

Digitally Encoded Full Duplex Multi-Protocol Data Channel



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

FEATURES:

- Real Time Multiprotocol Data Transmission
- Low Power Consumption
- High Efficiency, Isolated Power Supply
- Full Duplex Multiprotocol Data Channel Supports RS-232, RS-422 & RS-485 (2 & 4-wire)
- 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
- Local LED Status Indicators to Monitor Critical System Parameters
- ST, FC Optical Connector
- Laser Back - Biased Photo Detector Circuitry for Stable Optical Output Over Full Temperature Range
- Meets EIA RS-170, RS-343A Formats
- Screw Terminal Connector for Data

DESCRIPTION:

This NXANXB-1G/1G-x module incorporates an all-digital encoding technology that transmits one user selectable, full duplex, RS-232, RS-422, RS-485 (2 & 4-wire), Manchester, Bi-Phase data channel. Module belongs to new **DigiCool™** series which features very Low Power Consumption and Isolated High Efficiency Power Supply. Standard 5-pin terminal blocks are used for easy connection of the data channel interface. These single fiber, laser based systems are available in both, Multimode and Singlemode modules.

Note: See the FT/FR-1G/1G-x data sheet for the complementary rack mount card version of this module.

CONFIGURATIONS:

The NXANXB-1G/1G-x products are available in small stand-alone modules for easy mounting on walls, shelves and other convenient flat surfaces.

MARKETS:

- ✓ Intelligent transportation systems (ITS)
- ✓ Security and surveillance
- ✓ Access Control

SPECIFICATIONS:

Data

Formats	RS-232, RS-422, RS-485 (2 & 4-wire) 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 ⁻⁹ *

Optical

Fiber Data Rate	50 Mb/s
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Connectors

Optical	ST, FC
Power (module)	2-pin Screw Terminal
Data	5-pin Screw Terminal

Quality

MTBF	>170,000 hours @ Ground Fix 35°C per MIL217F
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Power **

Module.....	12-24VAC / DC - 2.8 W
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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 - Green	Tx Data Present
1 - Green	Rx Data Present

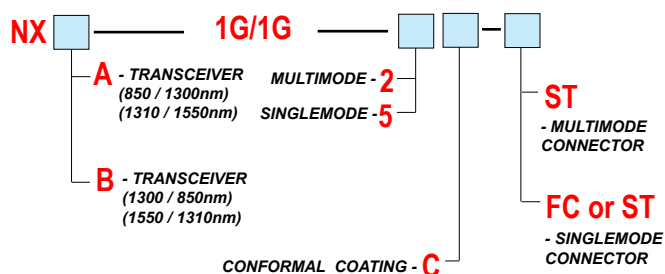
Physical

Dimensions (Module)	117 mm (4.60") L, 81 mm (3.18") W 26 mm (1.012") D
Weight (Module)	100 gms (3.52 Oz)

Environmental

Operating Temperature ...	-40°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

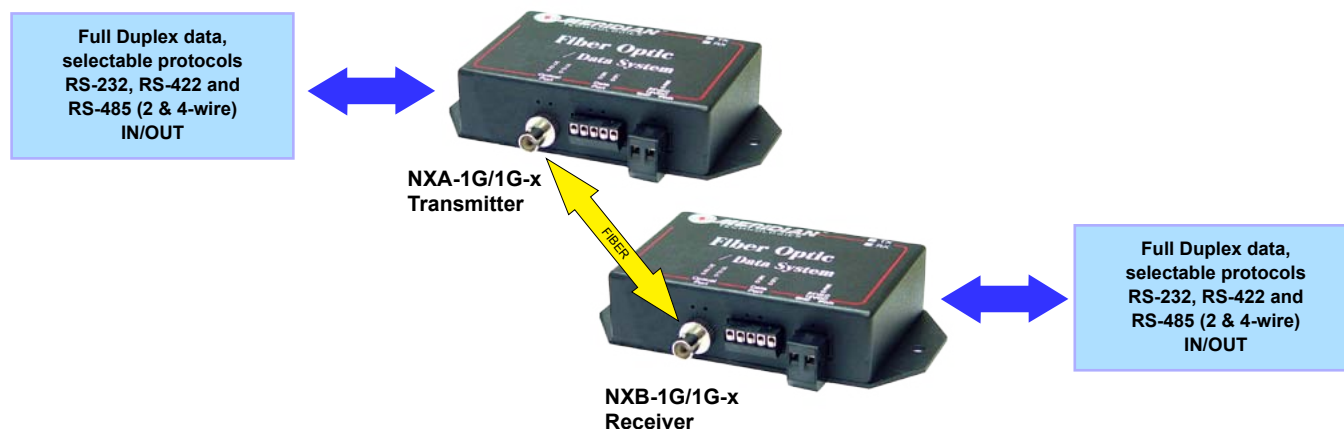
Part Numbers:



* measured @ max. optical budget

** Due to variations of drivers and diagnostic options, power shown @ max value

*** Add 30mm to include mounting flanges



OPTICAL:

Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)
Multimode (FP Laser) 62.5 / 125	-5	-28	23	1300 / 850	ST	24
Singlemode (FP Laser) 9 / 125	-5	-28	23	1310 / 1550	ST, FC	24