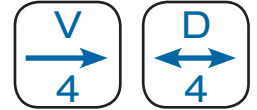


4-channel digital video/
4 bi-directional data channels



Description

The ComNet™ FVT/FVR414 video transmitter/data transceiver and video receiver/data transceiver series utilize digital encoding and decoding for high-quality 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

- 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
- 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: <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: 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 1
 LED INDICATORS

1310/1550 nm, Multimode and Single Mode
 - Video Sync Presence - 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:
 Surface Mount: 8-15 VDC @ 4W
 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

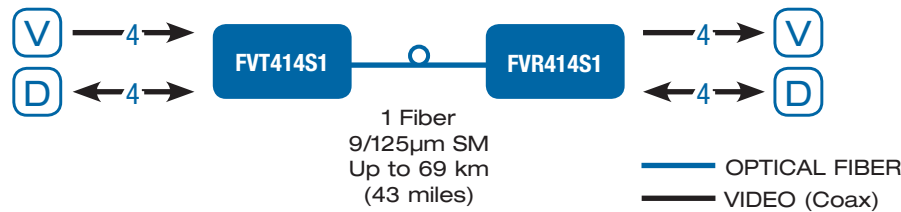
ENVIRONMENTAL

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 |
|-------------|--|-----------------|----------------------|--------------------|------------------|--------------|
| FVT414M1 | Video Transmitter/Data Transceiver (1310/1550 nm) | 1 | Multimode 62.5/125µm | 16 dB | 2 km (1.2 miles) | 2 |
| FVR414M1 | Video Receiver/Data Transceiver (1550/1310 nm) | | | | | |
| FVT414S1 | Video Transmitter/Data Transceiver (1310/1550 nm) | 1 | Single Mode 9/125µm | 23 dB | 69 km (43 miles) | 2 |
| FVR414S1 | 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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