



Description

The FiberPatrol® line of digital fiberoptic video multiplexers provides extremely high quality and consistent video. Unlike frequency modulated (FM) video multiplexers, digital systems do not suffer from degrading signal over the optical attenuation range. Digital systems are appropriate for both single mode and multimode optical fiber transmission. These products provide a signal-to-noise ratio of >60 dB which meets or exceeds RS-250C medium haul transmission requirements. FiberPatrol® video multiplexers feature 8 and optional 10 bits/sample digital circuitry and several mounting alternatives. The multiplexer is very space efficient – a 4 channel unit uses only one slot in the RMC chassis, or 2 slots for an 8 channel unit. Units having 12 or more channels include the RMC chassis in their base price. Configurations are available to add data and audio channels. Units meet FCC Part 15, Class B requirements for radiated emissions and feature automatically resettable polymer fuses on all power rails. As with all FiberPatrol® communication units, no optical or electrical adjustments are required.

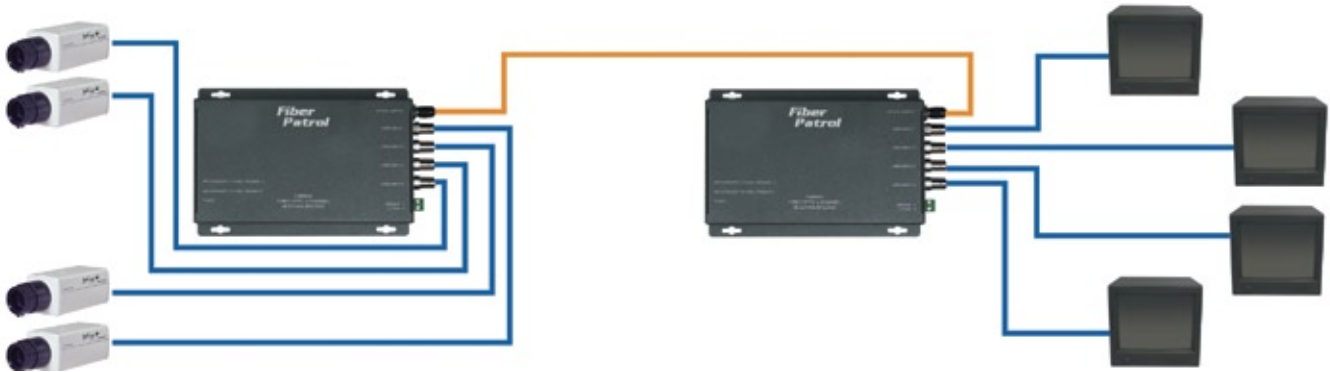
Features

- All digital (8 or 10 bit)
- Meets or exceeds RS-250C Medium Haul Transmission Requirements
- Multiple mounting options, space efficient
- Meets FCC Part 15, Class B requirements for radiated emissions
- Fiber transmissions up to 50 miles (dependent on channel count)
- Audio and data options
- Automatically resettable polymer fuses on all power rails
- Environmentally hardened

FIBEROPTIC VIDEO MULTIPLEXERS

FVM/FVD Series

Video (only) Multiplexing



Ordering Information

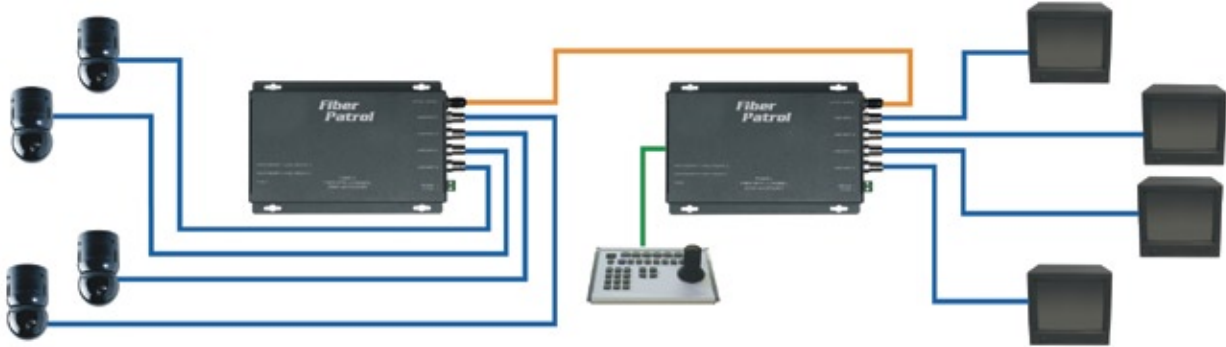
FVM/FVD Multiplexers - Video (only)

Description	Part Number	Fiber	# Fibers	Power Budget (dB)	Maximum Fiber Distance	# RMC Slots		
Video Multiplexer – 4 Channel	FVM0421 FVD0421	Multimode	1 (1310 nm)	12	.6 miles (1 km)	1		
	FVM0451 FVD0451	Single Mode		20	38 miles (60 km)			
	FVM0451-X FVD0451-X			23	50 miles (80 km)			
Video Multiplexer – 8 Channel	FVM0821 FVD0821	Multimode		1 (1310/1550 nm)	10	.6 miles (1 km)	2	
	FVM0851 FVD0851	Single Mode			15	28 miles (45 km)		
	FVM0851-X FVD0851-X				20	38 miles (60 km)		
Video Multiplexer – 12 Channel	FVM1221C FVD1221C	Multimode	1 (1310/1550 nm)		10	.6 miles (1 km)	4	
	FVM1251C FVD1251C	Single Mode			15	28 miles (45 km)		
Video Multiplexer – 16 Channel	FVM1621C FVD1621C	Multimode			1 (1310/1550 nm)	10	.6 miles (1 km)	5
	FVM1651C FVD1651C	Single Mode		15		28 miles (45 km)		
Video Multiplexer – 24 Channel	FVM2451C FVD2451C	Single Mode		1 (CWDM)		15	28 miles (45 km)	7
Video Multiplexer – 32 Channel	FVM3251C FVD3251C							9
Video Multiplexer – 64 Channel	FVM6451C FVD6451C		17					

Notes: (1) FVM0400 Series - Add "-10" for 10 bit video
 (2) RMC Chassis included with units of 12 channels or greater

FVM/FVD Series

Video Multiplexing with Data and Audio



Ordering Information

FVM/FVD Multiplexers - Video with 2 Data Channels

Description	Part Number	Fiber	# Fibers	Power Budget (dB)	Maximum Fiber Distance	# RMC Slots	
Video Multiplexer – 4 Channel Video with 2 Channel Data	FVM0631 FVD0631	Multimode	1 (1310/1550 nm)	12	.6 miles (1 km)	1	
	FVM0671 FVD0671	Single Mode		20	38 miles (60 km)		
	FVM0671-X FVD0671-X			23	50 miles (80 km)		
Video Multiplexer – 8 Channel Video with 2 Channel Data	FVM1031 FVD1031	Multimode		1 (CWDM)	10	.6 miles (1 km)	2
	FVM1071 FVD1071	Single Mode			15	28 miles (45 km)	
	FVM1071-X FVD1071-X				18	33 miles (54 km)	
Video Multiplexer – 12 Channel Video with 2 Channel Data	FVM1431C FVD1431C	Multimode	1 (CWDM)	10	.6 miles (1 km)	4	
	FVM1471C FVD1471C	Single Mode		15	28 miles (45 km)		
Video Multiplexer – 16 Channel Video with 2 Channel Data	FVM1831C FVD1831C	Multimode		1 (CWDM)	10	.6 miles (1 km)	5
	FVM1871C FVD1871C	Single Mode			15	28 miles (45 km)	

Note: Consult factory for additional configurations.
In RMC configuration, data channels connect on the front side of the chassis.

FVM/FVD Multiplexers - Video with 2 Data and 2 Audio Channels

Description	Part Number	Fiber	# Fibers	Power Budget (dB)	Maximum Fiber Distance	# RMC Slots	
Video Multiplexer – 4 Channel Video with 2 Channel Data & Audio	FVM0731 FVD0731	Multimode	1 (1310/1550 nm)	12	.6 miles (1 km)	2	
	FVM0771 FVD0771	Single Mode		20	38 miles (60 km)		
	FVM0771-X FVD0771-X			23	50 miles (80 km)		
Video Multiplexer – 8 Channel Video with 2 Channel Data & Audio	FVM1131 FVD1131	Multimode		1 (CWDM)	10	.6 miles (1 km)	3
	FVM1171 FVD1171	Single Mode			15	28 miles (45 km)	
	FVM1171-X FVD1171-X				18	33 miles (54 km)	

Note: Consult factory for additional configurations

Video

Input:	1 volt pk-pk (75 ohms)
Bandwidth:	5 Hz-6.5 MHz
Differential Gain:	<2%
Differential Phase:	<.7 deg
Tilt:	<1%
Signal-to-Noise:	>60 dB @ maximum optical loss
Digital Sampling:	8 bits @ 15MHz (10 bits optional on FVM/FVD0400 Series 67 dB S/N)

Data

Interface:	RS-232, RS-422, RS-485 (2w or 4w)
Data Encoding:	NRZ, NRZI, Manchester, Bi-phase
Data Rate:	DC-230 kbps (NRZ)
Bit Error Rate:	<1 x10 ⁻⁹

Audio

Impedance:	600 ohms
Encoding:	20 bit
Sample Rate:	55 KHz
Bandwidth:	20 Hz – 18 KHz @ -1 dB
Signal-to-Noise:	80 dB
Dynamic Range:	85 dB
Total Harmonic Distortion:	.001% @ 0 dBm Output
Channel Crosstalk:	-90 dB
Maximum Level:	+ 6 dBm (600 ohms)
Interface:	Balanced or Unbalanced

Connectors

Video:	BNC (gold plated center pin)
Data:	Spring-cage terminal block
Audio:	Spring-cage terminal block
Optical:	ST (SC optional)
Power:	Screw terminal block

Electrical & Mechanical

Input Voltage:	8-18 VDC or from RMC (Consult factory for current draw, depending on configuration)
Protection:	Automatic resettable polymer fuses
Circuit Board:	Meets IPC Standard
Size (LxWxH)	
Stand Alone Module:	7.0 x 4.9 x 1.0 in. (per card) (17.8 x 12.4 x 2.5 cm) (per card)
RMC Module:	7.7 x 5.0 x 1.0 in. (per card) (19.6 x 12.5 x 2.5 cm) (per card)
Shipping Weight:	Consult Factory – Dependent upon Configuration

Environmental

MTBF:	>100,000 hours
Operating Temperature:	-40 C to + 74 C, ambient
Storage Temperature:	-40 C to + 85 C, ambient
Relative Humidity:	0% to 95% (non-condensing)

Certifications & Compliance

Radiated Emissions:	FCC Part 15, Class B
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