

**Digitally Encoded
Multi-rate 3G-SDI Video**



FEATURES:

- Transmission of Multi-Rate SDI / HD-SDI / 3G-SDI (19 Mbps to 2.97Gbps (3G))
- Real-Time, Uncompressed Video Transmission
- Supports Both Singlemode and Multimode Fiber
- Supports The Following Formats :
 - 19.4 Mbps (SMPTE 310M)
 - 143 To 540 Mbps SMPTE 259M/344M
 - 1.5 Gbps SMPTE 292M HDTV
 - DVB/ASI at 270 Mbps
 - 2.97Gbps (3G) SMPTE 424M
 - SMPTE 305M SDTI Rates
- Error Free Pathological Pattern Performance
- Supports Embedded Audio and Metadata
- Distances in Excess of 60 km
- 5 VDC Power Pack or USB Hub
- Optional Isolated Power Supply 12-24 VAC/VDC
- Led Indicators for :
 - Rx Optical Signal
 - Tx Video Signal Present
- Wide Dynamic Range: Eliminates Need for Optical Attenuators
- Available with ST or FC Optical Connectors
- Requires No User Adjustments
- CWDM Lasers Available for 16 Channel MUX over One Fiber

DESCRIPTION:

Meridian's 3G-SDI fiber products is part of our expanding DigiCool product family. These units are robust, serial digital video transmitters & receivers that provide broadcast quality transmission of the industry standard range of digital video data rates. All units transmit and receive real-time video. No video compression is utilized. The standard NT/NR-1HG-x product supports one channel of SMPTE 292M, 310M, 259M, 344M and 424M compliant digital video data rates over one multimode or singlemode fiber. Using high-performance digital transmission technologies, no user adjustments are needed thus ensuring fast deployment and setup with broadcast quality results.

Other available options include MT/MR-1HG-x miniature modules and two channel rack mount units ST/SR-1HG-x with 3R (Retiming, Reshaping, Regenerate) functions and dual buffered outputs. This feature ensures maximum performance over long distances.

Optional USB power adapters (WP-USB) are available upon request.

CONFIGURATIONS:

This system is available in small standalone modules (NT/NR-1HG-x) and can be desk or wall mounted.

MARKETS:

- ✓ Remote broadcast camera links
- ✓ Sporting events, concerts, etc.
- ✓ Media feeds
- ✓ Video production
- ✓ Studio to studio & head end feeds
- ✓ Military information displays

SPECIFICATIONS:

Video

Formats	19.4 Mbps (SMPTE 310M) 143 To 540 Mbps SMPTE 259M/344M 1.5 Gbps SMPTE 292M HDTV DVB/ASI at 270 Mbps 2.97Gbps (3G) SMPTE 424M SMPTE 305M SDTI Rates
Nominal Level	0.8 Vp-p, 1.0 Vp-p max.
Data Rate	19Mb/s - 3Gb/s
Impedance	75 Ohm
Gain	Unity
Input Coupling	AC
Return Loss	>15 dB
Jitter (Pattological Data Pattern) ..	< 0.2 UI
Cable Equalization	Automatic 0-70m @ 3 Gb/s
Bit-Error Rate (0 to -20dBm).....	10 ⁻¹²

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST - MM(default), FC- SM(default)
Power (module)	Screw Terminals or DC Power Jack

Quality

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

Power Consumption.....	1.0 W @ 5 VDC 1.4 W @ 12 VDC 1.2 W @ 24 VAC
Input Voltage	5VDC (Standard) 12-24 VAC or 12-24 VDC Isolated PS (Option 'E' on P/N diagram)

Indicators (LEDs)

1 - Bi-color	SDI Signal Present - Green SDI Signal Absent - Red (Tx)
1 - Bi-color	Optical Signal Present - Green Optical Signal Absent - Red (Rx)

Physical

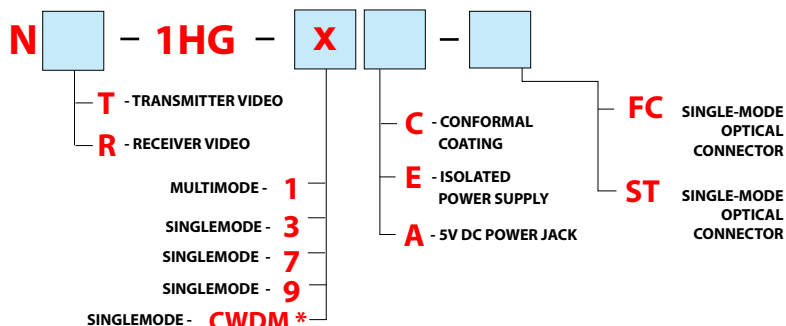
Dimensions (Module)	86 mm (3.35") L, 46 mm (1.8") W 19mm (0.735") D
Weight (Module).....	100 gms (3.52 Oz)

Enviromental

Operating Temperature	-25°C to +60°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

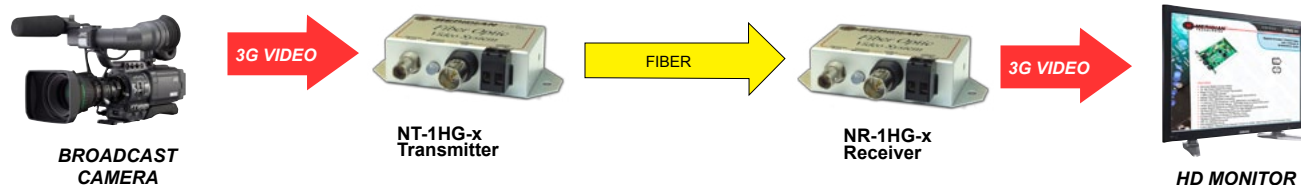
Part Numbers:

CWDM LASER GUIDE	
REFERENCE NUMBER	WAVELEGNTH
27	CWDM, 1270 nm DFB Laser
29	CWDM, 1290 nm DFB Laser
31	CWDM, 1310 nm DFB Laser
33	CWDM, 1330 nm DFB Laser
35	CWDM, 1350 nm DFB Laser
37	CWDM, 1370 nm DFB Laser
39	CWDM, 1390 nm DFB Laser
41	CWDM, 1410 nm DFB Laser
47	CWDM, 1470 nm DFB Laser
49	CWDM, 1490 nm DFB Laser
51	CWDM, 1510 nm DFB Laser
53	CWDM, 1530 nm DFB Laser
55	CWDM, 1550 nm DFB Laser
57	CWDM, 1570 nm DFB Laser
59	CWDM, 1590 nm DFB Laser
61	CWDM, 1610 nm DFB Laser



STANDARD PART NUMBERS	
PART NUMBER	DESCRIPTION
NT-1HG-1	Transmitter, module, multimode 1300nm
NR-1HG-1	Receiver, module, multimode 1300nm
NT-1HG-3	Transmitter, module, singlemode 1310nm FP laser
NR-1HG-3	Receiver, module, singlemode 1310nm FP laser
NT-1HG-7	Transmitter, module, singlemode 1550nm DFB laser
NR-1HG-7	Receiver, module, singlemode 1550nm DFB laser
NT-1HG-9	Transmitter, module, singlemode 1310nm DFB laser
NR-1HG-9	Receiver, module, singlemode 1310nm DFB laser

* See CWDM Laser Guide table for CWDM Lasers details



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)
1	Multimode (FP Laser) 62.5 / 125	-3	-20	17	1300	ST	20	0.65
3	Singlemode (FP Laser) 9 / 125	-3	-20	17	1310	ST, FC	20	30
7, 9, CWDM	Singlemode (DFB Laser) 9 / 125	+1	-20	21	CWDM	ST, FC	20	60

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