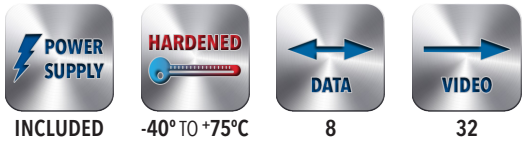
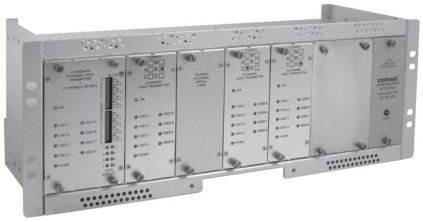
comnet
Communication Networks

32-Channel Digitally Encoded Video + 8 Bi-Directional Data Channels/10-Bit Digital/Short-Haul Video

FVT/FVR320D8S1





The ComNet™ FVT/FVR320D8S1 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 32 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. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are ever required.

FEATURES

› 10-Bit digitally encoded video transmission, transmits 32 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

› Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters

› Lifetime Warranty

APPLICATIONS

› High-Performance CCTV Systems

32-Channel Digitally Encoded Video + 8 Bi-Directional Data Channels/10-Bit Digital/Short-Haul Video

SPECIFICATIONS

Video

Video Input	1 volt pk-pk (75 ohms)
Overload	>1.5 V pk-pk
# Input/Output Channels	32
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	100m (300 ft) Camera to Fiber Optic Module to maintain 6 Mhz Bandwidth

Data

Data Channels	8
Data Interface	RS232, RS422 and RS485 (2 W/4 W)
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

Wavelength

Single Mode 9/125µm

Number of Fibers

1

LED Indicators

› Video Sync Presence for Each Video Channel
› Received Data › Transmitted Data
› Optical Carrier Detect › Power

Optical Emitter

Laser Diode

Connectors

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

Power

Operating Voltage Range	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)

Mechanical

Current Protection	Automatic Resettable Solid-State Current Limiters
Circuit Board	Meets IPC Standard
Size (L×W×H)	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]

AGENCY COMPLIANCE
PART 15 COMPLIANT · E322911 · N24621

MADE IN THE USA

ORDERING INFORMATION

Part Number	Description	Fibers Req'd	Fiber	Optical Pwr Budget	Max Distance[2]
FVT320D8S1	Video Transmitter/Data Transceiver	1	Single Mode 9/125µm	18 dB	36 km (22 miles)
FVR320D8S1	Video Receiver/Data Transceiver	1	Single Mode 9/125µm	18 dB	36 km (22 miles)
Accessories	Power Cord				
Options	[1] Add suffix '/C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory)				

[2] Distance may be limited by optical dispersion. This product requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended.

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

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