

## VAADT/VAADR14130WDM IFS Digitally Encoded Video with 2 Audio Channels and 1 Data Channel

### Overview

The IFS VADT/VADR14100WDM series video transceivers support simultaneous broadcast quality transmission of 10-bit digitally encoded video, 20-bit digitally encoded stereo audio, bi-directional data transmission, and Genlock over one single mode or multimode 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 all 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

- Distance Learning CCTV with PTZ Control and 2-Way Audio Communications
- ITS (Intelligent Transportation Systems)

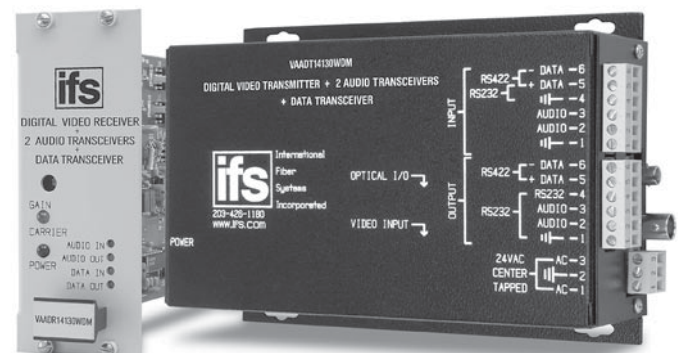
# Digitally Encoded Video with 2 Audio Channels and 1 Data Channel

Supports simultaneous broadcast quality transmission of 10-bit digitally encoded video, 20-bit digitally encoded stereo audio and bi-directional data over one single mode optical fiber.



### Standard Features

- 10-Bit Digitally Encoded Video Transmission
- Exceeds RS-250C Short-Haul Transmission
- NTSC, PAL, SECAM Compatible
- Full Color Compatibility • NTCIP Compatible
- 20-Bit Digitally Encoded Stereo Audio
- 600 Ohm Impedance Line-Level Audio
- No In-field Electrical or Optical Adjustments Required
- Reverse Sync for Genlock
- LED Status Indicators for Monitoring all Critical Operating Parameters
- Hot-Swappable Rack Modules
- Automatic Resettable Fuses on all Power Lines
- 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
- Distances up to 43 Miles (69 km)
- Comprehensive Lifetime Warranty



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gesecurity.com/ifs

Specifications subject to change without notice

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## Made in the USA

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

## Specifications

### Video

Video Input/Output: 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

### Data

Data Interface: RS-232, RS-422, 2 or 4-Wire RS-485 with Tri-State  
 Data Format: NRZ, NRZI, Manchester, Bi-phase  
 Data Rate: DC-100 Kbps (NRZ)  
 Operating Mode: Simplex or Full-Duplex

### Audio

No. of Bits: 20 Sampling Rate: 52.3 KHz  
 Bandwidth: 20 Hz to 18 KHz @ -1 dB Signal-to-Noise Ratio (SNR): 87 dB Minimum  
 Maximum Input/Output Level: 0 dBm across 600 ohms Channel Crosstalk: -100 dB @ 1 KHz  
 Total Harmonic Distortion: 0.01% @ 0 dB Output Level DTE/DCE Interface: User-Selectable  
 Input/Output: Balanced or Unbalanced, 600 ohms

**Wavelength** 1310/1550 nm, Single Mode

**Number Of Fibers** 1

### Connectors

Optical: ST, SC or FC (see ordering information)  
 Power, Audio, Data: Terminal Block with Screw Clamps  
 Video and Reverse Sync: BNC (Gold Plated Center-Pin)

### Electrical & Mechanical

Power: 12 VDC @ 500 mA  
 Surface Mount: From Rack  
 Rack: 2  
 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)†

†May be extended to condensation conditions by adding suffix '-C' to model number for conformal coating.

## Ordering Information

	Part Number	Description	Fibers Required	Opt. Pwr. Budget	Max. Distance*
Single Mode 9/125µm	VAADT14130WDM VAADR14130WDM	Video Transmitter & Audio & Data Transceiver (1310/1550 nm) Video Receiver & Audio Receiver/Data Transceiver (1550/1310 nm)	1		
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)			23 dB	43 miles (69km)
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 Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory) Add '-FC' to model number for FC Optical Connector Add '-HP' to model number for 26 dB Single Mode Optical Power Budget				

\* 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. \* All accessories are third party manufactured.

## System Design

