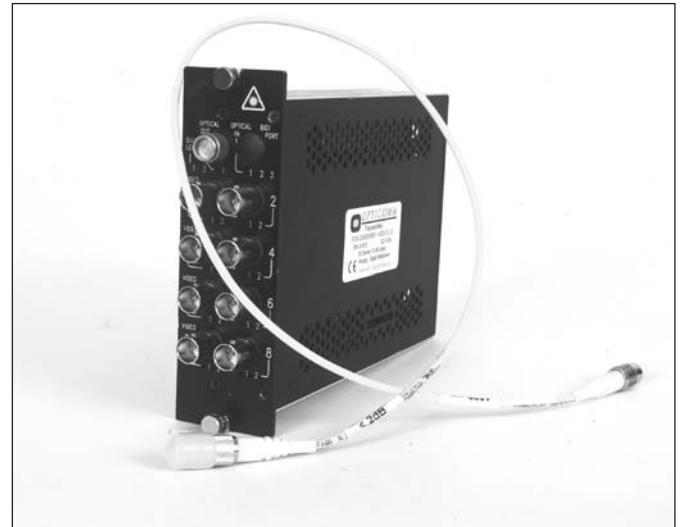## Digital Video/Audio/Data Multi-Channel System

The FDV Series Digital Systems are Analog to Digital, Digital to Analog, 8-bit or 10-bit modulated, LED or laser-based Video multiplexers with optional combinations of simplex or duplex 24-bit Audio and various Data signals, all over one multimode or singlemode fiber.

The multi-channel transmission is achieved by digital modulation schemes and Time Division Multiplexing (TDM) techniques. For the Video portion, only a single wavelength is used. This assures the best possible signal uniformity. The FDV Series is ideal for the transmission of multiple Video with Audio and/or Data, where only one fiber is available. Video, Audio and Data come in banks of two. Status indicators on Video, carrier detect, voltage, optical levels, and temperature are monitored via LEDs.

Sample Products*

	V	**A**	**D**
FDV-8400	❹→		
FDV-8800	❽→		
FDV-8422	❹→	❷→	❷→
FDV-8/4/88/0	❹→	←❽→	
FDV-8404	❹→		❹→

*numerous configurations available

System Design

All units come in small module or Insert Card versions. The cards can be inserted into our 18 slot, 19" *Multiverse™* rack mountable card cage (CC-18-80W), or one of our smaller Desktop Card Racks (DTCR series). The FDV Series is compatible with the MDM-7000 series for multi-channel single-fiber solutions.

Features

- Multimode or singlemode operation over one fiber
- Digital transmission
- True DC restoration
- Flat frequency response
- Complies with RS-170 & RS-170A EIA & RS-250C short haul standards
- Traffic & intelligent transport system
- Compatible with NTSC, PAL, and SECAM video signals for CCTV
- No EMI or RFI and no ground loops
- Rack Mount hot swappable
- Various data protocols available from RS-232, RS-422, RS-485 or Contact Closure

1310	1550	1270-1610 (CWDM)	Type	Mode	Wavelength Suffix	Fiber Type	Output Power	Receiver Sensitivity	Optical Budget Loss	Range*	Conn Type
●			LED	MM	L1	50/125μ 62.5/125μ	-8 dBm	-24 dBm	16 dB	3 km	ST
●			Laser	SM	L2	09/125μ	-3 dBm	-26 dBm	18 dB	25 km	FC
	●		Laser	SM	L3	09/125μ	-3 dBm	-26 dBm	23 dB	70 km	FC
		●	Laser	SM	L4	09/125μ	-4 dBm	-26 dBm	22 dB	25-70 km	FC

* Chromatic dispersion and additional losses should be taken into account.

Video

Video in/out impedance	75 Ω
Video in/out level	1 volt peak to peak, 1.5 volts max
Video bandwidth	5 Hz to 7 MHz @ -3dB
Differential gain/phase	< 1.0 % typical / < 0.7° typical
Linearity/Tilt	± 0.9 % typical / ≤ 0.5 % typical
Compatibility	NTSC, PAL, SECAM, RS-170, RS-170A
Signal to noise ratio	>68 dB using RS-250C short haul standards @ 1 km
Bit resolution	8-bit or 10-Bit
Connector type	BNC

Audio

Audio in/out impedance	600 Ω or 10k Ω - balanced or unbalanced
Audio in/out level	-6 to +6 dBm
Frequency response	10 Hz to 20 KHz
Signal to noise ratio	> 90 dB weighted
Total harmonic distortion	< 0.01%, 1 KHz at maximum modulation
Bit resolution	24-bit code
Connector type	HD 15 Pin female

Data

Data rate	DC to 1 Mbps
Bit error rate	10^{-9}
Data formats available	Async RS-232, RS-422, RC-485/2W, Genlock, Manchester, 20 mA current loop, Biphase, TTL, or six Contact Closures
Connector type	HD 15 Pin female

General

Dimensions & Weight	Stand Alone (SA): all others/DTCR-2: 7.16" L x 1.75" W x 6.5"H	53 oz
	Insert card (IC): all others (2 slot): 6.3" L x 1.7" W x 4.0" H	29 oz
Temperature	Operating: -20° C to +70° C; Storage; -30° C to +85° C	
Humidity	0 to 95% non-condensing	
Operating voltage	12 V_{DC} (200 mA) or 24 V_{AC} (300mA) or 110/220 V_{AC}	
Vibration/Shock	Up to 5 g's/Up to 12 g's	

Diagnostics

Status monitoring	LED indication

Optiva™ Configurable Communication Platform
Network Management
SDI & HD-SDI
Composite Video, Audio & Data
RGB/VGA/DVI
Audio/FSK/Intercom
Data (Ethernet/Serial/USB)
CATV/RF & L-Band
Optical Switching, Routing & Redundancy
Passive Multiplexing Solutions
Enclosures, Racks & Frames
Power Supplies & Accessories

10 YEAR WARRANTY **ISO 9001:2000 CERTIFIED** CE FCC PART 15 COMPLIANT
MADE IN THE USA

Sample Configuration

Video x 8 — FDV Series XMT — 1 Fiber — FDV Series RCV — Monitor x 8