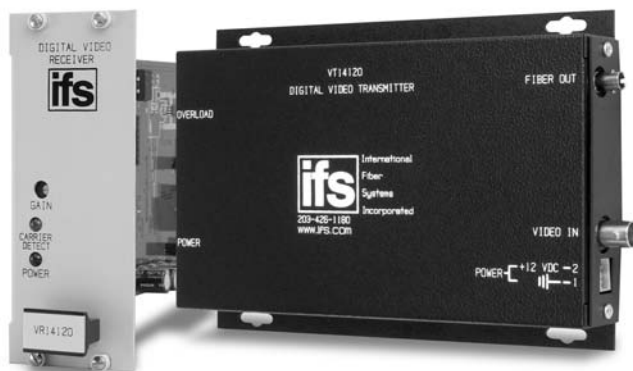




PRODUCT SPECIFICATION

10 BIT DIGITALLY ENCODED VIDEO TRANSMITTER AND RECEIVER

VT/VR14100 SERIES



DESCRIPTION

The IFS VT/VR14100 series video transmitter and video receiver units utilize state-of-the-art 10-bit digital encoding and decoding for true broadcast-quality video transmission that exceeds the requirements of EIA RS-250C for Short-Haul Video Transmission. These environmentally hardened units provide transmission of video over one singlemode or multimode fiber optic cable and are ideal for use in unconditioned road side or out-of-plant installations. As the level of video performance is so high, the VT/VR14100-series is ideally suited to networks employing multiple physical layers where video degradation may be problem, such as FDM or digitally encoded video multiplexing links, T-1 or fractional T-1 codecs, and SONET or ATM backbones. These units are completely transparent to and universally compatible with any NTSC, PAL, or SECAM CCTV camera system. 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

- High Performance CCTV (Fixed Video)

FEATURES

- State-of-the-Art 10-Bit Digitally Encoded Video Transmission
- Exceeds All Requirements for RS-250C Short-Haul Transmission: True Broadcast Video Performance
- Exceptionally Low Video Distortion with Zero Performance Variation vs. Optical Path Loss
- Ideally Suited to Networks Requiring Multiple Physical Layers Where Video Degradation May Be a Problem
- 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

Available at:
www.ifs.com

- Comprehensive Lifetime Warranty

- 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**	VT14120	Video Transmitter/Stand-alone module (1310 nm)	1	10 dB	2 miles (3 km)
	VR14120	Video Receiver/Stand-alone module (1310 nm)			
SINGLEMODE 9/125µm	VT14130	Video Transmitter/Stand-alone module (1310 nm)	1	23 dB	43 miles (69 km)
	VR14130	Video Receiver/Stand-alone module (1310 nm)			
	VT14150	Video Transmitter/Stand-alone module (1550 nm)	1	27 dB	67miles (108 km)
	VR14150	Video Receiver/Stand-alone module (1550 nm)			
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)				
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 Single-mode Equipment Only)				
	Add ‘-FC’ to Model Number for FC Optical Connector (Single-mode equipment only)				
	Add ‘-HP’ to VT Model Number for 26 dB Single-mode Optical Power Budget				
	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. 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/VR14100 SERIES

10 BIT DIGITALLY ENCODED VIDEO TRANSMITTER AND RECEIVER

SPECIFICATIONS

VIDEO

Video Input:	1 volt pk-pk (75 ohms)
Video Bandwidth:	5 Hz - 10 MHz
Differential Gain:	<2%
Differential Phase:	<0.7°
Tilt:	<1%
Signal-to-Noise Ratio (SNR):	>67 dB @ Maximum Optical Loss Budget

WAVELENGTH

1310 nm, Multimode
1550 nm, Singlemode

OPTICAL EMITTER

Laser Diode (all models)

NUMBER OF FIBERS

1

LED INDICATORS

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

CONNECTORS

Power:	Terminal block with screw clamps
Video:	BNC (Gold Plated Center-Pin)
Optical:	ST , SC or FC (see ordering information)

ELECTRICAL & MECHANICAL

Power:	
Surface Mount:	+12 VDC @500 mA
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 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.

AGENCY COMPLIANCE

FCC PART 15 COMPLIANT



MADE IN THE USA

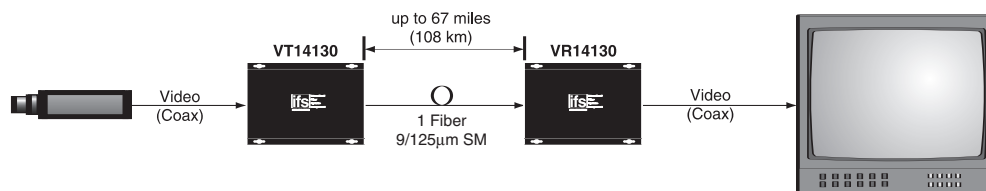
Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER	RECEIVER	OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	MODEL		
Multimode 62.5/125µm**	1310 nm	VT14120	VR14120	10 dB	2 miles (3 km)
Singlemode 9/125µm		VT14130	VR14130	23 dB	43 miles (69 km)
	1550 nm	VT14150	VR14150	27 dB	67 miles (108 km)

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SYSTEM DESIGN



International
Fiber
Systems
Incorporated

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