

# VPort 66-2MP Series

## 1080P PTZ dome IP camera for outdoors



- > -40 to 65°C operating temperature
- > Maximum 1920x1080 resolution at 60 FPS (single stream)
- > Supports 360° endless PAN and -6° to +96° TILT
- > 22X/30X optical zoom, and 20X digital zoom
- > DNR, BLC, and image stabilizer for superb image quality
- > Built-in 4.3 to 94.6 mm (22X) or 4.3 to 129 mm (30X) focal length lens with ICR (IR-cut filter removable)
- > Triple video streams with H.264 and MJPEG
- > IP66 rain and dust protection and NEMA Type 4X form factor
- > NEMA TS2 compliance and NTCIP 1205 support for ITS system
- > Calibrate PTZ movement manually or by schedule
- > Smart PTZ tracking (Pending)



### Introduction

The VPort 66-2MP is an IK10, IP66-rated, PTZ speed dome IP camera for use in harsh, outdoor environments. With a 360° endless PAN, -6 to 96° TILT, 22X/30X optical zoom, 20X digital zoom, H.264/MJPEG triple video streams, and day-and-night camera lens, the VPort 66-2MP is especially well-suited for outdoor video surveillance

applications. In addition, the VPort 66-2MP supports NTCIP 1205, which is an ITS (intelligent transportation system) communication protocol standard. NTCIP support allows the user to control PTZ operation directly via the NTCIP-compliant control panel.

### Specifications

#### Camera

**Sensor:** 1/2.8" HD progressive scan CMOS

**Lens:**

22X: f=4.3 mm (wide) to 94.6 mm (tele), F1.6 to F4.5

- Horizontal angle of view: 65.1° to 3.1°

- Vertical angle of view: 38.4° to 1.8°

30X: f=4.3 mm (wide) to 129.0 mm (tele), F1.6 to F4.7

- Horizontal angle of view: 65.1° to 2.3°

- Vertical angle of view: 38.4° to 1.4°

**Minimum Illumination:**

- Color: 0.4 lux, at F1.6 (Gain High, 50 IRE, 1/30 sec)

- B/W: 0.03 lux, at F1.6 (Gain High, 50 IRE, 1/30 sec)

**Minimum Working Distance:** 10 cm (wide), 120 cm (tele)

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

**Synchronization:** Internal

**White Balance:** ATW/AWB

**Electronic Shutter:** Auto, Fixed (1/100 to 1/16000 sec)

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

**ICR Control:** Auto

**DNR:** Built-in 2D/3D DNR (digital noise reduction)

**Auto Focus:** Continuous, one-shot

**WDR:** 50 db

**AGC (auto gain control):** Off, Level 1 to 7

**BLC (back light compensation):** Off, Level 1 to 15

**Sense Up:** On/Off, maximum 128X

**IRIS:** Auto/Manual IRIS control, Electronic IRIS

**Electronic Image Stabilizer:** Low, Medium, High

**Flickerless Control:** On/Off

**Image Rotation:** Flip, Mirror, and 180° rotation

**Image Setting:** Manual tuning with sharpness

**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

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

	NTSC		PAL	
	Size	Max. FPS	Size	Max. FPS
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
SXGA	1280 x 1024	30	1280 x 1024	25
Full HD	1920 x 1080	30	1920 x 1080	25

Note: Single video stream supports up to 60 FPS.

**Video Viewing:**

- DynaStream™ support for changing the video frame rate automatically
- 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

**Audio**

**Audio Inputs:** 1, line-in, with 2-pin terminal block connector  
**Audio Outputs:** 1, line-out, with 2-pin terminal block connector  
**Audio Format:** Mono, PCM (G.711); AAC

**Network**

**Protocols:** IPv4/v6, TCP, NTCIP 1205, UDP, HTTP, SMTP, FTP, Telnet, NTP, DNS, DHCP, TFTP, UPnP, RTP, RTSP, ICMP, IGMPv3, ARP, QoS, SNMPv1/v2c/v3, DDNS, Modbus/TCP, 802.1X, SSH/HTTPS, OPT66/67  
**Ethernet:** 1 10/100BaseT(X) Ethernet port, RJ45 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

**Power Requirements**

**Input Voltage:** 24 VDC, 24 VAC  
**Input Current:** 2.925 A @ 24 VDC; 4.94 A @ 24 VAC  
**Power Consumption:**  
 • 27 watts when heater and fan are off  
 • 31 watts when fan is on and heater is off  
 • 71 watts when fan and heater are on

**Physical Characteristics**

**Housing:**  
 • IP66-rated rain and dust protection connector  
 • EN 62262 IK10 vandal-resistant support  
 • NEMA Type 4X  
 • Metal housing, PC dome cover  
**Weight:** 5.15 kg (11.33 lb)  
**Installation:** Outdoor mounting with optional accessories

**Alarms**

**Video Motion Detection:** Includes sensitivity tuning  
**Scheduling:** Daily repeat timing schedule  
**Imaging:** JPEG snapshots for pre/trigger/post alarm images  
**Custom Alarms:** HTTP event servers and CGI events for setting customized alarm actions  
**Email/FTP Messaging:** Automatic transfer of stored images via email or FTP with event-triggered actions  
**Pre-alarm Buffer:** 35 MB for JPEG snapshot images

**PTZ (Pan/Tilt/Zoom)**

**Pan Range:** 360° endless, manual control speed from 0.15°/s to 120°/s  
**Tilt Range:** -6° to +96°, manual control speed from 0.15°/s to 120°/s  
**TILT Capability:** 6° above the horizon  
**Optical Zoom:** 22X, 30X  
**Digital Zoom:** 20X  
**Preset Positions:** 128 presets  
 • Preset moving speed: from 1°/s to 255°/s  
 • Alarm trigger moving speed: 360°/s  
**Functionality:** Supports guard tours

**Security**

**Password:** User level password protection  
**Filtering:** By IP address  
**Authentication:** 802.1X  
**Encryption:** HTTPS, SSH

**Environmental Limits**

**Operating Temperature:** -40 to 65°C (-40 to 149°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

**Ingress Protection:** IEC 60529, IP66

**Salt Spray Test:** ASTM-B117

*This unit can pass the test criteria without being damaged, but if the camera is repositioned, pan/tilt calibration needs to be redone.*

**Standards and Certifications**

**Safety:** UL 60950-1  
**Rail Traffic:** EN 50121-4  
**EMC:** EN 55022/24  
**EMI:** CISPR 22, 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: 10 V/m  
 IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV  
 IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV  
 IEC 61000-4-6 CS: Signal: 10 V  
 IEC 61000-4-8  
 IEC 61000-4-11

**Transportation:** NEMA TS2 compliant

**MTBF (mean time between failures)**

**Time:** 525,491 hrs  
**Standard:** Telcordia SR332

**Warranty**

**Warranty Period:** 3 years (limited warranty on moving parts; see Moxa's online warranty policy for details)  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Minimum Viewing System Requirements**

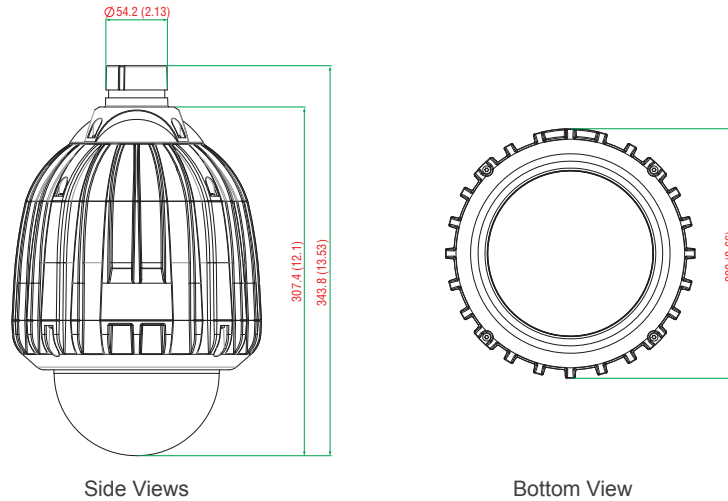
**CPU:** Intel Core i3 or above  
**Memory:** 2 GB of memory  
**OS:** Windows 7  
**Browser:** Internet Explorer 10 or above  
**Multimedia:** DirectX 11.0 or above

**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)



## Ordering Information

### Available Models

**VP-66-2MP-CAM22X:** 1080P PTZ dome IP camera, 22X optical zoom, RJ45 Ethernet port, 24 VAC/ VDC, -40 to 65°C

**VP-66-2MP-CAM30X:** 1080P PTZ dome IP camera, 30X optical zoom, RJ45 Ethernet port, 24 VAC/ VDC, -40 to 65°C

### Optional Accessories (can be purchased separately)

**VP-520LB:** Wall-mounting kit, 204(W) x 284(H) x 255(D) mm

**VP-520HB:** Pendant-mounting kit, 284(L) x 204(W) x 149.5(H) mm

**VP-510CPM:** Pole-mounting kit for the VP-520LB, 275(W) x 91(H) x 182(D) mm

**VP-SH1:** Sunshield for the VP-66-2MP, 236(Ø) x 180(H) mm

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

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

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

### Package Checklist

- VP-66-2MP series IP camera
- 3.5 mm jack to 2-pin terminal block connector
- L-type Torx screwdriver
- Dry pack and hook fastener
- Quick installation guide (printed)
- Documentation and software CD
- Warranty card



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