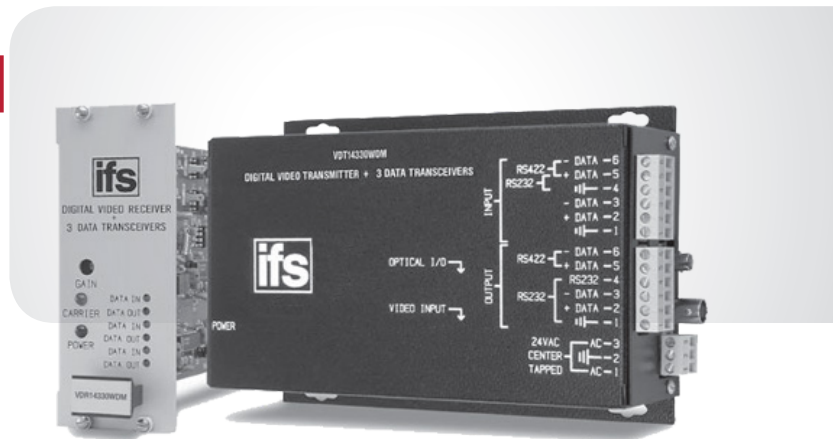


# VDT/VDR14330WDM Series

IFS Digitally Encoded Video with 3 Duplex Data Channels



## OVERVIEW

The IFS VDT/VDR14330WDM Series video transmitter/receiver and data transceiver supports the simultaneous broadcast quality transmission of 10-bit digitally encoded video and three channels of bi-directional data over one single mode optical fiber. As the level of video performance is so high, the modules are ideally suited to networks employing multiple physical layers where video degradation may be a problem. The modules are universally compatible with major CCTV camera manufacturers and support all major data protocols. Each data channel can be set up independently to support RS-232, RS-422, 2-wire or 4-wire RS-485 data interfaces. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. Each transceiver incorporates LED status indicating LED's for monitoring of proper system operation. The modules are available in either stand-alone or rack mount versions.

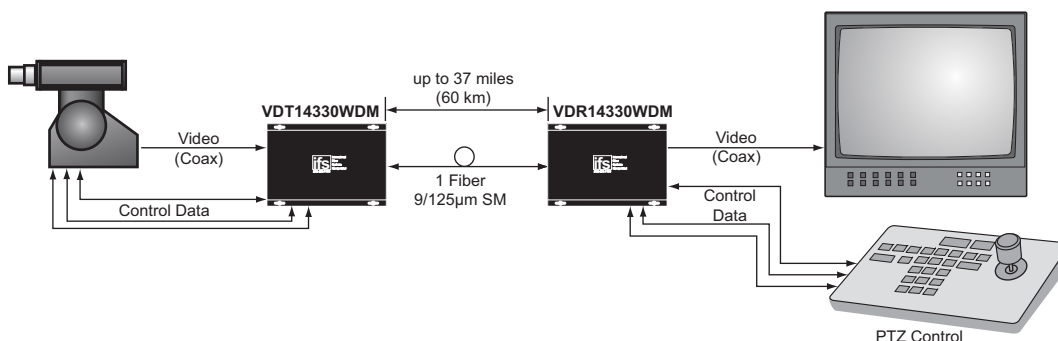
## APPLICATION EXAMPLES

- High Performance CCTV with PTZ Control plus two additional data channels for traffic signalization applications

## STANDARD FEATURES

- 10-Bit Digitally Encoded Video Transmission
- Exceeds RS-250C Short-Haul Transmission
- Ideally Suited to Networks Requiring Multiple Physical Layers Where Video Degradation May be a Problem
- Three Independent Full-Duplex Data Channels Supporting RS-232, RS-422, or RS 485 (2-wire or 4-wire) Data Interfaces
- No In-field Electrical or Optical Adjustments Required
- Integrated WDM for Greater Reliability
- 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
- LED Status Indicators For Monitoring All Critical Operating Parameters
- NTCIP Compatible
- Hot-Swappable Rack Modules
- Automatic Resettable Fuses on all Power Lines
- Distances up to 37 Miles (60 km)
- Comprehensive Lifetime Warranty

## SYSTEM DESIGN



# VDT/VDR14330WDM Series

North America  
T 855-286-8889

Latin America  
T 561-998-6114

IFS Digitally Encoded Video with 3 Duplex Data Channels

## Ordering Information

|                     | Part Number   | Description  | Fibers Required | Optical Pwr. Budget | Max. Distance*   |
|---------------------|---|--|-----------------|---------------------|------------------|
| Single-Mode 9/125µm | VDT14330WDM   | Video Transmitter/Data Transceiver (1310/1550 nm)  | 1               | 20 dB               | 37 miles (60 km) |
|                     | VDR14330WDM   | Video Receiver/Data Transceiver (1550/1310 nm)   | 1               | 20 dB               | 37 miles (60 km) |
| Accessories         | PS12VDC1.5A-U   | 12VDC, 1.5A Plug-in Power supply (110/220VAC) with Universal power plug adapter kit (Included) |                 |                     |                  |
| Options             | Add '-R3' to Model Number for R3 Rack Mount - No Charge (Requires R3 Rack purchased separately) |  |                 |                     |                  |

\*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.

## Specifications

### Video

|                              |                                      |
|------------------------------|--------------------------------------|
| Video Input:                 | 1 volt pk-pk (75 ohms)               |
| 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, Sensormatic "Sensornet", 2 and 4-wire RS-485 w/Tri-State   |
| Data Format:          | NRZ, NRZI, Manchester, Bi-phase (data channels independently configurable) |
| Data Rate:            | DC-100 Kbaud (NRZ)   |
| Bit Error Rate (BER): | <1 in 10 <sup>9</sup> @ Maximum Optical Loss Budget                        |
| Operating Mode:       | Simplex of Full Duplex   |

### Wavelength

1310/1550 nm, Single Mode

### Optical Emitter

Laser Diode

### Number Of Fibers

1

### Connectors

|          |   |
|----------|---|
| Optical: | ST  |
| Power:   | Terminal Block with Screw Clamps (specify at time of order) |
| Video:   | BNC (Gold Plated Center-Pin)                                |
| Data:    | Type 3 DB-9S  |

### Electrical & Mechanical

|                        |   |
|------------------------|---|
| Power:                 |   |
| Surface Mount:         | +12 VDC @ 700 mA (stand alone)                    |
| Rack:                  | From Rack   |
| Number of Rack Slots:  | 2   |
| Current Protection:    | Automatic Resettable Solid-State Current Limiters |
| Circuit Board:         | Meets IPC Standard                                |
| Size (in./cm.) (LxWxH) |   |
| Surface Mount:         | 7.0 x 4.0 x 2.0 in., 17.8 x 10.2 x 5.1 cm         |
| Rack Mount:            | 7.7 x 5.0 x 2.0 in., 19.6 x 12.7 x 5.1 cm         |
| Shipping Weight:       | < 2 lbs./0.9 kg                                   |

### 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) |

## Agency Compliance

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J



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Specifications subject to change without notice.

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