

# 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](http://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](http://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

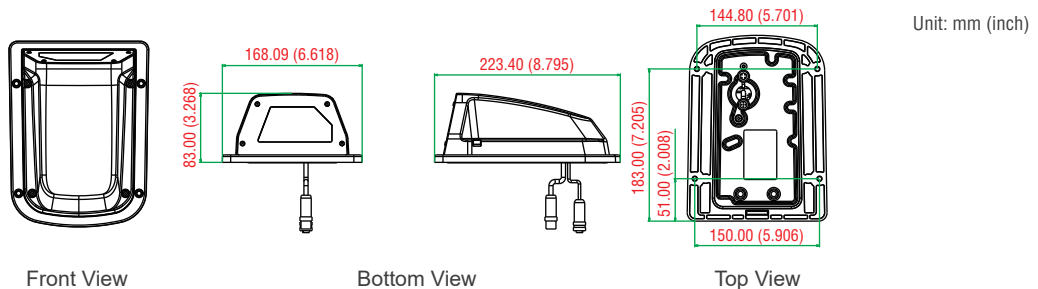
**Multimedia:** DirectX 9.0c or above

## 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