



Video



Audio

Data

### Bi-directional Video with Two Stereo Audio Channels

The FMV-593 is a duplex Video transmission system with two duplex Audio ports, ideal for CCTV cameras, video conferencing and ITS. Status indicators on Video, Sync, FM Data, carrier detect, voltage, temperature, and optical levels are monitored via LEDs.

### System Design

All units come in a small module or Insert Card version. The cards can be inserted into our 18-slot, 19" rackmountable card cage (CC-18-80W), or one of our smaller Desk Top Card Racks (DTCR series).

The Desk Top Card Racks can handle one, two, four, or seven cards, allowing for greater flexibility and future expansion. They can sit on a flat surface as a larger stand-alone unit, or can be surface mounted with the flanges provided. Each one of our card housings operates with an appropriate power supply. The regulated switching power supply has short circuit protection and an input operating voltage of 85-265 V<sub>AC</sub>.



### Features

- Multimode or singlemode operation over one fiber
- 8 MHz video bandwidth
- 10 Hz to 20 KHz audio bandwidth
- True DC restoration
- Flat frequency response
- Complies with RS-170 and RS-170A EIA video standards
- Compatible with NTSC, PAL and SECAM
- No EMI or RFI and no ground loops
- Stand Alone or Rack Mount
- Ideal for CCTV cameras, video conferencing and ITS

865	1310	1550	1270-1610 (CWDM)	Type	Mode	Wavelength Suffix	Fiber Type	Output Power	Receiver Sensitivity	Optical Loss Budget	Range*	Conn Type
•	•			LED	MM	L0/L1	50/125μ	-16 dBm	-34 dBm	18 dB	3 km	ST
•	•			LED	MM	L2/L3	09/125μ	-10 dBm	-34 dBm	24 dB	25 km	FC
	•	•	•	Laser	SM	L4	09/125μ	-3 dBm	-36 dBm	33 dB	25-90 km	FC

\* Chromatic dispersion and additional losses should be taken into account.

# FM Video/Audio/Data Transmission

## Video

Video in/out impedance	75 $\Omega$
Video in/out level	1 volt peak to peak, 1.5 volts max
Video bandwidth	5 Hz to 7 MHz @ -3dB
Differential gain	< 1.0 % typical
Differential phase	< 1.0° typical
Linearity	$\pm$ 1.1 % typical
Tilt	$\leq$ 0.5 % typical
Compatibility	NTSC, PAL, SECAM, RS-170, RS-170A
Signal to noise ratio	>67 dB using RS-250C standards @ 1 km
FM carrier frequency	70 MHz
Connector type	BNC

## Audio

Audio in/out impedance	600 $\Omega$ or 10k $\Omega$ – balanced or unbalanced
Audio in/out level	-6 to +6 dBm
Frequency response	10 Hz to 20 KHz
Signal to noise ratio	> 60 dB
Total harmonic distortion	< 1.0 %, 1 KHz at maximum modulation
Connector type	Hi-density 15 pin DB9 (DE15)

## General

Dimensions & Weight	Stand Alone (SA): 7.16" L x 6.51" W x 1.75" H	53 oz
	Insert Card (IC): 6.3" L x 1.7" W x 4.0" H	29 oz
Operating temperature	-20° C to +70° C	
Storage temperature	-30° C to +85° C	
Humidity	0 to 95% non-condensing	
Operating voltage	9 V <sub>DC</sub> (300 mA) or 110/220 V <sub>AC</sub>	
Vibration	Up to 5 g's	
Shock	Up to 12 g's	

## Diagnostics

Status monitoring	LED indicator
-------------------	---------------

**10**  
YEAR  
WARRANTY

CE

**FCC** PART 15  
COMPLIANT

Emissions: FCC Part 15, ICES-003,  
AS/NZS, 3548, EN55022  
Immunity: EN55024,  
EN61000-4-2,3,4,5,6,11  
Safety: UL1950, CAN/CSA 22.2,  
NO.950-95

MADE IN THE USA

## Sample Configuration

