



PRODUCT SPECIFICATION 24-CHANNEL DIGITALLY ENCODED VIDEO/ 2-CHANNEL DATA MULTIPLEXER

VT/VR72430-2DRDT-R3



DESCRIPTION

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 four independent video channels and two bi-directional data channels over one singlemode 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.

APPLICATION EXAMPLES

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

FEATURES

- 8-Bit Digitally Encoded Video Transmission Transmits 24 Real-Time Color Video Channels and Two Bi-Directional Data Channels on One Singlemode Optical 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
- 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.
- Robust Design Ensures Extremely High Reliability In Unconditioned Out-of-Plant Environments
- Supports RS-232, RS-422, and 2 or 4-wire RS-485 with Tri-State and Sensornet Data Interfaces
- 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



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*
SINGLEMODE 9/125μm	VT72430-2DRDT-R3	24 Channel Video Transmitter-Multiplexer w/ 2 Bi-Directional Data Channels	1	12 dB	22 miles (36 km)
	VR72430-2DRDT-R3	24 Channel Video Receiver-Demultiplexer w/ 2 Bi-Directional Data Channels			
OPTIONS	Add '-C' 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.



TECHNICAL SPECIFICATION 24-CHANNEL DIGITALLY ENCODED VIDEO/ 2-CHANNEL DATA MULTIPLEXER

VT/VR72430-2DRDT-R3

SPECIFICATIONS

VIDEO

Video Input: 1 volt pk-pk (75 ohms)
 # Input/Output Channels: 24
 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

DATA

Data Channels: 2
 Data Format: RS-232, RS-422, 2 wire or
 4 wire RS-485 with Tri-State
 Manchester Bi-Phase and Sensornet
 DC - 100 kbps (NRZ)
 Data Rate: DC - 100 kbps (NRZ)
 Bit Error Rate: < 1 in 10⁹ @ Maximum Optical Loss Budget
 Operating Mode: Simplex or Full-Duplex

WAVELENGTH 1310/1510/1530/1550 nm, Singlemode

OPTICAL EMITTER Laser Diode

NUMBER OF FIBERS 1

LED INDICATORS

VT Transmitter/ Data Transceiver Unit:

- Video Sync Presence for Each Input Channel
- Received Data - Channel 1
- Received Data - Channel 2
- Transmitted Data - Channel 1
- Transmitted Data - Channel 2
- Optical Carrier Detect/ Link-Lock
- Operating Power

VR Receiver/ Data Transceiver Unit:

- Video Sync Presence for Each Output Channel on Receiver
- Video Sync Presence for Each Input Channel on Transmitter
- Received Data - Channel 1
- Received Data - Channel 2
- Transmitted Data - Channel 1
- Transmitted Data - Channel 2
- Optical Carrier Detect/ Link-Lock
- Operating Power

CONNECTORS

Optical: ST, SC, or FC (See ordering information)
 Data: Terminal Block with Screw Clamps
 Video: BNC (Gold Plated Center-Pin)

ELECTRICAL & MECHANICAL

Power: 115/230 VAC
 Number of Rack Slots: 11
 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

ENVIRONMENTAL

MTBF: > 100,000 hours
 Operating Temp: 0° C to +70° 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

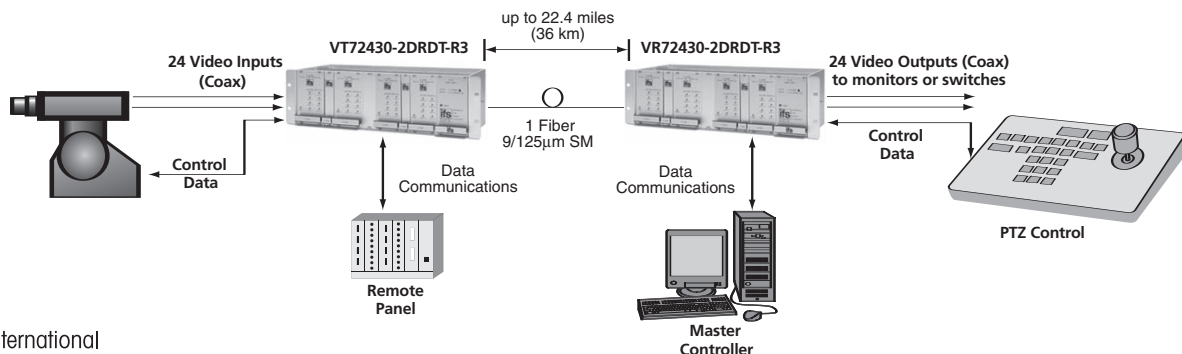
Complies with FDA Performance Standard for Laser Products,
 Title 21, Code of Federal Regulations, Subchapter J

OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER	RECEIVER	OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	MODEL		
Singlemode 9/125µm	1310 nm	VT72430-2DRDT-R3	VR72430-2DRDT-R3	12 dB	22 miles (36 km)
	1510 nm				
	1530 nm				
	1550 nm				

* Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels.

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.