

Duplex Analog Fiber Optic Transmission System

The Opticomm FMV-100K System is a duplex analog fiber optic transmission system. The system is capable of transmitting an Analog FSK signal at a system bandwidth between 300Hz and 100KHz.



The FMV-100K/TR-T50R10-FC-IC transmits at 1550nm and receives at 1510nm wavelengths. The FMV-100K/TR-T10R50-FC-IC transmits at 1510nm and receives at 1550nm wavelengths.

The system offers a link budget of at least 30dB over one single-mode fiber using a Coarse Wave Division Multiplexer operating over 1510nm and 1550nm wavelengths for bi-directional capability.

System Design

The Models FMV-100K/TR-T50R10-FC-IC and FMV-100K/TR-T10R50-FC-IC are insert card transceivers. These units are plug-in card assemblies compatible with Opticomm's CC-16B 19" rack-mountable chassis.

An insert card combined with a CC-16B chassis would be installed within a 19" distribution frame, typically found in a control room or hub.

All insert cards are swappable. Up to 16 FMV-100K insert cards can be housed in one CC-16B chassis with up to two PS-1205 power supplies for redundancy.



Features

- Singlemode Operation Over One Fiber
- 0-30dB Link Budget
- Ruggedized Industrial Enclosure
- No EMI or RFI and no ground loops
- Rack-Mountable
- High MTBF
- Wide Temperature Range

1510	1550	Type	Mode	Fiber Type	Output Power	Receiver Sensitivity	Optical Loss Budget	Conn Type
•	•	Laser (DFB)	SM	09/125μ	0 dBm	-30 dBm	30 dB	FC

Specifications

System Bandwidth	300Hz to 100kHz
Input Impedance	150 Ohm and 600 Ohm, balanced
Output Impedance	150 Ohm and 600 Ohm, balanced
Analog Input Level	100mVrms - 1 Vrms
Signal to Noise Ratio	>60 dB
Delay in Output Signal	15 us max.
Connector Type	DB15 HD Female for FMV-100K/TR-T50R10-FC-IC DB15 HD Male for FMV-100K/TR-T10R50-FC-IC
Indicators	1. Electrical input signal detect 2. Electrical output signal detect 3. Optical signal detect 4. Optical output enabled 5. Card power status

Optical Specifications

Cable Compatibility	9/125 micron single-mode
FiberOptic Connector	FC/PC (singlemode)
Operating Wavelength	Bi-directional CWDM transmission using 1550nm and 1510nm wavelengths.
Optical Budget Loss	0-30 dB (SM @1550nm/1510nm)
Laser Class	Class 1

General

Dimensions & Weight	Insert Card: 7.1" L x 0.8" W x 5.05" H	~ 0.6 lb.
System Design	Insert card to be installed inside the CC-16B 19" subrack frame, 3U high	
Connectors	Electrical and fiber connectors are accessible from the front	

Environmental

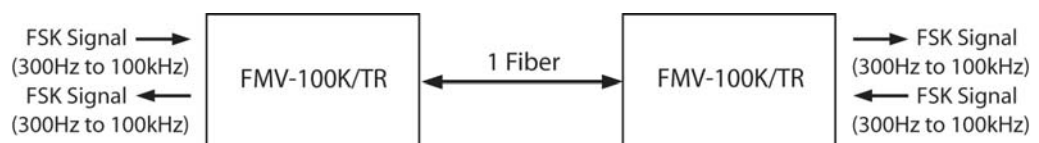
Operating Temperature	-20°C to +70°C
Operating Relative Humidity	95% @ 55° C, non-condensing
Storage Temperature	-40°C to +70°C
Storage Relative Humidity	94% @ 65°C, non-condensing
Cooling	Convection cooling
Shock & Vibration	Sinusoidal, 5 to 200Hz at 1.5g peak
MTBF	>400,000 Hours @ 30°C, Ground Benign, per MIL-HDBK-217F

Regulatory

CE Compliance
CSA Certification (FMV-100K System)

Opticom reserves the right to change specifications without prior notice.

Sample Configuration



Optiva™ Configurable Communication Platform
Network Management
SDI & HD-SDI
Composite Video, Audio & Data
RGB/VGA/DVI
Audio/FSK/Intercom
Data (Ethernet/Serial/USB)
CATV/RF & L-Band
Optical Switching, Routing & Redundancy
Passive Multiplexing Solutions
Enclosures, Racks & Frames
Power Supplies & Accessories

10 YEAR WARRANTY
ISO 9001:2000 CERTIFIED



FCC PART 15 COMPLIANT
MADE IN THE USA