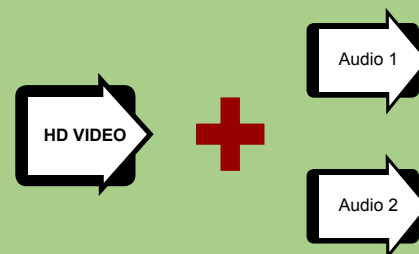


Digitally Encoded One SDI / HD-SDI Video
with Two Simplex 24-Bit Audio



FEATURES

- SDI / HD-SDI Video Transmission (19 Mbps to 1.5Gbps)
- 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
- Two Channels of Simplex Audio
- Built in Re-clocker on TX/RX
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- SpectraSmart™ PC Based Network Management
- Local LED Status Indicators to Monitor Critical System Diagnostics for Performance Parameters
- ST, FC Optical Connector
- Hot Swappable Cards
- Laser Back - Biased Photo Detector Circuitry for Stable Optical Output Over Full Temperature Range
- 75 Ohm BNC Video Connector (Gold Center Pin)
- Screw Terminals, DB-25 or 3.5mm Stereo Jack Connectors for Audio

DESCRIPTION

The FT/FR-1HD2A-x series fiber optic transmission system that takes advantage of Meridian's new digital encoding technology and transmits following signals over one single-mode or multimode fiber:

1. One real-time, SDI / HD-SDI Video (19 Mbps to 1.5 Gbps)
2. Two Simplex 24 bit audio

These units featuring built-in Re-clockers that support 3R (Retiming, Reshaping, Regenerate) functions and buffered output.

The functionality of this system is enhanced by compatibility with Meridian's PC based SpectraSmart™, Network Management and Remote Diagnostic Software System. SpectraSmart™ supervises the operating parameters of the transmission system such as status on SDI signal presence, PLL lock, SDI data rates, voltage, temperature, optical levels. See the SpectraSmart brochure for more details.

CONFIGURATIONS

The DigiCool™ products are available as rack mount cards that can be installed in Meridian's card chassis, desk chassis and 19" racking frames. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. These systems can be made a standalone system by using the SR-500, 1 slot desk / wall mount chassis.

MARKETS

- ✓ Security and Surveillance
- ✓ Intelligent Transportation System (ITS)
- ✓ Access Control Systems
- ✓ Campus Lecture Networks

SPECIFICATIONS:

SDI/HDSDI Video

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
Nominal Level	0.8 Vp-p, 1.0 Vp-p max.
Data Rate	19 Mb/s - 1.5 Gb/s
Impedance	75 Ohm
Gain	Unity
Input Coupling	AC
Return Loss	>15 dB
Jitter (Pattological Data Pattern)	< 0.2 UI
Cable Equalization	Automatic 0-70 m @ 1.5 Gb/s
Bit-Error Rate (0 to -20dBm)	10 ⁻¹²

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 (4V _{p-p} max) (+18 dBm available on request)
Total Harmonic Distortion	<0.01% @ 1KHz
Resolution	24 Bit

Optical

Fiber Data Rate	1.5 Gb/s
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Power *

Card	5 Watts
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* Due to variations of drivers and diagnostic options, power shown @ max value

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST for MM fiber (default) FC for SM fiber (default)
Power (standalone module)	See SR-500 Brochure for details
Audio	Screw Terminals (default), DB-25 or 3.5mm Stereo Jack Connector

Indicators (LEDs)

1 - Green	Power On
1 - Bi-color	TX Carrier/ Laser Over Current
1 - Bi-color	RX Carrier - Present / Error
1 - Bi-color	SDI/HD-SDI Signal Present (TX)
1 - Bi-color	SDI/HD-SDI Level 0/-20 dB (RX)
2 - Bi-Color	Audio Present / Overload

Physical

Dimensions (Card)	160 mm (6.3") L, 127 mm (5") H 20mm (0.80") W
Weight (Card)	450 gms (1.0 lb)
No of Slots	1
Module	See SR-500 Brochure

Enviromental

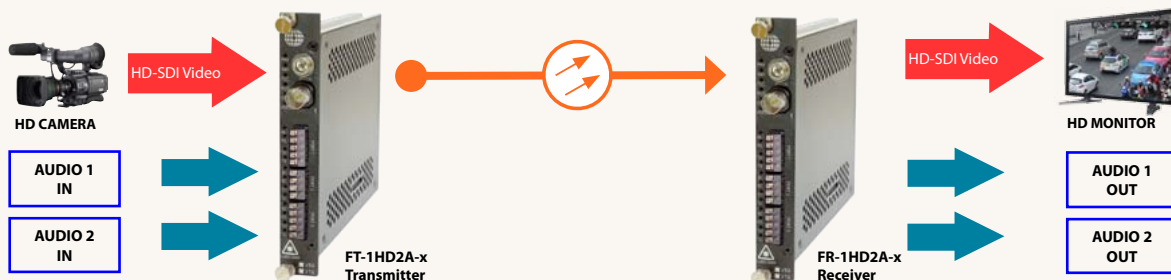
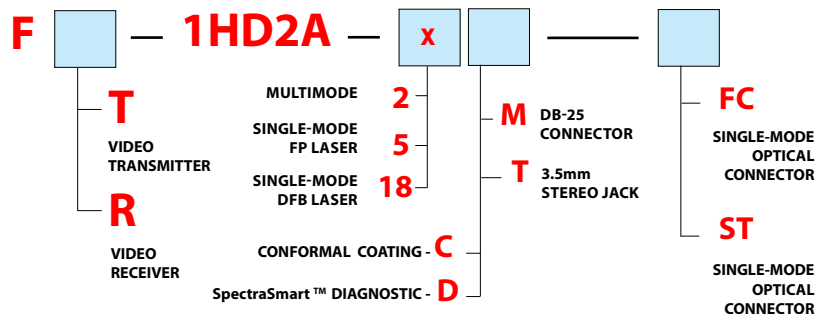
Operating Temperature	-34°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

Quality

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

Product	Signals	Wavelengths Distribution
FT-1HD2A-2 Transmitter card, MM	Video Audio	1300nm 850nm
FR-1HD2A-2 Receiver card, MM	Video Audio	1300nm 850nm
FT-1HD2A-5 Transmitter card, SM, FP Laser	Video Audio	1310nm 1550nm
FR-1HD2A-5 Receiver card, SM, FP Laser	Video Audio	1310nm 1550nm
FT-1HD2A-18 Transmitter card, SM, DFB Laser	Video Audio	1310nm 1550nm
FR-1HD2A-18 Receiver card, SM, DFB Laser	Video Audio	1310nm 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)
2	Multimode (FP Laser) 62.5 / 125	-5	-25	20	1300, 850	ST	25	0.66
5	Singlemode (FP Laser) 9 / 125	-5	-25	20	1310, 1550	FC, ST	25	55
18	Singlemode (DFB Laser) 9 / 125	+3	-25	28	1310, 1550	FC, ST	25	70

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