

# VPort P06-1MP-M12 Series

EN 50155, HD video image, compact IP cameras



## Features and Benefits

- 1/2.7" progressive scan camera with maximum 1280 x 800 resolution at up to 30 fps
- High quality video imaging with DNR and WDR
- Up to 3 H.264 or MJPEG independent video streams
- DynaStream™ for optimized network efficiency
- CBR Pro™ for high image quality in limited bandwidth transmissions
- Supports DHCP options 66 and 67 for auto-configuration
- 1 built-in audio input or microphone
- ONVIF support for standardization and interoperability

## Certifications



## Introduction

The compact VPort P06-1MP-M12 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 mobile IP video surveillance applications. In addition, the cameras are compliant with mandatory sections of EN 50155,<sup>1</sup> covering operating temperature, power input voltage, surge, ESD, and vibration, as well as conformal coating and power insulation, making them suitable for a variety of industrial applications. The cameras feature vandal-proofing (EN 62262 IK10), a -25 to 55°C or -40 to 70°C (T models) operating temperature range, a rugged M12 Ethernet port, 1 audio input, PoE power inputs, IP66 rain and dust protection, a dehumidifying membrane, and a selectable lens.

## Specifications

### Ethernet Interface

PoE Ports (10/100BaseT(X), M12 D-coded 4-pin female connector)

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### Ethernet Software Features

Protocols

TCP/IP  
IPv4  
UDP  
HTTP  
RTP/RTSP  
ARP  
UPnP  
FTP  
TFTP  
NTP Client  
DNS  
QoS  
IGMP v3  
ICMP  
SNMPv1/v2c/v3  
DHCP Opt66/67  
HTTPS

1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed statement, refer to: [www.moxa.com/doc/specs/EN\\_50155\\_Compliance.pdf](http://www.moxa.com/doc/specs/EN_50155_Compliance.pdf)

## Security Functions

Password	User-level password protection
Filter	IP address
Encryption	HTTPS

## Power Parameters

No. of Power Inputs	1
Source of Input Power	PoE (IEEE 802.3af)
Input Current	0.12 A @ 48 VDC

## Camera Characteristics

Sensor	1/2.7-in HD progressive scan CMOS
Lens	VPort P06-1MP-M12-CAM28 Series: f=2.8 mm, F2.0, Diagonal 126°, Horizontal 113°, Vertical 58° VPort P06-1MP-M12-CAM36 Series: f=3.6 mm, F1.6, Diagonal 99°, Horizontal 94°, Vertical 47° VPort P06-1MP-M12-CAM42 Series: f=4.2 mm, F1.8, Diagonal 87°, Horizontal 80°, Vertical 43° VPort P06-1MP-M12-CAM60 Series: f=6.0 mm, F1.6, Diagonal 60°, Horizontal 55°, Vertical 29° VPort P06-1MP-M12-CAM80 Series: f=8.0 mm, F1.6, Diagonal 45°, Horizontal 40°, Vertical 22°
Camera Angle	Pan: ±30°, Tilt: 0° to 90° (controlled manually)
Minimum Illumination	Color: 0.2 lux, at F1.2 (Gain High, 50 IRE, 1/30 sec)
Synchronization	Internal
White Balance	ATW/AWB
Electronic Shutter	Auto, Fixed (1/30 to 1/25000 sec)
S/N Ratio	Maximum 50 dB (AGC off; DNR on)
DNR (digital noise reduction)	Built-in 2D/3D DNR
WDR (wide dynamic range)	110 dB
Flickerless Control	Automatic, 50 Hz, 60 Hz modes
Image Rotation	Flip, Mirror, and 180° rotation
Image Setting	Manual tuning with saturation, sharpness, and contrast
AGC (auto gain control)	2X, 4X, 8X, 16X, 32X, 64X
BLC (back light compensation)	High/Medium/Low

## Video Interface

Video Compression	H.264 (ISO/IEC 14496-10) or MJPEG
Video Output	via Ethernet
Video Streams	3 independent H.264 or MJPEG video streams

Video Resolution and FPS (frames per second)	NTSC		PAL	
	Size	Max. FPS	Size	Max. FPS
QCIF	176 x 112	30	176 x 144	25
QVGA	320 x 240	30	320 x 240	25
CIF	352 x 240	30	352 x 288	25
VGA	640 x 480	30	640 x 480	25
4CIF	704 x 480	30	704 x 576	25
Full D1	720 x 480	30	720 x 576	25
SVGA	800 x 600	30	800 x 600	25
HD	1280 x 720	30	1280 x 720	25
WXGA	1280 x 800	30	1280 x 800	25
Note: Multiple streams may not support up to 30 FPS.				

Video Viewing	<p>DynaStream™ support for changing the video frame rate automatically</p> <p>CBR Pro™ for good image quality in limited bandwidth transmissions</p> <p>3 privacy mask areas provided</p> <p>Adjustable image size and quality</p> <p>Timestamp and text overlay</p> <p>OSD (On Screen Display) position adjustable</p> <p>Maximum of 5 simultaneous unicast connections, 50 multicast clients</p>
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<b>Audio Interface</b>	
Audio Inputs	VPort P06-1MP-M12-MIC Series: 1 x built-in microphone VPort P06-1MP-M12 Series: 1 x Line-in, with RCA connector
Audio Format	Mono, PCM (G.711)

<b>Camera Software Development</b>	
Video Standards	ONVIF Profile S

<b>Camera Alarm Software Features</b>	
Intelligent Video	Camera tampering detection
Video Motion Detection	3 independently configurable areas
Scheduling	Daily repeat timing schedule
Imaging	JPEG snapshots for pre/trigger/post alarm images
Custom Alarms	HTTP event servers for setting customized alarm actions
FTP Messaging	Automatic transfer of stored images via FTP as event-triggered actions

<b>Software Requirements</b>	
Memory Size	1 GB
Operating System	Windows 7 or above
Browser	Internet Explorer 9.x or above
Multimedia	DirectX 9.0C or above

## Physical Characteristics

Housing	Plastic top cover, metal bottom plate IP66 rain and dust protection IK10 vandal resistant protection Transparent PC cover
Dimensions	110 x 47 mm (4.33 x 1.85 in)
Weight	310 g (0.68 lb)
Installation	Panel mounting
Protection	-CT models: PCB conformal coating

## Environmental Limits

Operating Temperature	Standard Models: -25 to 55°C (-13 to 131°F) Wide Temp. Models: -40 to 70°C (-40 to 158°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Ingress Protection	IEC 60529, IP66
Vandal Resistance	EN 62262, IK10
Altitude	2000 m

## Standards and Certifications

EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Signal: 2 kV IEC 61000-4-5 Surge: Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Freefall	IEC 60068-2-31
Railway Fire Protection	EN 45545-2
Safety	UL 62368-1
Shock	IEC 60068-2-27, IEC 61373, EN 50155
Vibration	IEC 60068-2-64, IEC 61373, EN 50155
Railway	EN 50155 (complies with a portion of EN 50155 specifications)

## MTBF

Time	1,944,687 hrs
Standards	Telcordia SR332

## Warranty

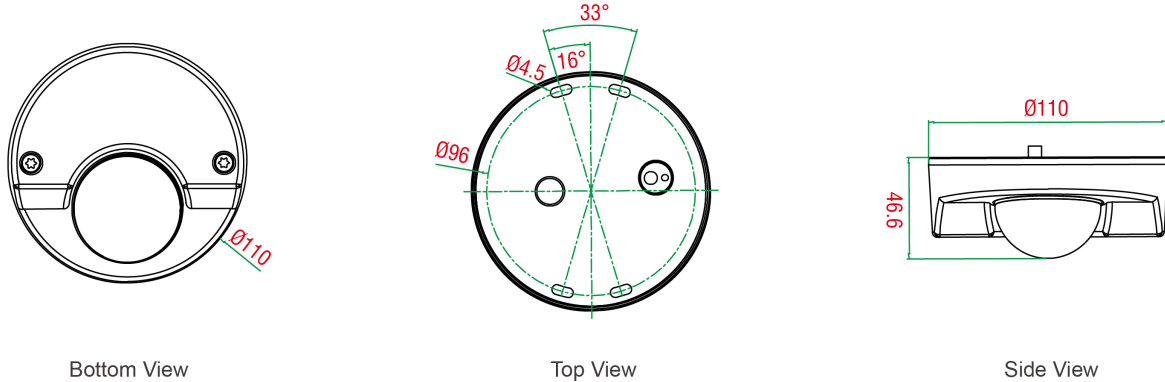
Warranty Period	5 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>

## Package Contents

Device	1 x VPort P06-1MP-M12 Series camera
Installation Kit	1 x sticker 1 x L-type Torx screwdriver 1 x grounding screw 4 x indented hexagonal head tapping screws, nuts, gaskets, and spring washers
Documentation	1 x document and software CD 1 x quick installation guide 1 x warranty card

## Dimensions

Unit: mm (inch)



Bottom View

Top View

Side View

## Ordering Information

Model Name	Lens	Audio Interface	Operating Temp.	Conformal Coating
VPort P06-1MP-M12-CAM28	2.8 mm	Line-in	-25 to 55°C	-
VPort P06-1MP-M12-CAM36	3.6 mm	Line-in	-25 to 55°C	-
VPort P06-1MP-M12-CAM42	4.2 mm	Line-in	-25 to 55°C	-
VPort P06-1MP-M12-CAM60	6.0 mm	Line-in	-25 to 55°C	-
VPort P06-1MP-M12-CAM80	8.0 mm	Line-in	-25 to 55°C	-
VPort P06-1MP-M12-CAM28-T	2.8 mm	Line-in	-40 to 70°C	-
VPort P06-1MP-M12-CAM36-T	3.6 mm	Line-in	-40 to 70°C	-
VPort P06-1MP-M12-CAM42-T	4.2 mm	Line-in	-40 to 70°C	-
VPort P06-1MP-M12-CAM60-T	6.0 mm	Line-in	-40 to 70°C	-
VPort P06-1MP-M12-CAM80-T	8.0 mm	Line-in	-40 to 70°C	-
VPort P06-1MP-M12-MIC-CAM28	2.8 mm	Microphone	-25 to 55°C	-
VPort P06-1MP-M12-MIC-CAM36	3.6 mm	Microphone	-25 to 55°C	-
VPort P06-1MP-M12-MIC-CAM42	4.2 mm	Microphone	-25 to 55°C	-
VPort P06-1MP-M12-MIC-CAM60	6.0 mm	Microphone	-25 to 55°C	-
VPort P06-1MP-M12-MIC-CAM80	8.0 mm	Microphone	-25 to 55°C	-
VPort P06-1MP-M12-MIC-CAM28-T	2.8 mm	Microphone	-40 to 70°C	-
VPort P06-1MP-M12-MIC-CAM36-T	3.6 mm	Microphone	-40 to 70°C	-
VPort P06-1MP-M12-MIC-CAM42-T	4.2 mm	Microphone	-40 to 70°C	-
VPort P06-1MP-M12-MIC-CAM60-T	6.0 mm	Microphone	-40 to 70°C	-

Model Name	Lens	Audio Interface	Operating Temp.	Conformal Coating
VPort P06-1MP-M12-MIC-CAM80-T	8.0 mm	Microphone	-40 to 70°C	–
VPort P06-1MP-M12-CAM28-CT	2.8 mm	Line-in	-25 to 55°C	✓
VPort P06-1MP-M12-CAM36-CT	3.6 mm	Line-in	-25 to 55°C	✓
VPort P06-1MP-M12-CAM42-CT	4.2 mm	Line-in	-25 to 55°C	✓
VPort P06-1MP-M12-CAM60-CT	6.0 mm	Line-in	-25 to 55°C	✓
VPort P06-1MP-M12-CAM80-CT	8.0 mm	Line-in	-25 to 55°C	✓
VPort P06-1MP-M12-CAM28-CT-T	2.8 mm	Line-in	-40 to 70°C	✓
VPort P06-1MP-M12-CAM36-CT-T	3.6 mm	Line-in	-40 to 70°C	✓
VPort P06-1MP-M12-CAM42-CT-T	4.2 mm	Line-in	-40 to 70°C	✓
VPort P06-1MP-M12-CAM60-CT-T	6.0 mm	Line-in	-40 to 70°C	✓
VPort P06-1MP-M12-CAM80-CT-T	8.0 mm	Line-in	-40 to 70°C	✓
VPort P06-1MP-M12-MIC-CAM28-CT	2.8 mm	Microphone	-25 to 55°C	✓
VPort P06-1MP-M12-MIC-CAM36-CT	3.6 mm	Microphone	-25 to 55°C	✓
VPort P06-1MP-M12-MIC-CAM42-CT	4.2 mm	Microphone	-25 to 55°C	✓
VPort P06-1MP-M12-MIC-CAM60-CT	6.0 mm	Microphone	-25 to 55°C	✓
VPort P06-1MP-M12-MIC-CAM80-CT	8.0 mm	Microphone	-25 to 55°C	✓
VPort P06-1MP-M12-MIC-CAM28-CT-T	2.8 mm	Microphone	-40 to 70°C	✓
VPort P06-1MP-M12-MIC-CAM36-CT-T	3.6 mm	Microphone	-40 to 70°C	✓
VPort P06-1MP-M12-MIC-CAM42-CT-T	4.2 mm	Microphone	-40 to 70°C	✓
VPort P06-1MP-M12-MIC-CAM60-CT-T	6.0 mm	Microphone	-40 to 70°C	✓
VPort P06-1MP-M12-MIC-CAM80-CT-T	8.0 mm	Microphone	-40 to 70°C	✓

## Accessories (sold separately)

### Camera Mounting Kits

VP-SCO1	Side-cable-out adaptor for mounting the VPort P06-1MP-M12
VP-FP1	Fixed plate for mounting the VPort P06-1MP-M12
VP-06TC1	Top cover for the VPort 06-1MP-M12

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