

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

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

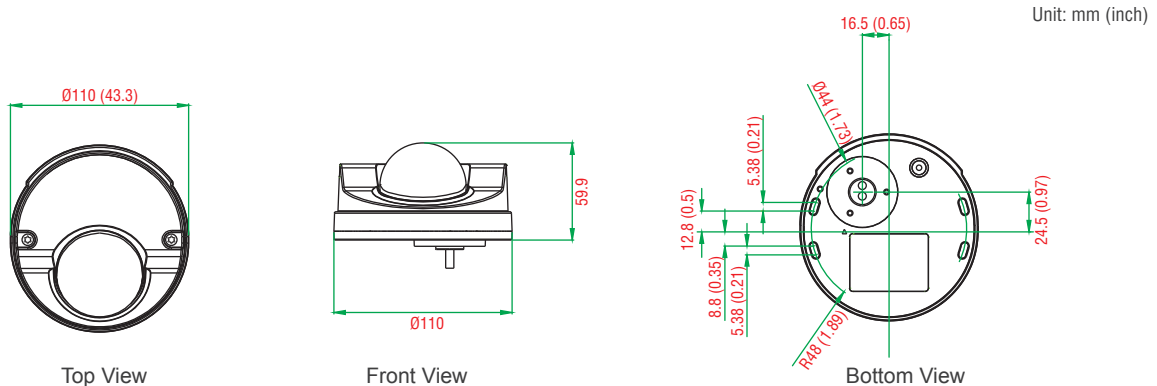
Multimedia: DirectX 9.0c or above

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

