

## Overview

The IFS VT/VR72030DRDT-R3 video transmitter/data transceiver and video receiver/data transceiver series utilizes state-of-the-art 8-bit digital encoding and decoding for high-quality video transmission that exceeds the requirements of EIA RS-250C for Medium-Haul Video Transmission. These environmentally hardened units provide transmission of twenty independent video channels and two bi-directional data channels over one single mode optical fiber and are ideal for use in unconditioned roadside or out-of-plant 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, or 2 or 4-wire RS-485 with Tri-state and Sensornet 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, available in rack-mount configuration only.

## Application Examples

- High Performance CCTV with PTZ Control
- High Performance CCTV with Access Control

# 20-Channel Digitally Encoded Video and 2-Channel Data Multiplexer

Utilizing state-of-the-art 8-bit digital encoding and decoding for high-quality video transmission.



## Standard Features

- 8-Bit Digitally Encoded Video Transmission Transmits 20 Real-Time Color Video Channels and 2 Bi-Directional Data Channels on One Single Mode Fiber
- Exceeds All Requirements for RS-250C Medium-Haul Transmission: Extremely High 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
- 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.
- Directly Compatible with All NTSC, PAL, or SECAM CCTV Camera Systems
- Robust Design Ensures Extremely High Reliability In Unconditioned Out-of-Plant Environments
- LED Status Indicators Provide Rapid Indication of Critical Operating Parameters
- Solid-State Current Limiters on All Power Lines Provide Equipment Protection
- Includes R3 Rack
- Comprehensive Lifetime Warranty



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Specifications subject to change without notice

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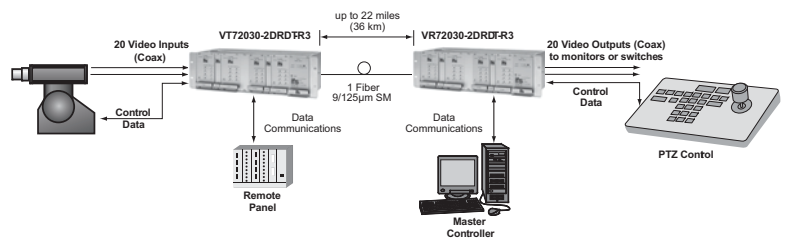
**Made in the USA**  
 Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

## Specifications

<b>Video</b>	
Video Input:	1 volt pk-pk (75 ohms)
Input/Output Channels:	20
Bandwidth (minimum):	10 Hz - 6.5 MHz per channel
Differential Gain:	<2%
Differential Phase:	<0.7°
Tilt:	<1%
Signal-to-Noise Ratio (SNR):	60 dB @ Maximum Optical Loss Budget
<b>Data</b>	
Data Channels:	2
Data Format:	RS-232, RS-422, 2 wire or 4 wire RS-485 with Tri-State, Manchester, Bi-phase and Sensornet
Data Rate:	DC - 100 kbps (NRZ)
Bit Error Rate:	<1 in 10 <sup>7</sup> @ Maximum Optical Loss Budget
Operating Mode:	Simplex or Full-Duplex
<b>Wavelength</b>	
	1310/1510/1530/1550 nm, Single Mode
<b>Opticalemmitter</b>	
	Laser Diode
<b>Numberoffibers</b>	
	1
<b>Connectors</b>	
Optical:	ST, SC or FC (see ordering information)
Data:	Terminal Block with Screw Clamps
Video:	BNC (Gold Plated Center-Pin)
<b>Electrical&amp;Mechanical</b>	
Power:	115/230 VAC
Number of Rack Slots:	10
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm.) (LxWxH)	
Rack Mount:	19.0 x 7.0 x 5.3 in., 48.3 x 17.8 x 13.3 cm
Shipping Weight:	< 12 lbs./5.4 kg
<b>Environmental</b>	
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.

## System Design



## Ordering Information

	PartNumber	Description	FibersRequired	OpticalPwr.Budget	Max.Distance*
Single Mode 9/125µm	VT72030-2DRDT-R3	20 Channel Video Transmitter/Multiplexer w/2 Bi-Directional Data Channels	1	12 dB	22 miles (36 km)
	VR72030-2DRDT-R3	20 Channel Video Receiver/Demultiplexer w/2 Bi-Directional Data Channels			

Options  
 Add '-C' to Model Number for Conformally Coated Printed Circuit Boards (Extra charge, consult factory)  
 Add '-SC' to Model Number for SC Connector  
 Add '-FC' to Model Number for FC Optical Connector

\* 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.

