

Digitally Encoded Multi-rate HD-SDI Video



FEATURES:

- Transmission of Multi-Rate SDI & HD-SDI (19 Mbps to 1.5 Gbps)
- 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
 - SMPTE 305M SDTI Rates
- SMPTE ST 297:2015 Compliant
- Error Free Pathological Pattern Performance
- Small Tx Easily Mounts on Back of Cameras
- Supports Embedded Audio and Metadata
- Transmission Distances up to 100 km
- Power via 5VDC Power Supply
- Led Indicators for :
 - Power
 - Rx Optical Power
 - Tx Video Signal Present
 - Laser Over Current
- Wide Dynamic Range: Eliminates Need for Optical Attenuators
- Optional Rack Mount Card Unit
- Available with ST or FC Optical Connectors
- Requires No User Adjustments
- CWDM Lasers are available
- Class 1 Laser Safety Rating

DESCRIPTION:

Meridian's HD-SDI fiber product is part of our expanding DigiView product family.

These units are robust, miniature 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 MT/MR product supports one channel of SMPTE 292M, 310M, 259M, and 344M compliant digital video data rates over one multimode or singlemode fiber.

For long distance applications High Power DFB lasers are available. Please see optical specifications below.

Using high-performance digital transmission technologies, no user adjustments are needed thus ensuring fast deployment and setup with broadcast quality results.

CONFIGURATIONS:

The MT/MR-1HD-x micro modules easily mounted on the camera (Tx unit) and monitor (Rx unit) via BNC connector.

Other product configurations include individual Transmitter/Receiver modules and one & two channel rack mount cards that can be installed in either Meridian desk/shelf mount chassis or in 19", 3RU racking frames.

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 SMPTE 305M SDTI Rates
Nominal Level	0.8 Vp-p, 1.0 Vp-p max.
Data Rate	19Mb/s - 1.5Gb/s
Impedance	75 Ohm
Gain	Unity
Input Coupling	AC
Return Loss	>15 dB
Jitter (Pattological Data Pattern) ..	< 0.2 UI
Cable Equalization	Automatic 0-200m @ 1.5 Gb/s
Bit-Error Rate (0 to -20dBm).....	10 ⁻¹¹
Tx/Rx Latency.....	< 6ns

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST - MM(default), FC - SM(default)
Power	0.65 mm DC Power Jack

Part Numbers:

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

Power

Power Consumption	500 mW
Input Power.....	5 VDC

Indicators (LEDs)

1 - Green	Power On (TX & RX)
4 - Green	Signal Power Level (RX)
1 - Bi-color	Green - Signal Present (TX)
	Red - Laser Over Current (TX)

Physical

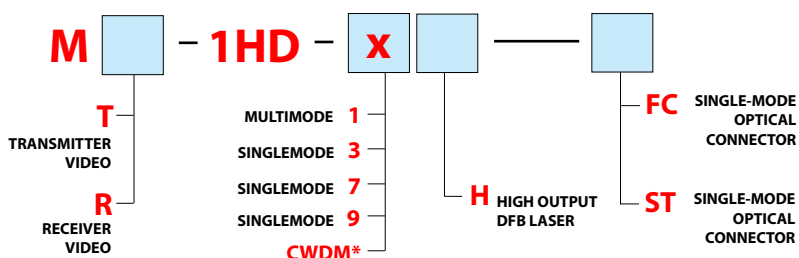
Dimensions (Module)	76 mm (3") L, 20 mm (0.8") W 15 mm (0.60") H
Weight (Module)	40 gms (0.1 lb.)

Environmental

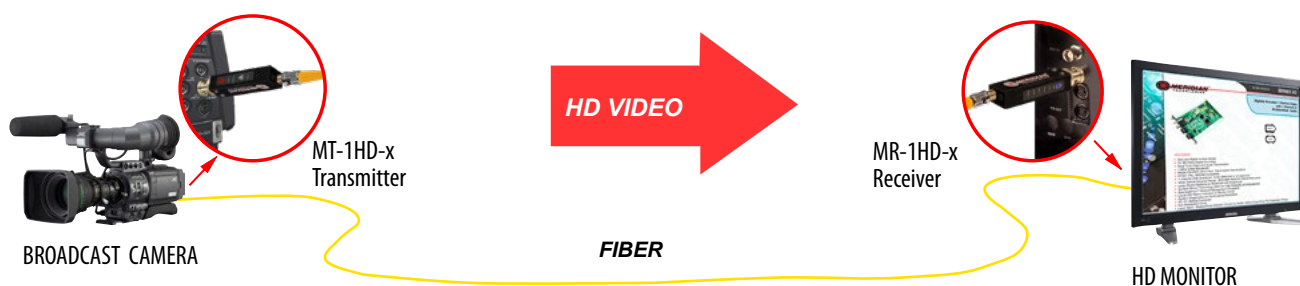
Operating Temperature ...	-25°C to +60°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

Quality

MTBF	>170,000 hours @ Ground Fix 35°C per MIL217F
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STANDARD PART NUMBER EXAMPLES			
P/N	DESCRIPTION	P/N	DESCRIPTION
MT-1HD-1	Transmitter, multimode 1300nm	MT-1HD-7H	Transmitter, singlemode 1550nm HO DFB laser
MR-1HD-1	Receiver, multimode 1300nm	MT-1HD-9H	Transmitter, singlemode 1310nm HO DFB laser
MT-1HD-3	Transmitter, singlemode 1310nm FP laser	MT-1HD-29H	Transmitter, singlemode, 1290nm HO DFB laser
MT-1HD-7	Transmitter, singlemode 1550nm DFB laser	MT-1HD-39H	Transmitter, singlemode, 1390nm HO DFB laser
MT-1HD-9	Transmitter, singlemode 1310nm DFB laser	MT-1HD-47H	Transmitter, singlemode, 1470nm HO DFB laser
MR-1HD-3	Receiver, singlemode, 1270-1610nm	MT-1HD-57H	Transmitter, singlemode, 1570nm HO DFB laser



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	-22	19	1300	ST	22	1.3
3	Singlemode (FP Laser) 9 / 125	-3	-22	19	1310	ST, FC	22	30
7, CWDM	Singlemode (DFB Laser) 9 / 125	+1	-22	23	1550, CWDM -1550 Band	ST, FC	22	80
9, CWDM	Singlemode (DFB Laser) 9 / 125	+1	-22	23	1310, CWDM -1310 Band	ST, FC	22	60
7, CWDM High Output	Singlemode (High output DFB Laser) 9 / 125	+4	-22	26	1550, CWDM -1550 Band	ST, FC	22	100
9, CWDM High Output	Singlemode (High output DFB Laser) 9 / 125	+4	-22	26	1310, CWDM -1310 Band	ST, FC	22	75

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