

## Standard Features

- 8-bit digitally encoded video transmission transmits 8 real-time color video signals and 2 bi-directional data signals on one single-mode optical fiber
- Supports RS-232, RS-422, and 2- or 4-wire RS-485 with tri-state data interfaces
- LED status indicators provide rapid indication of critical operating parameters
- 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
- Solid-state current limiters on all power lines provide unconditional equipment protection
- Comprehensive lifetime warranty

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

# 8-Channel Digitally Encoded Video and 2 Bi-Directional Data Multiplexer

Utilizes 8-bit digital encoding and decoding for high-quality video transmission.



# GE Security

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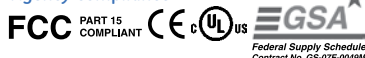
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Specifications subject to  
change without notice

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## Agency compliance



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:	8
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 @ Max. Optical Loss Budget
<b>Data</b>	
Data Channel:	2
Data Format:	RS-232, RS-422, 2-w or 4-w RS-485 with Tri-State, Manchester, Bi-phase and SensorNet
<b>Wavelength</b>	
1310/1550 nm, Multimode or Single Mode	
<b>Optical Emitter</b>	
Laser Diode	
<b>Number of Fibers</b>	
1	
<b>Connectors</b>	
Optical:	ST, SC or FC (see ordering information)
Power:	Terminal Block with Screw Clamps
Video:	BNC (Gold-Plated Center-Pin)
<b>Electrical &amp; Mechanical</b>	
Power:	12 VDC @ 500 mA (stand-alone)
Number of Rack Slots:	4
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm.) (LxWxH)	
Surface Mount (Transmitter):	7.0 x 4.9 x 3.0 in., 17.8 x 12.5 x 7.6 cm
Surface Mount (Receiver):	7.0 x 4.9 x 4.0 in., 17.8 x 12.5 x 10.4 cm
Rack Mount:	7.7 x 5.0 x 4.0 in., 19.6 x 12.7 x 10.4 cm
Shipping Weight:	< 2 lbs./0.9 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.

## Ordering Information

	Part Number	Description	Fibers Required	Optical Pwr. Budget	Max. Distance*
Multimode 62.5/125µm**	VT7820-2DRDT	8-Channel Video Transmitter/Data Transceiver (1310/1550 nm)	1	18 dB	1.2 miles (2 km)***
	VR7820-2DRDT	8-Channel Video Receiver/Data Transceiver (1310/1550 nm)			
Single Mode 9/125µm	VT7830-2DRDT	8-Channel Video Transmitter/Data Transceiver (1310/1550 nm)	1	17 dB	31 miles (51 km)
	VR7830-2DRDT	8-Channel Video Receiver/Data Transceiver (1310/1550 nm)			
	VT7830-2DRDT-HP	8-Channel Video Transmitter/Data Transceiver (1310/1550 nm)	1	23 dB	43 miles (69 km)
	VR7830-2DRDT-HP	8-Channel Video Receiver/Data Transceiver (1310/1550 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 ‘C’ for Conformally Coated Printed Circuit Boards (Extra charge, consult factory)				
	Add ‘HP’ to VT Model Number for 26 dB Single-Mode Optical Power Budget				
	Add ‘FC’ to model number for FC Optical Connector (For Single-Mode equipment only)				

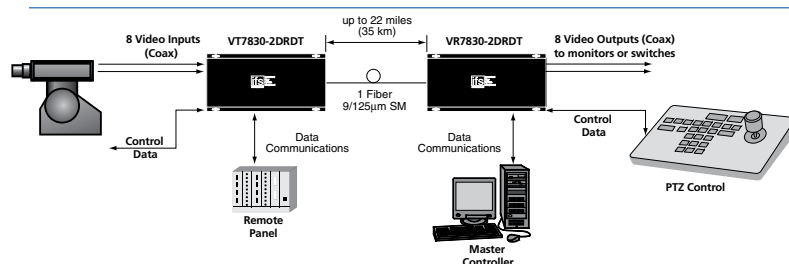
\*Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels.

Distance can also be limited by fiber bandwidth. \*\*For 50/125 fiber, subtract 4 dB from optical power budget.

\*\*\*This product may be used with 62.5 µm graded index multimode fiber having a maximum run length of 2 km and/or a maximum optical loss budget of 10 dB.

†All accessories are third-party manufactured.

## System Design



imagination at work