

# FTV80D2/FRV80D2 Fiber Transmitter and Receiver

## 8-CHANNEL VIDEO WITH BIDIRECTIONAL DATA AND CONTACT CLOSURE

### Product Features

- 10-Bit Digitally Encoded Video for High-Quality Transmission over a Single Fiber
- 2 Bidirectional Data Channels Support RS-232, RS-422, RS-485 (2-wire/4-wire), Manchester, and Bi-Phase Communication
- 1 Bidirectional Contact Closure
- Multimode Fiber Support for Distances up to 2 km (1.2 mi)
- Single-Mode Support for Distances up to 69 km (42.9 mi)
- Exceeds All Requirements for the EIA RS-250C Short-Haul Transmission Specification
- Laser Diode for Transmission of Optical Signals
- Compatible with NTSC, PAL, and SECAM Video Standards
- Designed to Meet NEMA TS 1/TS 2 and Caltrans Traffic Signal Control Equipment Environmental Standards
- Voltage Transient Protection on All Power and Signal Input/Output Lines
- LED Status Indicators for Monitoring All Critical Operating Parameters
- Hot-Swappable Rack Modules
- Stand-Alone or Rack-Mountable Modular Design



FRV80D2M1ST

The **FTV80D2/FRV80D2** transmitter and receiver transmit eight channels of unidirectional video, two channels of bidirectional data, and one bidirectional contact closure over one optical fiber in a three-slot wide design. The **FTV80D2** transmitter and **FRV80D2** receiver are available in multimode and single-mode versions.

The **FTV80D2/FRV80D2** plug-and-play design ensures ease of installation and no electrical or optical adjustments are required. Modular in design, **FTV80D2** and **FRV80D2** units can be rack-mounted using the EURACK/USRACK chassis, or stand-alone modules can be placed on a desktop or mounted to a wall (wall mount kit not required).

For stand-alone and wall mount installations, external power is required for the **FTV80D2/FRV80D2** units. The units can be powered with the recommended FEXTPS fiber external power supply.

# TECHNICAL SPECIFICATIONS

## MODELS

Transmitter	Compatible Receiver	Fiber Optical Connector Type	Number of Fibers	Wavelength	Optical Power Budget	Maximum Transmission Distance
<b>Multimode (62.5/125 <math>\mu</math>m)</b>						
FTV80D2M1ST	FRV80D2M1ST	ST	1	1310/1550 nm	16 dB	2 km (1.2 mi)
<b>Single Mode (9/125 <math>\mu</math>m)</b>						
FTV80D2S1ST	FRV80D2S1ST	ST	1	1310/1550 nm	23 dB	69 km (42.9 mi)
FTV80D2S1FC	FRV80D2S1FC	FC	1	1310/1550 nm	23 dB	69 km (42.9 mi)
<b>Note:</b> This product requires a fiber installation with a minimum 30 dB connector return loss.						

## VIDEO/ELECTRICAL

Number of Channels	8
Video Input (FTV80D2)/ Video Output (FRV80D2)	1.0 Vp-p, 75 ohms; NTSC, PAL, SECAM
Overload	>1.5 Vp-p
Bandwidth	10 Hz to 6.5 MHz per channel
Differential Gain	<2%
Differential Phase	<0.7°
Tilt	<1%
Signal-to-Noise Ratio	67 dB at maximum optical loss budget
Max. Coaxial Cable (RG59)	100 m (300 ft) camera to fiber optic module maintains 6 Mhz bandwidth
Power	
Surface Mount	8 to 15 VDC at 4 W
Rack Mount	Supplied by rack
MTBF	>100,000 hours
LED Indicators	Link, Video, Data

## DATA

Number of Channels	2
Data Communication	RS-232, RS-422, and RS-485 (2-wire/4-wire), Manchester, and Bi-Phase
Maximum Baud Rate	250 Kbps

## CONTACT CLOSURE

Number of Channels	1
Contact Interface	0.5 ms response time
Input	Dry
Output	SPST relay, 0.5 contact rating

## MECHANICAL

Connectors	
Optical	ST or FC
Power	Terminal block
Video	BNC (gold-plated center pin)
Data	Terminal block
Number of Rack Slots	3

## GENERAL

Operating Temperature	-40° to 75°C (-40° to 167°F)
Storage Temperature	-40° to 85°C (-40° to 185°F)
Relative Humidity	0 to 95%, noncondensing
Dimensions	15.5 × 13.5 × 8.3 cm (6.1" D × 5.3" W × 3.3" H)
Unit Weight	0.75 kg (1.65 lb)
Shipping Weight	0.90 kg (2.00 lb)

## CERTIFICATIONS/RATINGS\*

- CE, Class A
- FCC, Class A
- UL/cUL Listed
- C-Tick
- Designed to meet NEMA TS 1/TS 2 and Caltrans traffic signal control equipment environmental standards

\*At the time of this printing, all certifications are pending. Please consult the factory, our Web site ([www.pelco.com](http://www.pelco.com)), or the most recent B.O.S.S.® update for the current status of certifications.

## RECOMMENDED ACCESSORIES

EURACK	4 RU rack accessory with European power supply
USRACK	4 RU rack accessory with North American power supply
FEXTPS	Fiber External Power Supply with multiple plug adaptors (North American, Australian, United Kingdom, and European); 100 to 240 VAC, 50 to 60 Hz input, 9 VDC output

### Pelco, Inc.

625 W. Alluvial Ave., Fresno, CA 93711 United States

**USA & Canada** Tel (800) 289-9100 Fax (800) 289-9150

**International** Tel +1 (559) 292-1981 Fax +1 (559) 348-1120

[www.pelco.com](http://www.pelco.com)

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