

# VPort 06-2 Series

**EN 50155 compliant, 1080P video image, compact IP cameras**



- > Compliant with EN 50121-3-2 and essential sections\* of EN 50155 (T1 temperatures: -25 to 55°C; TX temperatures: -40 to 70°C)
- > 1/3" progressive scan camera with maximum 1920 x 1080 resolution at up to 30 frames/second
- > High quality video image with DNR and WDR
- > Up to 4 simultaneous H.264 or MJPEG independent video streams
- > DynaStream™ support for optimized network efficiency
- > CBR Pro™ support for high image quality in limited bandwidth transmissions
- > Supports SDXC (up to 1 TB SD card) for local storage
- > 1 built-in audio input or microphone
- > ONVIF conformity 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 VPort 06-2 cameras are compact, 1080P (1920x1080), H.264/MJPEG dome IP cameras designed for mobile video surveillance applications. The cameras are compliant with EN 50121-3-2, EN 62262 IK8, essential sections of EN 50155, and support a -25 to 55°C or -40 to 70°C operating temperature range. With a rugged M12 Ethernet port, SDXC slot for SD cards 64 GB and larger, ONVIF Profile

S standardization, built-in audio line port or microphone, PoE or 24 VDC power inputs, IP66 rain and dust protection, and the option of changing the lens, the VPort 06-2 cameras will perform reliably in a variety of extreme environmental conditions, making them suitable for a wide variety of mobile video surveillance applications.

## Specifications

### Camera

- Sensor:** 1/3" HD progressive scan CMOS
- Lens:** 2.5 mm, 3.6 mm, 4.2 mm, 6 mm, 8 mm fixed focal lengths
- Angle of View:**
  - 2.5 mm, F1.6: Diagonal 120°, Horizontal 101°, Vertical 57°
  - 3.6 mm, F1.6: Diagonal 99°, Horizontal 70°, Vertical 39°
  - 4.2 mm, F1.6: Diagonal 82°, Horizontal 62°, Vertical 34°
  - 6.0 mm, F1.8: Diagonal 62°, Horizontal 43°, Vertical 24°
  - 8.0 mm, F1.6: Diagonal 42°, Horizontal 33°, Vertical 17°
- Camera Angle:**
  - Pan: ±15°
  - Tilt: 0 to 90° (3.6, 4.2, 6 mm lenses), 30 to 60° (2.5 mm lens)
- Minimum Illumination:** 0.2 Lux @ F=1.2
- Synchronization:** Internal
- White Balance:** ATW/AWB
- Electronic Shutter:** Auto, Fixed (1/30 to 1/25000 sec)
- DNR:** Built-in DNR
- WDR:** On/Off, up to 100 dB
- AGC (auto gain control):** 2X, 4X, 8X, 16X
- Flickerless Control:** Automatic, 50 Hz, 60 Hz modes
- Auto Exposure:** Level ±5
- Image Rotation:** Flip, Mirror, 90°, 180°, and 270° rotation
- Image Setting:** Manual tuning with saturation, sharpness, and contrast

### Video

- Video Compression:** H.264 (ISO/IEC 14496-10) or MJPEG
- Video Output:** via Ethernet
- Video Streams:** Up to 4 independent 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
FHD	1920 x 1080	30	1920 x 1080	30

**Video Viewing:**

- DynaStream™ support for automatic frame rate adjustment
- CBR Pro™ for good image quality in limited bandwidth transmissions
- 3 privacy mask areas provided
- 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, or 1 built in to the microphone input

**Audio Format:** G.711, AAC

**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, IPv6, SIP

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

**Local Storage**

**SD Socket:** Micro SD socket

**Interface:** SDXC

**GPIO**

**Digital Inputs:** 1, max. 8 mA; Low: +13 V to 30 V; High: -30 V to +3 V

**Power Requirements**

**Input Voltage:** VPort P06-2 (PoE model): PoE (IEEE 802.3af)

VPort 06-2 (DC model): 12 to 24 VDC with DB9 connector

**Input Current:** 0.38 to 0.86 A

**Power Consumption:**

VPort P06-2: 8.1 W (max.)

VPort 06-2: 9 W (max.)

**Physical Characteristics**

**Housing:** IP66 rain and dust protection, EN 62262 IK8 vandal proof metal housing

**Dimensions:** 110 x 115.5 x 61.8 mm (4.33 x 4.54 x 2.43 in)

**Weight:** 620 g (1.37 lb)

**Installation:** Surface or ceiling mounting

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

**Alarms**

**Intelligent Video:** Camera tampering

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

**Shock:** G sensor for shock detection

**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

**Pre-alarm Buffer:** 50 MB video buffer for JPEG snapshot images

**Security**

**Password:** User level password protection

**Filtering:** By IP address

**Encryption:** HTTPS, SSH

**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:** -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.*

**Standards and Certifications**

**Safety:** UL 60950-1

**Rail Traffic:** EN 50155 (essential compliance\*), GB/T 24338.4-2009

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**EMC:** EN 55022/24

**EMI:** FCC Part 15, CISPR (EN 55022) 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: 2 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, IK8 level

*Note: Please check Moxa's website for the most up-to-date certification status.*

**MTBF (mean time between failures)**

**Time:** 977,972 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 or above

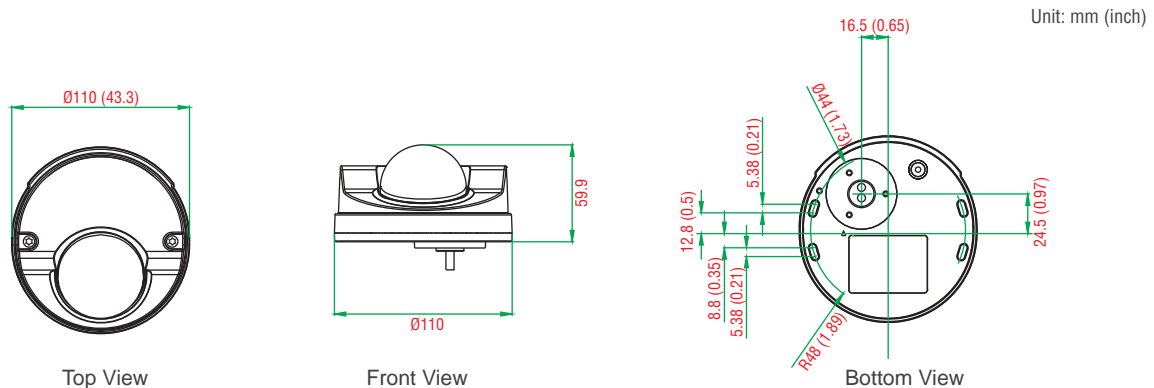
**Multimedia:** DirectX 9.0c or above

**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 SDK version is available for download from Moxa's website).

**Standard:** ONVIF Profile S

**Dimensions**



## Ordering Information

Model		Lens (mm)	Audio		Operating Temperature		Conformal Coating
PoE models	24 VDC models		Line-in	MIC	-25 to 55°C	-40 to 70°C	
VPort P06-2L25M	VPort 06-2L25M	2.5	✓	–	✓	–	–
VPort P06-2L36M	VPort 06-2L36M	3.6	✓	–	✓	–	–
VPort P06-2L42M	VPort 06-2L42M	4.2	✓	–	✓	–	–
VPort P06-2L60M	VPort 06-2L60M	6.0	✓	–	✓	–	–
VPort P06-2L80M	VPort 06-2L80M	8.0	✓	–	✓	–	–
VPort P06-2M25M	VPort 06-2M25M	2.5	–	✓	✓	–	–
VPort P06-2M36M	VPort 06-2M36M	3.6	–	✓	✓	–	–
VPort P06-2M42M	VPort 06-2M42M	4.2	–	✓	✓	–	–
VPort P06-2M60M	VPort 06-2M60M	6.0	–	✓	✓	–	–
VPort P06-2M80M	VPort 06-2M80M	8.0	–	✓	✓	–	–
VPort P06-2L25M-T	VPort 06-2L25M-T	2.5	✓	–	–	✓	–
VPort P06-2L36M-T	VPort 06-2L36M-T	3.6	✓	–	–	✓	–
VPort P06-2L42M-T	VPort 06-2L42M-T	4.2	✓	–	–	✓	–
VPort P06-2L60M-T	VPort 06-2L60M-T	6.0	✓	–	–	✓	–
VPort P06-2L80M-T	VPort 06-2L80M-T	8.0	✓	–	–	✓	–
VPort P06-2M25M-T	VPort 06-2M25M-T	2.5	–	✓	–	✓	–
VPort P06-2M36M-T	VPort 06-2M36M-T	3.6	–	✓	–	✓	–
VPort P06-2M42M-T	VPort 06-2M42M-T	4.2	–	✓	–	✓	–
VPort P06-2M60M-T	VPort 06-2M60M-T	6.0	–	✓	–	✓	–
VPort P06-2M80M-T	VPort 06-2M80M-T	8.0	–	✓	–	✓	–
VPort P06-2L25M-CT	VPort 06-2L25M-CT	2.5	✓	–	✓	–	✓
VPort P06-2L36M-CT	VPort 06-2L36M-CT	3.6	✓	–	✓	–	✓
VPort P06-2L42M-CT	VPort 06-2L42M-CT	4.2	✓	–	✓	–	✓
VPort P06-2L60M-CT	VPort 06-2L60M-CT	6.0	✓	–	✓	–	✓
VPort P06-2L80M-CT	VPort 06-2L80M-CT	8.0	✓	–	✓	–	✓
VPort P06-2M25M-CT	VPort 06-2M25M-CT	2.5	–	✓	✓	–	✓
VPort P06-2M36M-CT	VPort 06-2M36M-CT	3.6	–	✓	✓	–	✓
VPort P06-2M42M-CT	VPort 06-2M42M-CT	4.2	–	✓	✓	–	✓
VPort P06-2M60M-CT	VPort 06-2M60M-CT	6.0	–	✓	✓	–	✓
VPort P06-2M80M-CT	VPort 06-2M80M-CT	8.0	–	✓	✓	–	✓
VPort P06-2L25M-CT-T	VPort 06-2L25M-CT-T	2.5	✓	–	–	✓	✓
VPort P06-2L36M-CT-T	VPort 06-2L36M-CT-T	3.6	✓	–	–	✓	✓
VPort P06-2L42M-CT-T	VPort 06-2L42M-CT-T	4.2	✓	–	–	✓	✓
VPort P06-2L60M-CT-T	VPort 06-2L60M-CT-T	6.0	✓	–	–	✓	✓
VPort P06-2L80M-CT-T	VPort 06-2L80M-CT-T	8.0	✓	–	–	✓	✓
VPort P06-2M25M-CT-T	VPort 06-2M25M-CT-T	2.5	–	✓	–	✓	✓
VPort P06-2M36M-CT-T	VPort 06-2M36M-CT-T	3.6	–	✓	–	✓	✓
VPort P06-2M42M-CT-T	VPort 06-2M42M-CT-T	4.2	–	✓	–	✓	✓
VPort P06-2M60M-CT-T	VPort 06-2M60M-CT-T	6.0	–	✓	–	✓	✓
VPort P06-2M80M-CT-T	VPort 06-2M80M-CT-T	8.0	–	✓	–	✓	✓

### Optional Accessories (can be purchased separately)

**SoftNVR-IA V3.0:** 64-channel IP surveillance software for industrial automation applications

**VP-SC02:** Side-cable-out adapter for mounting the VPort 06-2 on a surface

**VP-FP2:** Fixed plate with threaded screw holes for mounting the VPort 06-2 directly over a ceiling aperture

### Package Checklist

- VPort 06-2 series IP camera
- VP-DP01 (0.6 g dry packs x 2)
- L-type Torx screwdriver
- 4 indented hexagonal head tapping screws, nuts, gaskets, and spring washers
- Installation sticker
- Quick installation guide (printed)
- Documentation and software CD
- Warranty card

#### Side-cable-out adapter for surface mounting

##### VP-SC02

**Dimensions:** Ø110 x 17 (H) mm

**Material:** Plastic

**Operating temperature:** -30 to 120°C

**Weight:** 60 g



#### Plate with threaded screw holes for ceiling mounting

##### VP-FP2

**Dimensions:** 110 (L) x 40 (W) mm

**Material:** Metal

**Weight:** 40 g

