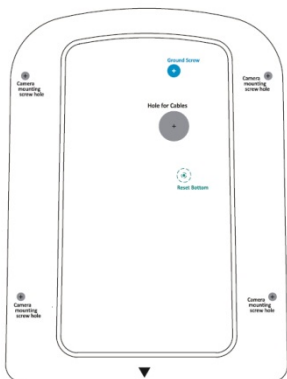
Dry packs (sealed in sachets) for absorbing moisture from the inside of the camera.



Metal cap for M12 male connector.



## Sticker for camera mounting positions



## Contents of the Package

- Dry pack and Metal M12 cap
- Documentation and Software CD (includes User's Manual, Quick Installation Guide, and VPort Utility)
- Quick installation guide (printed)
- Warranty card

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

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

## **Product Description**





### Appearance

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

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



**NOTE** To connect the VPort 06EC-2V series to a network, use an Ethernet cable with D-code M12 connector and an M12 PoE switch or RJ45 PoE switch

|   |  |
|---|--|
| <p>M12 D-code to M12 D-code cable</p>  | <p>M12 PoE switch<br/>(e.g., TN-5508-4PoE)</p>  |
| <p>M12 D-code and RJ45 cable</p>       | <p>RJ45 PoE switch<br/>(e.g., EDS-P510)</p>     |

**NOTE** The power input rating of the PoE part is 48 VDC, 0.2 A, with a maximum power consumption of approximately 8.1 W. The power input rating of the DC part (heater and digital output) is 24 VDC, 0.9 A with a maximum power consumption of 27 W.

- **5-pin M12 connector:** Includes digital output signal, power input for heater, and digital output.

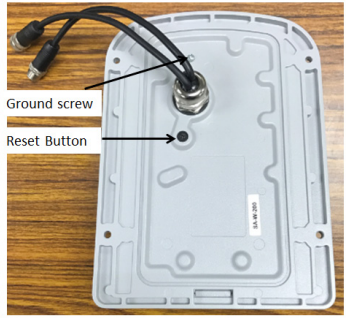
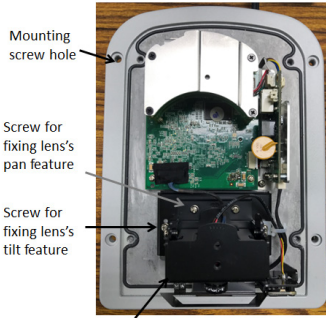
| PIN | Con.    |
|-----|---------|
| 1   | Power + |
| 2   | DO +    |
| 3   | Power - |
| 4   | DO -    |
| 5   | N/A     |



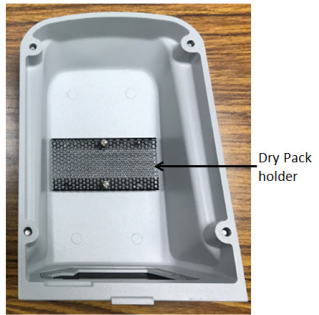
- **Solid metal top cover:** This top cover can be removed for adjusting the camera lens position.
- **Transparent tempered glass window:** The VPort 06EC-2V series is designed with a transparent tempered glass window, which is vandal-proof and satisfies EN 62262 (IEC 62262) Class IK7 requirements.
- **4 Hex security screws for top cover:** These 4 4 mm Hex screws are designed with anti-shedding to make installation more convenient.

**NOTE** The color of the form factor can be customized based on your installation environment. Please contact your Moxa sales representative for customization service.

## Inside the Camera



Calibration for tuning lens's vertical ( $-5$  to  $10^\circ$ ) and horizontal ( $\pm 5^\circ$ ) position



- **Mounting screw holes:** There are 4 mounting screw holes for mounting the VPort 06EC-2V series on the train.
- **Screw for fixing the pan feature of lens:** To adjust the pan feature of the lens, loosen the screw, and then retighten it after you are done with adjusting the position of the lens.
- **Screw for fixing the tilt feature of lens:** To adjust the tilt feature of the lens, loosen the screw, and then retighten it after you are done with adjusting the position of the lens.
- **Hardware reset button:** Loosen the screw and find the reset button inside of the hole. Use a pointed object to depress the reset button to reboot or restore factory defaults.
  - Reboot:  
press the button one time.
  - Factory default:  
press the button and hold for at least 5 sec.



- **Calibration for adjusting the horizontal ( $+10/-5^\circ$ ) and vertical ( $\pm 5^\circ$ ) positions of the lens:** After adjusting the lens's horizontal and vertical position, mark the position of this calibration for future placement or mass installation.

## Hardware Installation

**Step 1:** Open and remove the top cover.

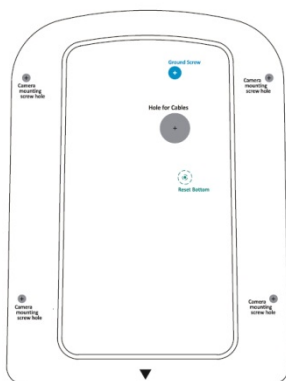
Use the Hex security screwdriver (with a pin) to loosen the top cover screws and remove the dry pack that is in the top cover.



**Step 2:** Use the markings on the installation sticker to position the drill bit before drilling holes. There are 3 types of installation.

### Mounting with 4 mounting screws

To mount the camera on the train, drill a hole through the gray portion of the sticker and then mount the camera with 4 screws.



**NOTE** The recommended torque of the top cover is 12 kg-cm and 25 kg-cm for mounting the camera on the train.

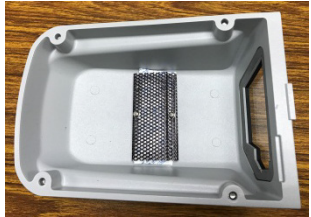
**Step 3:** Connect the camera with the 4-pin M12 D-code Ethernet connector and 5-pin M12 connector with 24 VDC power to activate the defrost heater and digital output.

**NOTE** Connectors used with the cameras should have a minimum IP rating of IP67. The paint and the screws located on the top cover have to pass the ASTM B368 standard (CASS) with testing lasting 125 hours; but this standard doesn't include the cable connector and cable gland.

**Step 4:** Loosen the screw for adjusting the horizontal or vertical position of the lens. Once the lens position is correct, fix the screw.



**Step 5:** Loosen the screw containing the dry pack, and place the dry packs on the inside of the top cover to absorb any moisture that might have entered the camera housing during installation. Then tighten the screw.



**Step 6:** Fix the top cover. The installation is now complete.

- NOTE**
1. The dry packs may become saturated if exposed to the air for too long; for this reason, reattach the top cover immediately after place the dry packs inside the top cover.
  2. Make sure the top cover is attached tightly (place the screws in the holes such that they can stay unaided and tighten all of them. Retighten the screws in succession until they are all completely tightened.)

## Software Installation


**Step 1:** Configure the camera's IP address.

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

### Network Environment with DHCP Server

For this 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 port, and HTTP port of the VPort will be listed in the utility's window.

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 camera 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 camera 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* option to ensure that the IP address you assign is not deleted each time the VPort is restarted.

**Step 2:** Access the camera's web-based manager.

Type the camera's IP address in the web browser's address field and 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 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. 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:** Access the homepage of the camera's web-based manager.

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

1. Video Images
2. Video Information



- Home
- Main Menu
- Overview
- Profile
- System
- Network
- Video
- Audio
- Metadata
- Streaming
- Event
- Actions



**Step 5:** 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 on the software CD.

- Home
- Main Menu
- Overview
- Profile
- System
- Network
- Video
- Audio
- Metadata
- Streaming
- Event
- Actions

### 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   |
|----------|---------------------|---|
| Profile  | Configuration       | Configure ONVIF Profile settings  |
|          | General             | Setting Input Name, contact and Location  |
|          | Date/Time           | Setting Date/Time   |
|          | Account             | Administration, User and Camera Account Privileges Management                                       |
|          | Local Storage       | Set up the local storage capability   |
|          | System Log          | System Log and operation information  |
|          | System Parameter    | System parameters information and Import/Export function  |
|          | LED Control         | Turn on/off LED   |
|          | Firmware Upgrade    | Remote Firmware Upgrade   |
|          | Factory Default     | Reset to Factory Default  |
| System   | Reboot              | Device will reboot for restarting system  |
|          | General             | The IP network settings of this VPort   |
|          | DHCP                | Configure DHCP settings   |
|          | DDNS                | Configure DDNS  |
|          | Universal RTP       | Enable RTP function   |
|          | TLS                 | Configure TLS Type of Service   |
|          | Accessing IP        | Set up a list to control the access permission of clients by checking their IP address              |
|          | DDNS                | Configure the DDNS settings   |
|          | Host Service        | Host Service is for the device search capability by Host software or utility                        |
|          | SIP                 | Configure SIP   |
| Network  | LLDP                | Configure LLDP  |
|          | SIP                 | Configure SIP settings  |
|          | Image Setting       | Configure the information of video image  |
|          | Camera Setting      | Configure the attributes of video image   |
|          | Corridor            | Configure the corridor mode   |
|          | Privacy Mask        | Configure the Privacy Mask settings   |
|          | Video Encoder       | Set up the Encode Standard(H.264G or H.264), Size (Resolution), FPS, Quality and Multicast settings |
|          | PreAlarm            | Set up PreAlarm Parameters  |
|          | Audio Encoder       | Configure Audio Encoder Multicast settings  |
|          | Audio Volume        | Configure Audio Volume  |
| Metadata | Metadata            | Configure Metadata settings   |
|          | OSD                 | Configure OSD settings  |
|          | Streaming           | Enable/Disable all Event Producer   |
|          | System Event        | Configure System Event settings   |
|          | Motion Detection    | Configure Motion Detection settings   |
|          | Camera Tamper       | Configure Camera Tamper settings  |
|          | Shock Detection     | Configure Shock Detection settings  |
|          | Sequential Snapshot | Configure Sequential Snapshot settings, Schedule and Transmit destinations                          |
|          | Action Config       | Configure detail Action activation  |
|          | Event               | Action Trigger  |

Best viewed with IE10 or above with resolution of 1280x1024

## Wiring Requirements



### ATTENTION

#### Safety First!

Be sure to disconnect the power cord before installing and/or wiring your Moxa VPort 06EC-2V series. 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 separate.
- We strongly advise labeling wiring to all devices in the system.

### Dimensions (mm)

