FT85011/FR85011 Fiber Transmitter and Receiver

SINGLE-CHANNEL DIGITALLY ENCODED VIDEO WITH BIDIRECTIONAL DATA

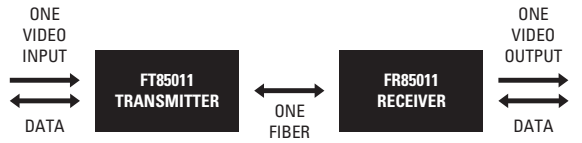
Product Features

- 8-Bit Digitally Encoded Video for High-Quality Video Transmission over a Single Fiber
- Bidirectional Data Channel That Supports RS-232, RS-422, RS-485 (2-wire/4-wire), Manchester, Bi-Phase, and Coaxitron® Communication
- Patent-Pending Transmission Technology Allowing Coaxitron Control at Full-Distance Capabilities
- Integrated Wavelength Division Multiplexing (WDM) in a Single Fiber
- Multimode Fiber Support for Distances up to 6 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
- Standalone and Rack-Mountable Modular Design
- LED Indicators for Monitoring of Signal Status, Data Activity, and Operating Power

Available in multimode and single-mode versions, the **FT85011/ FR85011** fiber transmitter and receiver provide the ability to transmit one unidirectional composite video channel and one bidirectional data channel over one optical fiber. In addition, patent-pending technology provides the solution for allowing Coaxitron® pan/tilt/ zoom (PTZ) control data to be transmitted the full distance of the fiber (up to 6 km for multimode fiber and up to 30 km for single-mode fiber).

Modular in design, the **FT85011** and **FR85011** units can be rack mounted or can be used as standalone 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.

In addition to compatibility with the **FT85011** transmitter, the **FR85011** receiver is also compatible with the FS85011 plug-in transmitter that is used in a Spectra III™ dome.



SINGLE-CHANNEL VIDEO AND BIDIRECTIONAL DATA APPLICATION

SINGLE-CHANNEL VIDEO AND COAXITRON DATA APPLICATION

TECHNICAL SPECIFICATIONS

MODELS

Model No.		Fiber Optic Connector Type	Wavelength (Video/Data)	Optical Power Budget	Maximum Transmission Distance
Transmitter	Compatible Receiver				
Multimode (62.5/125 µm)					
FT85011MSTR	FR85011MSTR	ST	1310/850 nm	20 dB*	6 km (3.7 mi)†
Single-Mode (9/125 µm)					
FT85011SSTR	FR85011SSTR	ST	1310/1550 nm	20 dB	30 km (18.6 mi)††
FT85011SFCR	FR85011SFCR	FC	1310/1550 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 FT85011MSTR, for example, is CT85011MSTR.
- 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

RELATED PRODUCTS (Applicable to FR85011 Receiver Only)

FS85011MST	Single-channel fiber optic video transmitter/data transceiver for Spectra III dome; multimode, ST connector
FS85011SST	Single-channel fiber optic video transmitter/data transceiver for Spectra III dome; single-mode, ST connector
FS85011SFC	Single-channel fiber optic video transmitter/data transceiver for Spectra III dome; single-mode, FC connector

VIDEO

Number of Channels	1
Modulation Type	Pulse code modulation, 8-bit resolution
Video Input	1.0 Vp-p, 75 ohms; NTSC, PAL, and SECAM
Bandwidth	6.5 MHz
Gain	Unity
Differential Gain	<2%
Differential Phase	<1°
Tilt	<1%
Signal-to-Noise Ratio	>60 dB (CCIR weighted)

DATA

Number of Channels	1
Data Communication	RS-232, RS-422, RS-485 (2-wire/4-wire), Manchester, Bi-Phase, Coaxitron
Maximum Baud Rate	500 kbps

GENERAL

Operating Temperature	-40° to 167°F (-40° to 75°C)
Input Power Requirements	12 VDC or 24 VAC, 200 mA
LED Indicators	Power, Video Present, Optic Fault, Data Tx, Data Rx
Dimensions	8.75" D x 1.08" W x 4.81" H (22.23 x 2.74 x 12.22 cm)
Unit Weight	1.48 lb (0.67 kg)
Shipping Weight	3 lb (1.36 kg)

MECHANICAL

Connectors	
Video	BNC
Rack Power/Alarm	4-pin connector
Standalone Power	2-pin connector, screw terminal
Data	9-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

WM5001-3U	Wall mount base kit for single-width module
WM5001-3UEXP	Wall mount expansion kit for single-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
RK5001-1UEXP	Adapter kit that allows a 3 RU single-width fiber module to be used in RK5000PS-5U rack mount chassis

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