

Digitally Encoded 1 Uni-directional Channel of Multi-rate HD-SDI Video with Re-clockers



ST-1HD-x
Transmitter Card



SR-1HD-x
Receiver Card



FEATURES:

- Transmission of Multi-Rate SDI & HD-SDI (19 Mbps to 1.5Gbps)
- Built in Re-clocker on TX/RX
- 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
 - 1.485 Gbps SMPTE 292M HDTV
 - DVB-ASI at 270 Mbps
 - SMPTE 305M SDTI Rates
- SMPTE ST 297:2015 Compliant
- Error Free Pathological Pattern Performance
- Rack Mounted Card Units
- Supports Embedded Audio and Metadata
- Distances in Excess of 30 km
- Led Indicators for :
 - Power
 - Rx Optical Power
 - Tx Video Signal Present
 - Laser Over Current
- Wide Dynamic Range: Eliminates Need for Optical Attenuators
- Optional Small Tx Easily Mounts on the Back of Broadcast Camera
- Available with ST or FC Optical Connectors
- Requires No User Adjustments
- CWDM Lasers Available for 16 Channel MUX over One Fiber

DESCRIPTION:

Meridian's HD-SDI fiber products is part of our expanding DigiView product family. These serial digital video transmitters & receivers provide broadcast quality transmission of the industry standard range of digital video data rates.

The ST/SR-1HD-x system will transmit one uni-directional channels of real-time SDI/HDSDI video over one multimode or singlemode fiber.

These units featuring built-in Re-clockers that support 3R (Retiming, Reshaping, Regenerate) functions and dual buffered outputs. One buffered output can be set as a time base (clock). Transmitter supports buffered loop-through. This feature ensures maximum performance over long distances. No video compression is utilized.

The standard ST/SR-1HD-x product supports one channel of SMPTE 292M, 305M, 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.

CONFIGURATIONS:

The ST/SR-1HD-x system is available either as modules or 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 1.485 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	19Mb/s - 1.5Gb/s per channel
Impedance	75 Ohm
Gain	Unity
Input Coupling	AC
Return Loss	>15 dB
Jitter (Pattological Data Pattern) ..	< 0.2 UI
Cable Equailization	Automatic 0-200m @ 1.5 Gb/s
Bit-Error Rate (0 to -20dBm).....	10 ⁻¹²
Tx/Rx Latency.....	< 6ns

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	Singlemode - FC (default), Multimode - ST (default)

Power **

Card	2 W
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Indicators (LEDs)

1 - Green	Power On (TX & RX)
1 - Red	Laser Over Current (TX)
4 - Green	Signal Power Level (RX)
1 - Green	Signal Present (TX)
1 - Green	Signal Lock (TX)
1 - Green	SDI Present (TX)
1 - Green	HD-SDI Present (TX)

Physical

Dimensions (Card)	160 mm (6.3") L, 127 mm (5") W 20mm (0.80") W
Weight (Card)	450 gms (16 Oz)
No. of Slots	1
Module	See SR-500 Brochure

Environmental

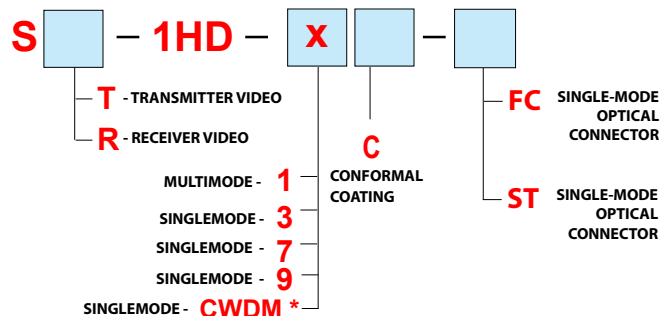
Operating Temperature	-25°C to +60°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

Quality

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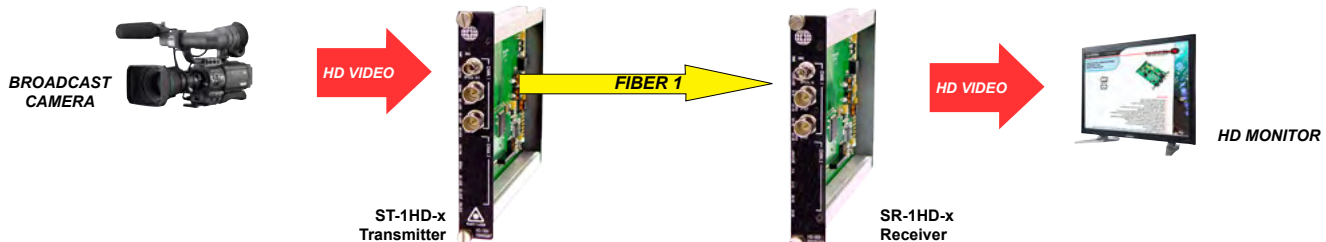
Part Numbers:

CWDM LASER GUIDE	
REFERENCE NUMBER	WAVELEGSTH
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
ST-1HD-1	Transmitter, module, multimode 1300nm
SR-1HD-1	Receiver, module, multimode 1300nm
ST-1HD-3	Transmitter, module, singlemode 1310nm FP laser
ST-1HD-7	Transmitter, module, singlemode 1550nm DFB laser
ST-1HD-9	Transmitter, module, singlemode 1310nm DFB laser
SR-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) 62.5 / 125	-3	-19	16	1300	ST	19	1.3
3	Singlemode (FP Laser) 9 / 125	-3	-19	16	1310	ST, FC	19	30
7, 9, CWDM	Singlemode (DFB Laser) 9 / 125	+1	-20	21	1310, 1550, 1270-1610	ST, FC	20	60

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