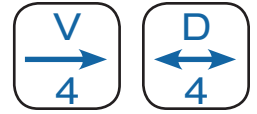
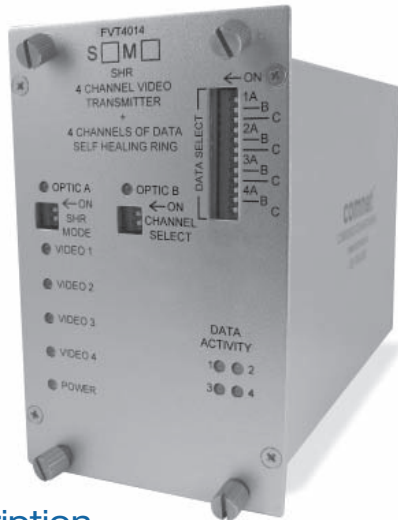


(4) 10-bit digital video channels + 4 bi-directional data channels/daisy chain 8 video channels on one optical fiber/dual optical port self-healing ring configuration/single fiber operation



### Description

The ComNet™ FVT/FVR4014SHR series of optical video links provides four 10-bit digital video channels, medium haul video quality, and four bi-directional data channels and a “Dual Optical Port” (DOP) Self-Healing Ring (SHR) topology. Up to (8) 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 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. These units are interchangeable between stand-alone or card mount configurations.

### Features

- Up to four 10-bit digitally encoded video channels
- Four bi-directional data channels; or 8 – 32 contact closures
- Daisy chain 8 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

PART NUMBER	FIBERS REQUIRED	FIBER
FVT4014M1SHR	1 in/1 out	Multimode
FVR4014M1SHR	(1310/1550 nm)	62.5/125µm
FVT4014S1SHR	1 in/1 out	Single Mode
FVR4014S1SHR	(1310/1550 nm)	9/125µm

# FVT/FVR4014(M)(S)1SHR SELF-HEALING RING

(4) 10-bit digital video channels + 4 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:	< 0.7°
Tilt:	<1%
Signal-to-Noise Ratio (SNR):	67 dB @ Maximum Optical Loss Budget

### DATA

Data Interface:	RS232, RS422 and RS485 (2W/4W)
Data Format:	NRZ, NRZI, Manchester, Bi-phase and Sensornet
Data Rate:	DC-250 Kbps (NRZ)

### CONTACT (Replaces 1 Data Channel)

Contact Interface:	Response time 0.5 msec
Input:	Dry Contact Closure
Output:	SPST Relay 0.5A Contact Rating – normally open

<b>WAVELENGTH</b>	1310/1550 nm, MM and SM
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<b>NUMBER OF FIBERS</b>	1 In/1 Out
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<b>OPTICAL EMITTER</b>	Laser Diode
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### LED INDICATORS

FVT Transmitter/Data Transceiver Unit:	FVR Receiver/Data Transceiver Unit:
- Fiber Status	- Fiber Status
- Video Input Sync Presence	- Video Output Sync Presence
- Received Data	- Received Data
- Transmitted Data	- Transmitted Data
- Power	- 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:	8-15 VDC @ 3W
Surface Mount:	From Rack
Rack Mount:	3
Number of Rack Slots:	Automatic Resettable Solid-State Current Limiters
Current Protection:	Meets IPC Standard
Circuit Board:	6.1 × 5.3 × 3.3 in., (15.5 × 13.5 × 8.3 cm)
Size (in./cm) (L×W×H):	<2 lb./0.9 kg
Shipping Weight:	

### 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
FVT4014M1SHR	Video Transmitter/Data Transceiver	1 In/1 Out	Multimode 62.5/125µm	16 dB	2 km (1.2 miles)	3
FVR4014M1SHR	Video Receiver/Data Transceiver					
FVT4014S1SHR	Video Transmitter/Data Transceiver	1 In/1 Out	Single Mode 9/125µm	16 dB	48 km (30 miles)	3
FVR4014S1SHR	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)					

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.

