ifs

VT/VR71630-2DRDT-R3 Series

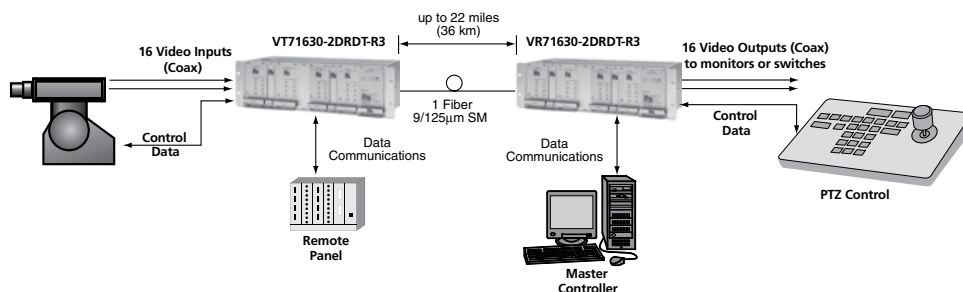## IFS 16-Channel Digitally Encoded Video and 2-Channel Data Multiplexer

OVERVIEW

The IFS VT/VR71630DRDT-R3 Series video transmitter/data transceiver and video receiver/data transceiver 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 sixteen 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, and these units are available in rack-mount configurations only.

APPLICATION EXAMPLES

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

STANDARD FEATURES

- 8-Bit Digitally Encoded Video Transmission Transmits 16 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

SYSTEM DESIGN

16 Video Inputs (Coax)

VT71630-2DRDT-R3

up to 22 miles (36 km)

VR71630-2DRDT-R3

16 Video Outputs (Coax) to monitors or switches

Control Data

1 Fiber 9/125µm SM

Control Data

Data Communications

Data Communications

Remote Panel

Master Controller

PTZ Control

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VT/VR71630-2DRDT-R3 Series

IFS 16-Channel Digitally Encoded Video and 2-Channel Data Multiplexer

Ordering Information

	Part Number	Description	Fibers Required	Optical Pwr. Budget	Max. Distance*
Single Mode 9/125µm	VT71630-2DRDT-R3	16-Channel Video Transmitter/Multiplexer w/2 Bi-Directional Data Channels	1	12dB	22 miles (36 km)
	VR71630-2DRDT-R3	16-Channel Video Receiver/Demultiplexer w/2 Bi-Directional Data Channels	1	12dB	22 miles (36 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.

Specifications

Video

Video Input:	1 Volt pk-pk (75 ohms)
Input/Output Channels:	16
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
Data Rate:	DC - 100 kbps (NRZ)
Bit Error Rate:	< 1 in 10^9 @ Maximum Optical Loss Budget
Operating Mode:	Simplex or Full-Duplex

Wavelength

	1310/1530/1550 nm, Single Mode

Optical Emitters

	Laser Diode

Number Of Fibers

	1

Connectors

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

Electrical & Mechanical

Power:	115/230 VAC
Number of Rack Slots:	8
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:	< 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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