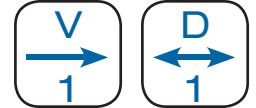


10-bit digital video with  
bi-directional and up-the-coax data



## Description

The ComNet™ FVT/FVR1031 series video transmitter/receiver and data transceiver supports simultaneous transmission of short-haul quality 10-bit digital video, bi-directional data and up-the-coax 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 major data protocols as well as up-the-coax data. The FVT/FVR1031 allows the user to choose bi-directional data or up-the-coax data through a switch on the unit. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are ever required. Bi-color (Red/Green) LED indicators are provided for rapidly ascertaining equipment operating status. Packaged in the exclusive ComNet ComFit housing, these units may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate.

## Applications

- High Performance CCTV with PTZ Camera Control

## Features

- 10-bit digitally encoded video transmission
- Exceeds all requirements for RS-250C short-haul transmission: True broadcast video performance
- Supports RS232, RS422 or RS485 (2 or 4-wire) data interfaces
- 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
- Hot-Swappable Modules
- Distances up to 43 miles (69 km)
- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters
- Interchangeable between stand-alone or rack mount use - ComFit
- Lifetime Warranty



# FVT/FVR1031(M)(S)1

## 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 Format:     | RS-232, RS-422, 2 or 4-wire RS-485 w/Tri-State, Manchester, bi-phase and up-the-coax data |
| Data Rate:       | DC-115 Kbps (NRZ)   |
| WAVELENGTH       | 1310/1550 nm, MM and SM   |
| NUMBER OF FIBERS | 1   |
| OPTICAL EMITTER  | Laser Diode   |
| LED INDICATORS   | - Video Sync Presence - Received Data<br>- Transmitted Data - Optical Carrier Detect      |

### CONNECTORS

|          |                                      |
|----------|--------------------------------------|
| Optical: | ST (Standard)<br>SC or FC (Optional) |
| Power:   | Terminal Block                       |
| Video:   | BNC (Gold Plated Center-Pin)         |
| Data:    | Terminal Block                       |

### ELECTRICAL & MECHANICAL

|                        |   |
|------------------------|---|
| Power:                 | 8-15 VDC @ 2W                                     |
| Surface Mount:         | From Rack   |
| Rack Mount:            | 1   |
| Number of Rack Slots:  | Automatic Resettable Solid-State Current Limiters |
| Current Protection:    | Meets IPC Standard                                |
| Circuit Board:         | 6.1 x 5.3 x 1.1 in.,<br>(15.5 x 13.5 x 2.8 cm)    |
| Size (in./cm) (LxWxH): | <2 lb./0.9 kg                                     |
| Shipping Weight:       |   |

### 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.



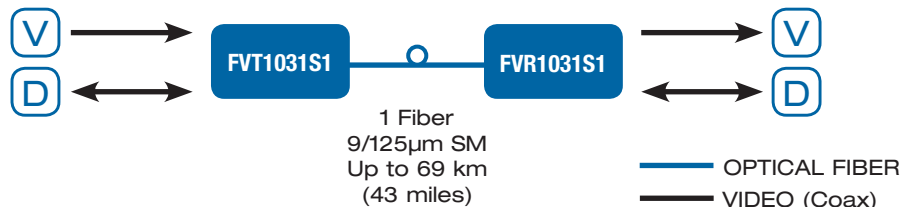
| PART NUMBER | DESCRIPTION  | FIBERS REQ'D | FIBER                   | OPTICAL PWR BUDGET | MAX. DISTANCE† | MAX. UTC DISTANCE† | # RACK SLOTS |
|-------------|--|--------------|-------------------------|--------------------|----------------|--------------------|--------------|
| FVT1031M1   | Video Transmitter/Data Transceiver   | 1            | Multimode<br>62.5/125µm | 16 dB              | 3 km (2 mi)    | 1 km (0.6 mi)      | 1            |
| FVR1031M1   | Video Receiver/Data Transceiver  |              |                         |                    |                |                    |              |
| FVT1031S1   | Video Transmitter/Data Transceiver   | 1            | Single Mode<br>9/125µm  | 23 dB              | 69 km (43 mi)  | 1 km (0.6 mi)      | 1            |
| FVR1031S1   | 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)<br>Add '/SC' for SC Connectors<br>Add '/FC' for FC Connectors<br>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.

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

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.



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