

10-bit digital video with one bi-directional data channel  
+ 1 10/100 Mbps fast Ethernet port



## Description

The ComNet™ FVT/FVR10D1E series video transmitter/receiver and data transceiver and the FVT10D1EM mini transmitter and data transceiver support the simultaneous transmission of short haul quality 10-bit EIA RS-250C digital video with one bi-directional data channel plus one 10/100 Mbps fast Ethernet port. The modules are 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 most major manufacturers. Packaged in the exclusive ComNet ComFit housing, the FVT/FVR10D1E standard 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

- 10-bit digital video transmission
- One bi-directional data channel
- One 10/100 BASE-T/TX fast Ethernet port
- IEEE 802.3 compliant
- Automatic MDI/MDI-X crossover
- Exceeds all requirements for RS-250C short-haul transmission: True broadcast video performance
- Compatible with all NTSC, PAL, or SECAM CCTV camera systems
- Certified to the requirements 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
- Distances up to 30 miles (48 km)
- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters
- FVT/FVR10D1E(M)(S) is a hot-swappable rack module
- FVT/FVR10D1E(M)(S) is interchangeable between stand-alone or rack mount use – ComFit
- Lifetime Warranty

## Applications

- Surveillance Systems with Control
- Hybrid Ethernet Systems



# FVT10D1E(M)(S)M FVT/FVR10D1E(M)(S)

10-bit digital video with one bi-directional data channel + one 10/100 Mbps fast Ethernet port

## 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)

### ETHERNET

Data Interface: 10/100 BASE-T/TX  
 Data Rate: 10/100 Mbps  
 Full Duplex

### WAVELENGTH

### NUMBER OF FIBERS

### OPTICAL EMITTER

### LED INDICATORS

1310/1550 nm, MM and SM  
 1  
 Laser Diode  
 - Link - Video - Data - Ethernet Activity

### CONNECTORS

Optical: 1 ST connector  
 Power: Terminal Block  
 Video: BNC (Gold Plated Center-Pin)  
 Data: RJ45  
 Small-Size Data: Terminal Block  
 Ethernet: RJ45

### ELECTRICAL & MECHANICAL

Power: 8-15 VDC @ 350 mA  
 Surface Mount: Automatic Resettable  
 Current Protection: Solid-State Current Limiters  
 Circuit Board: Meets IPC Standard  
 Size (in./cm) (LxWxH) - Mini: 4.1 x 3.7 x 1.1 in., (10.4 x 9.4 x 2.8 cm)  
 Size (in./cm) (LxWxH) - Full Size: 6.1 x 5.3 x 1.1 in., (15.5 x 13.5 x 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)\*

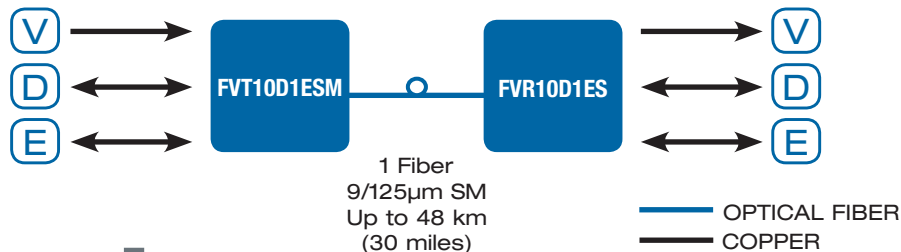


\* May be extended to condensation conditions by adding suffix '/C' to model number for conformal coating.

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE†
FVT10D1EMM	Mini-Video Transmitter/Data Transceiver	1	Multimode 62.5/125µm	16 dB	3 km (2 miles)
FVT10D1EM	Video Transmitter/Data Transceiver				
FVR10D1EM	Video Receiver/Data Transceiver				
FVT10D1ESM	Mini-Video Transmitter/Data Transceiver	1	Single Mode 9/125µm	16 dB	48 km (30 miles)
FVT10D1ES	Video Transmitter/Data Transceiver				
FVR10D1ES	Video Receiver/Data Transceiver				
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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