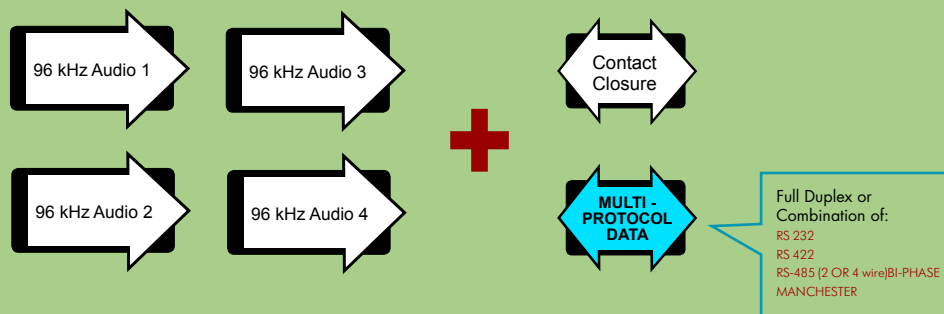


Four Simplex Channels of 96 kHz Digital Audio,  
 One Bi-directional Multi-protocol Data  
 and One Full Duplex Contact Closure  
 over One Multimode or Singlemode Fiber



### FEATURES

- Four Uni-directional Channels of 96 kHz Digitally Encoded Audio over one Fiber
- Transparent Audio Transmission, No SRC Processing
- Low Power Consumption
- High Efficiency, Isolated Power Supply
- One Channel of Bi-Directional Multi-protocol Data and Contact Closure
- Laser Based Systems for Multimode and Singlemode Fiber
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- SpectraSmart™ PC Based NeFourrk Management
- Local LED Status Indicators to Monitor Critical
- System Diagnostics and Performance Parameters
- ST, FC Optical Connector
- Hot Swappable Rack Cards
- Back - Biased Photo Detector Circuitry for Stable Optical Laser Output Over Full Temperature Range
- Meets NEMA TS1 / TS2 & CALTRANS Specifications
- Meets EIA RS-170, RS-343A Formats
- Utilizes Internal Switching Power Supplies
- Automatically Resettable Solid-State Current Limiters on All Power Lines: Provides Equipment Protection
- Wide Optical Dynamic Range: Optical Attenuators are Never Needed
- BNC Connectors for Audio
- RJ45 Connector for Data and Contact Closure

### DESCRIPTION

The FT/FR-4AF1C1G/1C1G-x series fiber optic transmission system that takes advantage of Meridian's new digital encoding technology transmits following signals over one multimode or singlemode fiber:

1. Four Simplex 96 kHz digital audio
2. One user selectable, full duplex RS-232, RS-485 (2 or 4 wire), RS-422, Manchester, Bi-Phase or in combination
3. One bi-directional contact closure

The functionality of FT/FR-4AF1C1G/1C1G-x series is further enhanced by its compatibility with Meridian's PC based SpectraSmart, NeFourrk Management and Remote Diagnostic Software System. SpectraSmart supervises the operating parameters of the transmission system such as status on video levels, sync, carrier detect, voltage, temperature, optical levels, data present etc. See the SpectraSmart brochure for more details.

### CONFIGURATIONS

The FT/FR-4AF1C1G/1C1G-x products are available as rack mount cards that can be installed in Meridian's card chassis, desk chassis and 19" racking frames. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. These systems can be made a standalone system by using the SR-500/s, 1 slot desk / wall mount chassis (87VAC-264VAC).

### MARKETS

- ✓ Security and Surveillance
- ✓ Intelligent Transportation System (ITS)
- ✓ Access Control Systems
- ✓ Campus Lecture NeFourrks

SPECIFICATIONS:

Audio Inputs (Tx)

Unbalanced AES-3ID Sample Rate	32 kHz - 96 kHz
Input Impedance	75Ohms, +/-5%, (IEC958)
Minimum Input Signal	320mV for 50% of cell period
Maximum Input Signal	1VppV, +/-20%
Return Loss	>15dB, 0.1 to 6.0MHz

Audio Outputs (Rx)

Unbalanced AES-3ID Sample Rate	32 kHz - 96 kHz
Input Impedance	75Ohms, +/-20%, 0.1MHz to 6.0MHz
Output Voltage	1.0 Vpp, +/-20% into 75Ohms
DC Offset	<50mV
Jitter	<20ns
Return Loss	>15dB, 0.1 to 6.0MHz

Data

Formats	RS-232 w/ full speed handshake, RS-485, RS-422, Manchester or Bi-Phase
Data Rate (RS-232)	DC to 125 Kb/s
Data Rate (RS-422, RS-485)	DC to 250 Kb/s
Bit Error Rate	10 <sup>-9</sup> *

Contact Closure

Rate	10 Hz.(Per Channel)
Contact Rating	0.3A, 30V AC / DC
Contact Bounce Time	5 ms

Optical

Fiber Data Rate	350 Mb/s
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Connectors

Audio	75 Ohm BNC (Gold Center Pin)
Optical	ST, FC
Data and Contacts	RJ45 Connector
Power (module)	See SR-500 Brochure for details

Power \*\*

Card	5 Watts
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Indicators (LEDs)

1 - Green	Power On
1 - Bi-color	TX Carrier/ Laser Over Current
1 - Bi-color	RX Carrier - Present / Error
4 - Bi-color	Audio Present Tx/Rx
2 - Green	Data Present
2 - Green	Contact Closure Present

Physical

Dimensions (Card)	20 (W) x 127 (H) x 160 (D) mm (0.8 x 5.0 x 6.3 inch)
Weight (Card)	450 gms (16 Oz)
No. of Slots	1
Module	See SR-500 Brochure

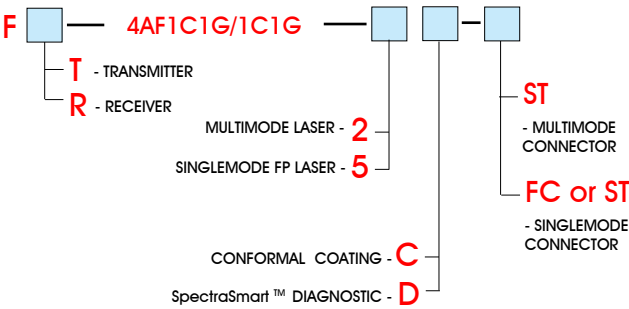
Enviromental

Operating Temperature	-34°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

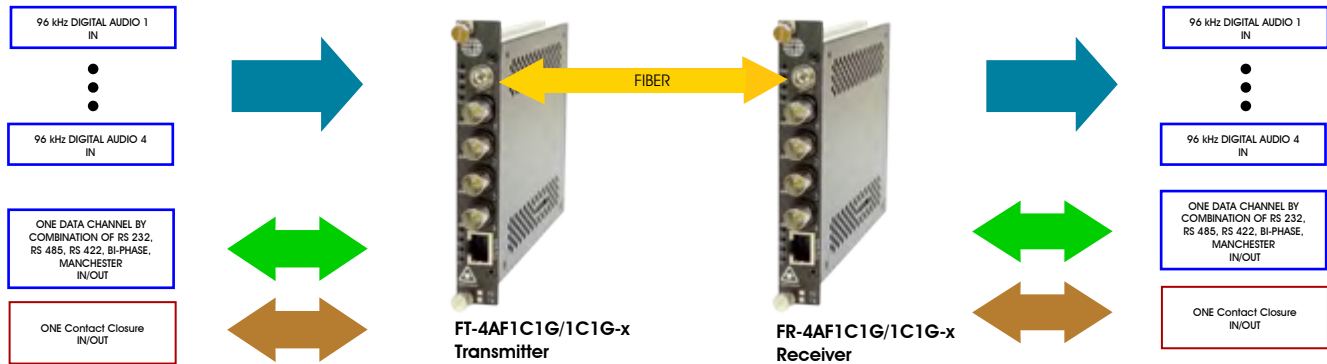
Quality

MTBF	>170,000 hours @ Ground Fix 35°C per MIL217F
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Part Numbers:



\* measured @ max. optical budget  
\*\* Due to variations of drivers and diagnostic options, power shown @ max value



OPTICAL:

Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)
Multimode (Laser) 9 / 125	-5	-25	20	1300/850	FC	23
Singlemode (FP Laser) 9 / 125	-5	-25	20	1310/1550	ST, FC	23