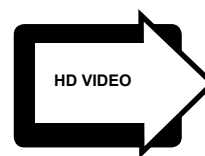


**Digitally Encoded Multi-rate  
HD-SDI Video****FEATURES:**

- 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
- Error Free Pathological Pattern Performance
- Small Tx Easily Mounts on Back of Cameras
- Supports Embedded Audio and Metadata
- Transmission Distances in excess of 60 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. 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 two channel rack mount units ST/SR-1HD-x with 3R (Retiming, Reshaping, Regenerate) functions and dual buffered outputs. This feature ensures maximum performance over long distances.

**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)<br>143 To 540 Mbps SMPTE 259M/344M<br>1.5 Gbps SMPTE 292M HDTV<br>DVB/ASI at 270 Mbps<br>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 <sup>-11</sup>   |

### Connectors

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

### Quality

|            |   |
|------------|---|
| MTBF ..... | >170,000 hours @ Ground Fix<br>35°C per MIL217F |
|------------|---|

### 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 )<br>Red - Laser Over Current ( TX ) |

### Physical

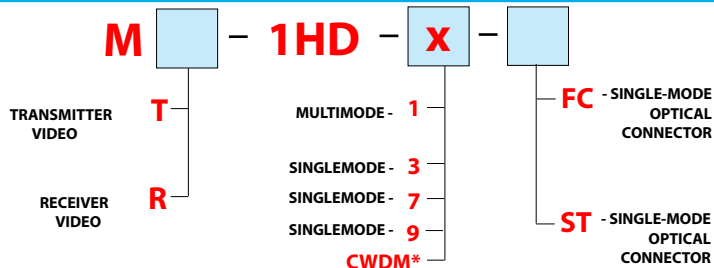
|                           |   |
|---------------------------|---|
| Dimensions (Module) ..... | 76 mm (3") L, 20 mm (0.8") W<br>15 mm (0.60") H |
| Weight (Module) .....     | 40 gms (0.1 lb.)                                |

### Environmental

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

### Part Numbers:

| CWDM LASER GUIDE |                         |
|------------------|-------------------------|
| REFERENCE NUMBER | WAVELENGTH              |
| 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                                  |
| MT-1HD-1              | Transmitter, multimode 1300nm                |
| MR-1HD-1              | Receiver, multimode 1300nm                   |
| MT-1HD-3              | Transmitter, singlemode 1310nm FP laser      |
| MT-1HD-7              | Transmitter, singlemode 1550nm DFB laser     |
| MT-1HD-9              | Transmitter, singlemode 1310nm DFB laser     |
| MR-1HD-3              | Receiver, singlemode, wide band, 1270-1610nm |

\* 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)<br>62.5 / 125 | -3                   | -22                        | 19                  | 1300                  | ST                | 22                         | 1.3               |
| 3                     | Singlemode (FP Laser)<br>9 / 125   | -3                   | -22                        | 19                  | 1310                  | ST, FC            | 22                         | 30                |
| 7, 9, CWDM            | Singlemode (DFB Laser)<br>9 / 125  | +1                   | -22                        | 23                  | 1310, 1550, 1270-1610 | ST, FC            | 22                         | 60                |

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