

One Full Duplex Multiprotocol Data  
over One Fiber



**MULTI-  
PROTOCOL  
DATA**

Full Duplex or  
Combination of:  
**RS 232**  
**RS 422**  
**RS-485 (2 OR 4 wire)**  
**BI-PHASE**  
**MANCHESTER**

## FEATURES

- Full Duplex Multiprotocol Data Channel Supports RS-232, RS-422 & RS-485 (2 & 4-wire)
- Low Power Consumption
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Laser Based Systems for both Multimode and Singlemode modules
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- SpectraSmart™ PC Based Network Management
- SpectraView™ Fault / Setup Firmware
- Local LED Status Indicators to Monitor Critical System Parameters
- ST, FC Optical Connector
- Hot Swappable Cards
- Laser Back - Biased Photo Detector Circuitry for Stable Optical Output Over Full Temperature Range.
- Meets EIA RS-170, RS-343A Formats
- Screw Terminals Connector for Data

## DESCRIPTION

The FXA/FXB-1G/1G-x series fiber optic transmission system that takes advantage of Meridian's new digital encoding technology transmits following signals:

1. One channel of user selectable, full duplex RS-232, RS-485 (2 or 4 wire), RS-422, Manchester, Bi-Phase

Both, multimode and singlemode, one fiber versions are available. The versatility of the FXA/FXB-1G/1G-x system is enhanced by SpectraView, an On-Screen Video Diagnostic / Setup firmware system. SpectraView features a selectable on-board data test signal generator with built-in local and remote loop-back functions. If greater diagnostic capability is required, the functionality of FXA/FXB-1G/1G-x series is further enhanced by its compatibility with Meridian's PC based SpectraSmart™, Network 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 FXA/FXB-1G/1G-x product 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, 1 slot desk / wall mount chassis (87VAC-264VAC).

## MARKETS

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

SPECIFICATIONS:

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).. <td>DC to 250 Kb/s</td>	DC to 250 Kb/s
Bit Error Rate .....	10 <sup>-9*</sup>

Optical

Fiber Data Rate .....	350 Mb/s
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Connectors

Optical .....	ST - MM(default), FC - SM(default)
Power (module) .....	See SR-500 Brochure for details
Data .....	Screw Terminals Connector

Power \*\*

Card .....	3 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
2 - Green .....	Data Present

Physical

Dimensions (Card) .....	160 mm (6.3") L, 127 mm (5") W 20mm (0.80") W
Weight (Card) .....	450 gms (16 Oz)
No. of Slots .....	1
Module .....	See SR-500 Brochure

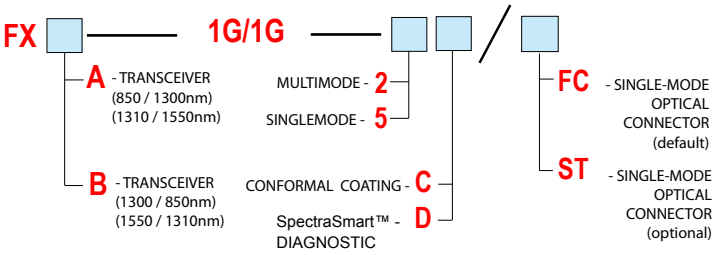
Enviromental

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:

Meridian Optical Code	Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Estimated Maximum Transmission Distance (km)
2	Multimode (FP Laser) 62.5 / 125	-5	-25	20	1300 / 850	ST	25	2
5	Singlmode (FP Laser) 9 / 125	-5	-25	20	1310 / 1550	ST, FC	25	50