FT8308/FR8308 Fiber Transmitter and Receiver
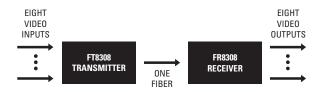## EIGHT-CHANNEL DIGITALLY ENCODED VIDEO

Product Features

- 8-Bit Digitally Encoded Video for High-Quality Multichannel Video Transmission over a Single Fiber

- Multimode Fiber Support for Distances up to 1 km

- Single-Mode Fiber Support for Distances up to 30 km

- Exceeds All Requirements for the RS-250C Medium-Haul Transmission Specification

- Compatible with NTSC, PAL, and SECAM Video Standards

- Meets NEMA TS 2 and Caltrans Traffic Signal Control Equipment Environmental Standards

- No Performance Adjustments Required

- 12 VDC or 24 VAC Power Supply

- Stand-Alone and Rack-Mountable Modular Design

- LED Indicators for Monitoring of Signal Status, Laser Status, and Operating Power

The **FT8308/FR8308** fiber transmitter and receiver provide the ability to transmit up to eight composite video channels over one optical fiber. The **FT8308** transmitter and the **FR8308** receiver are available in multimode and single-mode versions.

Modular in design, the **FT8308** and **FR8308** units can be rack mounted or can be used as stand-alone modules. Rack mounting is accomplished using the RK5000 Series rack mount chassis. Stand-alone modules can be placed on a desktop or can be mounted to a wall.

EIGHT VIDEO INPUTS → **FT8308 TRANSMITTER** → ONE FIBER → **FR8308 RECEIVER** → EIGHT VIDEO OUTPUTS

International Standards Organization Registered Firm; ISO 9001 Quality System

TECHNICAL SPECIFICATIONS

MODELS

Model No.		Fiber Optic Connector Type	Wavelength	Optical Power Budget	Maximum Transmission Distance
Transmitter	Compatible Receiver				
Multimode (62.5/125 µm)					
FT8308MSTR	FR8308MSTR	ST	1310 nm	20 dB*	1 km (0.6 mi)[†]
Single-Mode (9/125 µm)					
FT8308SSTR	FR8308SSTR	ST	1310 nm	20 dB	30 km (18.6 mi)[‡]
FT8308SFCR	FR8308SFCR	FC	1310 nm	20 dB	30 km (18.6 mi)[‡]

[*]When using 50/125 µm multimode fiber, subtract 3 dB from the optical power budget.
[†]Maximum transmission distance is limited by fiber bandwidth.
[‡]Maximum transmission distance is based on attenuation of 0.5 dB/km plus a 5 dB buffer for connector and splice losses.

Notes:
- For conformal coated models, replace the first letter *F* in the model number with the letter *C*. The conformal coated version of FT8308MSTR, for example, is CT8308MSTR.
- For models with higher optical power budgets, contact the factory.

Supplied Accessories
- Regulated switching power supply with multiple plug adapters (North American, Australian, United Kingdom, and European); 100-240 VAC, 50-60 Hz input, 12 VDC output

  Note: In extreme temperature conditions, it is recommended that an industrial-rated outdoor power supply such as the Pelco® WCS1-4 power supply be used.
- Wall clip for attachment of single module to wall

VIDEO
Number of Channels	8
Modulation Type	Pulse code modulation, 8-bit resolution
Video Input (FT8308)/ Video Output (FR8308)	1.0 Vp-p, 75 ohms; NTSC, PAL, and SECAM
Bandwidth	6.5 MHz
Gain	Unity
Crosstalk	-50 dB typical at 3.58 MHz
Differential Gain	<1%
Differential Phase	<1.2°
Tilt	<1%
Signal-to-Noise Ratio	>60 dB (CCIR weighted)

GENERAL
Operating Temperature	-40° to 167°F (-40° to 75°C)
Input Power Requirements	12 VDC or 24 VAC, 460 mA
LED Indicators	Power
	Video Present (per channel)
	Optic Fault
Dimensions	8.75" D x 2.28" W x 4.81" H (22.23 x 5.79 x 12.22 cm)
Unit Weight	2.64 lb (1.20 kg)
Shipping Weight	4 lb (1.81 kg)

MECHANICAL
Connectors
Video	BNC (per channel)
Rack Power/Alarm	4-pin connector
Stand-Alone Power	2-pin connector, screw terminal
Fiber Optic	ST for multimode fiber
	ST or FC for single-mode fiber

CERTIFICATIONS
- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- C-Tick
- Complies with FDA requirements for Class 1 laser products
- Meets NEMA TS 2 and Caltrans traffic signal control equipment standards for ambient operating temperature, mechanical shock and vibration, humidity with condensation, high-line/low-line voltage conditions, and transient voltage protection—certified by an independent testing laboratory

  Note: Conformal coating is required for operation in environments with relative humidity above 95% (condensing).

OPTIONAL ACCESSORIES
WM5002-3U	Wall mount base kit for double-width module
WM5002-3UEXP	Wall mount expansion kit for double-width module
RK5000-3U	19-inch rack mount chassis for 14 slots, no power (3 RUs)
RK5000PS-3U	19-inch rack mount chassis for 12 slots with power (3 RUs)
EPS5000-120	External rack power supply, 1 RU, dual 120 W power outputs
RK5001B-3U	Blank filler panel, single width
RK5002B-3U	Blank filler panel, double width
RK5002-1UEXP	Adapter kit that allows a 3 RU double-width fiber module to be used in RK5000PS-5U rack mount chassis