

VPort 36-2L Series Preliminary

1080P, day-and-night, rugged box IP cameras



- > Industrial design with -40 to 75°C operating temperature (heater or cooling fan not required)
- > Maximum 1920 x 1080 resolution at 30 FPS
- > Built-in P-IRIS zoom lens with 3x (3 to 9 mm) and 2x (10 to 23 mm) optical zoom
- > Zoom and focus can be controlled remotely over an IP network
- > Four video streams with H.264 and MJPEG
- > SD card interface for disconnection and event recording
- > 12/24 VDC, 24 VAC, or PoE redundant power inputs
- > EN 50121-4, NEMA TS2 compliance



Introduction

The VPort 36-2L rugged 1080P (1920 x 1080) box IP cameras are specially designed for mission-critical and extreme weather environments. The cameras have two kinds of built-in P-iris zoom lenses, 3 to 9 mm and 10 to 23 mm. They support remote zoom and focus control via an IP network, providing convenience and simplicity for camera operation, and feature a wide -40 to 75°C operating temperature range (-T models) and industrial-grade EMC (EMI/ Surge

Level 3) protection. The VPort 36-2L cameras are suitable for the kind of industrial and outdoor environments found with oil & gas, rail, and ITS applications. In addition, the VPort 36-2L supports a light sensor and ICR (IR-cut filter removable) for day & night viewing, advanced WDR (wide dynamic range), and DNR (digital noise reduction), allowing the VPort 36-2L to produce good quality images even in extreme sunlight conditions.

Specifications

Camera

Sensor: 1/3" progressive scan CMOS

Lens:

3X: f=3(wide) to 9 (tele) mm, F1.6 to F2.6

- Horizontal angle of view: 30.2° to 87.4°

- Vertical angle of view: 16.4° to 47°

- Diagonal angle of view: 32.4° to 95.7°

2X: f=10 (wide) to 23 (tele) mm, F1.2 to F2.3

- Horizontal angle of view: 11.4° to 26.9°

- Vertical angle of view: 6.3° to 14.4°

- Diagonal angle of view: 13.7° to 31°

Illumination (low light sensitivity):

Color: 0.2 Lux @ F1.2

B/W: 0.1 Lux @ 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)

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: On/Off, up to 100 dB

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

IRIS: Auto, P-IRIS

Flickerless Control: Automatic, 50 Hz, 60 Hz modes

Auto Exposure: Level ±5

Image Rotation: Flip, Mirror, 90°, 270° and 180° rotation

Image Setting: Manual tuning with saturation, sharpness, and contrast

Video

Video Compression: H.264 (ISO/IEC 14496-10) or MJPEG

Video Output: via Ethernet

Video Streams: 4, H.264, or MJPEG independent 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
SXGA	1280 x 1024	30	1280 x 1024	25
Full HD	1920 x 1080	30	1920 x 1080	25

Video Viewing:

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

Audio

Audio Inputs: 1, 3.5 mm phone jack

Audio Outputs: 1, 3.5 mm phone jack

Audio Format: Mono, PCM (G.711); AAC

Network

Protocols: IPv4/v6, TCP, UDP, HTTP, SMTP, FTP, 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

Serial Port

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

PTZ Driver: Pelco D, Pelco P, custom camera

Local Storage

SD Socket: Standard SD socket (SDXC, SDHC)

GPIO

Digital Inputs: 1, max. 8 mA,
 • High: +13 V to +30 V
 • Low: -30 V 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: 12/24 VDC, 24 VAC or Power-over-Ethernet redundant power design

Physical Characteristics

Housing: Metal, IP30 protection

Dimensions: 200 x 90 x 70 mm (7.9 x 3.5 x 2.8 in)

Installation: Wall mounting, pole mounting, corner mounting

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

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

Video Recording: Event/always 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:

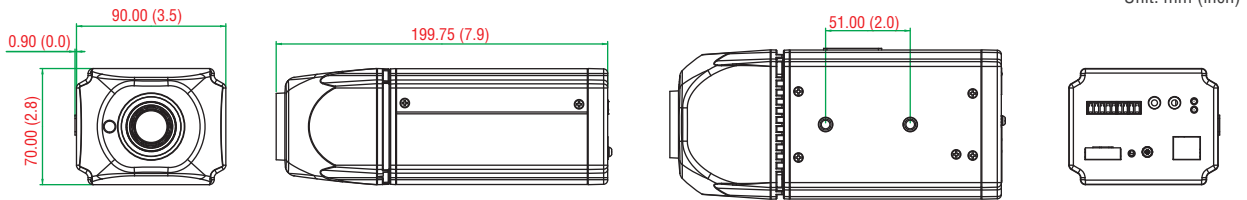
Standard model: -25 to 60°C (-13 to 140°F)

Wide Temp. model: -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)

Dimensions



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 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: 2 kV; Signal: 2 kV

IEC 61000-4-6 CS: Signal: 10 V

IEC 61000-4-8

IEC 61000-4-11

Traffic Control: NEMA TS2

Warranty

Warranty Period: 5 years (limited warranty on moving parts; see Moxa's online warranty policy for details)

Details: See 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 (the latest version of SDK is available for download from Moxa's website).

Standard: ONVIF Profile S

Ordering Information

Model	Lens		Ethernet		Temperature	
	3 to 9 mm	10 to 23 mm	RJ45	Single-Mode Fiber	-25 to 60°C	-40 to 75°C
VPort 36-2L3X	✓	–	✓	–	✓	–
VPort 36-2L2X	–	✓	✓	–	✓	–
VPort 36-2L3X-T	✓	–	✓	–	–	✓
VPort 36-2L2X-T	–	✓	✓	–	–	✓

Optional Accessories (can be purchased separately)

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

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

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

VP-C1820: Pole-mounting bracket for a 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 36-2L series IP camera
- Quick installation guide (printed)
- Documentation and software CD
- Warranty card