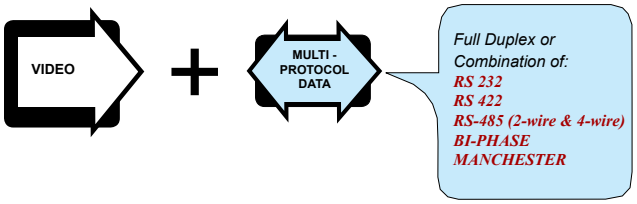
MERIDIAN TECHNOLOGIES

NT/NR-1W1G/1G-x **DigiCool™**

Digitally Encoded 1 Channel Video with Full Duplex Multi-Protocol Data Channel



FEATURES:

- 10 Bit Video Digital Encoding
- Real Time Video and Data Transmission
- Low Power Consumption
- High Efficiency, Isolated Power Supply
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- 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.
- 75 Ohm BNC Video Connector (Gold Center Pin)
- Meets EIA RS-170, RS-343A Formats
- Screw Terminal Connector for Data

DESCRIPTION:

This NTNR-1W1G/1G-x module incorporates an all-digital encoding technology that transmits one real-time, simplex 10-bit video channel and 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. NTSC, PAL and SECAM video formats are all seamlessly supported. 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-1W1G/1G-x data sheet for the complementary rack mount card version of this module.

CONFIGURATIONS:

The NTNR-1W1G/1G-x products are available in small standalone modules for easy mounting on walls, shelves and other convenient flat surfaces.

MARKETS:

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

SPECIFICATIONS:

Video

Format	NTSC, PAL, SECAM
Voltage/Impedance	1 Vp-p, 75 Ohm, 1.5 Vp-p max.
Bandwidth	5 Hz to 7 MHz @ -3 dB
Differential Gain	<0.6%
Differential Phase	<0.3°
SNR	>67 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

Data

Formats	RS-232, RS-422, RS-485 (2 & 4-wire) Manchester or Bi-Phase
Data Rate	DC to 125 Kb/s
Bit Error Rate	10^{-9*}

Optical

Fiber Data Rate	270 Mb/s

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST - MM(default), FC - SM(default)
Power (module)	2-pin Screw Terminal
Data	5-pin Screw Terminal

Power **

Input Power (default)	12-24VAC / DC - 2.8 W
Input Power (optional)	5VDC - 2.5 W

Indicators (LEDs)

1 - Green	Power On
1 - Bi-color	TX Carrier/ Laser Over Current
1 - Bi-color	RX Carrier - Present / Error
1 - Bi-color	Video Present / Overload
1 - Green	Video Sync. Present
1 - Green	Tx Data Present
1 - Green	Rx Data Present

Physical

Dimensions (Module)	117 mm (3.35") L, 46 mm (1.8") W 19mm (0.735") D
Weight (Module)	100 gms (3.52 Oz)

Enviromental

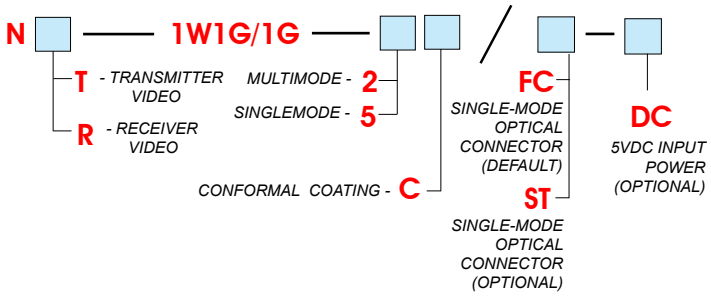
Operating Temperature	-40°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

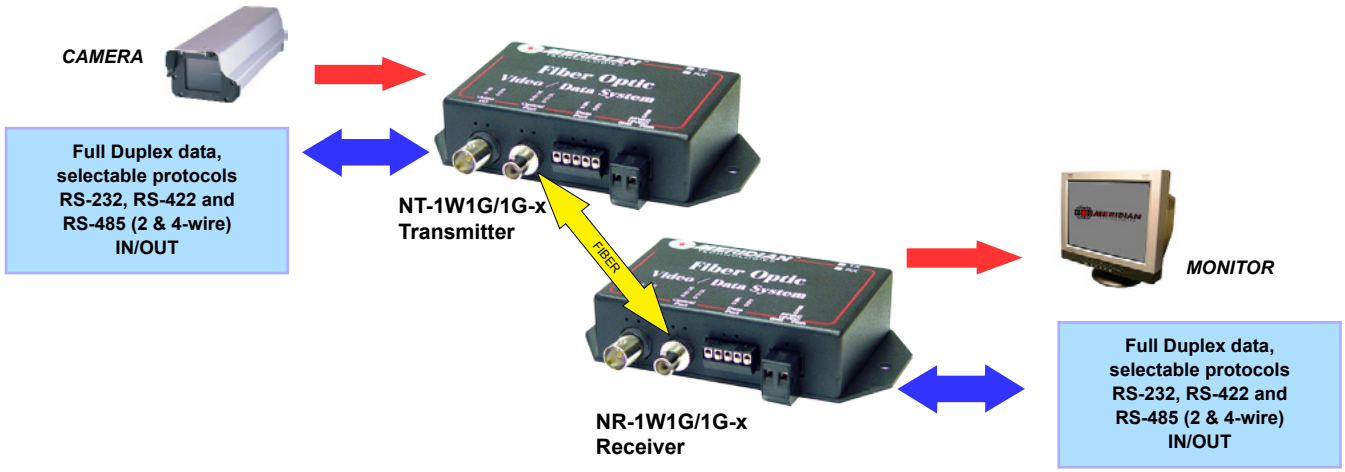
Quality

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

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

Part Numbers:





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	-5	-28	23	1300 / 850	ST	24	2
5	Singlemode (FP Laser) 9 / 125	-5	-28	23	1310 / 1550	ST, FC	24	50

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