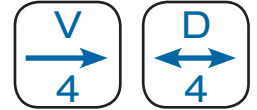


4-channel digital video + 4 bi-directional data channels + 10-bit digital short-haul video



Description

The ComNet™ FVT/FVR4014 video transmitter/data transceiver and video receiver/data transceiver series utilize 10-bit digital encoding and decoding for high-quality video transmission that meets the requirements of EIA RS-250C for short-haul video transmission. These environmentally hardened units provide transmission of four independent video channels and four bi-directional data channels over one optical fiber and are ideal for use in unconditioned roadside or out-of-plant installations. These units are completely transparent to and universally compatible with any NTSC, PAL, or SECAM CCTV camera systems, data channels can be set independently for RS232, RS422 and 2 or 4-wire RS485 with tri-state support. 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.

Features

- 10-bit digital video transmission: transmits 4 real-time color video signals and 4 bi-directional data signals on one optical fiber
- Supports RS232, RS422, and 2 or 4-wire RS485 with tri-state data interfaces
- Exceeds all requirements for EIA RS-250C short-haul transmission: Extremely high video performance
- Exceptionally low video distortion with zero Performance Variation vs. Optical Path Loss
- Ideally suited to networks requiring multiple physical layers where video degradation may be a problem
- 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.
- 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
- Lifetime Warranty

Applications

- High-Performance CCTV (Fixed Video)



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: | <2% |
| Differential Phase: | <0.7° |
| Tilt: | <1% |
| Signal-to-Noise Ratio (SNR): | 67 dB Typical |
| Max. RG-59 COAX Distance: | 100m (300ft) Camera to Fiber Optic Module to maintain 6Mhz Bandwidth |

DATA

| | |
|-----------------|--|
| Data Channels: | 4 |
| 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 ⁻⁹ @ Maximum Optical Loss Budget |
| Operating Mode: | Simplex or Full-Duplex |

WAVELENGTH

NUMBER OF FIBERS

LED INDICATORS

| |
|--|
| 1310/1550 nm, Multimode and Single Mode |
| 1 |
| - Video Sync Presence for Each Video Channel |
| - Received Data - Transmitted Data |
| - Optical Carrier Detect |
| Laser Diode |

OPTICAL EMITTER

CONNECTORS

| | |
|----------|------------------------------|
| Optical: | ST |
| Power: | Terminal Block |
| Video: | BNC (Gold Plated Center-Pin) |
| Data: | RJ45 (5 pcs. Included) |

ELECTRICAL & MECHANICAL

| | |
|-----------------------|---|
| Power: | 8-15 VDC @ 4W |
| Surface Mount: | From Rack |
| Rack Mount: | From Rack |
| Number of Rack Slots: | 2 |
| Current Protection: | Automatic Resettable Solid-State Current Limiters |

| | |
|-----------------------|---|
| Circuit Board: | Meets IPC Standard |
| Size (in./cm) (LxWxH) | 6.1 x 5.3 x 2.2 in., (15.5 x 13.5 x 5.6 cm) |
| Shipping Weight: | <2 lb./0.9 kg |

ENVIRONMENTAL

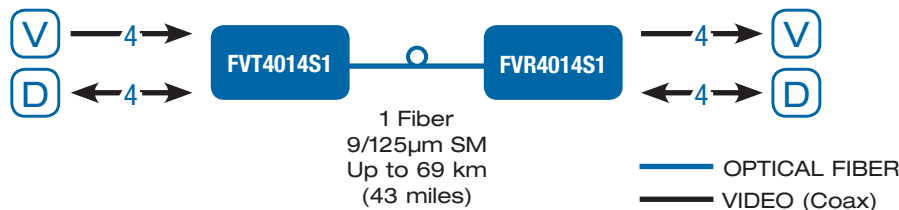
| | |
|--------------------|-----------------------------|
| MTBF: | >100,000 hours |
| Operating Temp: | -40° C to +75° C |
| Storage Temp: | -40° C to +85° C |
| Relative Humidity: | 0% to 95% (non-condensing)* |

* 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† | # RACK SLOTS |
|-------------|--|-----------------|----------------------|--------------------|------------------|--------------|
| FVT4014M1 | Video Transmitter/Data Transceiver (1310/1550 nm) | 1 | Multimode 62.5/125µm | 16 dB | 2 km (1.2 miles) | 2 |
| FVR4014M1 | Video Receiver/Data Transceiver (1550/1310 nm) | | | | | |
| FVT4014S1 | Video Transmitter/Data Transceiver (1310/1550 nm) | 1 | Single Mode 9/125µm | 23 dB | 69 km (43 miles) | 2 |
| FVR4014S1 | Video Receiver/Data Transceiver (1550/1310 nm) | | | | | |
| Accessories | 9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included) (5) RJ45 - RJ45 Breakout Wiring Kit (Includes cable and terminal block) | | | | | |
| 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 30 dB connector return loss. The use of Super Polish Connectors is recommended. † Distance may be limited by optical dispersion. 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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