

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



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 sensitivity):

- 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

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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

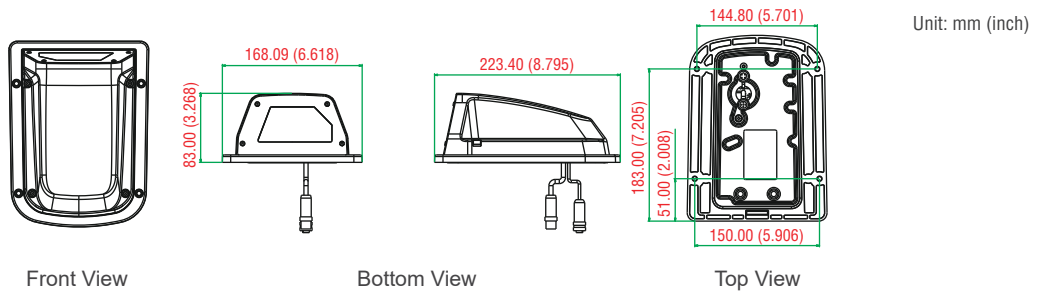
CPU: Pentium 4, 2.4 GHz
Memory: 512 MB of memory
OS: Windows XP with SP3 or above, Windows 7
Browser: Internet Explorer 8.x or above
Multimedia: DirectX 9.0c or above

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



Ordering Information

| Model | Lens | Operating Temp. Range | | Conformal Coating |
|-----------------------|------|-----------------------|-------------|-------------------|
| | mm | -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