VPort 354 Series

Preliminary

Coming Soon

Full motion, 4-channel MJPEG/MPEG4 industrial video encoders

> Industrial design with -40 to 75°C operating temperature and fiber optic Ethernet port
> 2 Ethernet ports for cascade and port redundancy
> SD card slot for local storage capability
> Modbus/TCP supported for easy communication with SCADA software
> Video stream up to 120 frames/sec at 4CIF (704 x 480) resolution

NEMA TS2   CE   FC

: Introduction

The VPort 354 is a high performance, 4-channel industrial video encoder that provides up to 4CIF full frame rate performance (NTSC: 704 x 480 @ 30 FPS; PAL: 704 x 576 @ 25 FPS) for each channel, and supports a dual MJPEG/MPEG4 algorithm, making it especially well-suited for use with distributed surveillance systems in critical industrial applications. In addition, a continuous pre/post event trigger video record function can help system administrators determine why an alarm was triggered, and 2-way audio is provided for the convenience of real-time communication between system administrators located at the central site, and engineers in the field.

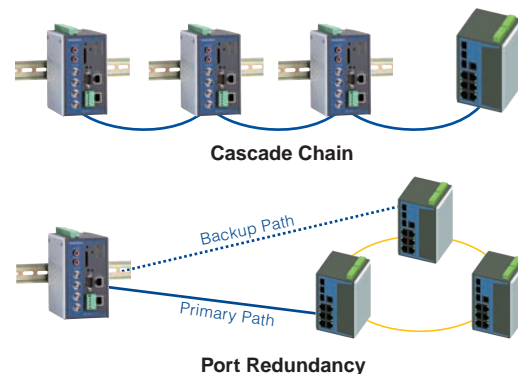### Rugged Design for Mission-critical Industrial Environments

- -40 to 75°C wide operating temperature
- Built-in single-mode or multi-mode fiber optic Ethernet port—media converter not required
- 2 Ethernet ports for cascade and port redundancy
- 1 RS-232/422/485 COM port for controlling external serial devices over Ethernet (Pending)
- Redundant 12/24 VDC and 24 VAC power inputs for greater reliability
- Metal housing with IP30 protection against dust
- DIN-Rail mounting installation for industrial environments
- UL508 certification (Pending)
- Meets NEMA TS2, Section 2 requirements

Advanced Network Protocols Support 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

Two Ethernet Ports for Cascading and Port Redundancy

The VPort 354 has two built-in 10/100 Mbps Ethernet ports for cascading multiple VPort 354 units. With the cascade feature, you'll need fewer switch ports, and also reduce your cable layout effort. An Ethernet by-pass function is also supported so that the cascade link will keep working if one of the VPort 354 units in the cascade chain goes offline. Port redundancy can be used to build a backup path for video transmission in case the primary path is broken.

Cascade Chain

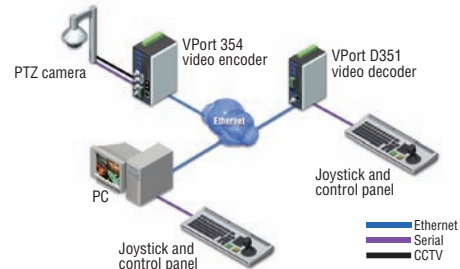Backup Path

Primary Path

Port Redundancy

SD Card for Storing Video Locally when the Network is Down

The VPort 354 is equipped with an SD card socket (V2.0) for local storage purposes. Enable local storage to record events that occur when the network is down and the video stream cannot be transmitted.

Transparent PTZ Control for Easy Control of PTZ Cameras

The VPort 354 uses Moxa's Real COM technology to implement transparent communication for RS-232/422/485 PTZ control. The benefit of the Transparent PTZ Control function is that it eliminates the need to build the PTZ control driver into the VPort product, allowing the use of a legacy PTZ control panel or keyboard to control a PTZ camera directly.

Specifications

Video

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

Video Stream: Dual streams (one for MJPEG, the other for MPEG4) at the same video resolution (note that MJPEG only has one quality setting)

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
QCIF	176 x 120	30	176 x 144	25
CIF	352 x 240	30	352 x 288	25
2CIF	704 x 240	30	704 x 288	25
4CIF	704 x 480	30	704 x 576	25

Video Viewing:
• Adjustable image size and quality
• Timestamp and text overlay

Video Output: Via Ethernet port

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, SNMPv1/v2c/v3, DDNS

Ethernet: 2 10/100BaseT(X) auto negotiating RJ45 ports, or 2 100BaseFX fiber ports (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 [a] 4 km [b]	40 km [c]
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 (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

Local Storage

SD Socket: Standard SD socket, V2.0, with SD LED indicator

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: 1200 g

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

Alarms

Video Motion Detection: Includes sensitivity tuning (Pending)

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

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, Yokogawa (Fieldeye series), 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

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 (Pending)

EMS:
EN61000-4-2 (ESD), level 3
EN61000-4-3 (RS), level 3
EN61000-4-4 (EFT), level 3
EN61000-4-5 (Surge), level 3
EN61000-4-6 (CS), level 2
EN61000-4-8
EN61000-4-11

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

Traffic Control: NEMA TS2

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.

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
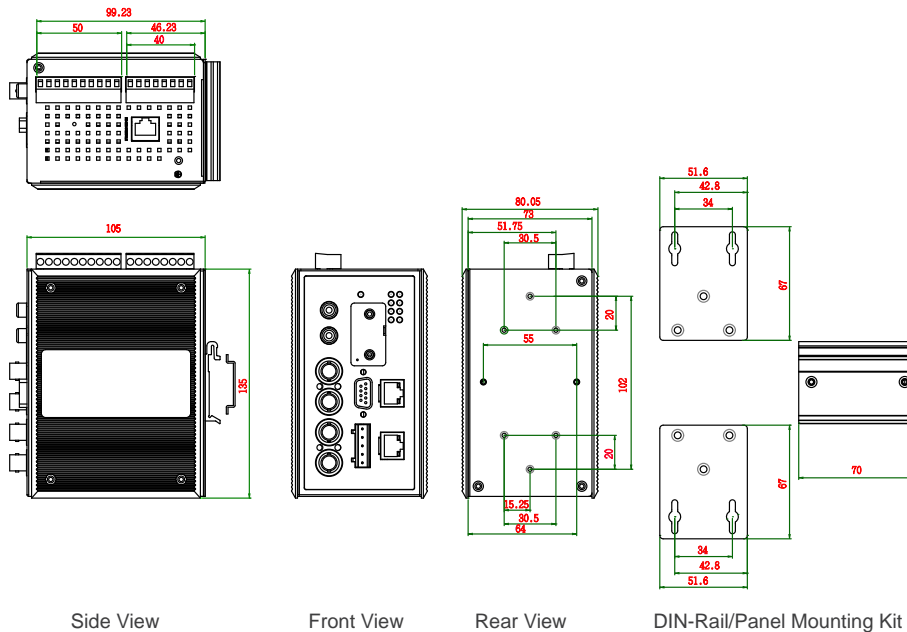
Browser: Internet Explorer 6.x or above

Multimedia: DirectX 9.0c or above

Software 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 vailable for download from Moxa's website).

Dimensions (unit = mm)

Side View   Front View   Rear View   DIN-Rail/Panel Mounting Kit

: 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 354	VPort 354-T	2	---	---
VPort 354-MM-SC	VPort 354-MM-SC-T	---	2	---
VPort 354-SS-SC	VPort 354-SS-SC-T	---	---	2

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