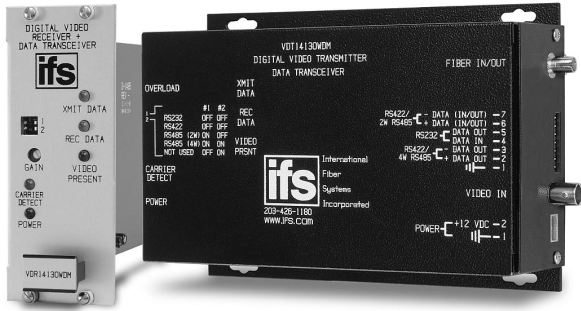




# PRODUCT SPECIFICATION VDT/VDR14100WDM SERIES DIGITALLY ENCODED VIDEO WITH BI-DIRECTIONAL DATA



## DESCRIPTION

The IFS VDT/VDR14100WDM series video transmitter/receiver and data transceiver supports simultaneous broadcast quality transmission of 10-bit digitally encoded video and bi-directional data over one multimode or singlemode optical fiber. The modules are universally compatible with major CCTV camera manufacturers and support RS-232, RS-422, and 2-wire or 4-wire RS-485 data interfaces, and most major data protocols. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. Each transceiver incorporates status indicating LED's for monitoring of proper system operation. The modules are available in either stand-alone or rack mount versions.

## APPLICATION EXAMPLES

- High Performance CCTV with PTZ Control

## FEATURES

- 10-Bit Digitally Encoded Video Transmission
- Exceeds RS-250C Short-Haul Transmission
- NTSC, PAL, SECAM Compatible
- Full Color Compatibility
- Supports RS-232, RS-422, or RS-485 (2-wire or 4-wire) Data Interfaces
- No In-field Electrical or Optical Adjustments Required
- LED Status Indicators For Monitoring All Critical Operating Parameters
- NTCIP Compatible
- Tested and Certified by an Independent Testing 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.



- Integrated WDM for Greater Reliability

- Hot-Swappable Rack Modules

Available at: [www.ifs.com](http://www.ifs.com)

- Automatic Resettable Fuses on all Power Lines

- Distances up to 37 Miles (60km)

- A & E Specifications, (CSI)

- AutoCAD Drawings

- Comprehensive Lifetime Warranty

- Operation Manuals

- Technical Bulletins

## ORDERING INFORMATION

	PART NUMBER	DESCRIPTION	FIBERS REQUIRED	OPTICAL PWR BUDGET	MAX. DISTANCE*
MULTIMODE 62.5/125µm**	VDT14120WDM	Video Transmitter/Data Transceiver (1310/1550 nm)	1	10 dB	1.9 miles (3 km)
	VDR14120WDM	Video Receiver/Data Transceiver (1550/1310 nm)			
SINGLEMODE 9/125µm	VDT14130WDM	Video Transmitter/Data Transceiver (1310/1550 nm)	1	20 dB	37 miles (60 km)
	VDR14130WDM	Video Receiver/Data Transceiver (1550/1310 nm)			
	VDT14130WDM-HP	Video Transmitter/Data Transceiver (1310/1550)		26 dB	49 miles (78 km)
ACCESSORIES♦	PS-12VDC 12 Volt DC Plug-in Power Supply (Included)				
	PS-12VDC-230 12 Volt DC Plug-in Power Supply, 230 VAC Input (Included if specified at time of order)				
OPTIONS	Add '-R3' to Model Number for R3 Rack Mount - No Charge (Requires R3 Rack purchased separately)				
	Add '-SC' to Model Number for SC Optical Connector (For Singlemode Equipment and Rack Mount only)				
	Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory)				
	Add '-25' to Model Number for Type DB-25S Data Channel Connector				
	Add '-FC' to Model Number for FC Optical Connector (Singlemode equipment only)				

\* Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth. \*\* For 50/125 Fiber, subtract 4 dB from Optical Power Budget.

♦ All accessories are third party manufactured.

International Fiber Systems, Incorporated ■ DESIGN CENTER (888) 999-9IFS or (203) 426-1180

FAX (203) 426-3326 ■ sales@ifs.com

Europe, Middle East, Africa TEL +44(0) 1732 522 777 ■ Asia Pacific TEL +65 6235 2661 ■ Latin America TEL (512) 477-8787



# TECHNICAL SPECIFICATION VDT/VDR14100WDM SERIES

## DIGITALLY ENCODED VIDEO WITH BI-DIRECTIONAL DATA

### SPECIFICATIONS

#### VIDEO

Video Input: 1 volt pk-pk (75 ohms)  
 Video 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

#### DATA

Data Interface: RS-232, RS-422, 2 and 4 wire RS-485 with Tri-State  
 Data Format: NRZ, RZI, Manchester, Bi-phase,  
 Data Rate: DC-100 Kbaud (NRZ)  
 Bit Error Rate (BER): < 1 in 10<sup>9</sup> @ Maximum Optical Loss Budget  
 Operating Mode: Simplex or Full-Duplex

#### WAVELENGTH

1310/1550 nm, Multimode  
 1310/1550 nm, Singlemode

#### OPTICAL EMITTER

Laser Diode

#### NUMBER OF FIBERS

1

#### LED INDICATORS

VDT Transmitter/ Data Transceiver Unit:

- Video Input Sync Presence
- Video Input Overload
- Received Data
- Transmitted Data
- Optical Carrier Detect/ Link-Lock
- Operating Power

VDR Receiver/ Data Transceiver Unit:

- Video Output Sync Presence
- Video Output Overload
- Received Data
- Transmitted Data
- Optical Carrier Detect/ Link-Lock
- Operating Power

### CONNECTORS

Power: Terminal Block with Screw Clamps or Type DB-9P Connector (Specify at Time of Order)  
 Video: BNC (Gold Plated Center-Pin)  
 Data: Terminal Block with Screw Clamps - Optional  
 Optical: Type DB-25 Connector  
 ST, SC or FC (see ordering information) (For SC - Rack Mount Only)

### ELECTRICAL & MECHANICAL

Power: 12 VDC @ 500 mA  
 Surface Mount: From Rack  
 Rack: 2  
 Number of Rack Slots: Automatic Resettable Solid-State Current Limiters  
 Current Protection: Meets IPC Standard  
 Circuit Board: 7.0 x 4.0 x 2.0 in., 17.8 x 10.2 x 5.1 cm  
 Size (in./cm.) (LxWxH): 7.7 x 5.0 x 2.0 in., 19.6 x 12.7 x 5.1 cm  
 Surface Mount: < 2 lbs./0.9 kg  
 Rack Mount: Shipping Weight:

### ENVIRONMENTAL

MTBF: > 100,000 hours  
 Operating Temp: -40° C to +74° 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

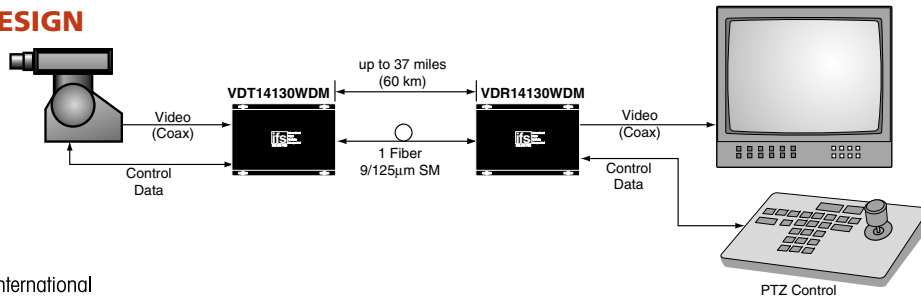
**FCC** PART 15 COMPLIANT      
**MADE IN THE USA**  
 Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

### OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER	RECEIVER	OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	MODEL		
Multimode 62.5/125µm**	1310/1550 nm	VDT14120WDM	VDR14120WDM	10 dB	1.9 miles (3 km)
Singlemode 9/125µm		VDT14130WDM	VDR14130WDM	20 dB	37 miles (60 km)
		VDT14130WDM-HP	VDR14130WDM-HP	26dB	49 miles (78 km)

\* Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth. \*\* For 50/125 Fiber, subtract 4 dB from Optical Power Budget.

### SYSTEM DESIGN



**ifs** International  
 Fiber Systems  
 Incorporated

TEL (203)426-1180 ■ FAX (203)426-3326 ■ www.ifs.com ■ sales@ifs.com  
 16 Commerce Road ■ Newtown, CT 06470

Due to our continued effort to advance technology, product specifications are subject to change without notice.

10/06/04