VPort 461 Series

Excellent video performance, 1-channel H.264/MJPEG industrial video encoders
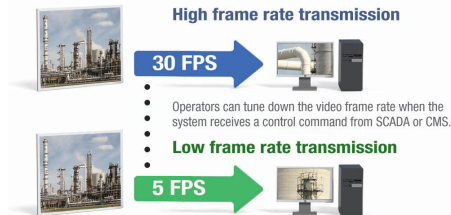
> 3 simultaneous video streams for H.264 and MJPEG
> Video latency under 200 ms
> 2 Ethernet ports for cascade and Ethernet port redundancy
> Moxa DynaStream™ function supported for network efficiency
> OnVIF supported for standardization and interoperability
> 802.1X and SSL/SSH for advanced network security
> Local storage capability with SD card slot
> Industrial design with -40 to 75°C operating temperature
> Free VPort SDK PLUS supported

Introduction

The VPort 461 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 461 can provide up to 3 video streams simultaneously with H.264 and MJPEG compression format. Video streams can be used for different purposes, such as viewing, recording, and analyzing, and the industrial rugged design, which includes a -40 to 75°C operating temperature, IP30 form factor protection, and industrial certifications, make the VPort 461 suitable for harsh environments.

The VPort 461 is equipped with Moxa's innovative DynaStream™ function for decreasing the bandwidth consumption of your video transmissions. DynaStream™ can reduce or increase the video frame rate automatically to make the video stream controllable by the system and system adminstrator.

High frame rate transmission

30 FPS

Operators can tune down the video frame rate when the system receives a control command from SCADA or CMS.

Low frame rate transmission

5 FPS

Specifications

Video
Video Compression: H.264 (MPEG4 part 10), MJPEG
Video Inputs: 1, BNC connector
Video Outputs: over Ethernet
Video Streams: Max. of 3 video streams (2 encoders: 1 for H.264, 1 for H.264 and MJPEG)
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

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

Network
Protocols: TCP, UDP, HTTP, SMTP, FTP, NTP, DNS, DHCP, UPnP, RTP, RTSP, ICMP, IGMPv3, QoS, SNMPv1/v2c/v3, DDNS, Modbus/TCP, 802.1X (Pending), SSL/SSH (Pending)

Ethernet: 2 10/100BaseT(X) auto negotiating RJ45 ports

Serial Port
PTZ Ports: 1, RS-232/422/485 port (terminal block connector), max. speed of 115.2 Kbps
COM Ports: 1, RS-232/422/485 (DB9 female connector), max. speed of 115.2 Kbps
Console Port: 1 RS-232 RJ45 port

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
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: PTZ control signal
SD: SD card operation

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

Power Requirements
Input Voltage: 2 24 VDC/VAC power inputs for redundancy
Power Consumption: Approx. 5.5 W

Physical Characteristics
Housing: Metal, IP30 protection
Dimensions: 52.98 x 135 x 105 mm (2.09 x 5.31 x 4.13 in)
Weight: 900 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 and CGI events for setting customized alarm actions
Pre-alarm Buffer: 9 MB for JPEG snapshot images

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 24 custom commands
PTZ Function Updates: Driver upload supported
Supported Device Protocols: Pelco D, Pelco P, Dynacolor DynaDome, Cohu, 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
Authentication: 802.1X (Pending)
Encryption: SSL/SSH (Pending)

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)

Standards and Certifications
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS:
EN 61000-4-2 (ESD) Level 3,
EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level 3,
EN 61000-4-5 (Surge) Level 3,
EN 61000-4-6 (CS) Level 3,
EN 61000-4-8,
EN 61000-4-11
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 (mean time between failures)
Time: 375,000 hours
Database: Telcordia (Bellcore), GB 25°C

Warranty
Warranty Period: 5 years
Details: See 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
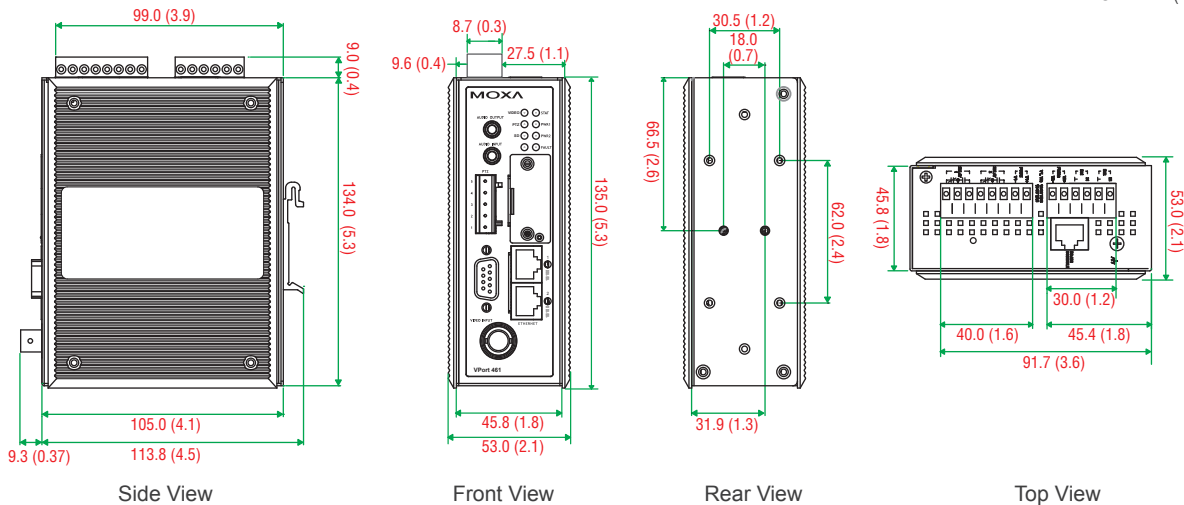**Multimedia:** DirectX 9.0c or above

Software 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 vailable for download from Moxa's website).
Standard: OnVIF (Pending)

Dimensions

Unit: mm (inch)

Side View   Front View   Rear View   Top View

Ordering Information

Available Models
VPort 461: 1-channel H.264/MJPEG industrial video encoder with 2 10/100BaseT(X) ports, 0 to 60°C operating temperature
VPort 461-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: 32-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 461 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