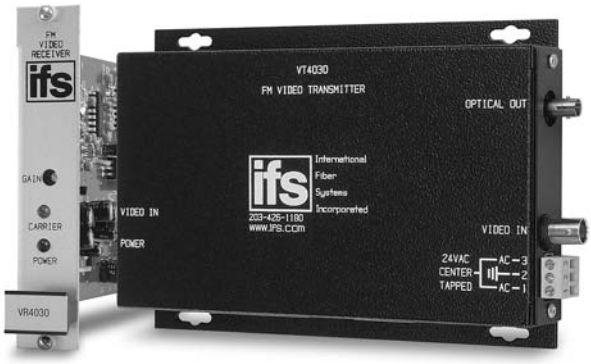
PRODUCT SPECIFICATION VT/VR4000 SERIES
FM VIDEO TRANSMITTER AND RECEIVER



DESCRIPTION

The IFS VT/VR4000 Video Transmitter and Receiver series utilizes frequency modulation for transmission quality that meets some of the requirements for EIA RS-250C Medium-Haul Video Transmission. These environmentally hardened units provide transmission of NTSC, PAL, or SECAM video over one multimode or singlemode 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
- Meets Some Requirements for RS-250C Medium-Haul Transmission
- Directly Compatible with All NTSC, PAL, or SECAM CCTV Camera Systems
- 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 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
- Optical Loss Relay Output
- 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*
MULTIMODE 62.5/125µm**	VT4010 VR4010	FM Video Transmitter (850 nm) FM Video Receiver (850 nm)	1	16 dB	2.8 miles (4.5 km)
	VT4020 VR4030	FM Video Transmitter (1310 nm) FM Video Receiver (1310 nm)	1	16 dB	10 miles (16 km)
SINGLEMODE 9/125µm	VT4025 VR4030	FM Video Transmitter (1310 nm, LED) FM Video Receiver (1310 nm)	1	17 dB	31 miles (51 km)
	VT4030 VR4030	FM Video Transmitter (1310 nm, Laser) FM Video Receiver (1310 nm)	1	27 dB	50 miles (81 km)
	VT4055 VR4050	FM Video Transmitter (1550 nm, LED) FM Video Receiver (1550 nm)	1	17 dB	42 miles (68 km)
	VT4050 VR4050	FM Video Transmitter (1550 nm, LASER) FM Video Receiver (1550 nm)	1	26 dB	65 miles (104 km)
ACCESSORIES♦	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)				
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 only) Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory) Add '-FC' to model number for FC Optical Connector (For 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 ■ For an office near you go to: www.ifs.com
With Offices in Asia Pacific ■ Australia ■ Europe ■ Latin America

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, Singlemode

OPTICAL EMITTER
850 or 1310 nm, Multimode: LED
1310 or 1550 nm, Singlemode: Laser Diode

NUMBER OF FIBERS
1

LED INDICATORS
VT Transmitter Unit:
- Video Input Sync Presence
- Operating Power

VR Receiver Unit:
- Optical Carrier Detect
- Operating Power

RELAYS***
24 VAC/DC @ 100 mA

CONNECTORS

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

ELECTRICAL & MECHANICAL

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

AGENCY COMPLIANCE
FCC PART 15 COMPLIANT CE c UL us GSA
Federal Supply Schedule Contract No. GS-07F-0049M

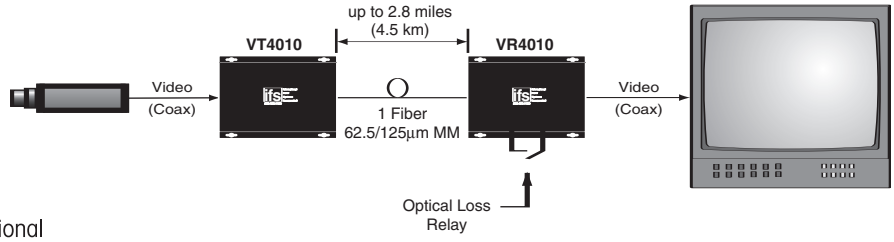
MADE IN THE USA
Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER		RECEIVER		OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	OUTPUT	MODEL	SENSITIVITY		
Multimode 62.5/125µm**	850 nm	VT4010	20 µw (-17 dBm)	VR4010	.5 µw (-33 dBm)	16 dB	2.8 miles (4.5 km)
	1310 nm	VT4020		VR4030			10 miles (16 km)
Singlemode 9/125µm		VT4025	25 µw (-16 dBm)			17 dB	31 miles (51 km)
		VT4030	250 µw (-6 dBm)			27 dB	50 miles (81 km)
	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. *** Short to ground when optical carrier is present.**

SYSTEM DESIGN



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