

VPort 66-2MP Series Quick Installation Guide

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Overview

The VPort 66-2MP is a vandal-proof, IP66-rated, PTZ speed dome IP camera for use in harsh, outdoor environments. With a 360° endless PAN, -6 to 96° TILT, 22X/30X optical/20X digital zoom, H.264/MJPEG triple video streams, day-and-night camera lens, and -40 to 65°C operating temperature, the VPort 66-2MP is especially well-suited for outdoor video surveillance applications.





Package Checklist

Moxa's VPort 66-2MP is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

- 1 × VPort 66-2MP

Model	Lens	Power	Ethernet
VPort 66-2MP-CAM22X	f=4.3 mm (wide) to 94.6 mm (tele),	24 VDC/VAC	RJ45
VPort 66-2MP-CAM30X	f=4.3 mm (wide) to 129.0 mm (tele)	24 VDC/VAC	RJ45

- Screw handle accessory package

Torx screw driver for attaching/detaching the top cover.	3.5 mm power jack to 2-pin terminal block connector for 2-wire power line connection.
	
Silica gel dry bag (silica gel desiccant) for absorbing moisture inside the camera.	Hook-and-loop fasteners for attaching the dry bag inside the camera.
	

- Quick Installation Guide
- Documentation and software CD (includes user's manual, Quick Installation Guide, and utility)
- 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

- Maximum 60 FPS @ full HD (1080P, 1920x1080) resolution (only in single stream mode)
- 22X/30X optical and 20X digital zoom (22X: 4.3 to 94.6 mm, 30X: 4.3 to 129 mm)
- Supports MJPEG and H.264 dual codecs
- Supports Full HD/SXGA/WXGA/720P/SVGA/ Full D1/ 4CIF/ VGA/ CIF/QVGA resolution
- TCP, UDP, and HTTP network transmission modes
- Supports QoS (ToS) for transmission priority
- Supports RTSP streaming
- Supports multicast (IGMP) video streaming
- Supports SNMP (V1/V2C/V3) for network system integration and management
- Accessible IP filtering
- UPnP supported
- Built-in web server for easy configuration
- 360° endless pan and -6° to +96° tilt
- Manual max pan speed of 120°/s; Preset max of 255°/s; Alarm Trigger max of 360°/s*
- Supports PTZ movement calibration
- Minimum illumination up to 0.4 lux (color) and 0.03 lux (B/W)
- Built-in tamper alarm and Video Motion Detection (VMD)
- -40 to 65°C operating temperature
- 1 10/100BaseT(X) port with RJ45 connector
- IP66 protection and NEMA Type 4X form factor
- SDXC slot for local event / disconnected recording
- CBR Pro for flexible flow control
- DynaStream™ for network efficiency with dynamic frame rate change
- EN50121-4 compliance
- Supports ONVIF Profile S for multiple video stream profiles
- 24 VDC/VAC power input
- Supports NTCIP 1205
- EN 62262 IK10 level vandal resistance
- CE, FCC, UL 60950-1
- Pre, Trigger, and post snapshot images supported
- Sequential snapshot images supported
- Supports SMTP and FTP for alarm message transmission
- Supports HTTP event server
- 3-year warranty for product, and 1-year warranty for moving parts**

**When the temperature is under -10°C, the maximum PT speed will be reduced to a max. of 130°/sec.*

***The following moving parts come with a 1-year warranty:*

- Fan
- Shutter
- Zoom lens
- DC-Iris, P-Iris lens
- PAN, TILT and lens motors/ mechanism
- Slip ring

VPort 66-2MP Product Description

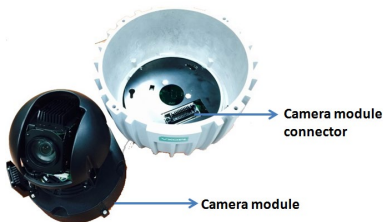
Appearance



- **Top cover screws:** Four screws used to secure the top cover.
- **Top cover:** The top cover can be removed to take out the camera body for installing or re-installing the SD card.
- **Zoom Lens:** The VPort 66-2MP-M12 supports 2 lenses with different optical zoom specs:
 - 22X: $f = 4.3 \text{ mm}$ (wide) to 94.6 mm (tele), F1.6 to F4.5
 - 30X: $f = 4.3 \text{ mm}$ (wide) to 129.0 mm (tele), F1.6 to F4.7
- **Dome cover:** The VPort 66-2MP has a vandal-proof PC dome cover, satisfying EN 62262 (IEC 62262) class IK10 level.
- **Mounting kit:** For installing the VPort 66-2MP on a wall or pole. The mounting kit is not included as a standard accessory with the VPort 66-2MP; it must be ordered and purchased separately. Refer to the ordering information on the VPort 66-2MP's datasheet or webpage for mounting accessory information.

NOTE The color of the dome cover can be customized based on your installation environment. Please contact your Moxa sales representative for information about this customization service. Note that the color of the dome cover could decrease the light transmittance of the video image. The darker the dome cover, the greater the decrease of light transmittance.

Inside the camera



- **Camera module:** The main body of the VPort 66-2MP.
- **Camera module connector:** A patented connector for connecting the camera module with the external connectors with cables.

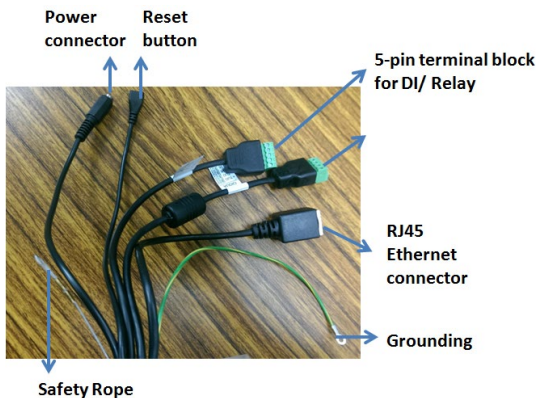


SD card socket (SDXC)

- SD card socket (SDXC):** The VPort 66-2MP supports the SDXC interface, which can use SD cards with more than 64 GB of memory for local storage of video recordings (by event or continuous recording).

NOTE Since video recording requires a high frequency of read and write actions, we recommend using high performance, high reliability SD cards, such as Scandisk or Transcend high-end SD cards. Most importantly, we highly recommend backing up videos recorded on an SD card to a video recorder, hard disk, or other more permanent storage media.

External cables and connectors



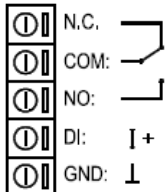

- Power connector:** The VPort 66-2MP supports one 24 VDC or 24 VAC power input, with a 3.5 mm power jack male connector. You can use a standard 24 VDC/VAC power adapter (3 A min.) to power the VPort 66-2MP. In addition, a 3.5 mm power jack to 2-pin terminal block connector is included as a standard VPort 66-2MP accessory for direct power line connections.

VPort 66-2MP Power Consumption Information

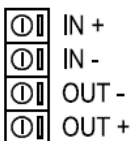
Heater/Fan Operation	PTZ Operation	Temp. (inside the camera)	Power consumption
Heater/Fan off	Off	0 to 35°C	19 watts
Heater/Fan off	Operating		27 watts
Heater/Fan on	Off	-40 to 0°C	67 watts
Heater/Fan on	Operating		71 watts
Heater off / Fan on	Off	≥ 35°C	24 watts
Heater off / Fan on	Operating		31 watts

- NOTE**
- The heater and fan will be enabled when the internal temperature is under -10°C , and disabled when above 0°C . The fan will be enabled when the internal temperature is above 50°C , and disabled when under 35°C .
 - When using the 3.5 mm power jack to 2-pin terminal block connector for a direct power line connection, be sure to pay attention to the "+" and "-" pin assignments on the connector.
 - The power input rating of the VPort 66-2MP is 24 VDC (21.6 to 26.4 VDC) or 24 VAC (21.6 to 26.4 VAC).

- Reset button:** For rebooting and restoring factory defaults.
 - **Reboot:** Press the button once.
 - **Factory default:** Press and hold the button for at least 10 seconds.
- RJ45 Ethernet connector:** The RJ45 Ethernet port is for 10/100 Mbps network transmission.
- 5-pin terminal block connector for DI/Relay:** The VPort 66-2MP supports 1 DI (digital input) and 1 relay output.

	Relay Output	N.C. (normal close)	Max. 1 A, 24 VDC Initial status is Normal Open
		COM (common)	
		NO (normal open)	
	DI	DI: I+	High: +13 V to +30 V
		GND: ⊥	Low: -30 V to +3 V

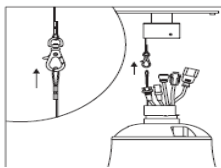
- 4-pin terminal block for audio input/output:** The VPort 66-2MP supports 1 audio input and 1 audio output for an external microphone and external speaker.

	Audio input	IN +	Audio input +
		IN -	Audio input -
	Audio output	OUT -	Audio output -
		OUT +	Audio output +

- Grounding:** Attach the grounding cable with attachment ring to the mounting kit's grounding screw (inside the mounting kit box) to ground the VPort 66-2MP.



- **Safety Rope:** For easier installation, use the safety rope to hook the camera to the mounting kit buckle.

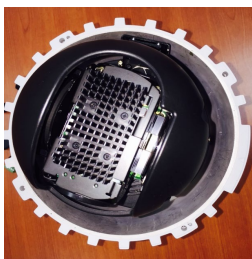


Hardware Installation

A mounting kit is required to install the VPort 66-2MP. Below we use the VP-520LB to illustrate; the installation method of other accessories is similar.

Step 1: Open and remove the top cover.

Use the security torx to loosen the 4 top cover screws.



Step 2: Installing an SD card requires removing the camera module.

1. Loosen the 2 anti-drop Phillips screws, which hold the camera module in place.



2. Pull the camera module a little and turn it clockwise to remove the camera module from the camera module connector.



3. Insert the SD card, and then install the camera module by rotating the camera module connector counterclockwise. Screw in the 2 anti-drop Phillips screws.

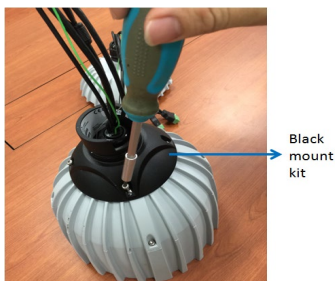


NOTE If you have difficulty removing the camera module from the camera module connector, position the camera module in a downwards direction. Doing so will make it easier to turn the camera module clockwise.

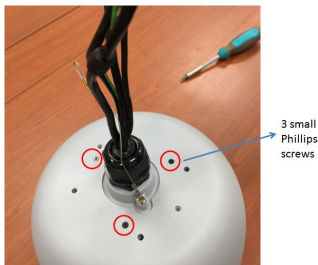
Step 3: Install the sunshield (VP-SH1) if required

The VP-SH1 sunshield can be used with the VPort 66-2MP to prevent direct sunlight from shining on the housing. Using the sunshield could be warranted since sunlight can affect the heat dissipation mechanism.

1. Loosen the 4 security screws on the top of the camera.



2. Remove the black mount kit and put the VP-SH1 on the housing. Use the 3 small Phillips screws in the VP-SH1's package to fix the VP-SH1 to the housing.



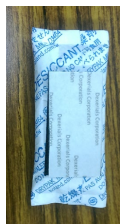
3. Replace the black mount kit tighten the 4 security screws.



Step 4: Fasten the dry bag inside the housing

Use the hook-and-loop fastener to attach the dry bag to the camera housing.

1. Remove the dry bag from the package stick it to the hook fastener.



2. Attach the other side of the hook fastener to the internal wall of the camera housing. Be sure not to place the dry bag on top of the 2 Phillips screws since the dry bag will block the way when removing the camera module.



Step 5: Close the top cover and screw in the 4 top cover screws immediately (5.5 kgf-cm torque is recommended)

NOTE The dry bag will absorb moisture inside the camera to prevent moisture from condensing on the inside of the transparent dome when the camera is used in low temperature environments. Install the dry bag and replace the camera's top cover immediately after opening the dry bag and exposing it to the atmosphere.

Step 6: Install the VPort 66-2MP on the VP-520LB mounting kit

1. Loosen the 3 socket set screws on the VP-520LB tube.



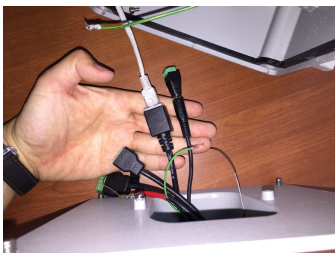
2. Loosen the 4 Phillips screws on the front cover, the stud bolts inside the front cover, and the ground screw inside the box, and then pull the bolt from the hinge to separate the front cover and the box.



3. Insert the VPort 66-2MP's external cables and connectors through the tube.



4. Connect the connectors.



5. Arrange the cables and connectors inside the box and then fix the ground screw and hook the safety rope with the buckle. Close the front cover, put the stud bolt back on the hinge to fix it in place, and then tighten the 4 front cover Phillips screws.



6. Once the VPort 66-2MP is installed on the VP-520LB, you can install the VPort 66-2MP+VP-520LB to a wall or on a pole (with the VP-510CPM).

With sunshield



Without sunshield



NOTE Refer to the mounting kit installation guide for detailed information about the accessories included with the mounting kit.

Step 7: Power on the VPort 66-2MP

NOTE When the VPort 66-2MP's internal temperature is under -30°C, it will need at least 30 to 40 minutes to power up.

Software Installation

Step 1: Configure the VPort's IP address.

When the VPort 66-2MP is first powered on, the POST (Power On Self Test) will run for a few moments (about 90 to 120 seconds). The network environment determines how the IP address is assigned.

DHCP Server Network Environment

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 completed, the Model Name, MAC address, IP address, serial port, and HTTP port of the VPort will be listed in the utility's window.

Model	IP Address	MAC Address	Status	Name	Lo
VPort 351	172.19.16.89	00:09:EB:00:0...		VPort 351	
VPort P06-1MP-M12-CA...	172.19.16.94	00:90:EB:30:2...		VPort P06-1MP-M12-CAM60	
EDS-408A-MM-ST	172.19.16.65	00:90:EB:23:F...		Managed Redundant Switch 09...	Sw
EDS-408A-MM-SC	172.19.16.49	00:90:EB:0D:6...		Managed Redundant Switch 00...	Sw
IKS-6526-SB	172.19.16.250	00:9E:0E:86:5...		Managed Redundant Switch 00...	Sw
EDS-P506A-4POE	172.19.16.253	00:90:EB:20:9...		Managed Redundant Switch 02...	Sw
EDS-P506A-4POE	172.19.16.70	00:90:EB:20:9...		Managed Redundant Switch 02...	Sw
VPort 461	172.19.16.187	00:0A:19:74:1...		VPort 461	
MeNVR	172.19.16.52	2C:44:FD:28:0...			
VPort 36-1MP-T	172.19.16.66	00:90:EB:2D:E...		VPort 36-1MP-T	
MeNVR	172.19.16.63	E0:69:95:42:1...			
MeNVR	172.19.16.72	C4:34:6B:55:D...			
VPort 66-2MP-CAM22X	172.19.16.23	00:90:EB:11:2...		VPort 66-2MP-CAM22X	
VPort P06-2MP	172.19.16.29	00:90:EB:11:2...		VPort P06-2MP	
VPort	172.19.16.50	00:90:EB:06:2...		VPort	

3. 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 is connected to a network that does not have a DHCP server, 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. Check the **Use fixed IP address** to ensure that the IP address you assign is not deleted each time the VPort is restarted.

Step 2: Accessing 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 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, and you will need to 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 VPort P66-2MP's web-based manager homepage.

After installing the ActiveX Control component, the homepage of the VPort 16's web-based manager will appear. Check the following items to make sure the system was installed properly:

1. Video Images
2. Video Information
3. Click the **Show PTZ Control Panel** button; the PTZ Camera Control pop-up window should appear.



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 on the software CD.

Moxa VPort 66-2MP-CAM22X Server Name: VPort66-2MP-PTZ Camera IP Address: 192.168.127.100 Firm. Ver: 1.0

STAT PWL ID Relay
Temp: 27 Fan Speed: 0 Reset: 1 Model: 2

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 same of the page you would like to open.

Category	Item	Description and Content
Profile	Configuration	Configure DMZ/ Profile settings
	General	Setting host name, context and location
	Date/Time	Setting Date/Time
	Account	Administration, User and Demo Account Privileges Management
System	Local Storage	Set up the local storage capability
	System Log	System log and operation information
	System Parameter	System parameters information and Import/Export function
	Factory Control	Factory operation mode setting
Network	Firmware Upgrade	Remote Firmware Upgrade
	Factory Default	Reset to Factory Default
	Restart	Device will reboot for refreshing system
	Demarc	The IP network settings of the VPort
	DDNS	Configure DDNS
	UPnP	Enable UPnP function
	SNMP	Configure SNMP(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
	Media/HTTP	Enable Media/HTTP function
	Media Service	Media search protocol
	RTSP	Configure RTSP
Video	SDP	Configure SDP
	LSDP	Configure LSP
	Image Setting	Configure the information of video image
	Camera Setting	Configure the attributes of video image
Video	ROI	Configure the ROI(region of interest) settings
	Video Encoder	Set up the Encode Standard(H.264 or H.265), Size (Resolution), FPS, Quality and Multicast settings
Audio	Encoder	Set up Encoder Parameters
	Audio Encoder	Configure Audio Encoder Multicast settings
Streaming	DRM	Configure DRM settings
	Streaming Status	Get Stream Connection Status
PTZ	Zoom Control	Configure the Zoom settings
	PTZ Config	Configure PTZ Preset
Focus	Tracking	Configure Tour Settings
	Focus Setting	Configure the Focus settings
Event	Enable Event	Enable/Disable all Event Producer
	Motion Detection	Configure Motion Detection settings
Actions	Sequential Snapshot	Configure Sequential Snapshot settings, Schedule and transient destinations
	Action Config	Configure detail Action activation
Actions	Action Trigger	Configure Action Trigger for event trigger condition specify Action Config

Wiring Requirements



ATTENTION

Safety First!

- Be sure to disconnect the power cord before installing and/or wiring your Moxa VPort 66-2MP.
- 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:

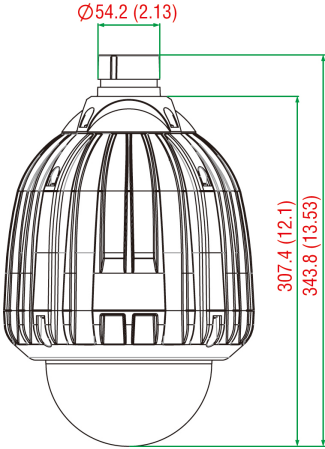
- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.
- You can use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb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

Grounding the VPort 66-2MP

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices.

Dimensions (mm/inch)

Side View



Bottom View

