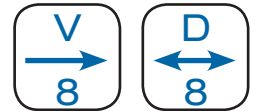## (8) 10-bit digital video channels with 8 bi-directional data channels/ daisy chain 8 video channels on one optical fiber/dual optical port self-healing ring configuration/single fiber operation

V → 8

D ↔ 8

Description

The ComNet™ FVT/FVR8018SHR series of optical video links provides eight 10-bit digital video channels, medium haul video quality, and 8 bi-directional data channels and a "Dual Optical Port" (DOP) Self-Healing Ring (SHR) topology. Up to eight video channels and multiple video receivers can be "Daisy Chained" on one optical fiber. The Self-Healing Ring (SHR) topology using the Dual Optical Ports (DOP) provide fail safe operation in the event of loss of one fiber or one optical module. Each optical port uses wavelength division multiplexing (WDM) to both transmit and receive on one optical fiber. The data channels support RS232, RS422 and 2 wire and 4 wire RS485. 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 confirming 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

- Up to eight 10-bit digital video channels

- Eight bi-directional data channels; or 8 – 64 contact closures*

- Daisy chain eight video links on one single mode fiber

- Dual optical port Self-Healing Ring (SHR) configuration

- Exceeds all requirements for RS-250C medium haul transmission

- 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 rack modules

- Interchangeable between stand-alone or rack mount use – ComFit

- Distances up to 30 miles (48 km)

- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters

- Lifetime Warranty

Requires an additional FDC8T/R232 unit(s) sold separately.

(8) 10-bit digital video channels with 8 bi-directional data channels/daisy chain 8 video channels on one optical fiber/dual optical port self-healing ring configuration/single fiber operation

specifications

VIDEO

Video Input:	1 volt pk-pk (75 ohms)
Overload	>1.5V pk-pk
Bandwidth:	5 Hz - 6.5 MHz
Differential Gain:	<2%
Differential Phase:	< 0.7º
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 Interface:	RS232, RS422 and RS485 (2W/4W)
Data Format:	NRZ, NRZI, Manchester, Bi-phase and Sensornet
Data Rate:	DC-250 Kbps (NRZ)

WAVELENGTH

1310/1550 nm, MM and SM

NUMBER OF FIBERS

1 In/1 Out

OPTICAL EMITTER

Laser Diode

LED INDICATORS

- Fiber Status   - Video Sync Presence
- Received Data   - Transmitted Data
- Power

CONNECTORS

Optical:	2 ST connectors for the Dual Port configuration (Required for Daisy Chain Self-Healing Ring operation)
Power:	Terminal Block
Video:	BNC (Gold Plated Center-Pin)
Data:	RJ45

ELECTRICAL & MECHANICAL

Power:	
Surface Mount:	8-15 VDC @ 3W
Rack Mount:	From Rack
Number of Rack Slots:	3
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm) (L×W×H)	6.1 × 5.3 × 3.3 in., (15.5 × 13.5 × 8.3 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.

AGENCY COMPLIANCE
FC PART 15 COMPLIANT   CE   cULus E322911   RoHS COMPLIANT   C N24621

MADE IN THE USA

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE**	# RACK SLOTS
FVT8018M1SHR	Video Transmitter/Data Transceiver	1 In/1 Out	Multimode 62.5/125µm	16 dB	2 km (1.2 miles)	3
FVR8018M1SHR	Video Receiver/Data Transceiver					
FVT8018S1SHR	Video Transmitter/Data Transceiver	1 In/1 Out	Single Mode 9/125µm	16 dB	48 km (30 miles)	3
FVR8018S1SHR	Video Receiver/Data Transceiver					

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 35 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.