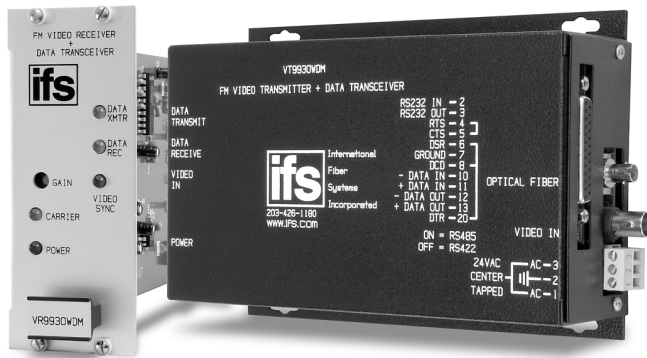




PRODUCT SPECIFICATION

FM VIDEO WITH BI-DIRECTIONAL DATA

VT/VR9930WDM



DESCRIPTION

The IFS VT/VR9930WDM video transmitter/data transceiver and video receiver/data transceiver units utilize frequency modulation for high video quality that meets the requirements of EIA RS-250C. These environmentally hardened units provide the simultaneous transmission of video and full-duplex data over one singlemode optical fiber and are ideal for use in unconditioned out-of-plant or roadside installations. Completely transparent to and universally compatible with any NTSC, PAL, or SECAM CCTV camera system, all standard pan-tilt-zoom control signals including RS-232, RS-422, and 2-wire RS-485 data are supported. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are ever required. LED indicators are provided for rapidly ascertaining equipment operating status, and these units are available in either stand-alone or rack mount configurations.

APPLICATION EXAMPLES

- CCTV with PTZ Control

FEATURES

- Frequency Modulation for High Quality Video Transmission
- Directly Compatible with All NTSC, PAL, or SECAM CCTV Camera Systems
- LED Status Indicators Provide Rapid Indication of Critical Operating Parameters
- Integrated WDM for Greater Reliability
- Solid-State Current Limiters on All Power Lines Provide Equipment Protection
- Wide Optical Dynamic Range: Optical Attenuators are Never Required
- 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.



- Robust Design Ensures Extremely High Reliability in Unconditioned Roadside Environments
- Comprehensive Lifetime Warranty

Available at: www.ifs.com

- A & E Specifications, (CSI)
- AutoCAD Drawings
- Operation Manuals
- Technical Bulletins

ORDERING INFORMATION

	PART NUMBER	DESCRIPTION	FIBERS REQUIRED	OPTICAL PWR BUDGET	MAX. DISTANCE*
SINGLEMODE 9/125µm	VT9930WDM	Video Transmitter/Data Transceiver (1310/1550 nm)	1	23 dB	41 miles (66 km)
	VR9930WDM	Video Receiver/Data Transceiver (1550/1310 nm)			
ACCESSORIES ♦	PS-24VACCT 24 volt AC Center Tap Power Supply (Included) PS-24VACCT-230 24 Volt AC Center Tap 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' for SC connector (Singlemode equipment only) Add '-FC' to model number for FC Optical Connector (Singlemode equipment only) Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory)				

* Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels.

♦ All accessories are third party manufactured.

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TECHNICAL SPECIFICATION

VT/VR9930WDM

FM VIDEO WITH BI-DIRECTIONAL DATA

SPECIFICATIONS

VIDEO

Video Input: 1 volt pk-pk, (75 ohms)
 Bandwidth: 5 Hz - 10 MHz min., @ -3 dB
 Differential Gain: <2%
 Differential Phase: <1.3°
 Tilt: <1%
 Signal-to-Noise Ratio: >60 dB @ Maximum Optical Loss Budget

DATA

Data Interface: RS-232, RS-422, RS-485 two-wire
 Data Format: NRZ, NRZI, Manchester, Bi-phase
 Operating Mode: Simplex or Full Duplex
 Data Rate: DC-100 Kbps (NRZ)
 Bit Error Rate: <1 in 10⁻⁹ @ Maximum Optical Loss Budget

WAVELENGTH

1310/1550 nm, Singlemode

OPTICAL EMITTER

Laser Diode

NUMBER OF FIBERS

1

LED INDICATORS

VT Transmitter/ Data Transceiver Unit:
 • Video Input Sync Presence
 • Transmitted Data
 • Received Data
 • Optical Carrier Detect
 • Operating Power

VR Receiver/ Data Transceiver Unit:
 • Video Output Sync Presence
 • Transmitted Data
 • Received Data
 • Optical Carrier Detect
 • Operating Power

CONNECTORS

Power: Terminal Block w/Screw Clamps*
 Data: Type DB-25S
 Video: BNC (Gold Plated Center-Pin)
 Optical: Type ST, SC, or FC
 (see ordering information)

ELECTRICAL & MECHANICAL

Power: VT: 24 VAC C.T. @ 300 mA
 VR: 24 VAC C.T. @ 600 mA
 Surface Mount: From Rack
 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 12.5 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, ambient
 Storage Temp: -40° C to +85° C, ambient
 Relative Humidity: 0% to 95% (non-condensing)†

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

• Optional Type DB-9P: Specify connector style at time of order.

AGENCY COMPLIANCE

FCC PART 15 COMPLIANT    
 Federal Supply Schedule
 Contract No. GS-07F-0049M

MADE IN THE USA

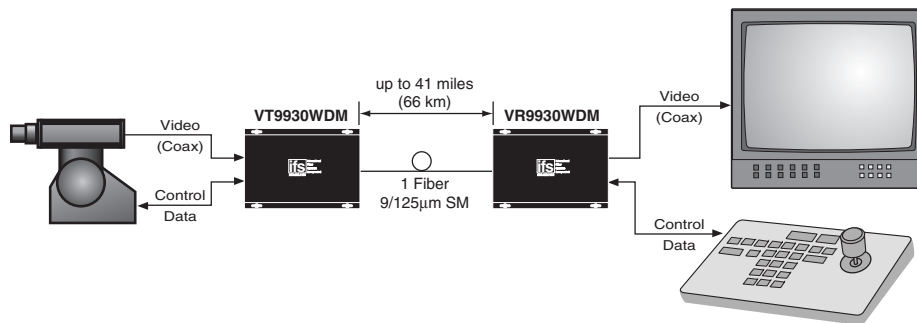
Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER		RECEIVER		OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	OUTPUT	MODEL	SENSITIVITY		
Singlemode 9/125µm	1310/1500 nm	VT9930WDM	200 µW (-7 dB)	VR9930WDM	1 µW (-30 dB)	23 dB	41 miles (66 km)

* Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels.

SYSTEM DESIGN



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