

Two Simplex Multi-rate SDI / HDSDI Video,
 Two Unidirectional NTSC, PAL Video,
 Two Bidirectional Audio and
 One Full Duplex Ethernet Channel
 over One Fiber



FEATURES:

- Two Multi-Rate SDI / HD-SDI (19 Mbps to 1.5Gbps) over one fiber
- Real-Time, uncompressed Video Transmission over One Single-mode Optical Fiber utilizing CWDM wavelength technology
- Supports The Following Formats :
 - 19.4 Mbps (SMPTE 310M)
 - 143 To 540 Mbps SMPTE 259M/344M
 - 1.485 Gbps SMPTE 292M HDTV
 - DVB-ASI at 270 Mbps
 - SMPTE 305M SDTI Rates
- Error Free Pathological Pattern Performance
- Supports Embedded Audio and Metadata
- Two NTSC, PAL 10-Bit Video with Digital Encoding
- Standard Full Duplex 24-Bit Audio
- 10/100 Base-T IEEE 802.3 Compliant Ethernet
- Ethernet Full Duplex or Half-duplex Supported
- Laser Based Single-mode System
- Wide Dynamic Range: Eliminates Need for Optical Attenuators
- Available with ST or FC Optical Connectors
- Requires No User Adjustments

DESCRIPTION:

The MT/MR-2HD2W2A1R/2A1R-x system is a part of Meridian's DigiView product family and will transmit two simplex Multi-rate SDI / HDSDI Video, two Unidirectional NTSC, PAL Video, two Bidirectional Audio and one Full Duplex Ethernet Channel over one single-mode fiber. Using Coarse Wavelength Division Multiplexing (CWDM) technology, the content details of each video channel are preserved by real-time transmission of each video channel in a compact module format.

These serial digital video transmitters & receivers provide broadcast quality transmission of the industry standard range of digital video data rates. No user adjustments are needed thus ensuring fast deployment and setup with broadcast quality results.

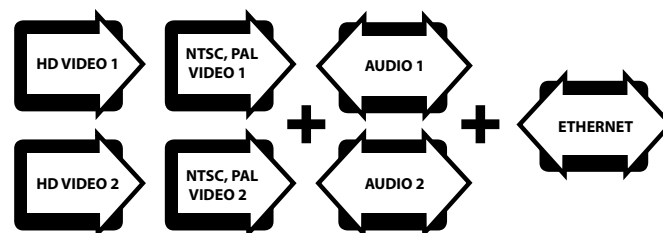
Other signal options are available, including 3G video over one single-mode fiber.

CONFIGURATIONS:

The MT/MR-2HD2W2A1R/2A1R-x system is inclosed in 4-slot stand-alone chassis (SR-1450) with AC power supply (87 VAC - 164 VAC) and can be mounted on any flat surface.

MARKETS:

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



SPECIFICATIONS:

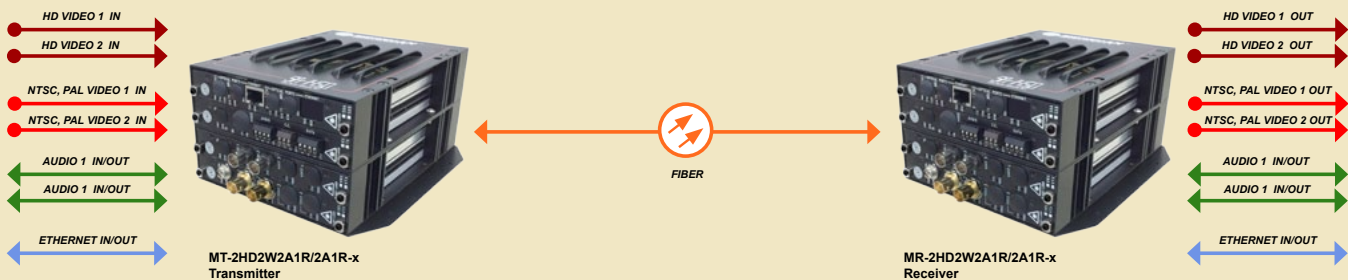
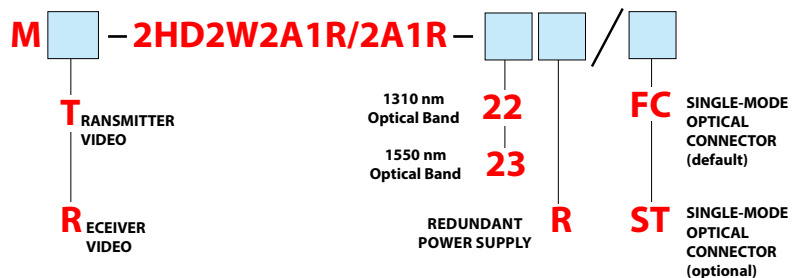
3G-SDI Video	
Formats	19.4 Mbps (SMPTE 310M) 143 To 540 Mbps SMPTE 259M/344M1.485 Gbps SMPTE 292M HDTV DVB-ASI at 270 Mbps 2.97 Gbps (3G) SMPTE 424M SMPTE 305M SDTI Rates
Nominal Level	0.8 Vp-p, 1.0 Vp-p max.
Data Rate	19Mb/s - 3Gb/s
Impedance	75 Ohm
Gain	Unity
Input Coupling	AC
Return Loss	>15 dB
Jitter (Pathological Data Pattern)	< 0.2 UI
Cable Equalisation	Automatic 0-70m @ 3 Gb/s
Bit-Error Rate (0 to -20dBm)	10 ⁻¹²
NTSC, PAL Video	
Formats	NTSC, PAL, SECAM
Voltage/Impedance	1 Vp-p, 75 Ohm, 1.5 Vp-p max.
Bandwidth	5 Hz to 6.8 MHz @ -3 dB
Differential Gain	<0.6%
Differential Phase	<0.3°
SNR	>67 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

Audio	
I/O Impedance	600 Ohm (Bal.), 47 KOhm (Un Bal.)
Frequency Response	10 Hz to 20 KHz
SNR	>90dB (Weighted) @ 1 KHz
In/Out Level	-8 to +8 dBm (4Vp-p max.) (+18 dBm available on request)
Total Harmonic Distortion	<0.01% @ 1KHz
Resolution	24 Bit
10/100/1000 Base-T Ethernet	
Ethernet Standards	IEEE 802.3 CSMA/CD IEEE 802.3i 10Base-T IEEE 802.3u 100Base-T IEEE 802.3ab 1000Base-T
Data Rate	10/100/1000 Mb/s
Bit Error	10 ⁻⁹
Optical	
Wavelengths 1310 Band	1270nm - 1390nm
Wavelengths 1550 Band	1470nm - 1590nm
Output power	+1 dBm per channel

Connectors	
3G-SDI Video	75 Ohm BNC (Gold Center Pin)
NTSC, PAL Video	75 Ohm BNC (Gold Center Pin)
Audio	Screw Terminals
Optical	FC, ST (Single-mode)
Ethernet	Shielded RJ-45
Power (module)	2-pin Screw Terminal
Power	
Input Power	9-36VDC
Power Consumption	16 W
Physical	
Dimensions	182 (L) x 132 (H) x 132 (W) mm (7.16 x 5.15 x 5.15 inch)
Weight	4064 gms (8.96 lb.)
Environmental	
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

Part Numbers:

Unit	Description	Wavelength
MT-2HD2W2A1R/2A1R-22	Video, Audio, Ethernet Transceiver, Single-mode, 1310nm Optical Band	Tx @ 1270nm - 1350nm Rx @ 1370nm - 1390nm
MR-2HD2W2A1R/2A1R-22	Video, Audio, Ethernet Transceiver, Single-mode, 1310nm Optical Band	Tx @ 1370nm - 1390nm Rx @ 1270nm - 1350nm
MT-2HD2W2A1R/2A1R-23	Video, Audio, Ethernet Transceiver, Single-mode, 1550nm Optical Band	Tx @ 1470nm - 1550nm Rx @ 1570nm - 1590nm
MR-2HD2W2A1R/2A1R-23	Video, Audio, Ethernet Transceiver, Single-mode, 1550nm Optical Band	Tx @ 1570nm - 1590nm Rx @ 1470nm - 1550nm



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)
22, 23	Singlemode (DFB Laser) 9 / 125	+1 (per channel)	-20	21	1310 nm Band, 1550 nm Band	FC, ST	21	50

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