



## V702R-R Fiber-Optic Video Receiver

- Superior performance and reliability
- Rack-mount
- Requires no adjustment
- Bicolor LEDs

The V702R-R fiber-optic receiver provides superior performance and reliability in closed-circuit video systems.

The V702R-R series can withstand an optical signal loss of up to 13 dB over 62.5- $\mu$ m cable. The unit requires no adjustments. A complete system requires one transmitter and one receiver, except that the V702R-R receiver can accommodate two transmitter inputs. The V702R-R receiver is compatible with V700 series transmitters.

The video level LED indicates the strength of the synchronizing component of the composite video signal. Since the sync signal has a constant amplitude, unlike the luminance part of the composite video signal, it provides a better measure of video signal quality. Green indicates adequate signal, red indicates inadequate signal.

The receiver is available as a rack-mount module. Rack-mount modules are designed for use with the V515R-PS and V517R-PS card cage racks. Rack-mount modules are powered by the power supply built into the V515R-PS card cage rack or by the external V517E-PS external power supply if installed in the V517R-PS card cage rack.

### OPTICAL CABLE RECOMMENDATIONS

Vicon recommends that a professional fiber company install and terminate the optical cable. The cable should meet the application requirements for physical properties, such as strength and weather-proofing. The fiber contractor will provide recommendations for exact cable type based on the details of the installation.

### COAXIAL CABLE RECOMMENDATIONS

Using the correct coaxial cable is critical for proper system operation. The cable must meet these requirements: (1) pure copper center conductor; (2) pure copper braid shield with a minimum of 95% coverage; (3) polyethylene dielectric. If the cable is connected to a camera on a pan-and-tilt, use a multi-strand center conductor. Other cable properties, such as outer jacket material, will be determined by the physical requirements of the installation. With RG-59/U type cable made of the materials above, the fiber-optic transmitter or receiver may be located up to 300 feet (about 100 meters) from the video source or video destination.

### ASSOCIATED EQUIPMENT AND ACCESSORIES

**Model V515R-PS 15-Channel Rack, Product Code 7214:** Rack with built-in power supply can accommodate 15 modules with a total current requirement of 6 A. Modules must be rack-mount version. Product Specification V052.

**Model V517R-PS 17-Channel Rack, Product Code 7215:** Accommodates 17 single-width rack-mount modules or the equivalent in double- and single-width modules. Requires external rack-mount power supply V517E-PS. Product Specification V052.

**Model V517E-PS Rack-Mount Power Supply, Product Code 7216:** Provides power for two fully loaded V517R-PS card-cage racks. Mounts in standard 19-inch EIA-type rack. Product Specification V052.

**TECHNICAL SPECIFICATIONS  
DIVISION 13 - SPECIAL CONSTRUCTION  
SECTION 137\_\_ - SECURITY CCTV SYSTEM**

**SECURITY SYSTEM**

PART 2 - PRODUCTS

2.01 GENERAL

- A. All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer's system.
- B. All systems and components shall have been thoroughly tested and proven in actual use.
- C. All systems and components shall be provided with the availability of a toll free 24-hour technical support phone number from the manufacturer. The phone number shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge.
- D. All systems and components shall be provided with an explicit manufacturer warranty.

2.02 FIBER-OPTIC VIDEO RECEIVER

- A. The fiber-optic receiver shall provide dual channel video transmission over two optical fibers. Input video signal shall be 1 V p-p composite video. The video bandwidth shall be 8 MHz. Optical wavelength shall be 850 nm. Maximum optical attenuation with 62.5-um cable shall be 13 dB. Signal-to-noise ratio shall be greater than 50 dB, at maximum optical attenuation. The receivers shall contain bicolor optical indicator LEDs. The receiver shall be available in rack-mount modules.
- B. The receiver shall have the following mechanical specifications:
  - 1. **Module Width:** 1 slot, 1.0 in. (25.4 mm).
  - 2. **Weight:** 0.61 lb (0.28 kg).

The rack-mount receiver shall be Vicon Industries model V702R-R receiver.



# Technical Information

## ELECTRICAL

**Power Requirements:** 13.5-16 VDC.  
**Current:** 35 mA.  
**Power Consumption:** 1.4 W @14 V.  
**Heat Equivalent:** 0.08 btu/min (0.03 kg-cal/min).  
Note: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.

## VIDEO

**Number of Channels:** 2.  
**Modulation Type:** Frequency Modulation (FM).  
**Video Bandwidth:** 8 MHz ( $\pm 1$  dB).  
**Video Input Signal:** 1 V p-p, nominal composite.  
**Video Output Signal:** 1 V p-p, composite.  
Unity gain,  $\pm 5\%$ .  
**Video Input/Output Impedance:** 75 ohms.  
**Differential Phase:**  $< 1.7^\circ$ .  
**Tilt:**  $< 1.6\%$ .  
**Signal-to-Noise Ratio:**  $>$  Greater than 50 dB, at maximum path loss.  
**Output Gain:** Unity.  
**Standards Supported:** NTSC, PAL.

## OPTICAL

**Gain Control:** Optical automatic (OAGC).  
**Optical Wavelength:** 850 nm.  
**Maximum Optical Attenuation:** 13 dB.  
**Operating Distance:** 3.2 mile (5.2 km) (approximate; assumes best fiber).  
**Fiber Type:** 62.5  $\mu\text{m}$ .  
**Video Interconnection Maximum Distances:** Video Equipment to Transmitter:  $\leq 100$  ft (30 m).  
Receiver to Video Equipment:  $\leq 100$  ft (30 m).

## CONNECTORS AND INDICATORS

**Power Connector:** Made via card cage rack.  
**Video Input/Output Connector:** 2 BNCs.  
**Optical Connector:** 2 ST-type.  
**Indicator:** 2 Level/Loss bicolor LEDs.

## MECHANICAL

**Dimensions:** 1 slot, 1.0 in. (25.4 mm).  
**Weight:** 0.61 lb (0.28 kg).  
**Finish:** Black semigloss paint.  
**Shipping Dimensions:** Length: 9.75 in. (247.7 mm).  
Width: 5.25 in. (133.4 mm).  
Height: 1.0 in. (25.4 mm).  
**Shipping Weight:** 0.80 lb (0.36 kg).  
**Shipping Volume:** 0.03 ft<sup>3</sup> (0.0008 m<sup>3</sup>).

## ENVIRONMENTAL

**Operating Temperature Range:** -40 to 167° F (-40 to 75° C).  
**Storage Temperature Range:** -40 to 185° F (-40 to 85° C).  
**Storage Humidity:** Up to 95% relative, noncondensing.

