comnet
Communication Networks

10-bit digitally encoded video with "Up-the-Coax" extended distance or bi-directional data (RS232, RS422, RS485 2/4W)
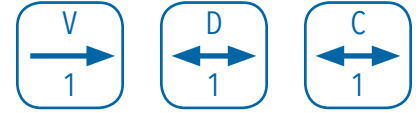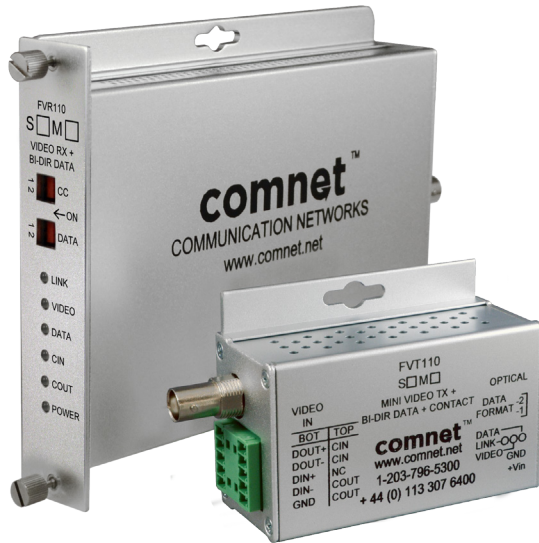
FVT/FVR110(M,S)1[/M]

APPEARANCE

V → 1   D ↔ 1   C ↔ 1

DESCRIPTION

The ComNet™ FVT/FVR110 series is a video transmitter/receiver and data transceiver that supports the simultaneous transmission of short haul quality 10-bit EIA RS-250C digitally encoded video and bi-directional data over one multimode or single mode optical fiber. The module is universally compatible with major CCTV camera manufacturers and supports RS232, RS422 and 2 or 4-wire RS485 data interfaces and most data protocols. It also supports "up-the-coax" data transmission from all major manufacturers, utilizing time-base correction these units can achieve distances of 48km. The FVT/FVR110 supports Panasonic Proteus™, Pelco Coaxitron™ and Bosch Bilinx™ Up-the-Coax systems. The FVT110 also transmits a single bi-directional contact closure signal. Packaged in the exclusive ComNet ComFit housing, the full-size units may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate.

FEATURES

› Supports Panasonic Proteus™, Pelco Coaxitron™ and Bosch Bilinx™ Up-the-Coax systems

› 1 Full Duplex Data channel

› 1 Full Duplex Contact Closure

› Distances up to 30 miles (48 km)

› Exceeds all requirements for RS-250C short-haul transmission: True broadcast video performance

› Time-Based Corrected Up-the-Coax Data

› 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.

› Automatic resettable fuses on all power lines

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

› FVT/FVR110(M,S)1 is a hot-swappable rack module

› FVT/FVR110(M,S)1 is interchangeable between stand-alone or rack mount use – ComFit

APPLICATIONS

› High-Performance CCTV with PTZ Control

› Lifetime Warranty

FVT/FVR110(M,S)1[/M]

10-bit digitally encoded video with "Up-the-Coax" extended distance or bi-directional data (RS232, RS422, RS485 2/4W)

SPECIFICATIONS

Video

Video Input:	1 volt pk-pk (75 ohms)
Overload::	>1.5V pk-pk
Bandwidth:	5 Hz - 10 MHz
Differential Gain:	<2%
Differential Phase:	<0.7˚
Tilt:	<1%
Signal-to-Noise Ratio (SNR):	67 dB @ Maximum Optical Loss Budget
Max. RG-59 COAX Distance:	100m (300ft) Camera to Fiber Optic Module to maintain 6Mhz Bandwidth

Data

Data Interface:	RS232, RS422, RS485 (2/4W), UTC (Up-the-Coax)
Data Format:	NRZ, NRZI Manchester, Bi-phase and Sensornet
Data Rate:	DC-250 Kbps (NRZ)

Contact

Input:	Dry Contact Closures
Output:	SPST Relay 0.5 Contact Rating

Wavelength

1310/1550 nm, MM and SM

Optical Emitter

Laser Diode

LED Indicators

– Link   – Video   – Data
– Contact In   – Contact Out   – Power

Connectors

Optical:	1 ST connector
Power:	Terminal Block
Video:	BNC (Gold Plated Center-Pin)
Data:	Terminal Block
Contact:	Terminal Block

Power

Operating Voltage:	8 to 15 VDC
Power Consumption:	5.25W

Electrical & Mechanical

Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm) (L×W×H)	
FVT/FVR110(M,S)1/M (Mini)	3.3 × 2.5 × 1.46 in (8.4 × 6.4 × 2.7 cm)
FVT/FVR110(M,S)1 (ComFit)	6.1 × 5.3 × 1.1 in (15.5 × 13.5 × 2.8 cm)
Shipping Weight:	<2 lb / 0.9 kg

Environmental

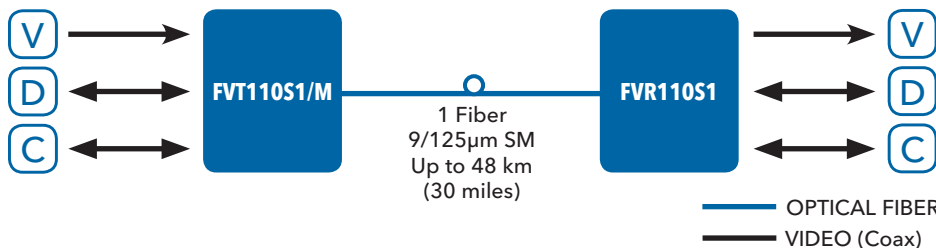|	
MTBF:	>100,000 hours
Operating Temp:	-40˚ C to +75˚ C
Storage Temp:	-40˚ C to +85˚ C
Relative Humidity:	0% to 95% (non-condensing)[1]

ORDERING INFORMATION

Part Number	Description	Fibers Required	Fiber	Optical Power Budget	Maximum Distance	# Rack Slots
FVT110M1/M	Mini Video Transmitter/Data Transceiver	1	Multimode‡ – 62.5/125µm	16 dB	3 km (2 mi)	N/A
FVT110M1	Video Transmitter/Data Transceiver	1	Multimode‡ – 62.5/125µm	16 dB	3 km (2 mi)	1
FVR110M1	Video Receiver/Data Transceiver	1	Multimode‡ – 62.5/125µm	16 dB	3 km (2 mi)	1
FVT110S1/M	Mini Video Transmitter/Data Transceiver	1	Single Mode‡ – 9/125µm	16 dB	48 km (30 mi)	N/A
FVT110S1	Video Transmitter/Data Transceiver	1	Single Mode‡ – 9/125µm	16 dB	48 km (30 mi)	1
FVR110S1	Video Receiver/Data Transceiver	1	Single Mode‡ – 9/125µm	16 dB	48 km (30 mi)	1

Accessories Options	9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)
	[1] Add '/C' for Conformally Coated Circuit Boards (Extra charge, consult factory)
	DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1)

TYPICAL APPLICATION

V
D   FVT110S1/M   1 Fiber 9/125µm SM Up to 48 km (30 miles)   FVR110S1   V
C   D
     C

—— OPTICAL FIBER
—— VIDEO (Coax)

Low Power Consumption

comnet
Communication Networks