

# VPort P06-1MP-M12 Series

**EN 50155 compliant, HD video image, compact IP cameras**



- > Compliant with EN 50121-3-2
- > Essential compliance with EN 50155\* (standard model supports T1 temperatures, -25 to 55°C; T model supports TX temperatures, -40 to 70°C)
- > 1/2.7" progressive scan camera with maximum 1280 x 800 resolution at up to 30 frames/second
- > High quality video image with DNR and WDR
- > Up to 3 H.264 or MJPEG independent video streams
- > DynaStream™ support for maximized network efficiency
- > CBR Pro™ support for high image quality in limited bandwidth transmissions
- > Supports DHCP Opt 66/67 for auto-configuration
- > 1 built-in audio input or microphone
- > ONVIF support for standardization and interoperability

\*Moxa defines "essential compliance" to include those EN 50155 requirements that make products more suitable for rolling stock railway applications.



## Introduction

The compact VPort P06-1MP-M12 cameras provide an HD (720P, 1280 x 720) video image, and feature an H.264/MJPEG IP dome, 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 essential sections of EN 50155, 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 IK8), 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

### Camera

- Sensor:** 1/2.7" HD progressive scan CMOS
- Lens:** 2.5, 3.6, 4.2, 6 mm fixed focal length
- Angle of View:**
  - 2.5 mm F2.8: Diagonal 170°, Horizontal 130°, Vertical 98°
  - 3.6 mm, F1.6: Diagonal 120°, Horizontal 96°, Vertical 56°
  - 4.2 mm, F1.6: Diagonal 96°, Horizontal 81°, Vertical 47°
  - 6.0 mm, F1.8: Diagonal 66°, Horizontal 51°, Vertical 38°
  - 8.0 mm, F1.8: Diagonal 44°, Horizontal 38°, Vertical 24°
- Camera Angle:**
  - Pan: ±30°
  - Tilt: 0-90° (3.6, 4.2, 6 mm lens), 30-60° (2.5 mm lens)
- Minimum Illumination:** 0.2 Lux @ F=1.2
- Synchronization:** Internal
- White Balance:** ATW/AWB
- Electronic Shutter:** Auto (1/30 to 1/25000 sec)
- S/N Ratio:** 50 dB (Gamma, Aperture, AGC, OFF; DNR ON)
- DNR:** Built-in DNR
- WDR:** Level 1-8, up to 115 dB
- AGC (auto gain control):** 2X, 4X, 8X, 16X, 32X, 64X
- Flickerless Control:** Automatic/50 Hz/60 Hz mode
- Auto Exposure:** Level ±5

- Image Rotation:** Flip, Mirror, and 180° rotation
- Image Setting:** Manual tuning with saturation, sharpness, and contrast
- Black Level Control:** High/Medium/Low
- Video**
  - 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

**Video Viewing:**

- DynaStream™ support for automatic frame rate adjustment
- CBR Pro™ for good image quality in limited bandwidth transmission
- 3 privacy mask areas configurable
- Adjustable image size and quality
- Timestamp and text overlay
- OSD (On screen Display) position adjustable
- Maximum of 5 simultaneous unicast connections

**Audio**

**Audio Inputs:** 1, Line-in, rugged RCA connector; or 1 built-in microphone input

**Audio Format:** Mono, PCM (G.711)

**Network**

**Protocols:** TCP/IP, UDP, HTTP, SMTP, NTP, DNS, DHCP, UPnP, RTP, RTSP, ICMP, QoS, IGMPv3, SNMPv1/v2c/v3, DDNS, TFTP, ARP, DHCP, OPT66/67

**Ethernet:** 1 10/100BaseT(X) isolated Ethernet port, 4-pin M12 D-coded female connector

**Power Requirements**

**Input:** Power-over-Ethernet (IEEE 802.3af)

**Power Consumption:** 6 W (max.)

**Physical Characteristics**

**Housing:** IP66 rain and dust protection, EN 62262 IK9 vandal-proof protection

**Dimensions:** Diameter: 110 mm (4.33 in); Height: 47 mm (1.85 in)

**Weight:** 310 g (0.68 lb)

**Installation:** Surface or ceiling mounting

*Note: Optional external housing and mounting accessories may be required.*

**Alarms**

**Intelligent Video:** Camera tamper

**Video Motion Detection:** 3 independently configurable motion 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

**Email/FTP Messaging:** Automatic transfer of stored images via email or FTP as event-triggered actions

**Security**

**Password:** User level password protection

**Filtering:** By IP address

**Encryption:** HTTPS, SSH

**Environmental Limits**

**Operating Temperature:**

Standard model: -25 to 55°C (-13 to 131°F)

Wide Temp. model: -40 to 70°C (-40 to 158°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

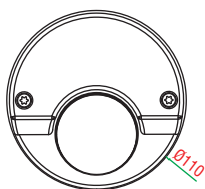
**Ambient Relative Humidity:** 5 to 95% (non-condensing)

**Altitude:** 2000 m

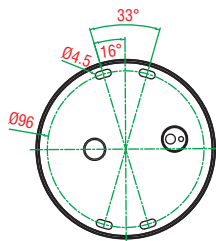
*Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.*

**Dimensions**

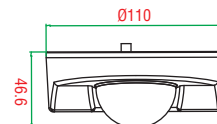
Unit: mm (inch)



Bottom View



Top View



Side View

**Standards and Certifications**

**Safety:** UL 60950-1

**Rail Traffic:** EN 50155 (essential compliance\*), EN 45545-2

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**EMC:** EN 55022/24

**EMI:** CISPR 22, 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: Power: 2 kV; Signal: 2 kV

IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV

IEC 61000-4-6 CS: 10 V

IEC 61000-4-8

**Shock:** IEC 61373

**Freefall:** IEC 60068-2-32

**Vibration:** IEC 61373

**Vandal Resistance:** EN 62262, IK9 level

**Fire Protection:** EN 45545-2: 2013

**MTBF** (mean time between failures)

**Time:** 1,944,687 hrs

**Standard:** Telcordia TR/SR

**Warranty**

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Minimum Viewing System Requirements**

**CPU:** Pentium 4, 2.4 GHz

**Memory:** 512 MB of memory

**OS:** Windows XP/2000 with SP4 or above, Windows Vista, Windows 7

**Browser:** Internet Explorer 9.x or above

**Multimedia:** DirectX 9.0c or above

**Software Development**

**VPort SDK PLUS:** Includes CGI commands, ActiveX Control, and API library for customized applications or system integration for third-party developers (the latest version of SDK is available for download from Moxa's website).

**Standard:** ONVIF Profile S

