comnet
Communication Networks

COMPAK1031M1
FVT1031M1 + FVR1031M1

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

Description

The ComNet™ FVT1031M1 and FVR1031M1 video transmitter/ receiver and data transceiver support simultaneous transmission of short-haul quality 10-bit digital video, bi-directional data and up-the-coax data over one multimode optical fiber. The module is universally compatible with major CCTV camera manufacturers and supports RS-232, RS-422 and 2 or 4-wire RS-485 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 Control

Features

- 10-bit digitally encoded video transmission
- Exceeds all requirements for RS250C 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 2 miles (3 km)
- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters
- Lifetime Warranty

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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

NUMBER OF FIBERS

1

OPTICAL EMITTER

Laser Diode

LED INDICATORS

- Video Sync Presence
- Received Data
- Transmitted Data
- Optical Carrier Detect

CONNECTORS

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

ELECTRICAL & MECHANICAL

Power:	
Surface Mount:	8-15 VDC @ 2W
Rack Mount:	From Rack
Number of Rack Slots:	1
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm) (L×W×H)	6.1 x 5.3 x 1.1 in., (15.5 x 13.5 x 2.8 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)†

AGENCY COMPLIANCE

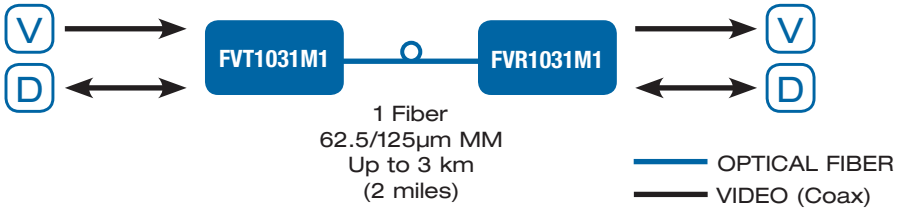
MADE IN THE USA

† 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 62.5/125µm	16 dB	3 km (2 mi)	1 km (0.6 mi)	1
FVR1031M1	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)
	Add '/SC' for SC Connectors
	Add '/FC' for FC Connectors
	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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