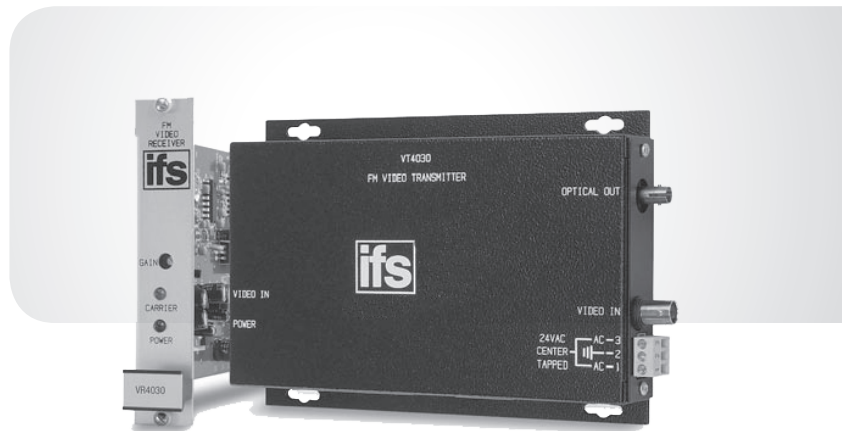


# VT/VR4000 Series

IFS FM Video Transmitter and Receiver



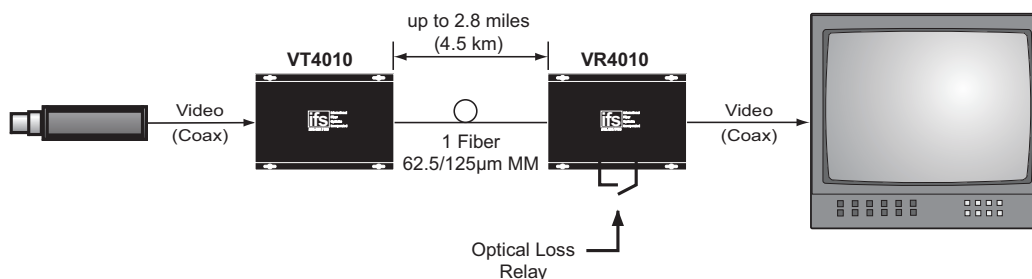
## OVERVIEW

The IFS VT/VR4000 Series Video Transmitter and Receiver 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)

## SYSTEM DESIGN



## STANDARD FEATURES

- Frequency Modulation for High Quality Video Transmission
- Meets Some Requirements for RS-250C Medium-Haul Transmission
- Direct 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

# VT/VR4000 Series

North America T 855-286-8889 Latin America T 561-998-6114

IFS FM Video Transmitter and Receiver

## Ordering Information

	Part Number	Description	Fibers Required	Tx Output	Optical Pwr. Budget	Max. Distance*
Multimode 62.5/125µm	VT4010	FM Video Transmitter (850 nm)	1	25 µw (-17 dBm)	16 dB	2.8 miles (4.5 km)
	VR4010	FM Video Receiver (850 nm)	1	25 µw (-17 dBm)	16 dB	2.8 miles (4.5 km)
	VT4020	FM Video Transmitter (1310 nm)	1	20 µw (-17 dBm)	16 dB	10 miles (16 km)
	VR4030	FM Video Receiver (1310 nm)	1	250 µw (-6 dBm)	16 dB	10 miles (16 km)
Single Mode 9/125µm	VT4025	FM Video Transmitter (1310 nm), LED	1	25 µw (-16 dBm)	17 dB	31 miles (51 km)
	VR4030	FM Video Receiver (1310 nm)	1	250 µw (-6 dBm)	27 dB	31 miles (51 km)
	VT4030	FM Video Transmitter (1310 nm), Laser	1	250 µw (-6 dBm)	27 dB	50 miles (81 km)
	VR4030	FM Video Receiver (1310 nm)	1	250 µw (-6 dBm)	27 dB	50 miles (81 km)
	VT4055	FM Video Transmitter (1550 nm), LED	1	25 µw (-16 dBm)	17 dB	65 miles (104 km)
	VR4055	FM Video Receiver (1550 nm)	1	200 µw (-7 dBm)	26 dB	65 miles (104 km)
	VT4050	FM Video Transmitter (1550 nm), Laser	1	200 µw (-7 dBm)	26 dB	42 miles (68 km)
	VR4050	FM Video Receiver (1550 nm)	1	200 µw (-7 dBm)	26 dB	42 miles (68 km)
Accessories ♦						
Options	1068977A	Power Supply, 24VACCT AT 0.60A, 240V/50HZ, 19W Level IV, (EU)				
	1068978A	Power Supply, 24VACCT AT 0.60A, 240V/50HZ, 19W Level IV, (UK)				
	1068979A	Power Supply, 24VACCT AT 0.60A, 120V/60HZ, 18W Level IV,(US)				
	1068980A	Power Supply, 24VACCT AT 0.60A, 240V/50HZ, 19W Level IV, (AUS)				

\*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:	10 Hz - 10 MHz
Differential Gain:	<2%
Differential Phase:	<1.3°
Tilt:	<1%
Signal-to-Noise Ratio (SNR):	<60 Minimum @ Max. Optical Loss Budget

**Wavelength** 850 or 1310 nm, Multimode; 1310 or 1550 nm, Single mode

**Receiver Sensitivity** .5 µw (-33 dBm)

**Number Of Fibers** 1

**Led Indicators** VT: Video Sync Presence, Operating Power  
VR: Optical Carrier Detect, Operating Power

**Relays\*\*\*** 24 VAC/DC @ 100 mA

### Connectors

Optical:	ST
Power:	Terminal Block with Screw Clamps
Video:	BNC (Gold Plated Center-Pin)

### Electrical & Mechanical

Power:	
Surface Mount:	VTVR: 24 VAC C.T. @ 300 mA, VT: 12 VDC @ 200 mA (Optional)
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 12.4 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)

### 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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VT/VR4000 Series