

# VPort 461A Series

**Excellent video performance, 1-channel H.264/MJPEG industrial video encoders**



- > Supports up to 3 video streams simultaneously for H.264 and MJPEG
- > Up to Full D1 resolution (720 x 480) @ 90 FPS for 3 video streams with legacy analog video images
- > Video latency under 200 ms
- > 2 Ethernet ports for cascade and Ethernet port redundancy
- > Moxa DynaStream™ function supported for network efficiency
- > ONVIF supported for standardization and interoperability
- > Local storage capability with SD card slot
- > Industrial design with -40 to 75°C operating temperature



## Introduction

The VPort 461A 1-channel industrial video encoder with H.264 video compression algorithm provides the best video quality on the market, but with a smaller bandwidth requirement than other video compression standards. In addition, to meet various video stream requirements, the VPort 461A can provide up to 3 video streams simultaneously using H.264 and MJPEG compression formats. Video streams can be used for different purposes, such as viewing, recording, and analyzing. In addition, the rugged industrial design, which includes a -40 to 75°C operating temperature, IP30 protection,

and industrial certifications, make the VPort 461A suitable for harsh environments.

The VPort 461A is equipped with Moxa's innovative DynaStream™ technology, which allows you to change the video frame rate automatically. With DynaStream™, you can control your network bandwidth budget and simplify network system management. The CBR Pro™ function guarantees the lowest packet loss for limited bandwidth transmissions to ensure that images will not exhibit the mosaic effect.

## Specifications

### Video

**Video Compression:** H.264 (MPEG4 part 10), MJPEG

**Video Inputs:** 1 (BNC connector)

**Video Outputs:** over Ethernet

**Video Streams:** 3, H.264 or MJPEG video streams

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

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

	NTSC		PAL	
	Size	Max. FPS	Size	Max. FPS
QCIF	176 x 112	30	176 x 144	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

### Video Viewing:

- DynaStream™ supported for changing the video frame rate automatically
- Adjustable image size and quality
- Timestamp and text overlay
- Maximum of 10 simultaneous unicast connections, 50 multicast clients
- CBR Pro™ supported for accurate streaming bit rate control
- Image manipulation: 180° rotation
- Image tuning: control brightness, contrast, saturation

### Audio

**Audio Inputs:** 1 Line-in or MIC-in with 3.5 mm phone jack

**Audio Outputs:** 1 Line-out with 3.5 mm phone jack

**Audio Format:** Mono, PCM (G.711)

### Network

**Protocols:** IPv4/v6, UDP, HTTP, SMTP, FTP, NTP, DNS, DHCP, UPnP, RTP, RTSP, ICMP, IGMPv3, QoS (ToS), SNMP V3, DDNS, Modbus/TCP, 802.1X, SSH/HTTPS

**Ethernet:** 2 10/100BaseT(X) Ethernet ports, RJ45 connector

### Serial Port

**PTZ Ports:** 1 RS-232 or RS-422/485 port, terminal block connector, 115.2 kbps

**COM Ports:** 1 RS-232 or 485 port, DB9 male connector, 115.2 kbps

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

### Local Storage

**SD Socket:** Standard SD socket, V2.0 (SDHC)

### GPIO

**Digital Inputs:** 2, max. 8 mA

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

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

### LED Indicators

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

**PWR1:** Power 1

**PWR2:** Power 2

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

**VIDEO:** Video input signal

**PTZ:** Indicates if PTZ or COM port data has been transmitted

**SD:** Indicates if SD card was mounted successfully

### Power Requirements

**Input Voltage:** 12 to 32 VDC, or 18 to 30 VAC

**Input Current:** 0.85 A @ 12 VDC; 0.3 A @ 32 VDC; 0.85 A @ 18 VAC; 0.56 A @ 30 VAC

### Physical Characteristics

**Housing:** Metal, IP30 protection  
**Dimensions:** 46 x 134 x 105 mm (1.81 x 5.31 x 4.13 in)  
**Weight:** 710 g (including DIN-rail mounting kit)  
**Installation:** DIN-Rail mounting, wall mounting (with optional kit)

### Alarms

**Intelligent Video:** Camera tampering  
**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:** 50 MB for JPEG snapshot images

### PAN/TILT/ZOOM

**PTZ Camera Control:** Via PTZ port or COM port  
**PTZ Control Functions:** PAN, TILT, ZOOM, FOCUS, moving speed, preset position (max. 128 positions)  
**PTZ Function Updates:** Driver upload supported  
**Supported Device Protocols:** Pelco D, Pelco P, Custom Camera

### 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 17.8 Hz: ±1.6 mm; 17.8 to 500 Hz: 2g; 2 hrs/axis  
**Shock:** IEC 60068-2-27, 20g/11ms

**Altitude:** 2000 m

**Ingress Protection:** IEC 60529, IP30

### Standards and Certifications

**Safety:** UL 60950-1  
**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: 1 kV  
 IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV  
 IEC 61000-4-6 CS: 10 V  
 IEC 61000-4-8  
 IEC 61000-4-11

**Transportation:** NEMA TS2\*

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

**MTBF (mean time between failures)**

**Time:** 647,088 hrs

**Standard:** Telcordia SR332

### 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 or above

**Memory:** 512 MB memory or above

**OS:** Windows XP/2000 with SP4 or above, Windows Vista, Windows 7

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

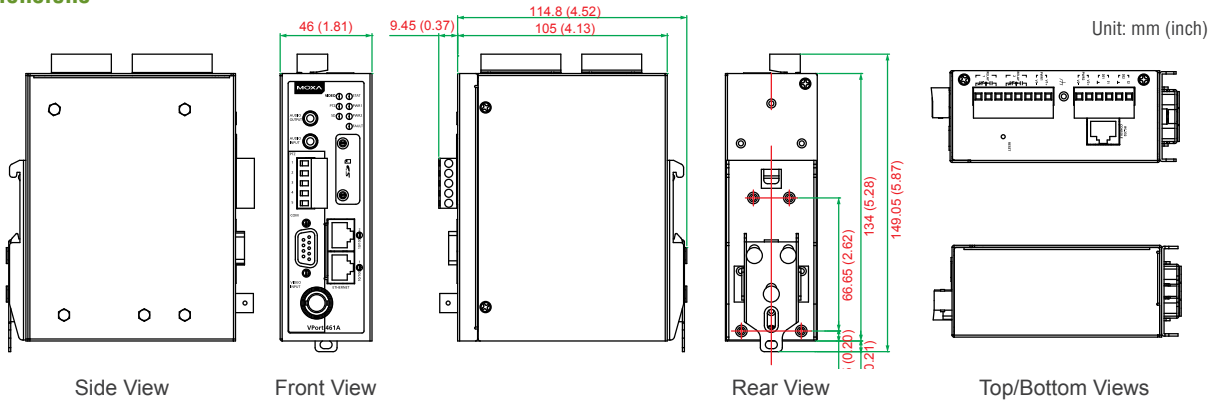
**Multimedia:** DirectX 9.0c or above

### Software Development Kit

**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

### Dimensions



## Ordering Information

### Available Models

**VPort 461A:** 1-channel H.264/MJPEG industrial video encoder with 2 10/100BaseT(X) ports, -25 to 60°C operating temperature  
**VPort 461A-T:** 1-channel H.264/MJPEG industrial video encoder with 2 10/100BaseT(X) ports, -40 to 75°C operating temperature

### Optional Accessories (can be purchased separately)

**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  
**WK-46:** Wall mounting kit  
**RK-4U:** 4U-high 19" rack mounting kit

### Package Checklist

- VPort 461A video encoder
- 6-pin terminal block for 1 power input and 2 digital inputs
- 8-pin terminal block for the other power input and 2 relay outputs
- 5-pin terminal block for the RS-232/422/RS-485 PTZ control port
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card