

# VPort P06HC-1MP-M12 Series

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



with front decorative plate

- > Compliant with EN 50121-3-2 and essential sections of EN 50155\*
- > -25 to 55°C operating temperature
- > 1/2.7" progressive scan camera with maximum 1280 x 800 resolution at up to 30 frames/second
- > Flush mounting for hiding inside a panel, such as a wall or ceiling
- > Up to 3 H.264 or MJPEG independent video streams
- > DynaStream™ support for maximized network efficiency
- > CBR Pro™ support for high image quality in limited bandwidth transmissions
- > Supports DHCP Opt 66/67 for auto-configuration
- > 1 built-in microphone for audio input, and 1 digital input for external sensor
- > ONVIF support for standardization and interoperability

\*Moxa defines "essential compliance" to include those EN 50155 requirements that make products more suitable for rolling stock railway applications.



## 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, 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

### Camera

- Sensor:** 1/2.7" HD progressive scan CMOS
- Lens:** 3.6 mm megapixel fixed focal length lens
- Angle of View:**
  - 3.6 mm, F1.6: Diagonal 120°, Horizontal 96°, Vertical 56°
- Synchronization:** Internal
- Minimum Illumination:** 0.2 Lux @ F=1.2
- White Balance:** ATW/AWB
- Electronic Shutter:** Auto (1/30 to 1/25000 sec)
- S/N Ratio:** 50 dB (Gamma, Aperture, AGC, OFF; DNR ON)
- DNR:** Built-in DNR
- WDR:** Level 1-3, up to 115 dB
- AGC Control:** 2X, 4X, 8X, 16X
- Flickerless Control:** Automatic/50 Hz/60 Hz mode
- Auto Exposure:** Level ±5
- Image Rotation:** Flip, Mirror, and 180° rotation
- Image Setting:** Manual tuning with brightness and contrast

### Video

- Video Compression:** H.264 (ISO/IEC 14496-10) or MJPEG
- Video Output:** Via Ethernet
- Video Streams:** 3 independent H.264 or MJPEG video streams
  - Stream 1: H.264, 1280 x 800 resolution (max.)
  - Stream 2: H.264, 720 x 576 resolution (max.)
  - Stream 3: MJPEG, 720 x 576 resolution (max.)

Note: Streams 2 and 3 must be set to the same resolution

### 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 automatic frame rate adjustment
- CBR Pro™ for good image quality in limited bandwidth transmission
- 3 privacy mask areas configurable
- Adjustable image size and quality
- Timestamp and text overlay
- OSD (On screen Display) position adjustable
- Maximum of 5 simultaneous unicast connections
- Digital PTZ with 4x zoom

### Audio

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

## 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

**Ethernet:** 1 10/100BaseT(X) isolated Ethernet port, 4-pin M12 D-coded female connector

## GPIO

**Digital Inputs:** 1, max. 8 mA, isolated 5-pin M12 connector  
High: +13 V to +30 V; Low: -30 V to +3 V

## Power Requirements

**Input:** Power-over-Ethernet (IEEE 802.3af)

**Power Consumption:** 6 W (max.)

## Physical Characteristics

**Housing:** IP66 metal housing with transparent cover

**Dimensions:** 109 x 68 x 90 mm (4.29 x 2.68 x 3.54 in)

**Weight:** 903 g (1.1 lb)

**Installation:** Flush mounting

## Alarms

**Intelligent Video:** Camera tamper

**Video Motion Detection:** 3 independently configurable motion 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

## Security

**Password:** User level password protection

**Filtering:** By IP address

**Encryption:** HTTPS, SSH

## Environmental Limits

**Operating Temperature:** -25 to 55°C (-13 to 131°F)

**Storage Temperature:** -40 to 75°C (-40 to 167°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

**Altitude:** 2000 m

**Conformal Coating:** Available on request

## Standards and Certifications

**Safety:** UL 60950-1

**Rail Traffic:** EN 50155 (essential compliance\*), EN 45545-2

**EMI:** FCC Part 15, CISPR (EN 55022) 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: 2 kV

IEC 61000-4-6 CS: 10 V

IEC 61000-4-8

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**Shock:** IEC 61373

**Freefall:** IEC 60068-2-32

**Vibration:** IEC 61373

Note: Please check Moxa's website for the most up-to-date certification status.

## 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/2000 with SP4 or above, Windows Vista, Windows 7

**Browser:** Internet Explorer 9.x or above

**Multimedia:** DirectX 9.0c or above

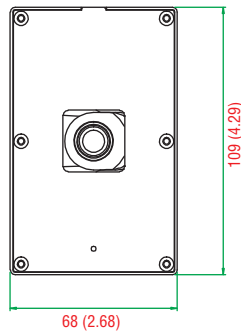
## Software Development

**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).

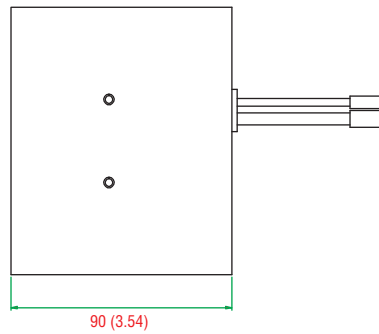
**Standard:** ONVIF

## Dimensions

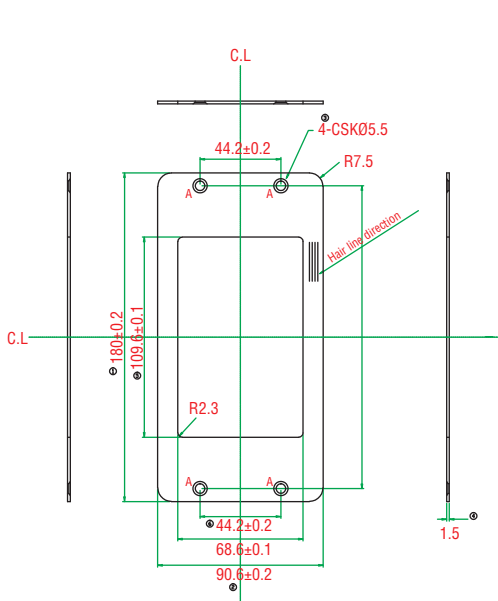
Unit: mm (inch)



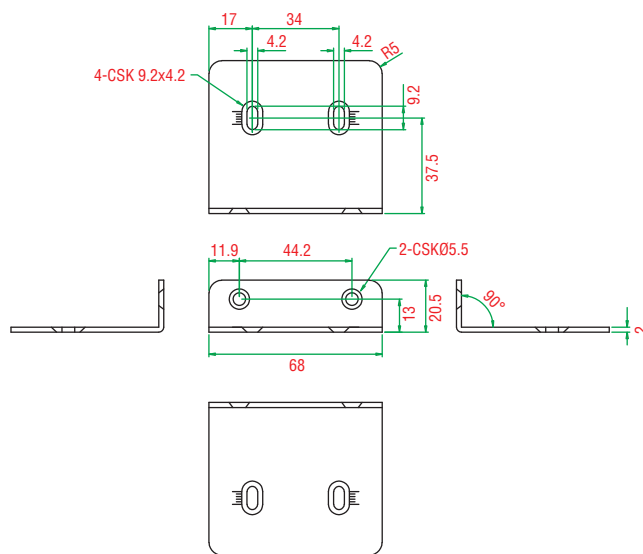
Front View



Side View



Front Decorative Plate



Wall-Mounting Kit

## Ordering Information

### Available Models

**VPort P06HC-1MP-M12-CAM36:** EN 50155 compliant, HD, H.264/MJPEG square-type IP camera, 3.6 mm lens, M12 Ethernet connector, PoE, -25 to 55°C operating temperature

Note: Conformal coating available upon request

### Optional Accessories (can be purchased separately)

**SoftNVR-IA:** 64-channel IP surveillance software for industrial automation applications

**VP-FD1:** Front decorative plate for the VPort P06HC

### Package Checklist

- VPort P06HC-1MP-M12 IP camera
- L-type Torx screwdriver
- Dry pack
- Hook fasteners
- 2 L-type installation kits and 4 nylock screws
- Installation stick
- Quick installation guide (printed)
- Documentation and software CD
- Warranty card