

## 4 Channel Full Duplex Switch-Selectable Multi-Protocol Data Modem



### FEATURES:

- Simultaneously transmits multi - protocol data over one fiber
- Mix and Match Data formats Options on the same System
- No user adjustments or selections necessary
- 4 switch-selectable, multi-protocol data channels. Compatible with RS-232, RS-422, RS-485, Manchester, Bi-phase
- Wide optical dynamic Range: Eliminates Need For Optical Attenuators
- Laser Based Systems for Multimode and Singlemode fiber applications
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- SpectraSmart™ Network Management Compatible - PC Based Diagnostics
- Local LED Status Indicators to Monitor Critical System Diagnostics for Performance Parameters
- Laser Back - Biased Photo Detector Circuitry for Stable Optical Output Over Full Temperature Range
- DB 9 Type Data Connectors

### DESCRIPTION:

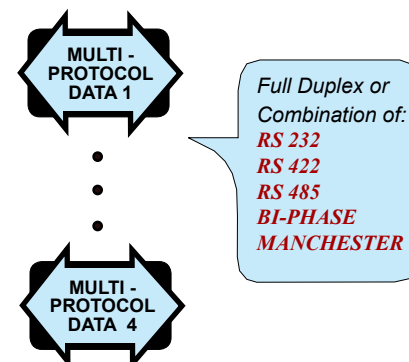
The DXA/DXB-4G-x series products incorporate Real time digital encoding technology. The DXA/DXB-4G-x fiber optic module is capable of Simultaneously transmitting up to 4 full-duplex channels of switch-selectable multi-protocol data (RS-232, RS-422 and RS-485 (2 or 4-wire)) over one optical fiber. These data formats are also compatible with bi-phase & Manchester encoding schemes. Both Multimode and Singlemode fiber versions are available. Meridian's digital product line incorporates plug-in personality signal cards to easily configure a wide variety of module types. The functionality of the DXA/DXB-4G-x series products is enhanced by their compatibility with Meridian's PC based SpectraSmart Network Management & Diagnostic Software system. SpectraSmart supervises the operating parameters of the transmission system such as the status on video levels, sync, digital carrier detect, voltages, temperatures, optical levels etc. See SpectraSmart brochure for further details.

### CONFIGURATIONS:

The DXA/DXB-4G-x product family is available as rack mount cards and modules that can be installed in Meridian's desk chassis or 19" racking frames. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. These modems can be converted to surface mount modems by using the SR-1000/s, 2 slot desk / wall mount chassis (87VAC-264VAC).

### MARKETS:

- ✓ Intelligent Transportation Systems (ITS)
- ✓ Security and surveillance
- ✓ Access Control



# SPECIFICATIONS

## Data

Formats	RS-485, RS-422, RS-232
Data Rate RS-422 / 485	DC to 1Mb/s
Data Rate RS-232	DC to 125 Kb/s
Bit Error Rate	10 <sup>-9</sup> *

## Optical

Fiber Data Rate	500Mbps
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## Connectors

Optical	ST for MM, FC for SM for ST @ SM please Specify
Data	DB9 Female

## Power \*\*

Card	20 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
1 - Bi-color	RX optical signal - Present / Absent
8 - Green	Data Present

## Physical

Dimensions:	
Card	44 (W) x 127(D) x 160 (H) mm (1.7 x 5.0 x 6.3 inch)
Weight:	
Card	540 gms (1.2 lb.)
No. of Slots	2

## Environmental

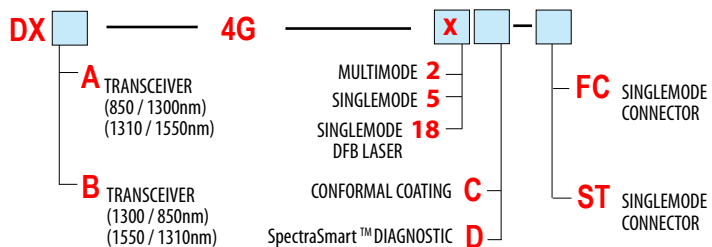
Operating Temperature	-34°C to +74°C
Storage Temperature	-55°C to +85°C
Humidity	0 to 95% Non-condensing
Relative Humidity	(98% with Conformal Coating, with min. condensation)

## Quality

MTBF	>200,000 hours @ Ground Fix 35°C per MIL217F
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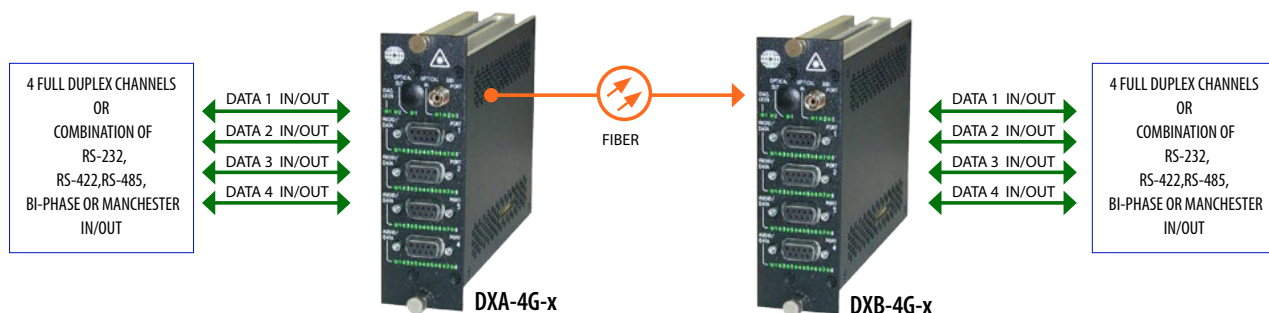
## Part Numbers:

DXA-4G-2 . . Transmitter, 850nm/ 1300nm, MM, Laser  
DXB-4G-2 . . Receiver, 1300nm/ 850nm, MM, Laser  
DXA-4G-5 . . Transmitter, 1310nm/1550nm,SM, Laser  
DXB-4G-5 . . Receiver, 1550nm/1310nm,SM, Laser  
DXA-4G-18 . . Transmitter, 1310nm/1550nm,SM, DFB Laser  
DXB-4G-18 . . Receiver, 1550nm/1310nm,SM, DFB Laser



\* 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)	Max Distance (Km)
2	Multimode (FP Laser) 62.5 / 125	-3	-24	21	1300 / 850	ST	24	2
5	Singlemode (FP Laser) 9 / 125	-3	-24	21	1310 / 1550	ST, FC	24	60
18	Singlemode (FP Laser) 9 / 125	+3	-24	27	1310 / 1550	ST, FC	24	70

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