



The ComNet™ FVT/FVR412(M)(S)1 Series transmits four channels of video utilizing state of the art digital encoding and decoding for high-quality video transmission, along with two channels of bi-directional data and one bi-directional contact closure over one single mode or multimode optical fiber. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are required.

## FEATURES

- › Digitally encoded video transmission: transmits 4 real-time color video signals and 2 bi-directional data signals on one optical fiber
- › Supports RS232, RS422, and 2- or 4-wire RS485
- › One bi-directional contact closure
- › 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 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
- › Hot-swappable rack modules
- › Interchangeable between stand-alone or rack mount use - ComFit
- › Five year warranty

## APPLICATIONS

- › Multiple CCTV with PTZ

## SPECIFICATIONS

### Video

Video Input	1 volt pk-pk (75 ohms)
Overload	>1.5V pk-pk
# Input/Output Channels	4
Bandwidth (minimum)	10 Hz - 6.5 MHz per channel
Differential Gain	<4%
Differential Phase	<0.7°
Tilt	<1%
Signal-to-Noise Ratio (SNR)	57 dB Typical
Max. RG-59 COAX Distance	100m (300ft) Camera to Fiber Optic Module to maintain 6Mhz Bandwidth

### Data

Data Channels:	2
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 10 <sup>9</sup> @ Maximum Optical Loss Budget
Operating Mode:	Simplex or Full-Duplex

### Contact

Contact Interface	Response Time: 0.5 msec
Input	Dry Contact Closure
Output	SPST Relay, 0.5 A Contact Rating - normally open

### Wavelength

1310/1550 nm, Multimode and Single Mode

### Number Of Fibers

1

### Indicating LEDs

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

### Optical Emitter

Laser Diode

### Connectors

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

### Power

Operating Voltage Range	8 to 15 VDC
Power Consumption	4W

### Electrical & Mechanical

Number of Rack Slots:	2
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size	6.1 × 5.3 × 3.3 in (15.5 × 13.5 × 8.3 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) <sup>1</sup>

AGENCY COMPLIANCE



MADE IN THE  
**USA**

## ORDERING INFORMATION

Part Number	Description	Fiber	Optical Power Budget	Max. Distance <sup>2</sup>
FVT412M1	Video Transmitter/Data Transceiver (1310/1550 nm)	Multimode 62.5/125µm	16 dB	2 km (1.2 mi)
FVR412M1	Video Receiver/Data Transceiver (1550/1310 nm)	Multimode 62.5/125µm	16 dB	2 km (1.2 mi)
FVT412S1	Video Transmitter/Data Transceiver (1310/1550 nm)	Single Mode 9/125µm	23 dB	69 km (43 miles)
FVR412S1	Video Receiver/Data Transceiver (1550/1310 nm)	Single Mode 9/125µm	23 dB	69 km (43 miles)
Included	DC Plug-in Power Supply, 90-264 VAC, 50-60 Hz (Included)			
Options	[1] Add suffix 'C' for Conformally Coated Circuit Boards to extend to condensation conditions (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 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.

[2] Transmission distance will be diminished if additional losses are introduced by the optical connectors, splices and other factors regarding the quality of the fiber. Operating distance of multimode is limited by the characteristics of the fiber bandwidth. For additional information or support, contact the ComNet Applications Engineering Department.

## TYPICAL APPLICATION



Low Power Consumption