



The ComNet FVT/FVR240D8S1 video transmitter/data transceiver and video receiver/data transceiver series utilize 10-bit digital encoding and decoding for high-quality video transmission that exceeds the requirements of EIA RS-250C for short-haul video transmission. These environmentally hardened units provide transmission of 24 independent video channels and eight bi-directional data channels over one optical fiber and are ideal for use in unconditioned roadside or out-of-plant installations. These units are completely transparent to and universally compatible with any NTSC, PAL, or SECAM CCTV camera systems, data channels can be set independently for RS232, RS422 and 2 or 4-wire RS485, Sensornet, Bi-phase and Manchester.

FEATURES

- › 10-Bit digitally encoded video transmission, transmits 24 real-time/full frame color video signals and 8 bi-directional data signals on one optical fiber
- › Supports RS232, RS422, and 2 or 4-wire RS485, Sensornet, Bi-phase and Manchester
- › Exceeds all requirements for EIA RS-250C short-haul transmission: Extremely high video performance
- › Exceptionally low video distortion with zero Performance Variation vs. Optical Path Loss
- › Compatible with all NTSC, PAL, or SECAM CCTV camera systems
- › Designed to meet full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- › Voltage transient protection on all power and signal input/output lines provides protection from power surges and other voltage transient events.
- › Robust design ensures extremely high reliability in unconditioned out-of-plant environments
- › LED status indicators confirm operating status
- › Plug-and-play design ensures ease of installation and no electrical or optical adjustments are required.
- › Lifetime Warranty

APPLICATIONS

- › High-Performance CCTV (Fixed Video)

SPECIFICATIONS

Video

Video Input	1 V pk-pk (75 ohms)
Overload	>1.5 V pk-pk
# Input/Output Channels	24
Bandwidth (minimum)	10 Hz - 6.5 MHz per channel
Differential Gain	<2%
Differential Phase	<0.7°
Tilt	<1%
Signal-to-Noise Ratio (SNR)	67 dB Typical
Max. RG-59 COAX Distance	100 m (300 ft) Camera to Fiber Optic Module to maintain 6Mhz Bandwidth

Data

Data Channels	8
Data Interface	RS232, RS422 and RS485 (2W/4W)
Data Format	NRZ, NRZI, Manchester, Bi-Phase and Sensornet
Data Rate	DC-250 Kbps (NRZ)
Bit Error Rate	<1 in 1010 @ Maximum Optical Loss Budget
Operating Mode	Simplex or Full-Duplex

Fiber Optic

Wavelength	Single Mode 9/125µm
Number of Fibers	1
Optical Emitter	Laser Diode

Connectors

Optical	ST
Power	Terminal Block
Video	BNC (Gold Plated Center-Pin)
Data	RJ45 (5 pcs. Included)

Power

Input Voltage	90 to 264 VAC
Power Consumption	70 W Max
Output Voltage	9 VDC +/- 5% @ 6.5 Amps @ 75°C
Fusing	1.25 A slow blow (rack power supply) (plug-in modules individually electronically fused)
Current Protection	Automatic Resettable Solid-State Current Limiters

Electrical & Mechanical

Indicating LEDs	› Video Sync Presence for Each Video Channel › Received Data › Transmitted Data › Optical Carrier Detect › Power
Circuit Board Size (L×W×H)	Meets IPC Standard 19 × 7.5 × 6 in (48 × 19 × 15 cm)
Shipping Weight	<8 lb / 3.6 kg

Environmental

MTBF	>100,000 hours
Operating Temp	-40° C to +75° C
Storage Temp	-40° C to +85° C
Relative Humidity	0% to 95% (non-condensing) ¹



ORDERING INFORMATION

Part Number	Description	Fibers	Cable	Optical Pwr Budget	Max. Distance ³
FVT240D8S1	Video Transmitter/Data Transceiver	1	Single Mode 9/125µm	18 dB	54 km (35 miles)
FVR240D8S1	Video Receiver/Data Transceiver	1	Single Mode 9/125µm	18 dB	54 km (35 miles)
Accessories	ComNet C1PS Card Cage Power Supply, Power Cord (Included)				
Options	[1] Add suffix 'C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory)				

[2] Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth.

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

TYPICAL APPLICATION

