



S704V

Product Specification

Description: 4-Channel FM Video Multiplexer

Features

- ✓ Four channels of real-time, full-frame video
- ✓ FM modulation
- ✓ 640 TV lines resolution
- ✓ 8 MHz bandwidth
- ✓ Optical Automatic Gain Control (OAGC)
- ✓ Diagnostic LEDs
- ✓ Optical budget 13 dB standard; higher budgets available
- ✓ MTBF >100,000 hours
- ✓ Forever Warranty™

Description

The S704V Four-Channel FM Video System transmits four channels of full-frame, real-time video over a single fiber. It accepts monochrome and color signals in the following formats: EIA, CCIR, NTSC, and PAL. A complete system consists of a transmitter and receiver. Full-frame, real-time video transmission delivers all the video captured by the camera. A bandwidth of 8 MHz enables the S704V to transmit extremely clear, high-resolution images. FM modulation assures that the image quality remains high over the full operating distance. Diagnostic LEDs on the transmitter and receiver monitor the status of the video and optical signals. The S704V is available in both standalone and rack-mount modules. Rack modules may be mounted in the 515R1 or 517R1 Card-Cage Racks. The 515R1 is equipped with an internal power supply, while the 517R1 requires the 517EPS External Power Supply, which is

continued

Basic Model Descriptions

S704V Four-channel single-fiber video multiplexer transmitting at 850 and 1300 nm.

For a complete list of available models, please refer to Table 1.

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Description *continued*

designed to supply power for two 517R1 racks. A rack-mount module may also be mounted in a 501R Standalone Enclosure for Rack Cards.

TECHNICAL INFORMATION

ELECTRICAL

Input Voltage:		Rack Unit Power Factor*:	3
Standalone Transmitters:	12 - 16 VAC	Power Consumption:	5 W @ 14 V
	12 - 16 VDC	Heat Equivalent**:	0.3 Btu/min
Standalone Receivers:	13.5 - 16 VDC		0.07 cal/min
Rack Modules:	13.5 - 16 VDC		
Current Requirement:	350 mA		

*For an explanation of the Power Factor, please see the product specification for the 515R or 517R racks or the Fiber Finder.™

**This represents the conversion of all input power to heat. The actual heat generated will be less.

VIDEO SIGNAL

Number of Channels:	4	Video Bandwidth:	8 MHz
Standards Supported:	EIA, CCIR, NTSC, PAL	Video Resolution:	640 TV lines
Video Input Signal:	1.0 V p-p composite video	Differential Phase:	4°
Input Impedance:	75 Ω	Differential Gain:	4%

Video Output Signal: 1.0 V p-p composite video, unity gain

Output Impedance: 75 Ω

Signal-to-Noise Ratio: 60 dB*

*0 dB loss

VIDEO INTERCONNECTION

Recommended Maximum Distance		Recommended	
Video Equip. to Tx: ≤ 100 ft (30 m)		Cable Type:	RG59/U coaxial cable, Belden No. 9259 or equivalent
Rx to Video Equip.: ≤ 100 ft (30 m)			

AGENCY COMPLIANCE AND MTBF

Emissions:	FCC Part 15, ICES-003, AS/NZS 3548, EN55022	Safety:	UL1950, CAN/CSA 22.2, NO.950-95
Immunity:	ENVS0204 EN61000-4-2, 3, 4, 5, 6, 11	MTBF:	>100,000 hours

FCC PART 15
COMPLIANT



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TECHNICAL INFORMATION

OPTICAL

Wavelength:	850 and 1300 nm	Emitter Type:	LED
Optical Mode:	Multimode	Fiber Type:	62.5 μm
Optical Budget:	13 dB standard; higher budgets available	Modulation Type:	Frequency modulation (FM).
Operating Distance*:	3.2 mi (5.2 km)	Gain Control:	Optical automatic (OAGC)
		Transmitter Launch Power:	-15 dBm
		Receiver Sensitivity:	-28 dBm

*Operating distance is approximate and assumes best fiber. It will be affected by the type and number of splices in the fiber.

CONNECTORS

Optical:	ST type
Video:	BNC
Power Input:	Detachable screw terminal connector

OPTIONS

Power Supply:	Refer to Table 1
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ENVIRONMENTAL

Temperature Range in Operation:	-40° to +167° F (-40° to +75° C)	Humidity Range in Operation:	0 to 95% relative, noncondensing
Temperature Range In Storage:	-40° to +185° F (-40° to +85° C)	Humidity Range in Storage:	0 to 95% relative, noncondensing

MECHANICAL

Standalone Receiver

Dimensions:	Length: 9.31 in (236 mm) Width: 6.33 in (161 mm) Height: 2.15 in (55 mm)
Weight:	2.80 lb (1.27 kg)
Shipping Dimensions:	Length: 11.8 in (300 mm) Width: 6.8 in (170 mm) Height: 3.1 in (80 mm)
Shipping Volume:	0.14 cu ft (0.004 cu m)
Shipping Weight:	3.10 lb (1.41 kg)
Construction:	Aluminum
Finish:	Black semigloss paint
Mounting Method:	4 No. 6 (3 mm) screws

Standalone Transmitter

Dimensions:	Length: 5.10 in (130 mm) Width: 4.26 in (108 mm) Height: 2.09 in (53 mm)
Weight:	0.82 lb (0.37 kg)
Construction:	Aluminum
Finish:	Black semigloss paint
Mounting Method:	4 No. 6 (3 or 3.5 mm) screws

Rack Modules

Width:	2 slots, 2.0 in (51 mm)
Weight:	1.86 lb (0.84 kg)
Construction:	Aluminum front panel
Finish:	Black semigloss paint

INDICATORS

Transmitter:	Video Status	Receiver:	Video Status Level/Loss™
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TECHNICAL INFORMATION

FIGURE 1: SYSTEM DIAGRAM

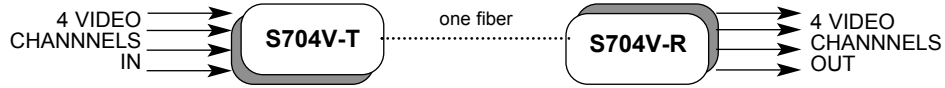


TABLE 1: MODEL VARIATIONS

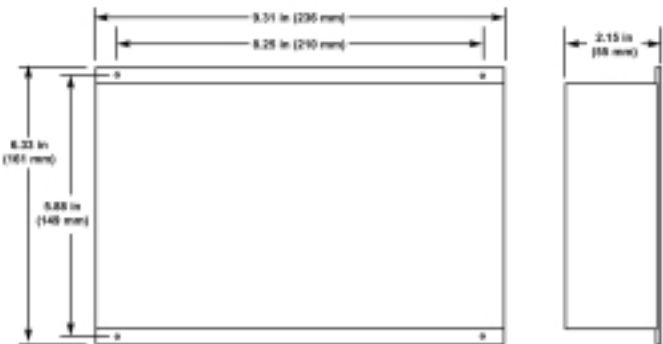
Model Number	Function	Enclosure Type*	Fiber Size	No. of Fibers	Max. Atten.	Wave-length	Power Supply Model
Standalone Modules							
S704VT-EST	Transmitter	4 X 5 X 2	62.5	1	13	850, 1300	611P
S704VR-EST	Receiver	502R	62.5	1	13	850, 1300	612P
Rack Modules							
S704VT-RST	Transmitter	515R, 517R	62.5	1	13	850, 1300	powered by rack
S704VR-RST	Receiver	515R, 517R	62.5	1	13	850, 1300	powered by rack

*For exact dimensions, see the MECHANICAL section.

FIGURE 2: OUTLINE DRAWING - S704VT-EST



FIGURE 3: OUTLINE DRAWING - S704VR-EST



THE FOREVER WARRANTY

Fiber Options, Inc. warrants that, at the time of shipment, the products manufactured by *Fiber Options, Inc.* will be free from defects in material and workmanship. Should any defects appear in the product, *Fiber Options, Inc.* shall repair or replace the product or supply an equivalent, at its sole discretion. A Return Authorization (RA) number is required to send the unit back in case return is necessary. Return shipments to *Fiber Options, Inc.* shall be at the buyer's expense. *Fiber Options, Inc.* will return said equipment prepaid via best way. **THIS WARRANTY IS THE SOLE WARRANTY OF FIBER OPTIONS WITH RESPECT TO THE PRODUCT AND IS IN LIEU OF AND EXCLUDES ANY AND ALL OTHER EXPRESSED OR IMPLIED WARRANTIES INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PURPOSE. THIS WARRANTY IS THE SOLE REMEDY AVAILABLE FOR ANY CLAIM BASED ON AN ALLEGED DEFECT IN MATERIAL OR WORKMANSHIP WHETHER SUCH CLAIM ARISES IN CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE. FIBER OPTIONS SHALL NOT BE LIABLE IN ANY WAY FOR ANY CONSEQUENTIAL DAMAGE RESULTING FROM ANY DEFECT COVERED BY THIS WARRANTY.**

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