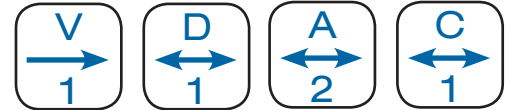


- (1) 10-bit digital short-haul video + (1) bi-directional data +
(2) bi-directional audio + (1) bi-directional contact closure



Description

The ComNet™ FVT/FVR10D1A2C1 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 one independent video channel and one bi-directional data channel over one optical fiber and are ideal for use in unconditioned roadside or out-of-plant installations. They also provide transmission of two bi-directional audio signals and one bi-directional contact closure over the same fiber. The modules use 24-bit 96kHz sample rate digital encoding for superior transmission of balanced line-level audio. 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. It also supports “up-the-coax” data transmission from all major manufacturers. 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. These units are interchangeable between stand-alone or card mount configurations.

Features

- 10-bit digital video transmission: transmits 1 real-time color video signal and 1 bi-directional data signal on one optical fiber
- Supports RS232, RS422, and 2 or 4-wire RS485 with tri-state data interfaces
- Two bi-directional Audio Channels
- One bi-directional Contact Closure
- 24-Bit 96kHz Digitally Encoded Transmission
- 20Hz – 18 kHz Audio Bandwidth
- 600 Ohms Audio Input Impedence
- Transmits Balanced Line-Level Audio up to +6dBm
- 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



FVT/FVR10D1A2C1(M)(S)1

(1) 10-bit digital short-haul video + (1) bi-directional data +
(2) bi-directional audio + (1) bi-directional contact closure

specifications

VIDEO

Video Input:	1 volt pk-pk (75 ohms)
Overload:	>1.5V pk-pk
# Input/Output Channels:	1
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:	1
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)
Bit Error Rate:	<1 in 10 ⁻⁹ @ Maximum Optical Loss Budget
Operating Mode:	Simplex or Full-Duplex

AUDIO

# Input/Output Channels:	2 (balanced)
Audio Input/Output Signal:	Max 4.4 volt pk-pk (+6dBm)
Bandwidth:	20Hz - 18kHz
Total Harmonic Distortion:	0.02%
Signal-to-Noise Ratio (SNR):	85dB (Typical)

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

LED INDICATORS

- Video Sync Presence
- Received Data
- Transmitted Data
- Link
- Audio Channels 1-2
- Contact Closure
- Power

OPTICAL EMITTER

Laser Diode

CONNECTORS

Optical:	ST
Power:	Terminal Block
Video:	BNC
Data:	Terminal Block
Audio:	Terminal Block
Alarm:	Terminal Block
Contact:	Terminal Block

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) (L×W×H):	6.1 × 5.3 × 2.2 in., (15.5 × 13.5 × 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.



LIFETIME WARRANTY

WWW.COMNET.NET

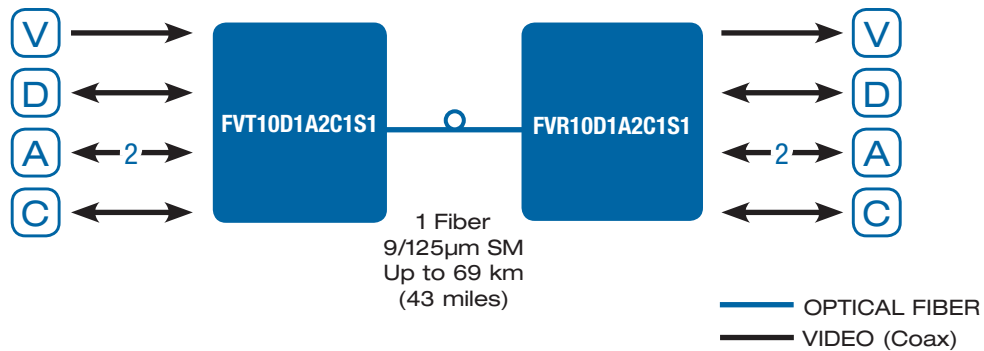
TECH SUPPORT: 1.888.678.9427

FVT/FVR10D1A2C1(M)(S)1 (1) 10-bit digital short-haul video + (1) bi-directional data + (2) bi-directional audio + (1) bi-directional contact closure

specifications

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE†	# RACK SLOTS
FVT10D1A2C1M1	Video Transmitter/Data Transceiver Audio Transmitter (1310/1550 nm)	1	Multimode 62.5/125µm	16 dB	3 km (2 miles)	2
FVR10D1A2C1M1	Video Receiver/Data Transceiver/ Audio Receiver (1550/1310 nm)					
FVT10D1A2C1S1	Video Transmitter/Data Transceiver Audio Transmitter (1310/1550 nm)	1	Single Mode 9/125µm	23 dB	69 km (43 miles)	2
FVR10D1A2C1S1	Video Receiver/Data Transceiver Audio Receiver (1550/1310 nm)					
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)					

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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