

# FRV20 Fiber Receiver

## 2-CHANNEL DIGITALLY ENCODED VIDEO



### Product Features

- Accepts Two 10-Bit Digitally Encoded Video Channels over Two Fibers
- Compatible with FTV10 and FTV10M Fiber Transmitters
- Multimode Fiber Support for Distances up to 3 km (1.9 mi)
- Single-Mode Fiber Support for Distances up to 69 km (42.9 mi)
- Exceeds All Requirements for EIA RS-250C Short-Haul Transmission Specifications
- Compatible with NTSC, PAL, or 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
- Stand-Alone or Rack-Mountable Modular Design



FRV20S2ST

The **FRV20** fiber receiver accepts two channels of video over two optical fibers. The **FRV20** receiver is compatible with the FTV10 and FTV10M transmitters. Each of the two transmitters can send a single independent video channel to one **FRV20** receiver.

The **FRV20** receiver is available in multimode and single-mode versions. When using single-mode fiber, the **FRV20** receiver and compatible transmitter offer an optical power budget of 23 dB and provide a transmission distance of up to 69 km (42.9 mi).

The **FRV20** plug-and-play design ensures ease of installation by requiring no electrical or optical adjustments. Modular in design, **FRV20** 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 **FRV20** units. The units can be powered with the recommended FEXTPS fiber external power supply.



# TECHNICAL SPECIFICATIONS

## MODELS

Receiver	Compatible Transmitter	Fiber Optical Connector Type	Number of Fibers	Wavelength	Optical Power Budget	Maximum Transmission Distance
<b>Multimode (62.5/125 <math>\mu</math>m)</b>						
FRV20M2ST	FTV10M1ST	ST	2	1310 nm	16 dB	3 km (1.9 miles)
<b>Single Mode (9/125 <math>\mu</math>m)</b>						
FRV20S2ST	FTV10S1ST	ST	2	1310 nm	23 dB	69 km (42.9 miles)
FRV20S2FC	FTV10S1FC	FC	2	1310 nm	23 dB	69 km (42.9 miles)
<b>Note:</b> This product requires a fiber installation with a minimum 30 dB connector return loss.						

## VIDEO

Number of Channels	2
Video Input	1.0 Vp-p, 75 ohms; NTSC, PAL, SECAM
Number of Input Channels	2
Overload	>1.5 Vp-p
Bandwidth (minimum)	5 to 10 MHz
Differential Gain	<2%
Differential Phase	<0.7°
Tilt	<1%
Signal-to-Noise Ratio	>67 dB typical at maximum optical loss
Max. Coaxial Cable (RG59)	100 m (300 ft) camera to fiber optic module to maintain 6 Mhz bandwidth

## ELECTRICAL

Power	
Surface Mount	8 to 15 VDC at 2 W
Rack Mount	Provided by rack
MTBF	>100,000 hours
Current Protection	Automatic resettable solid-state current limiters
Circuit Board	Meets IPC standards
LED Indicators	Video, Link, Power

## MECHANICAL

Connectors	
Power	Terminal block
Optical	ST or FC
Video	BNC (gold-plated center pin)
Number of Rack Slots	1

## GENERAL

Dimensions	15.5 × 13.5 × 2.8 cm (6.1" D × 5.3" W × 1.1" H)
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
Unit Weight	0.38 kg (0.85 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

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