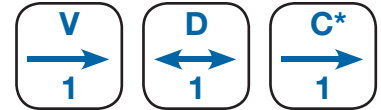


10-bit digitally encoded video with “Up-the-Coax”^{*} extended distance
or bi-directional data (RS232, RS422, RS485 2/4W)



Description

The ComNet™ FVT/FVR109A 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-based correction these units can achieve distances of 48km. The FVT/FVR109A supports Panasonic Proteus™, Vicon Vicoax™ and Pelco Coaxitron™ up-the-coax systems. The FVT109A also transmits the state of a contact closure input over fiber to an output relay on the FVR109A. The contact closure is not supported with the FVT109AM. 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™, Vicon Vicoax™ and Pelco Coaxitron™ up-the-coax systems
- 1 bi-directional data channel
- Contact closure in direction of video
- 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
- Tested and certified by an independent laboratory for 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 unconditional 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/FVR109A(M)(S)1 is a hot-swappable rack module
- FVT/FVR109A(M)(S)1 is interchangeable between stand-alone or rack mount use – ComFit
- Lifetime Warranty

Applications

- High-Performance CCTV with PTZ Control

^{*} Contact closure is not supported on the FVT109AM



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 and RS485 (2W/4W), UTC (Up-the-Coax)
Data Format:	NRZ, NRZI Manchester, Bi-phase and Sensornet
Data Rate:	DC-250 Kbps (NRZ)
WAVELENGTH	1310/1550 nm, MM and SM
NUMBER OF FIBERS	1
OPTICAL EMITTER	Laser Diode
LED INDICATORS	- Link - Video - Data
CONNECTORS	

Optical:	1 ST connector
Power:	Terminal Block
Video:	BNC (Gold Plated Center-Pin)
Data:	Terminal Block
Contact:	Input: Dry Contact Closures Output: SPST Relay 0.5 Contact Rating

ELECTRICAL & MECHANICAL

Power:	
Surface Mount:	8-15 VDC @ 350 mA
Rack Mount:	From Rack
Rack Slots:	1
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm) (LxWxH)	
FVT/FVR109A(M)(S)1M (Small Size)	3.3 × 2.5 × 1.1 in., (8.4 × 6.4 × 2.8 cm)
FVT/FVR109A(M)(S)1 (ComFit Model)	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)*
* May be extended to condensation conditions by adding suffix '/C' to model number for conformal coating.	



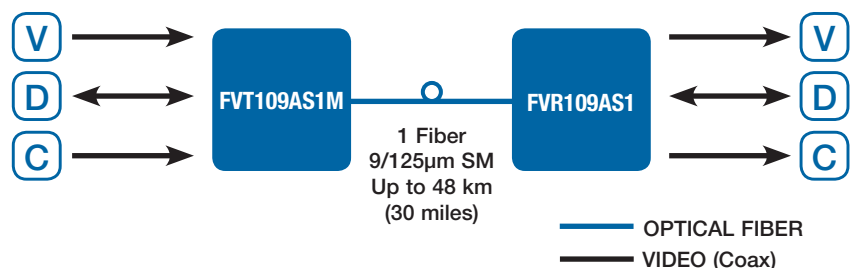
PART NUMBER	DESCRIPTION	FIBERS REQ'D	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE [†]	# RACK SLOTS
FVT109AM1M	Mini Video Transmitter/Data Transceiver	1	Multimode 62.5/125µm	16 dB	3 km (2 mi)	– (Mini)
FVT109AM1	Video Transmitter/Data Transceiver					1
FVR109AM1	Video Receiver/Data Transceiver					1
FVT109AS1M	Mini Video Transmitter/Data Transceiver	1	Single Mode 9/125µm	16 dB	48 km (30 mi)	– (Mini)
FVT109AS1	Video Transmitter/Data Transceiver					1
FVR109AS1	Video Receiver/Data Transceiver					1
Accessories	9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)					
Options	Add '/C' for Conformally Coated Circuit Boards (Extra charge, consult factory)					
	DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1)					

NOTE: This product requires a fiber installation with a minimum 35 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.

[†]Distance may be limited by optical dispersion. **Check with control system manufacturer for distance limits on up-the-coax systems.**



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