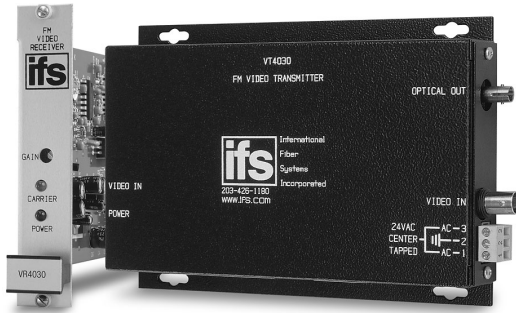




PRODUCT SPECIFICATION

VT/VR4000 SERIES

FM VIDEO TRANSMITTER AND RECEIVER



DESCRIPTION

The IFS VT/VR4000 Video Transmitter and Receiver series utilizes frequency modulation for transmission quality that exceeds the requirements of EIA RS-250C for Medium-Haul Video Transmission. These environmentally hardened units provide transmission of NTSC, PAL, or SECAM video over one multimode or single-mode fiber optic cable and are ideal for use in unconditioned out-of-plant or roadside installations. 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 this equipment is available in either stand-alone or rack mount configurations.

APPLICATION EXAMPLES

- CCTV (Fixed Video)

FEATURES

- Frequency Modulation for High Quality Video Transmission
- Exceeds All Requirements for RS-250C Medium-Haul Transmission
- Directly Compatible with All NTSC, PAL, or SECAM CCTV Camera Systems
- LED Status Indicators Provide Rapid Indication of Critical Operating Parameters
- Solid-State Current Limiters on All Power Lines Provide Equipment Protection
- Wide Optical Dynamic Range: Optical Attenuators Are Never Required
- Exceeds NEMA TS-1/TS-2 and Caltrans Traffic Signal Control Equipment Environmental Specifications for Operating Temperature, Shock, Vibration, Humidity, and Voltage Transient Protection
- Robust Design Ensures Extremely High Reliability In Unconditioned Roadside Environments
- 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*
MULTIMODE 62.5/125µm**	VT4010	FM Video Transmitter (850 nm)	1	16 dB	2.8 miles (4.5 km)
	VR4010	FM Video Receiver (850 nm)			
	VT4020	FM Video Transmitter (1310 nm)	1	16 dB	10 miles (16 km)
	VR4030	FM Video Receiver (1310 nm)			
SINGLE-MODE 9/125µm	VT4025	FM Video Transmitter (1310 nm, LED)	1	17 dB	30 miles (49 km)
	VR4030	FM Video Receiver (1310 nm)			
	VT4030	FM Video Transmitter (1310 nm, Laser)	1	27 dB	51 miles (81km)
	VR4030	FM Video Receiver (1310 nm)			
	VT4055	FM Video Transmitter (1550 nm, LED)	1	17 dB	42 miles (68 km)
	VR4050	FM Video Receiver (1550 nm)			
OPTIONS	VT4050	FM Video Transmitter (1550 nm, LASER)	1	26 dB	65 miles (104 km)
	VR4050	FM Video Receiver (1550 nm)			
	<small>PS-24VACCT 24 volt AC Center Tap Power Supply PS-24VACCT-230 24 Volt AC Center Tap Power Supply 230 VAC Input (Included if specified at time of order) 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 Single-mode equipment only) Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory) Add '-FC' to model number for FC Optical Connector (For Single-mode equipment only)</small>				

* 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.

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TECHNICAL SPECIFICATION

VT/VR4000 SERIES

FM VIDEO TRANSMITTER AND RECEIVER

SPECIFICATIONS

VIDEO

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

WAVELENGTH

850 or 1310 nm, Multimode,
 1310 or 1550 nm, Single-mode

OPTICAL EMITTER

850 or 1310 nm, Multimode: LED
 1310 or 1550 nm, Single-Mode: Laser Diode

NUMBER OF FIBERS

1

LED INDICATORS

- VT Transmitter Unit:
- Video Input Sync Presence
 - Operating Power
- VR Receiver Unit:
- Video Output Sync Presence
 - Optical Carrier Detect
 - Operating Power

CONNECTORS

Optical: Type ST, SC, or FC
 (See ordering information)
 Power: Terminal Block with Screw Clamps
 Video: BNC (gold plated center-pin)

ELECTRICAL & MECHANICAL

Power: VT: 12 VDC @ 200 mA
 VR: 24 VAC C.T. @ 300 mA
 Surface Mount: From Rack
 Rack: 1
 Number of Rack Slots: Automatic Resettable Solid-State Current Limiters
 Current Protection: Meets IPC Standard
 Circuit Board: 7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 2.5 cm
 Size (in./cm.) (LxWxH): 7.7 x 5.0 x 1.0 in., 19.6 x 12.7 x 2.5 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

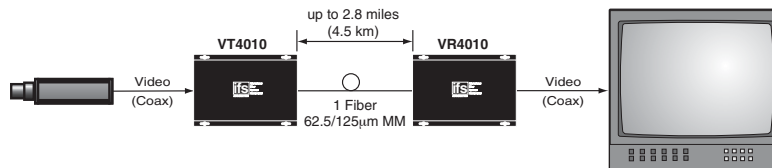


OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER		RECEIVER		OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	OUTPUT	MODEL	SENSITIVITY		
Multimode 62.5/125µm**	850 nm	VT4010	20 µw (-17 dBm)	VR4010	.5 µw (-33 dBw)	16 dB	2.8 miles (4.5 km)
		VT4020		VR4030			10 miles (16 km)
Single-mode 9/125µm	1310 nm	VT4025	25 µw (-16 dBm)	VR4030	.5 µw (-33 dBw)	17 dB	30 miles (49 km)
		VT4030	250 µw (-6 dBm)				27 dB
	1550 nm	VT4050	200 µw (-7 dBm)	VR4050		26 dB	65 miles (104 km)
		VT4055	25 µw (-16 dBm)			17 dB	42 miles (68 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



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