VPort 06EC-2V Series

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

> IP67-rated dustproof and waterproof protection
> 1920 x 1080 resolution at up to 60 fps
> Built-in front glass heater to remove snow and frost
> iCapTrue image enhancement technology
> DynaStream™ maximizes network efficiency
> CBR Pro™ provides high-quality images under limited-bandwidth conditions
> ONVIF Profile S supported for interoperability
> Complies with all EN 50155 mandatory test items*

*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

DynaStream   ONVIF

cULus LISTED   EN 50155   CE   FC

: 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 supporting a wide -40 to 70°C operating temperature range are available.

: Specifications

Camera

Sensor: 1/3" HD progressive scan CMOS
Lens:
• 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°
Illumination (low light sensitvity):
• Color: 0.2 Lux @ F1.6
• Black/White: 0.05 Lux
Camera Angle: Pan ±5°, Tilt +10/-5° (controlled manually)
ICR Control (for day & night): Auto
Synchronization: Internal
White Balance: ATW/AWB/Custom settings, with 4 preset color temperatures
Electronic Shutter: Auto, Fixed (1/30 to 1/25000 sec)
DNR: Built-in
WDR: On/Off, up to 100 dB
AGC (auto gain control): 2X, 4X, 8X, 16X
Flickerless Control: Automatic, 50 Hz, 60 Hz
Auto Exposure: Level ±5
Image Rotation: Flip, Mirror, 90°, 180°, 270° 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: 4

Video Viewing:
• CBR Pro™ for good image quality in limited bandwidth transmissions
• DynaStream™ support for automatic frame rate adjustment
• 3 configurable privacy mask areas
• Adjustable image size and quality
• Timestamp and text overlay
• OSD (On Screen Display) position adjustable
• Maximum of 5 simultaneous unicast connections
• Digital PTZ

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

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, IEC 61375-2-3
Ethernet: 1 10/100BaseT(X) isolated Ethernet port, 4-pin M12 Dcode female connector, with 20 cm cable

Local Storage

SD Socket: Micro SD socket
Interface: SDXC (can support up to 1 TB)

GPIO

Digital Outputs: 1, 5-pin M12 male connector with 20 cm cable, 24 VDC / 1 A

Power Requirements
Camera: Power over Ethernet (IEEE 802.3af)
Heater Input: 24 VDC (for defrosting)

Physical Characteristics
Housing: Metal housing with IP67 rain and dust protection
Dimensions: 83 x 168 x 223 mm (3.27 x 6.61 x 8.78 in)
Weight: 1.63 kg (3.59 lb)

Alarms
Intelligent Video: Camera tamper
Video Motion Detection: 3 independently configurable areas
Shock: G sensor for shock detection
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

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*, EN 50121-3-2:2015
*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
EMI: FCC Part 15, CISPR (EN 55032) 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
Salt Spray Test: ASTM B368 (CASS) 125 hours
Note: Please check Moxa's website for the most up-to-date certification status.

MTBF (mean time between failures)
Time: 480,269 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 with SP3 or above, Windows 7
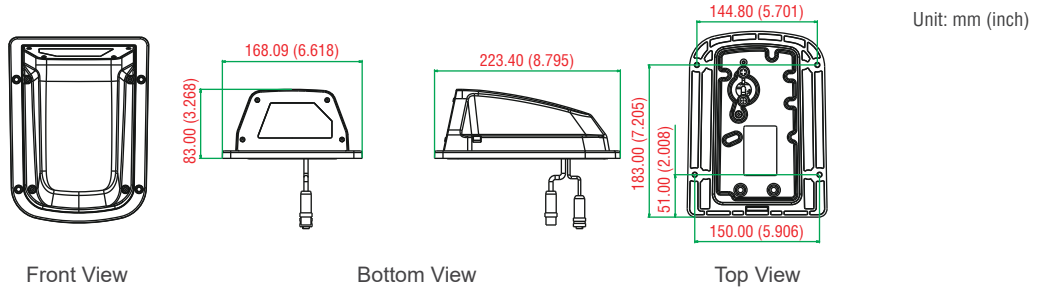**Browser:** Internet Explorer 8.x or above
Multimedia: DirectX 9.0c or above

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

Dimensions

168.09 (6.618) · 83.00 (3.268) · 223.40 (8.795) · 144.80 (5.701) · 183.00 (7.205) · 51.00 (2.008) · 150.00 (5.906)

Unit: mm (inch)

Front View · Bottom View · Top View

Ordering Information

Model	Lens mm	Operating Temp. Range		Conformal Coating
		-25 to 55°C	-40 to 70°C	
VPort 06EC-2V36M	3.6	✓	–	–
VPort 06EC-2V42M	4.2	✓	–	–
VPort 06EC-2V60M	6	✓	–	–
VPort 06EC-2V80M	8	✓	–	–
VPort 06EC-2V36M-CT	3.6	✓	–	✓
VPort 06EC-2V42M-CT	4.2	✓	–	✓
VPort 06EC-2V60M-CT	6	✓	–	✓
VPort 06EC-2V80M-CT	8	✓	–	✓
VPort 06EC-2V36M-T	3.6	–	✓	–
VPort 06EC-2V42M-T	4.2	–	✓	–
VPort 06EC-2V60M-T	6	–	✓	–
VPort 06EC-2V80M-T	8	–	✓	–
VPort 06EC-2V36M-CT-T	3.6	–	✓	✓
VPort 06EC-2V42M-CT-T	4.2	–	✓	✓
VPort 06EC-2V60M-CT-T	6	–	✓	✓
VPort 06EC-2V80M-CT-T	8	–	✓	✓

Package Checklist
- VPort 06EC-2V IP camera
- VP-DP02 (15 g dry pack)
- Installation sticker
- Quick installation guide (printed)
- Documentation and software CD
- Warranty card