

# VPort 06EC-2V Series

EN 50155, 1080p resolution, day & night outdoor IP cameras



## Features and Benefits

- IP67-rated
- 1920 x 1080 resolution at up to 60 fps
- Built-in front glass heater to remove snow and frost
- iCapTrue™ image enhancement technology
- DynaStream™ for optimized network efficiency
- CBR Pro™ for high image quality in limited bandwidth transmissions
- ONVIF Profile S support for standardization and interoperability
- Complies with all EN 50155 mandatory test items<sup>1</sup>

## Certifications



## Introduction

The VPort 06EC-2V outdoor IP cameras support 1080P (1920 x 1080) resolution video images at up to 60 frames per second. iCapTrue's new image enhancement technology uses an advanced AE and AWB algorithm to produce better image quality in a variety of environments. The chassis design is IP67-rated, and has been shown to provide ample dust and rain protection, and with a built-in front glass heater and a tough outer cover, the cameras have the versatility and ruggedness needed for outdoor mobile IP video surveillance applications. In addition, models capable of operating between -40 to 70°C are available.

## Specifications

### Memory

microSD Slot	SDXC
--------------	------

### Input/Output Interface

Digital Output Channels	1
Contact Current Rating	Resistive load: 1 A @ 24 VDC
Connector	5-pin A-coded male M12 connector with 20 cm cable

### Ethernet Interface

PoE Ports (10/100BaseT(X), M12 D-coded 4-pin female connector)	1
--	---

### Ethernet Software Features

Protocols	TCP/IP, IPv4/IPv6, UDP, HTTP, RTP/RTSP, ARP, UPnP, FTP, TFTP, SMTP, NTP Client, DNS, DDNS, 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, click here: [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	2
Source of Input Power	PoE (IEEE 802.3af)
Input Voltage	24 VDC for front-window heater (for defrosting)
Input Current	0.167 A @ 48 VDC, 0.9 A @ 24 VDC
Power Connector	M12 connector
Note	PoE is for powering the camera; 24 VDC is for powering the heater

## Camera Characteristics

Sensor	1/3-in 1080P progressive scan CMOS
Lens	VPort 06EC-2V36M Series: f=3.6 mm, F1.6, Diagonal 99°, Horizontal 70°, Vertical 39° VPort 06EC-2V42M Series: f=4.2 mm, F1.6, Diagonal 82°, Horizontal 62°, Vertical 34° VPort 06EC-2V60M Series: f=6.0 mm, F1.8, Diagonal 62°, Horizontal 43°, Vertical 24° VPort 06EC-2V80M Series: f=8.0 mm, F1.6, Diagonal 42°, Horizontal 33°, Vertical 17°
Minimum Illumination	Color: 0.2 lux, at F1.6 (Gain High, 50 IRE, 1/30 sec) B/W: 0.05 lux, at F1.6 (Gain High, 50 IRE, 1/30 sec)
Day & Night	Auto/Color/BW; ICR control
ICR Control	Auto
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: ±5°, Tilt: +10/-5° (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
NTSC/PAL	Auto-sensing or manual

Video Resolution and FPS (frames per second)	NTSC		PAL	
	Size	Max. FPS	Size	Max. FPS
QCIF	176 x 112	60	176 x 144	50
CIF	352 x 240	60	352 x 288	50
VGA	640 x 480	60	640 x 480	50
4CIF	704 x 480	60	704 x 576	50
Full D1	720 x 480	60	720 x 576	50
SVGA	800 x 600	60	800 x 600	50
HD	1280 x 720	60	1280 x 720	50
WXGA	1280 x 800	60	1280 x 800	50
1080p	1920 x 1080	60	1920 x 1080	50

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> <p>Digital PTZ</p>
---------------	---

#### Camera Software Development

VPort SDK PLUS	Includes CGI commands, ActiveX Control, and API library for customized applications or system integration for third-party developers.
Video Standards	ONVIF Profile S

#### Camera Alarm Software Features

Intelligent Video	Camera tampering detection
Video Motion Detection	3 independently configurable areas
Shock Detection	Built-in G sensor
Humidity	Detects camera's internal humidity
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
Video Recording	Event recordings stored on the SD card

#### Software Requirements

Memory Size	2 GB
Operating System	Windows 7 or above
Browser	Internet Explorer 9.x or above
Multimedia	DirectX 9.0C or above

## Physical Characteristics

Housing	Metal IP67 Transparent Glass cover
Dimensions	83 x 168 x 233 mm (3.27 x 6.61 x 8.78 in)
Weight	1630 g (3.59 lb)
Installation	Wall mounting (standard)
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, IP67
Salt Spray Test	ASTM B368 (CASS), 125 hours
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: 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 PFMF
Freefall	IEC 60068-2-31
Railway Fire Protection	EN 45545-2
Safety	UL 60950-1
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	480,269 hrs
Standards	Telcordia SR332

## Warranty

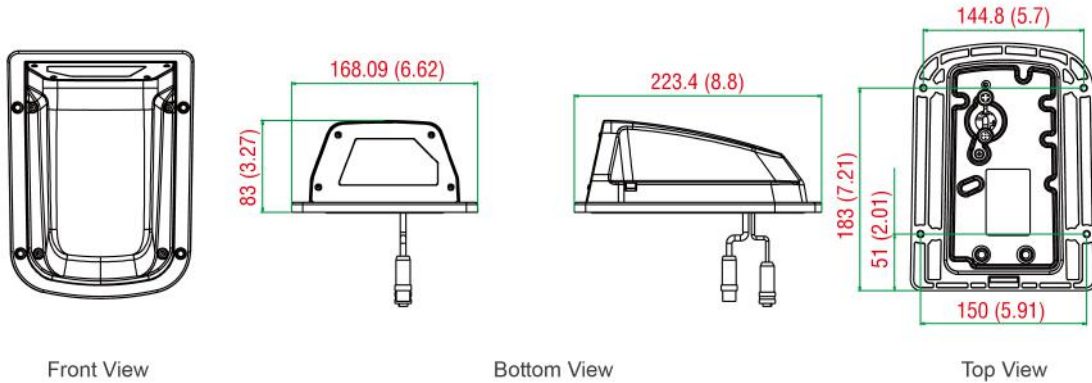
Warranty Period	5 years Note: Limited warranty on moving parts; see Moxa's online warranty policy for details.
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>

## Package Contents

Device	1 x VPort 06EC-2V Series camera
Installation Kit	1 x cap, male, metal, for M12 port 1 x 15 g dry pack (VP-DP02) 1 x sticker
Documentation	1 x document and software CD 1 x quick installation guide 1 x warranty card

## Dimensions

Unit: mm (inch)



## Ordering Information

Model Name	Lens	Local Storage	Operating Temp.	Conformal Coating
VPort 06EC-2V36M	3.6 mm	microSD slot, SDXC interface	-25 to 55°C	-
VPort 06EC-2V42M	4.2 mm	microSD slot, SDXC interface	-25 to 55°C	-
VPort 06EC-2V60M	6.0 mm	microSD slot, SDXC interface	-25 to 55°C	-
VPort 06EC-2V80M	8.0 mm	microSD slot, SDXC interface	-25 to 55°C	-
VPort 06EC-2V36M-T	3.6 mm	microSD slot, SDXC interface	-40 to 70°C	-
VPort 06EC-2V42M-T	4.2 mm	microSD slot, SDXC interface	-40 to 70°C	-
VPort 06EC-2V60M-T	6.0 mm	microSD slot, SDXC interface	-40 to 70°C	-
VPort 06EC-2V80M-T	8.0 mm	microSD slot, SDXC interface	-40 to 70°C	-
VPort 06EC-2V36M-CT	3.6 mm	microSD slot, SDXC interface	-25 to 55°C	✓
VPort 06EC-2V42M-CT	4.2 mm	microSD slot, SDXC interface	-25 to 55°C	✓
VPort 06EC-2V60M-CT	6.0 mm	microSD slot, SDXC interface	-25 to 55°C	✓
VPort 06EC-2V80M-CT	8.0 mm	microSD slot, SDXC interface	-25 to 55°C	✓
VPort 06EC-2V36M-CT-T	3.6 mm	microSD slot, SDXC interface	-40 to 70°C	✓

Model Name	Lens	Local Storage	Operating Temp.	Conformal Coating
VPort 06EC-2V42M-CT-T	4.2 mm	microSD slot, SDXC interface	-40 to 70°C	✓
VPort 06EC-2V60M-CT-T	6.0 mm	microSD slot, SDXC interface	-40 to 70°C	✓
VPort 06EC-2V80M-CT-T	8.0 mm	microSD slot, SDXC interface	-40 to 70°C	✓

## Accessories (sold separately)

### Camera Mounting Kits

VP-DP02	15 g dry pack with hook-and-loop fastener
---------	---

© Moxa Inc. All rights reserved. Updated Nov 12, 2018.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.