

# VPort 36-1MP Series

## Rugged HD day-and-night box-type IP cameras



- > Industrial design with -40 to 75°C operating temperature (heater or cooling fan not required)
- > 1/2.7" progressive scan CMOS camera with HD resolution (max. 1280 x 720)
- > DNR, WDR for superb image quality
- > Triple video streams with H.264 and MJPEG
- > Compatible with C/CS-mount lenses with built-in ICR support
- > EN 50121-4 and NEMA TS2 compliant
- > DynaStream™ support for maximum network efficiency
- > Local storage capability with SD card slot

Note: Lens must be purchased separately.



## Introduction

### Rugged Design

The VPort 36-1MP series includes the world's first rugged IP camera that can operate reliably in temperatures ranging from -40 to 75°C, without a heater or cooling fan.

### Superb Video Quality

The VPort 36-1MP series is designed to be compatible with C/CS-mount lenses to meet any viewing angle and distance requirement. With a built-in, removable IR-cut filter and automatic color mode switching, the VPort 36-1MP series is suitable for either day or night use. Highly-tuned ROI (Regions of Interest) and WDR (Wide Dynamic Range) functions enable the VPort 36-1MP series to produce exceptionally clear images.

### Convenient Installation

The VPort 36-1MP series includes unique and competitive cameras with features such as high EMI/surge protection, optional IP68 housing for rain/dust protection, and -40 to 75°C operation without a heater or cooling fan. The cameras are available with PoE (Power over Ethernet, 802.3af) or a wire power input that supports 12/24 VDC or 24 VAC.

### High Video Performance and Network Security

The VPort 36-1MP series can encode analog video into both H.264 and MJPEG video streams and can transmit up to 3 independent video streams (2 H.264 streams, 1 MJPEG stream) simultaneously. Advanced video encoding technology enables the cameras to support up to 30 FPS for each of the H.264 and MJPEG streams.

## Specifications

### Camera

**Sensor:** 1/2.7" HD progressive scan CMOS

**Lens:** Designed for C/CS-mount lens (lens not included)

**Illumination (low light sensitivity):**

- Color: 0.2 lux at F1.2

- B/W: 0.05 lux at F1.2

**Day & Night:** Auto/Color/BW; ICR Control

**Synchronization:** Internal

**White Balance:** ATW/AWB

**Electronic Shutter:** Auto, Fixed (1/30 to 1/25000 sec)

**Dynamic Range:**

- Color: 100 dB

- B/W: 110 dB

**S/N Ratio:** 50 dB (AGC OFF; DNR ON)

**ICR Control:** Auto (light sensor control) or DI control

**DNR:** Built-in DNR (digital noise reduction)

**WDR:** Levels 1-8

- color: 100 dB

- B/W: 110 dB

**AGC (auto gain control):** 2X, 4X, 8X, 16X, 32X, 64X

**IRIS:** Auto, DC drive

**Flickerless Control:** Indoor/Outdoor mode

**Auto Exposure:** Level ±5

**Image Rotation:** Flip, Mirror, and 180° 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:** 3, H.264, or MJPEG independent video streams

**Video Viewing:**

- DynaStream™ support for changing the video frame rate automatically
- 3 privacy mask areas provided
- Adjustable image size and quality
- Timestamp and text overlay
- Maximum of 5 simultaneous unicast connections, 50 multicast clients
- CBR Pro™ support for accurate streaming bit rate control

**Video Resolution and fps (frames per second):**

	NTSC		PAL	
	Size	Max. FPS	Size	Max. FPS
QCIF	176 x 112	30	176 x 144	25
QVGA	320 x 240	30	320 x 240	25
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

Note: Multiple streams may not support up to 30 FPS.

**Network**

**Protocols:** TCP, UDP, HTTP, SMTP, FTP, Telnet, NTP, DNS, DHCP, UPnP, RTP, RTSP, ICMP, IGMPv3, QoS, SNMPv1/v2c/v3, DDNS, Modbus/TCP, 802.1X, SSH/HTTPS

**Ethernet:** 1 10/100BaseT(X) Ethernet port, RJ45 connector

**Serial Port**

**PTZ Ports:** 1, RS-485, terminal block connector

**Local Storage**

**SD Socket:** Standard SD socket (SDHC)

**GPIO**

**Digital Inputs:** 1, max. 8 mA

High: +13 to +30 V; Low: -30 to +3 V

**Relay Outputs:** 1, max. 24 VDC @ 1 A

**LED Indicators**

**STAT:** Indicates if the system is booted properly or not

**Network:** 10 Mbps or 100 Mbps

**Power:** Power on/off

**Power Requirements**

**Input Voltage:** 24 VDC (12 to 24 VDC) / 24 VAC, and PoE (802.3af) redundant power design

**Input Current:** 12 to 24 VDC, 0.8 A or 24 VAC, 7.5 W or 48 VDC (PoE), 0.135 A

**Physical Characteristics**

**Housing:** Metal, IP30 protection

**Dimensions:** 81.76 x 69.65 x 147.6 mm (3.22 x 2.74 x 5.81 in)

**Weight:** 770 g (1.69 lb)

**Installation:** Wall mounting, pole mounting, corner mounting

Note: Optional external housing and mounting accessories may be required.

**Alarms**

**Intelligent Video:**

VPort 36-1MP: Camera tamper

VPort 36-1MP-IVA: Camera tamper, detection line/zone, missing object, abandoned object

Note: IVA functions are optional except for camera tamper.

**Video Motion Detection:** 3 independently configurable areas; includes sensitivity tuning

**Scheduling:** Daily repeat timing schedule

**Imaging:** JPEG snapshots for pre/trigger/post alarm images

**Video Recording:** Event recordings stored on the SD card

**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:** 24 MB video buffer for JPEG snapshot images

**Security**

**Password:** User-level password protection

**Filtering:** By IP address

**Authentication:** 802.1X

**Encryption:** HTTPS, SSH

**Environmental Limits**

**Operating Temperature:**

Standard Models: -25 to 60°C (-13 to 140°F)

Wide Temp. Models: -40 to 75°C (-40 to 167°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

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

**Vibration:**

IEC 60068-2-6, 2 to 13.2 Hz: 2 mm (peak-peak); 13.2 to 100 Hz: 0.7g; 1.50 hrs/axis

IEC 60068-2-6, 3 to 9 Hz: 7 mm (peak-peak); 9 to 150 Hz: 1.0g; 1.86 hrs/axis

**Shock:** IEC 60068-2-27, 20g/11ms

**Altitude:** 2000 m

**Standards and Certifications**

**Safety:** UL 60950-1

**Rail Traffic:** EN 50121-4

**EMC:** EN 55032/24

**EMI:** CISPR 32, FCC Part 15B 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

**Hazardous Location:** UL/cUL Class I Division 2 Groups A/B/C/D, ATEX Zone 2 Ex nCnAnL IIC T4

Note: The VP-3113MPIR lens is Class I Div. 2 and ATEX Zone 2 certified.

**Transportation:** NEMA TS2

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

**MTBF (mean time between failures)**

**Time:** 541,826 hours

**Standard:** Telcordia SR332

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

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

**Multimedia:** DirectX 9.0c or above

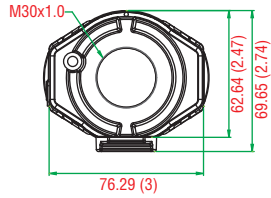
**Software Development**

**VPort SDK PLUS:** Includes CGI commands, ActiveX Control, and API library for customized applications or system integration for third-party developers (latest version available on Moxa website).

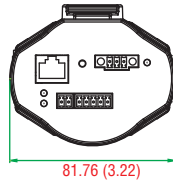
**Standard:** ONVIF Profile S

## Dimensions

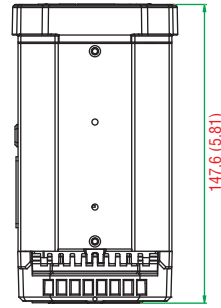
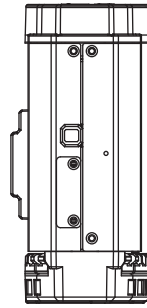
Unit: mm (inch)



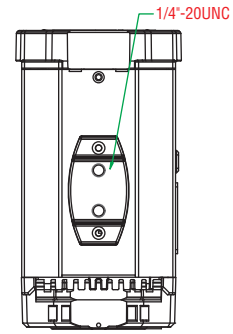
Front View



Rear View



Side Views



## Ordering Information

### Available Models

**VPort 36-1MP:** H.264/MJPEG fixed box IP camera, 12/24 VDC or 24 VAC power input or Power-over-Ethernet, -25 to 60°C operating temperature

**VPort 36-1MP-T:** H.264/MJPEG fixed box IP camera, 12/24 VDC or 24 VAC power input or Power-over-Ethernet, -40 to 75°C operating temperature

**VPort 36-1MP-IVA:** H.264/MJPEG fixed box IP camera, 12/24 VDC or 24 VAC power input or Power-over-Ethernet, -25 to 60°C operating temperature, 1 IVA license (does not support ONVIF)

**VPort 36-1MP-IVA-T:** H.264/MJPEG fixed box IP camera, 12/24 VDC or 24 VAC power input or Power-over-Ethernet, -40 to 75°C operating temperature, 1 IVA license (does not support ONVIF)

### Optional Accessories (can be purchased separately)

**VP-C1701:** IP68-rated outdoor housing, 406(L) x 109(H) x 145 (W) mm

**VP-C1800:** Wall-mounting bracket for outdoor housing, 213 (L) x 146 (H) x 80(W) mm

**VP-C1815:** Pole-mounting bracket for Ø70 to Ø230 mm pole

**VP-C1820:** Pole-mounting bracket for Ø360 mm pole

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

**DR-4524/75-24/120-24:** 45/75/120 W DIN-rail 24 VDC power supplies

**MDR-40-24/60-24:** 40/60 W DIN-rail 24 VDC power supplies, -20 to 70°C operating temperature

### Package Checklist

- VPort 36-1MP series IP camera
- Inner hexagon screwdriver
- C/CS-mount adapter ring
- 5-pin terminal block
- 3-pin terminal block
- 2-pin terminal block
- Quick installation guide (printed)
- Documentation and software CD
- Warranty card

### 2.8-10 mm F1.2 Day & Night Lens

Optional lens for the VPort 36-1MP series

#### VP-2810MPIR

**Mounting Type:** CS mount

**Iris:** DC Auto Iris

**Focus:** Manual

**Zoom:** Manual

**Dimensions:** Ø40 x 49 x 59 mm

**Weight:** 66 g

**Angle of View:**

Angle of View	D	154.0° - 39.0°
	H	127.6° - 34.3°
	V	65.0° - 18.9°



### 12.5-50 mm F1.4 Day & Night Lens

Optional lens for the VPort 36-1MP series

#### VP-1214MPIR

**Mounting Type:** CS mount

**Iris:** DC Auto Iris

**Focus:** Manual

**Zoom:** Manual

**Dimensions:** Ø46 x 59.3 x 58.4 mm

**Weight:** 74 g

**Angle of View:**

Angle of View	D	30.3° - 7.7°	1/2.7 type (4:3)	30.3° - 7.7°	
	H	26.3° - 6.7°			24.0° - 6.2°
	V	14.5° - 3.8°			17.8° - 4.7°



### 2.8-10 mm F1.2 Day & Night Lens

Optional lens for the VPort 36-1MP series

#### VP-2811MPIR

**Mounting Type:** CS mount

**Focus:** Manual

**Zoom:** Manual

**Dimensions:** Ø43.6 x 59 mm

**Weight:** 63 g

**Hazardous Location:** Compliant with the specification requirements of UL/cUL Class I Division 2 Group A/B/C/D, and ATEX Zone 2 Ex nC nA IIC T4, when used with the VPort 36-1MP

**Angle of View:**

Angle of View	D	154.0° - 39.0°
	H	127.6° - 34.3°
	V	65.0° - 18.9°

