

# VPort 06-2 Series

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



## Features and Benefits

- 1/3" progressive scan camera with maximum 1920 x 1080 resolution at up to 30 fps
- High quality video imaging with DNR and WDR
- Up to 4 simultaneous H.264 or MJPEG independent video streams
- DynaStream™ for optimized network efficiency
- CBR Pro™ 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

## Certifications



EN 50155



## Introduction

The VPort 06-2 cameras are compact, 1080P (1920 x 1080), H.264/MJPEG dome IP cameras designed for mobile video surveillance applications. The cameras are compliant with EN 62262 IK8, mandatory sections of EN 50155,<sup>1</sup> 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 up to 1 TB, ONVIF Profile S standardization, built-in audio line port or microphone, PoE or 24 VDC power inputs, IP66-rated, 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

### Memory

microSD Slot	SDXC
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### Input/Output Interface

Digital Input Channels	1
Digital Inputs	+13 to +30 V for state 1 -30 to +1 V for state 0 Max. input current: 8 mA
Connector	VPort P06-2 Series: 5-pin male M12 connector with 20 cm cable VPort 06-2 Series: DB9 male

### Ethernet Interface

PoE Ports (10/100BaseT(X), M12 D-coded 4-pin female connector)	VPort P06-2 Series: 1
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector)	VPort 06-2 Series: 1

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)

## Ethernet Software Features

Protocols	TCP/IP IPv4/IPv6 UDP HTTP RTP/RTSP ARP UPnP FTP TFTP NTP Client DNS QoS IGMP v3 ICMP SNMPv1/v2c/v3 DHCP Opt66/67 HTTPS SIP
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## Security Functions

Password	User-level password protection
Filter	IP address
Encryption	HTTPS SSH

## Power Parameters

No. of Power Inputs	1
Source of Input Power	VPort P06-2 Series: PoE (IEEE 802.3af)
Input Voltage	VPort 06-2 Series: 12/24 VDC
Input Current	VPort 06-2 Series: 0.86 A @ 12 VDC; 0.35 A @ 24 VDC VPort P06-2 Series: 0.17 A @ 48 VDC
Power Connector	VPort 06-2 Series: DB9 connector

## Camera Characteristics

Sensor	1/3-in 1080P progressive scan CMOS
Lens	VPort 06/P06-2x28M Series: f=2.8 mm, F2.0, Diagonal 94°, Horizontal 85°, Vertical 45° VPort 06/P06-2x36M Series: f=3.6 mm, F1.6, Diagonal 99°, Horizontal 70°, Vertical 39° VPort 06/P06-2x42M Series: f=4.2 mm, F1.6, Diagonal 82°, Horizontal 62°, Vertical 34° VPort 06/P06-2x60M Series: f=6.0 mm, F1.8, Diagonal 62°, Horizontal 43°, Vertical 24° VPort 06/P06-2x80M Series: f=8.0 mm, F1.6, Diagonal 42°, Horizontal 33°, Vertical 17°
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)	100 dB
AGC (auto gain control)	2X, 4X, 8X, 16X
Flickerless Control	Automatic, 50 Hz, 60 Hz modes

Image Rotation	Flip, Mirror, 90°, 180°, 270° rotation
Image Setting	Manual tuning with saturation, sharpness, and contrast
Camera Angle	Pan: ±15°, Tilt: 0° to 90° (controlled manually)

#### Video Interface

Video Compression	H.264 (ISO/IEC 14496-10) or MJPEG
Video Output	via Ethernet
Video Streams	4 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
	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
	Full HD	1920 x 1080	30	1920 x 1080	30

Video Viewing	DynaStream™ support for changing the video frame rate automatically 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 10 simultaneous unicast connections, 50 multicast clients
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#### Audio Interface

Audio Format	Mono, PCM (G.711) AAC
Audio Inputs	VPort 06/P06-2MxxM Series: 1 x built-in microphone VPort 06-2LxxM Series: 1 x line-in, with DB9 connector VPort P06-2LxxM Series: 1 x line-in, with M12 connector

#### Camera Software Development

Video Standards	ONVIF Profile S
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#### Camera Alarm Software Features

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

Pre-Alarm Buffer	50 MB video buffer for JPEG snapshot images
Video Recording	Event recordings stored on the SD card
<b>Software Requirements</b>	
Memory Size	2 GB
Operating System	Windows 7 or above
Browser	Internet Explorer 9.x or above
Multimedia	DirectX 9.0C or above
<b>Physical Characteristics</b>	
Housing	IP66 rain and dust protection Metal housing, PC dome cover IK8 vandal resistant protection
Dimensions	110 x 115.5 x 61.8 mm (4.33 x 4.53 x 2.43 in)
Weight	620 g (1.37 lb)
Installation	Panel mounting
Protection	PCB conformal coating is optional and provided on request. If conformal coating is required, please contact Moxa.
<b>Environmental Limits</b>	
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, IK8
Altitude	2000 m Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.
<b>Standards and Certifications</b>	
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: 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 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	VPort 06-2LXXM Series: 1,063,089 hrs VPort 06-2MXXM Series: 1,039,008 hrs VPort P06-2LXXM Series: 1,075,216 hrs VPort P06-2MXXM Series: 1,050,590 hrs
Standards	Telcordia SR332

## Warranty

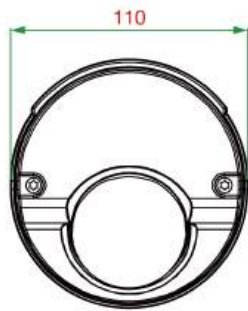
Warranty Period	5 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>

## Package Contents

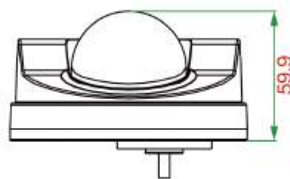
Device	1 x VPort 06-2 Series camera
Installation Kit	1 x sticker 1 x L-type Torx screwdriver 4 x indented hexagonal head tapping screws, nuts, gaskets, and spring washers
Documentation	1 x quick installation guide 1 x warranty card

## Dimensions

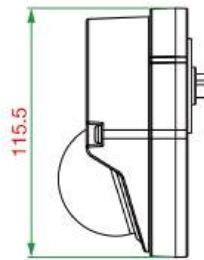
Unit: mm



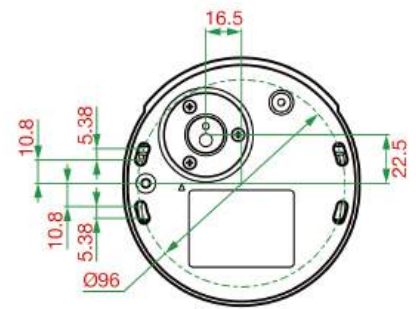
Top View



Front View



Side View



Bottom View

## Ordering Information

Model Name	Lens	Audio Interface	Local Storage	Power Input	Operating Temp.
VPort P06-2L28M	2.8 mm	Line-in	microSD slot, SDXC interface	PoE	-25 to 55°C
VPort P06-2L28M-T	2.8 mm	Line-in	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort P06-2M28M	2.8 mm	Microphone	microSD slot, SDXC interface	PoE	-25 to 55°C
VPort P06-2M28M-T	2.8 mm	Microphone	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort 06-2L28M	2.8 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2L28M-T	2.8 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort 06-2M28M	2.8 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2M28M-T	2.8 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort P06-2L36M	3.6 mm	Line-in	microSD slot, SDXC interface	PoE	-25 to 55°C

Model Name	Lens	Audio Interface	Local Storage	Power Input	Operating Temp.
VPort P06-2L36M-T	3.6 mm	Line-in	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort P06-2M36M	3.6 mm	Microphone	microSD slot, SDXC interface	PoE	-25 to 55°C
VPort P06-2M36M-T	3.6 mm	Microphone	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort 06-2L36M	3.6 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2L36M-T	3.6 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort 06-2M36M	3.6 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2M36M-T	3.6 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort P06-2L42M	4.2 mm	Line-in	microSD slot, SDXC interface	PoE	-25 to 55°C
VPort P06-2L42M-T	4.2 mm	Line-in	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort P06-2M42M	4.2 mm	Microphone	microSD slot, SDXC interface	PoE	-25 to 55°C
VPort P06-2M42M-T	4.2 mm	Microphone	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort 06-2L42M	4.2 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2L42M-T	4.2 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort 06-2M42M	4.2 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2M42M-T	4.2 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort P06-2L60M	6.0 mm	Line-in	microSD slot, SDXC interface	PoE	-25 to 55°C
VPort P06-2L60M-T	6.0 mm	Line-in	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort P06-2M60M	6.0 mm	Microphone	microSD slot, SDXC interface	PoE	-25 to 55°C
VPort P06-2M60M-T	6.0 mm	Microphone	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort 06-2L60M	6.0 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2L60M-T	6.0 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort 06-2M60M	6.0 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2M60M-T	6.0 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort P06-2L80M	8.0 mm	Line-in	microSD slot, SDXC interface	PoE	-25 to 55°C
VPort P06-2L80M-T	8.0 mm	Line-in	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort P06-2M80M	8.0 mm	Microphone	microSD slot, SDXC interface	PoE	-25 to 55°C

Model Name	Lens	Audio Interface	Local Storage	Power Input	Operating Temp.
VPort P06-2M80M-T	8.0 mm	Microphone	microSD slot, SDXC interface	PoE	-40 to 70°C
VPort 06-2L80M	8.0 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2L80M-T	8.0 mm	Line-in	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C
VPort 06-2M80M	8.0 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-25 to 55°C
VPort 06-2M80M-T	8.0 mm	Microphone	microSD slot, SDXC interface	12/24 VDC	-40 to 70°C

## Accessories (sold separately)

### Camera Mounting Kits

VP-FP2	Fixed plate for mounting the VPort 06
VP-06TC2C	Top cover for the VPort 06-2L, coated dome cover  Applicable Models: VPort 06-2L28M-T VPort 06-2L28M VPort 06-2L80M VPort 06-2L60M-T VPort 06-2L42M VPort 06-2L60M VPort 06-2L36M-T VPort 06-2L80M-T VPort 06-2L42M-T
VP-SC02	Side-cable-out adapter for surface mounting a VPort 06-2
VP-06MTC2C	Top cover for the VPort 06-2M, coated dome cover  Applicable Models: VPort 06-2M36M-T VPort 06-2M42M VPort 06-2M42M-T VPort 06-2M28M-T VPort 06-2M28M VPort 06-2M36M VPort 06-2M60M VPort 06-2M80M VPort 06-2M80M-T VPort 06-2M60M-T
VP-DP01	silica gel dry pack (2 x 0.6 g) with sticker

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