



S703V

Product Specification

Description: Two Channel Video Multiplexer

Features

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

Description

The S703V Two-Channel FM Video System transmits two 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. The system consists of a two-channel transmitter and receiver. It is available in a choice of two different wavelengths, 850 nm for normal distances and 1300 nm for longer distances.

Full-frame, real-time video transmission delivers all the video captured by the camera. A bandwidth of 8 MHz enables the S703V 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 S703V 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

continued

Basic Model Descriptions

S703V Single-fiber link transmitting at 850 nm.

S703V-L Single-fiber link transmitting at 1300 nm.

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

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DESCRIPTION *continued*

equipped with an internal power supply, while the 517R1 requires the 517EPS External Power Supply, which is

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 Module Power Factor*:	2
Standalone Transmitter:	12 - 16 VAC	Power Consumption:	3 W
	12 - 16 VDC	Heat Equivalent**:	0.2 Btu/min
Standalone Receiver:	13.5 - 16 VDC		0.05 cal/min
Rack Modules:	13.5 - 16 VDC		
Current Requirement:	200 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:	2	Output Impedance:	75 Ω
Standards Supported:	EIA, CCIR, NTSC, & PAL	Signal-to-Noise Ratio:	60 dB*
Video Input Signal:	1.0 V p-p composite video	Video Bandwidth:	8 MHz
Input Impedance:	75 Ω Video Output	Video Resolution:	640 TV lines
Signal:	1.0 V p-p composite video, unity gain	Differential Phase:	4°
		Differential Gain:	4%

*0 dB loss

VIDEO INTERCONNECTION

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

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:	Refer to Table 1	Emitter Type:	LED
Optical Mode:	Multimode	Fiber Type:	62.5 μm
Optical Budget:	13 dB standard; higher budgets available	Modulation Type:	Frequency modulation (FM)
		Gain Control:	Optical Automatic (OAGC)
Operating Distance*:		Transmitter Launch Power:	-15 dBm
S703V:	3.2 mi (5.2 km)	Receiver Sensitivity:	-28 dBm
S703VL:	11 mi (18 km)		

*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:	See 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 Transmitters

Dimensions:	Length: 5.10 in (130 mm) Width: 4.85 in (123 mm) Height: 1.19 in (30 mm)
Weight:	0.51 lb (0.23 kg)
Construction:	Aluminum
Finish:	Black semigloss paint
Mounting Method:	4 No. 6 (3 or 3.5 mm) screws

Rack Modules

Width:	1 slot, 1.0 in. (25 mm)
Weight:	0.75 lb (0.34 kg)
Construction:	Aluminum front panel
Finish:	Black semigloss paint

Standalone Receivers

Dimensions:	Length: 9.31 in (236 mm) Width: 6.33 in (161 mm) Height: 1.15 in (29 mm)
Weight:	1.36 lb (0.61 kg)
Shipping Dimensions:	Length: 10.5 in (267 mm) Width: 7.0 in (178 mm) Height: 2.0 in (51 mm)
Shipping Volume:	0.085 cu ft (0.002 cu m)
Shipping Weight:	1.6 lb (0.73 kg)
Construction:	Aluminum
Finish:	Black textured semigloss paint
Mounting Method:	4 No. 6 (3 or 3.5 mm) screws

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TECHNICAL INFORMATION

INDICATORS

Transmitter:	Video In (2)	Receiver:	Level/Loss™ Status (2)
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FIGURE 1: OUTLINE DRAWING - S703VT-EST

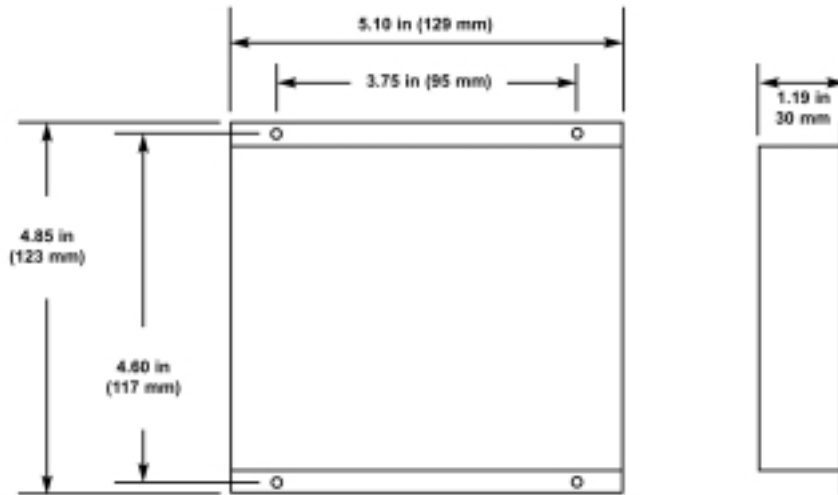
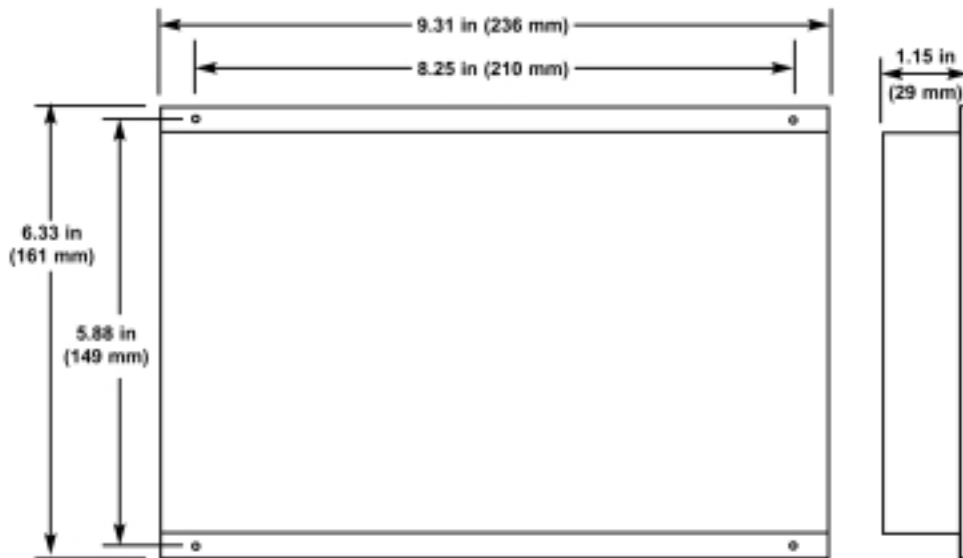


FIGURE 2: OUTLINE DRAWING - S703VR-EST



SERIES S703V

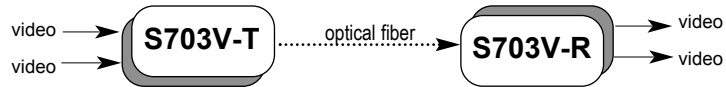
TECHNICAL INFORMATION

TABLE 1: MODEL VARIATIONS

Model Number	Function	Enclosure Type*	Fiber Size	No. of Fibers	Max. Atten.	Wave-length	Power Supply Model
Standalone Modules							
S703VT-EST	Transmitter	5 X 4 X 1	62.5	1	13	850	611P
S703VR-EST	Receiver	501R	62.5	1	13	850	612P
S703VT-ESTL	Transmitter	5 X 4 X 1	62.5	1	13	1300	611P
S703VR-ESTL	Receiver	501R	62.5	1	13	1300	612P
Rack-Mount Modules							
S703VT-RST	Transmitter	515R, 517R	62.5	1	13	850	powered by rack
S703VR-RST	Receiver	515R, 517R	62.5	1	13	850	powered by rack
S703VT-RSTL	Transmitter	515R, 517R	62.5	1	13	1300	powered by rack
S703VR-RSTL	Receiver	515R, 517R	62.5	1	13	1300	powered by rack

*For exact dimensions, see the MECHANICAL section.

FIGURE 3: SYSTEM DIAGRAM



S703V

Product Specification

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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