Model Number	Product Code	Description
V703T	7208	2 channel transmitter, surface mount
V703T-R	7208-02	2 channel transmitter, rack mount
V703R	7209	2 channel receiver, surface mount
V703R-R	7209-02	2 channel receiver, rack mount

Table 1: Models and Product Codes

V703 Series Two-Channel FM VIdeo Fiber-Optic Multiplexer

- **Transmits two channels real-time full-frame video**
- **Bicolor diagnostic signal LEDs**
- **8 MHz bandwidth**
- **Full automatic gain control (AGC)**

The V703 series represents a technological breakthrough in the simultaneous transmission of real-time multiple full-frame video over a single fiber-optic cable. With two channels, this series consists of a small transmitter and a corresponding receiver and accepts monochrome and color signals in EIA, CCIR, NTSC, PAL and SECAM. Refer to Figure 1.

Full-frame, real-time video transmission delivers all the video captured by the camera. A bandwidth of 8 MHz enables the V703 to transmit extremely clear, high-resolution images. FM modulation assures that the image quality remains high over the full operating distance. The transmitter and receiver feature bicolor diagnostic LEDs to indicate system status of the video signal.

All models in this series are set up at the factory for 62.5-um cable. ST-type connectors are standard.

The transmitter and receiver are available in surface-mount modules or in rack-mount versions for use with the V515R-PS or V517R-PS racks. The V515R-PS is equipped with an internal power supply, while the V517R-PS requires the V517E-PS external power supply, which is designed to supply power to two V517R-PS racks.

OPTICAL CABLE RECOMMENDATIONS
Vicon recommends that a professional fiber company terminate and install the optical cable. The cable should meet the application requirements for physical properties, such as strength, weather-proofing, etc., and fiber size. 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.

ASSOCIATED EQUIPMENT AND ACCESSORIES
Model V515R-PS 15-Channel Rack, Product code 7214: Rack with built-in power supply can accommodate 15 single-width transmitter or receiver or transceiver 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 VOPPS-120HDC Power Supply, Product code 5941: Converts 120 VAC to 13.5 VDC. Pins for standard U.S. utility outlet are molded into the power supply case for power input. Power output is via a pendant cable. Product Specification 743.

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 instrument rack. Product Specification V052.

Two-Channel Fiber Optic Multiplexer

The multichannel video fiber-optic link shall provide transmission of two video channels over a single optical fiber. Input video signal shall be 1 V p-p composite video. System bandwidth shall be 8 MHz per channel, with a horizontal resolution of 640 TV lines. Optical wavelengths shall be 850 nm. Maximum optical attenuation with 62.5-um cable shall be 13 dB; SNR shall be 60 dB. The transmitter and receiver shall be available in either standalone surface-mounted modules or in rack-mount modules.

The multichannel video system shall consist of Vicon model V703T transmitter and V703R receiver (surface mount) and V703T-R and V703R-R (rack mount).

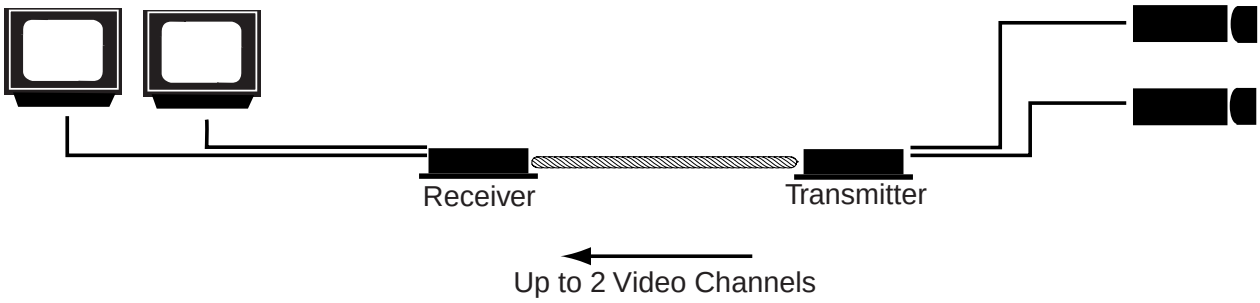

Figure 1
System Diagram

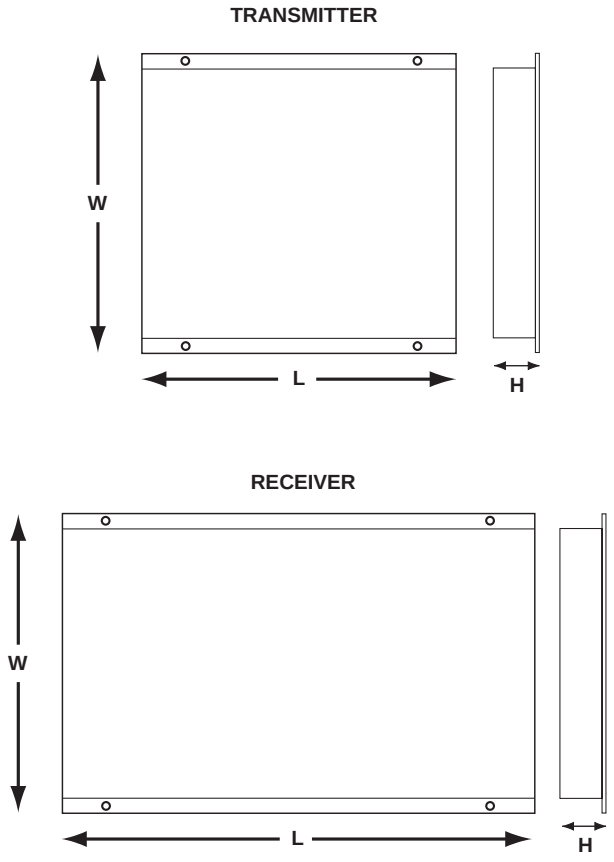

Figure 2
V703 Outline Drawing

ELECTRICAL

Power Requirements:	Surface Mount Transmitter: 12-16 VAC, 50/60 Hz or 12-16 VDC. Surface Mount Receiver/Rack Mount Modules: 13.5-16 VDC.
Current Requirement:	0.2 A.
Power Consumption:	3.0 W.
Heat Equivalent:	0.2 btu/min (0.05 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.
Safety Standards:	UL1950.
Radio Frequency Emissions Rating:	FCC Class A.
European Community (CE) Standards):	EN60950.

VIDEO

Number of Channels:	2
Formats Supported:	Monochrome: EIA and CCIR. Color: NTSC, PAL, and SECAM.
Full System Bandwidth:	8 MHz per channel.
Horizontal Video Resolution:	640 TV lines.
Input/Output Impedance:	75 ohms.
Optimum Input Signal:	1 V p-p nominal composite video.
Output Signal:	1 V p-p composite video, unity gain.
Differential Phase:	4°.
Differential Gain:	4%.
Signal-to-Noise Ratio:	60 dB (0 dB loss).
Interconnection Distance:	Video device to transmitter: ≤100 ft (30 m). Receiver to video device: ≤100 ft (30 m). RG 59/u coaxial cable, Belden No. 9259 or equivalent.

OPTICAL

Maximum Optical Attenuation:	13 dB.
Optical Wavelength:	850 nm.
Gain Control:	Fully automatic optical (AGC)
Operating Distance:	2.5 mi (4 km). Note: Operating distance is approximate and will be affected by the type and number of splices in the fiber and by the exact type of fiber used.
Fiber Type:	62.5 µm.
Modulation Type:	Frequency modulation.

CONNECTORS AND INDICATORS

Optical Connectors:	ST-type.
Video Connectors:	BNC.
Power Connector:	Detachable screw terminals.
Optical Power:	Bicolor LED.
Video Status:	Bicolor LED.

MECHANICAL

Dimensions:	See Table 2 and Figure 2.
Weight:	See Table 2.
Construction:	Aluminum.
Finish:	Black semigloss paint.
Mounting:	4 No. 6 (3 or 3.5 mm) screws.
Shipping Information:	See Table 2.

ENVIRONMENTAL

Operating Temperature Range:	-40 to 167° F (-40 to 75° C).
Operating/Storage Humidity Range:	0 to 95% relative, noncondensing.
Storage Temperature Range:	-40 to 185° F (-40 to 85° C).

Model	Unit Dimensions in. (mm)			Unit Weight lb (kg)	Shipping Dimensions in. (mm)			Shipping Weight lb (kg)	Shipping Volume ft³ (m³)
	Height (H)	Width (W)	Length (L)		Height	Width	Length		
V703T Surface-Mount Module	1.19 (30)	4.85 (123)	5.10 (130)	0.51 (0.23)	3.0 (76)	6.5 (165)	11.5 (292)	1.8 (0.8)	0.13 (0.004)
V703R Surface Mount Modules	1.15 (29)	6.33 (101)	9.31 (236)	1.36 (0.61)	2.0 (51)	7.0 (178)	10.5 (267)	1.6 (0.73)	0.085 (0.002)
Rack-Mount Modules	Single width (1 in./25 mm) module occupies one card cage slot.			0.75 (0.34)	1.0 (25)	5.5 (14)	9.9 (251)	0.74 (0.3)	0.03 (0.0008)

Table 2: Dimensions, Weights and Shipping Information