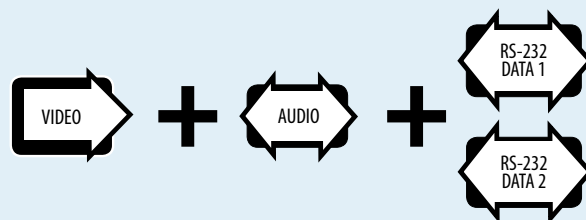**Digitally Encoded, One 10-Bit Video with
One Bi-directional 24-Bit Audio and
Two Full Duplex RS-232 Data**

FEATURES

- 10-Bit Video Digital Encoding
- Real Time Video, Audio & Data Transmission
- 7 MHz Video Bandwidth
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- Bi-Directional Audio and Multi-protocol Data
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Laser Based Systems for Multimode and Single-mode
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- SpectraSmartTM PC Based Network Management
- SpectraViewTM Fault / Setup Firmware
- 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)
- Meets EIA RS-170, RS-343A Formats
- Screw Terminal Type Connectors for Audio and Data

DESCRIPTION

This system is incorporates an all-digital encoding technology and transmits one real-time, simplex, 10-bit Composite Video, one full duplex 24-bit Audio and two full duplex RS-232 Data.

This single fiber, laser based system is available for both, Multimode or Single-mode fibers.

The versatility of the this product series is enhanced by SpectraView™, an On-Screen Video Diagnostic/Setup firmware system.

SpectraView™ monitors the integrity of the video signal and the fiber link. A break in the fiber path will cause a loss of fiber alarm to be displayed on an associated monitor while loss of video sync will generate a loss of sync alarm on the monitor. SpectraView™ is easy to use, always active and eliminates the need for additional test equipment. SpectraView™ also includes a selectable on-board audio & data test signal generator with built-in local and remote loop-back functions. In addition a video grey scale function is included to assist in monitor and system setup.

If greater diagnostic capability is required, this product is fully compatible with Meridian's SpectraSmart™ Network management and diagnostic PC based system. See the SpectraSmart or SpectraView™ brochures for additional details.

CONFIGURATIONS

The DigiSlim™ product family is available as rack mount cards and modules that can be installed in any of Meridian's desk chassis or in 19" racking frames. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. These systems can be transformed in to a standalone module by utilizing an SR-500 (standard configuration) or an SR-1002.

MARKETS

√ Intelligent transportation systems (ITS)
√ Security and surveillance
√ Access Control

SPECIFICATIONS

Video

Format	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	<0.3º
SNR	>67 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

Data

Formats	RS-232
Data Rate	DC to 125 Kb/s
Bit Error Rate	10^{-9}*

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	250 Mb/s

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST, FC
Power (module)	See SR-500 Brochure for details
Data/Audio/Contact	Screw Terminals

Power **

Card	6 Watts

Indicators (LED)

1 - Green	Power On
1 - Bi-color	TX Carrier/ Laser Over Current
1 - Bi-color	RX Carrier - Present / Error
1 - Bi-color	Video Present / Overload
1 - Green	Sync. Present
4 - Green	Data Present
2 - Bi-Color	Audio Present / Overmodulation

Physical

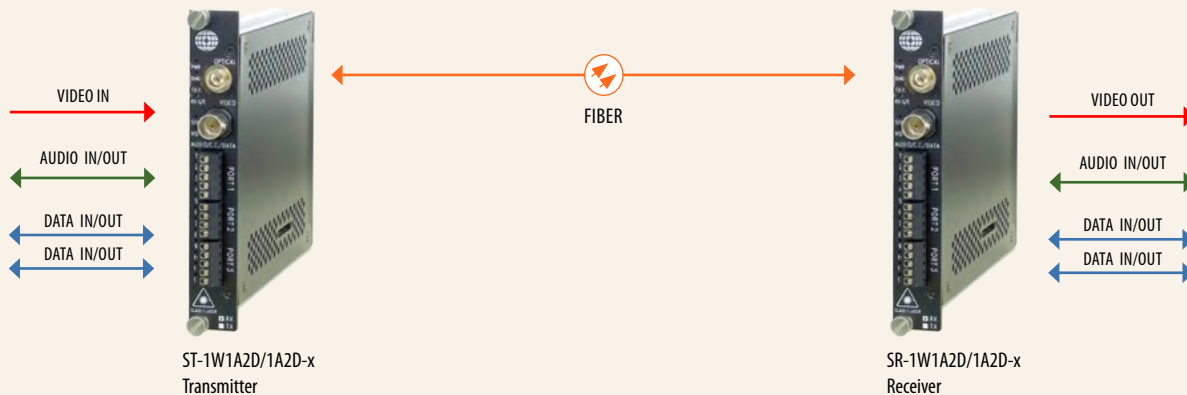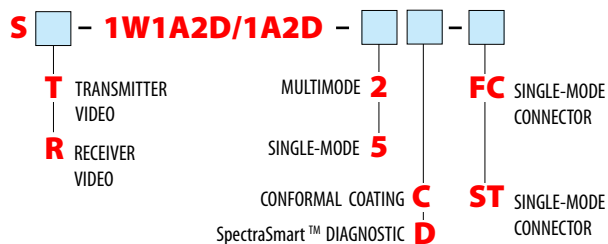|	
Dimensions (Card)	22 (W) x 127(D) x 160 (H) mm (0.87 x 5.0 x 6.3 inch)
Weight (Card)	450 gms (16 Oz)
No. of Slots	1
Module	See SR-500 Brochure

Environmental

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

Quality

MTBF	>170,000 hours @ Ground Fix 35ºC per MIL217F

Part Numbers:

S ☐ – 1W1A2D/1A2D – ☐ ☐ – ☐

- **T** TRANSMITTER VIDEO
- **R** RECEIVER VIDEO
- MULTIMODE **2**
- SINGLE-MODE **5**
- CONFORMAL COATING **C**
- SpectraSmart ™ DIAGNOSTIC **D**
- **FC** SINGLE-MODE CONNECTOR
- **ST** SINGLE-MODE CONNECTOR

ST-1W1A2D/1A2D-x
Transmitter

SR-1W1A2D/1A2D-x
Receiver

VIDEO IN • AUDIO IN/OUT • DATA IN/OUT • DATA IN/OUT • FIBER • VIDEO OUT • AUDIO IN/OUT • DATA IN/OUT • DATA IN/OUT

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	-26	21	850/ 1300	ST	26	4
5	Single-mode (FP Laser) 9 / 125	-5	-26	21	1310 / 1550	ST, FC	26	60