

# VPort 254 Series

## Rugged 4-channel MJPEG/MPEG4 industrial video encoders



- > Industrial design with -40 to 75°C operating temperature and fiber optic Ethernet port
- > Video stream up to 120 frames/sec at CIF (352 x 240) resolution
- > Modbus/TCP supported for easy communication with SCADA software
- > One RS-232/422/485 COM port for controlling external serial devices over Ethernet
- > Free VPort SDK PLUS and 4-channel video surveillance software



### Introduction

The rugged VPort 254 is a 4-channel industrial video encoder that provides up to 120 FPS at CIF resolution (NTSC: 352 x 240; PAL: 352 x 288), and supports an optional MJPEG/MPEG4 algorithm, making it especially well suited for use with distributed surveillance systems in critical industrial applications. In addition, the VPort 254 supports

serial-to-Ethernet and Modbus/TCP communications for integrating automation systems, and 2-way audio is provided to allow real-time communication between system administrators located at a central site and engineers in the field.

### Rugged Design for Mission-critical Industrial Environments

- Operates reliably in -40 to 75°C environments
- Built-in single-mode or multi-mode fiber optic Ethernet port (media converter not required)
- More reliable with redundant 12/24 VDC and 24 VAC power inputs

- Metal form factor with IP30 protection against dust
- DIN-Rail mounting installation suitable for industrial environments
- UL508 certified for industrial environments

### Advanced Network Protocols for Efficient Network Transmission and Integration

- Modbus/TCP for easy communication with SCADA software
- Standard RTSP (real-time streaming protocol) video streaming for easy integration
- Multicast (IGMP) protocols for efficient network transmission

- SNMPv1/v2c/v3 MIB-II for easy network management
- QoS (ToS) for configuring the transmission priority of video streams
- UPnP, DDNS, and IP filtering supported

### Specifications

#### Video

**Video Compression:** MJPEG or MPEG4 (ISO/IEC 14496-2)

**Video Inputs:** 4, BNC connector (1.0 Vpp, 75 ohms)

**NTSC/PAL:** Auto-sensing or manual

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

	NTSC		PAL	
	Size	Max. FPS	Size	Max. FPS
<b>QVGA</b>	320 x 240	30	320 x 288	25
<b>CIF</b>	352 x 240	30	352 x 288	25
<b>VGA</b>	640 x 480	7	640 x 576	7
<b>4CIF</b>	704 x 480	7	704 x 576	7
<b>Full D1</b>	720 x 480	7	720 x 576	7

**Video Viewing:** Adjustable image size and quality

#### Audio

**Audio Inputs:** 1 Line-in or MIC-in with RCA connector

**Audio Outputs:** 1 Line-out with RCA connector

#### Network

**Protocols:** TCP, UDP, HTTP, SMTP, FTP, Telnet, NTP, DNS, DHCP, UPnP, RTP, RTSP, ICMP, IGMPv3, QoS (ToS), SNMPv1/v2c/v3, DDNS, Modbus/TCP

**Ethernet:** 1 10/100BaseT(X) auto negotiating RJ45 port, or 1 100BaseFX fiber port (single/multi-mode, SC connector)

#### Optical Fiber:

	100BaseFX	
	Multi-mode	Single-mode
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km <sup>a</sup> 4 km <sup>b</sup>	40 km <sup>c</sup>
Saturation	-6 dBm	-3 dBm

- a. 50/125 μm, 800 MHz\*km fiber optic cable
- b. 62.5/125 μm, 500 MHz\*km fiber optic cable
- c. 9/125 μm single-mode fiber optic cable

## Serial Port

**PTZ Ports:** 1, RS-232/422/485 port (terminal block connector), max. speed of 115.2 Kbps, with 15 KV ESD protection

**COM Ports:** 1 RS-232/422/485 port (DB9 female connector), max. speed of 115.2 Kbps, with 15 KV ESD protection

**Console Port:** 1 RS-232 RJ45 port

## GPIO

**Digital Inputs:** 4, max. 8 mA

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

**Relay Outputs:** 2, max. 24 VDC @ 1 A

## LED Indicators

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

**PWR1:** Power 1

**PWR2:** Power 2

**FAULT:** Can be configured to correspond to system alarm, power failure, video loss, or disconnected network

**V1, V2, V3, V4:** Video input signal activity

## Power Requirements

**Input Voltage:** 2 12/24 VDC or 24 VAC inputs for redundancy

**Power Consumption:** Approx. 12 W

## Physical Characteristics

**Housing:** Metal, IP30 protection

**Dimensions:** 80.2 x 135 x 105 mm (3.16 x 5.31 x 4.13 in)

**Weight:** 1100 g

**Installation:** DIN-Rail mounting, wall mounting (with optional kit)

## Alarms

**Video Motion Detection:** Includes sensitivity tuning

**Video Loss:** Video loss alarm

**Scheduling:** Daily repeat timing schedule

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

**Email/FTP Messaging:** Automatic transfer of stored images via email or FTP with event-triggered actions

**Custom Alarms:** HTTP event servers for setting customized alarm actions

## PAN/TILT/ZOOM

**PTZ Camera Control:** Via RS-232/422/485 PTZ port or COM port

**PTZ Control Functions:** PAN, TILT, ZOOM, FOCUS, moving speed, preset position (max. 25 positions), and 10 custom commands

**PTZ Function Updates:** Driver upload supported

**Supported Devices and Protocols:** Pelco D, Pelco P, Dynacolor DynaDome, Custom Camera

**Transparent PTZ Control:** Control PTZ cameras with legacy PTZ control panel or keyboard connected to a PC or VPort decoder

## Security

**Password:** User level password protection

**Filtering:** By IP address

## Environmental Limits

**Operating Temperature:**

Standard Models: 0 to 60°C (32 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)

## Regulatory Approvals

**Safety:** UL508

**EMS:**

EN61000-4-2 (ESD), level 2

EN61000-4-3 (RS), level 3

EN61000-4-4 (EFT), level 3

EN61000-4-5 (Surge), level 3

EN61000-4-6 (CS), level 3

EN61000-4-12 (Oscillatory wave immunity), level 3

**EMI:** FCC Part 15, CISPR (EN55022) class A

**Hazardous Location:** UL/cUL Class I, Division 2, Groups A, B, C and D (Pending); ATEX Zone 2, Ex nC IIC (Pending)

**Shock:** IEC 60068-2-27

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

**Vibration:** IEC 60068-2-6

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

## MTBF (meantime between failures)

**Time:** 200,000 hrs

**Database:** MIL-HDBK-217F, GB 25°C

## Warranty

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

## System Requirements

**CPU:** Pentium 4, 2.4 GHz or above

**Memory:** 512 MB memory or above

**OS:** Windows XP/2000 with SP2 or above

**Browser:** Internet Explorer 6.x or above

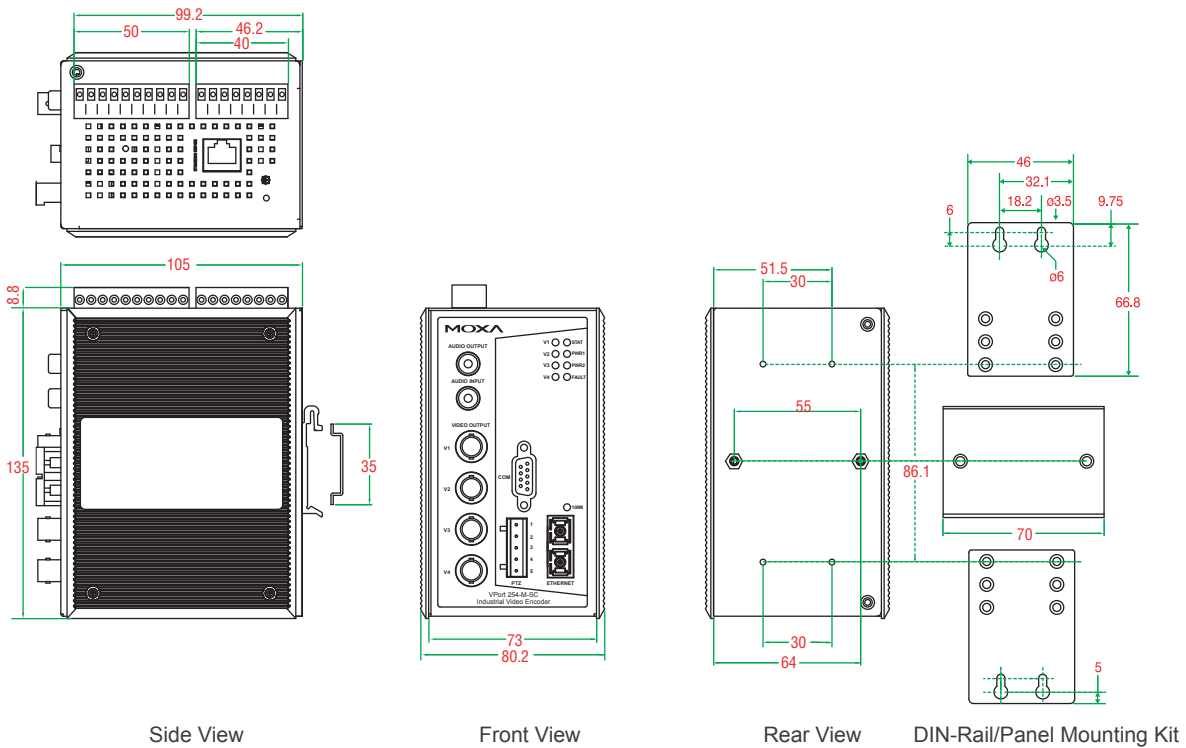
**Multimedia:** DirectX 9.0c or above

## Software Bundled Free

**SoftDVR™ Lite:** 1 to 4-ch IP surveillance software for viewing and recording

**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).

**Dimensions (unit = mm)**



**Ordering Information**

Available Models		Port Interface		
Standard Temperature (0 to 60 °C)	Wide Temperature (-40 to 75 °C)	10/100BaseT(X)	Multi-mode, SC Connector	Single-mode, SC Connector
VPort 254	VPort 254-T	1	---	---
VPort 254-M-SC	VPort 254-M-SC-T	---	1	---
VPort 254-S-SC	VPort 254-S-SC-T	---	---	1

**Optional Accessories** (can be purchased separately)

**SoftNVR:** Expandable IP surveillance software for managing up to 64 video channels

**SoftDVR™ Pro:** 16-channel IP surveillance software for viewing and recording

**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

**WK-46:** Wall mounting kit

**RK-4U:** 4U-high 19" rack mounting kit