



Video



Audio



Data

### Two-way Video with One Duplex Audio and One Duplex Data

The FMV-595 is a duplex Video transmission system with one duplex Audio and one Data port, ideal for CCTV cameras and traffic surveillance. Status indicators on Video, Sync, 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<br>(CWDM) | Type  | Mode | Wavelength<br>Suffix | Fiber<br>Type | Output<br>Power | Receiver<br>Sensitivity | Optical<br>Loss<br>Budget | Range*   | Conn<br>Type |
|-----|------|------|---------------------|-------|------|----------------------|---------------|-----------------|-------------------------|---------------------------|----------|--------------|
| •   | •    |      |                     | LED   | MM   | L0/L1                | 50/125μ       | -16 dBm         | -34 dBm                 | 18 dB                     | 3 km     | ST           |
| •   | •    |      |                     |       |      |                      | 62.5/125μ     |                 |                         |                           |          |              |
|     | •    | •    |                     | 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)                          |

## Data

|                        |  |
|------------------------|--|
| Data rate              | DC to 300 Kbps   |
| Bit error rate         | 10 <sup>-9</sup>   |
| Data formats available | Async RS-232, RS-422, RS-485/2W, Genlock, Manchester, 20 mA current loop, TTL, or six Contact Closures |
| Connector type         | Hi-density 15 pin DB9 (DE15)   |

## General

|                     |   |
|---------------------|---|
| Dimensions & Weight | Stand Alone (SA): 7.16" L x 5.21" W x .94" H      39 oz                             |
|                     | Insert Card (IC): 6.3" L x 0.8" W x 4.0" H      16 oz                               |
| Temperature         | Operating: -20° C to +70° C; Storage; -30° C to +85° C                              |
| Humidity            | 0 to 95% non-condensing   |
| Operating voltage   | 12 V <sub>DC</sub> (200 mA) or 9-24 V <sub>AC</sub> (6W) or 110/220 V <sub>AC</sub> |
| Vibration/Shock     | Up to 5 g's/Up to 12 g's  |

## Diagnostics

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

**10**  
YEAR  
WARRANTY



**FCC** PART 15  
COMPLIANT

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

MADE IN THE USA

## Sample Configuration

