# VPort P06HC-1MP-M12 Series

*HD video image, square-type IP cameras for mobile surveillance*

## Features and Benefits

- -25 to 55°C operating temperature
- 1/2.7" progressive scan camera with maximum 1280 x 800 resolution at up to 30 fps
- Flush mounting for hiding inside a panel, such as a wall or ceiling
- Up to 3 H.264 or MJPEG independent video streams
- DynaStream™ for optimized network efficiency
- CBR Pro™ for high image quality in limited bandwidth transmissions
- Supports DHCP options 66 and 67 for auto-configuration
- 1 built-in microphone for audio input, and 1 digital input for external sensor
- ONVIF support for standardization and interoperability

## Certifications

EN 50155    c(UL)us LISTED    CE    FC

## Introduction

The VPort P06HC-1MP-M12 square-type IP cameras provide an HD (720P, 1280 x 720) video image, and feature 3 H.264/MJPEG video streams, giving them the versatility and ruggedness to excel in many different installations and environments for IP video surveillance applications. In addition, the cameras comply with a portion of EN 50155 specifications,[1] covering operating temperature, power input voltage, surge, ESD, and vibration, making them suitable for a variety of industrial applications. The cameras feature a -25 to 55°C operating temperature, a rugged M12 Ethernet port, 1 built-in microphone, 1 digital input, PoE power inputs, IP66 rain and dust protection, and a selectable lens.

## Specifications

### Input/Output Interface

| | |
|---|---|
| Digital Input Channels | 1 |
| Digital Inputs | +13 to +30 V for state 1<br>-30 to +1 V for state 0<br>Max. input current: 8 mA |
| 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, UDP, HTTP, RTP/RTSP, ARP, UPnP, FTP, TFTP, SMTP, NTP Client, DNS, DDNS, QoS, IGMP v3, ICMP, SNMPv1/v2c/v3, DHCP Opt66/67 |

### Security Functions

| | |
|---|---|
| Password | User-level password protection |
| Filter | IP address |

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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

## Power Parameters

| | |
|---|---|
| No. of Power Inputs | 1 |
| Source of Input Power | PoE (IEEE 802.3af) |
| Input Current | 0.13 A @ 48 VDC |

## Camera Characteristics

| | |
|---|---|
| Sensor | 1/2.7-in HD progressive scan CMOS |
| Lens | f=3.6 mm, F1.6, Diagonal 120°, Horizontal 96°, Vertical 56° |
| 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) | 69 dB |
| AGC (auto gain control) | 2X, 4X, 8X, 16X |
| Flickerless Control | Automatic, 50 Hz, 60 Hz modes |
| Image Rotation | Flip, Mirror, and 180° rotation |
| Image Setting | Manual tuning with brightness and contrast |

## Video Interface

| | |
|---|---|
| Video Compression | H.264 (ISO/IEC 14496-10) or MJPEG |
| Video Output | via Ethernet |
| Video Streams | 3 independent H.264 or MJPEG video streams |

**Video Resolution and FPS (frames per second)**

| | NTSC | | PAL | |
|---|---|---|---|---|
| | Size | Max. FPS | Size | Max. FPS |
| 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 |

| | |
|---|---|
| Video Viewing | DynaStream™ support for changing the video frame rate automatically<br>3 privacy mask areas provided<br>Adjustable image size and quality<br>Timestamp and text overlay<br>Maximum of 5 simultaneous unicast connections, 50 multicast clients |

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## Audio Interface

| | |
|---|---|
| Audio Inputs | 1 x built-in microphone |
| Audio Format | Mono, PCM (G.711) |

## Camera Software Development

| | |
|---|---|
| VPort SDK PLUS | Includes CGI commands, ActiveX Control, and API library for customized applications or system integration for third-party developers |

## Camera Alarm Software Features

| | |
|---|---|
| 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 |
| Email/FTP Messaging | Automatic transfer of stored images via email or FTP as event-triggered actions |
| Pre-Alarm Buffer | 12 MB video buffer for JPEG snapshot images |

## Software Requirements

| | |
|---|---|
| Memory Size | 1 GB |
| Operating System | Windows 7 or above |
| Browser | Internet Explorer 9.x or above |
| Multimedia | DirectX 9.0C or above |

## Physical Characteristics

| | |
|---|---|
| Housing | Metal<br>IP66 rain and dust protection<br>Transparent PC cover |
| Dimensions | 109 x 68 x 90 mm (4.29 x 2.68 x 3.54 in) |
| Weight | 1100 g (2.43 lb) |
| Installation | Wall mounting (with optional kit) |
| Protection | VPort P06HC-1MP-M12-CAM36-CT: PCB conformal coating |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | -25 to 55°C (-13 to 131°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 |
| 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<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV<br>IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-6 CS: 10 V<br>IEC 61000-4-8 PFMF |

| | |
|---|---|
| Freefall | IEC 60068-2-31 |
| 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 | 1,275,915 hrs |
| Standards | Telcordia SR332 |

## Warranty

| | |
|---|---|
| Warranty Period | 5 years |
| Details | See www.moxa.com/warranty |

## Package Contents
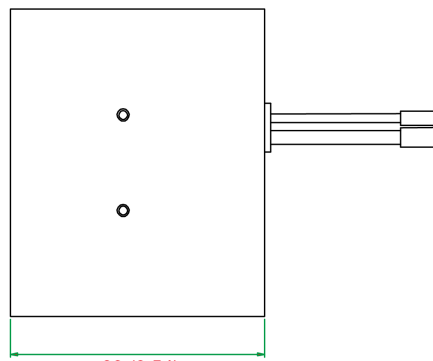
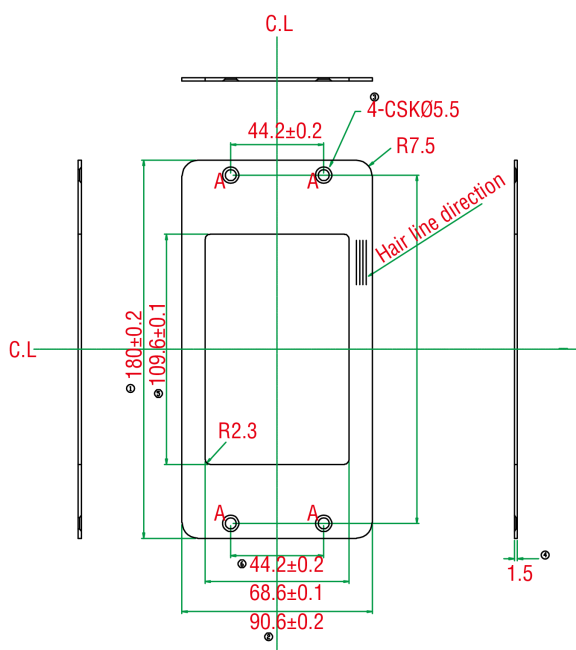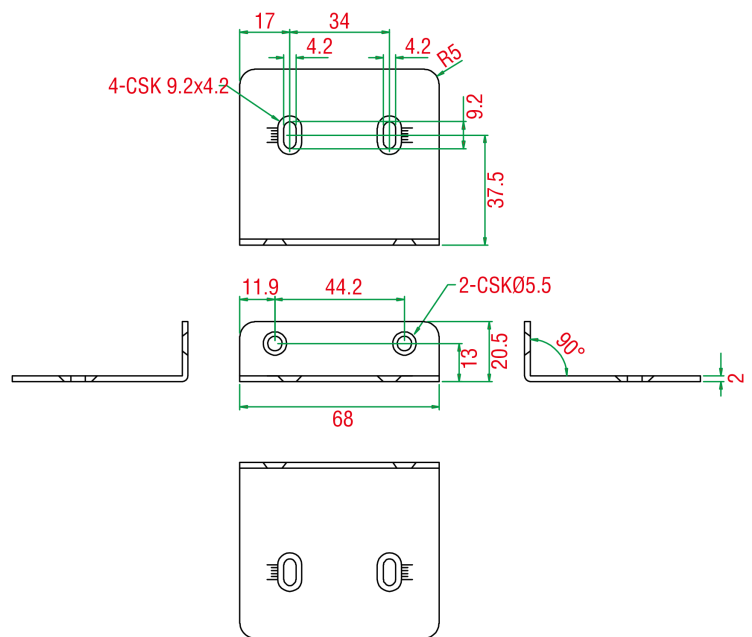| | |
|---|---|
| Device | 1 x VPort P06HC-1MP-M12 Series camera |
| Installation Kit | 1 x sticker<br>1 x L-type Torx screwdriver<br>2 x L-type installation kits<br>4 x Nylok screw<br>1 x dry pack |
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

# Dimensions

Unit: mm (inch)

**Front View**

109 (4.29)

68 (2.68)

**Side View**

90 (3.54)

**Front Decorative Plate**

C.L
4-CSKØ5.5
44.2±0.2
R7.5
Hair line direction
A
180±0.2
109.6±0.1
C.L
R2.3
A
44.2±0.2
68.6±0.1
90.6±0.2
1.5

**Wall-Mounting Kit**

17
34
4.2
4.2
R5
4-CSK 9.2x4.2
9.2
37.5

11.9
44.2
2-CSKØ5.5
13
20.5
90°
68
2
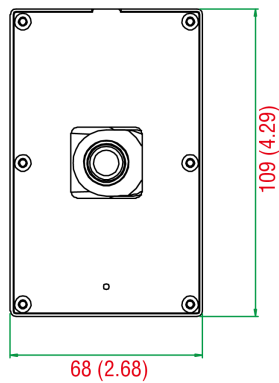
## Ordering Information

| Model Name | Lens | Audio Interface | Operating Temp. | Conformal Coating | Mounting |
|---|---|---|---|---|---|
| VPort P06HC-1MP-M12-CAM36 | 3.6 mm | Microphone | -25 to 55°C | – | Panel mount or recessed mounting (-with optional kit) |
| VPort P06HC-1MP-M12-CAM36-CT | 3.6 mm | Microphone | -25 to 55°C | ✓ | Panel mount or recessed mounting (-with optional kit) |

## Accessories (sold separately)

### Mounting Kits

| VP-FD1 | Front decorative plate for the VPort P06HC |
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