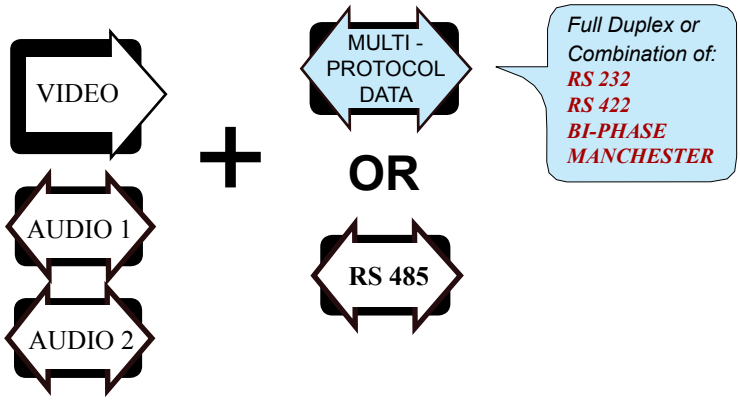
MERIDIAN TECHNOLOGIES

Digitally Encoded One Channel Video with Full Duplex Multi-Protocol Data and Two Bi-directional 24-bit Audio



FEATURES:

- One Slot Digital Module Design
- 10 Bit Video Digital Encoding
- Real Time Video and DataTransmission
- 7 MHz Video Bandwidth
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- Two 24-bit bi-directional Audio Channels
- Full Duplex Multiprotocol Data Channel
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Laser Based Systems for Multimode and Singlemode
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- *SpectraSmart*™ Network Management Compatible
- 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
- DB25F connector for Audio/Data interfaces

DESCRIPTION:

This module in the **ST/SR-1W2A1G/2A1G** product incorporates an all-digital encoding technology that transmits one real-time, simplex 10-bit video channel, two full-duplex 24-bit audio channels and one user selectable, full duplex, multi-protocol data channel. RS-232, RS-422, RS-485 (2 or 4 wire), Manchester and Bi-Phase data protocol/formats are all supported. NTSC, PAL and SECAM video formats are all seamlessly supported. A standard DB25F connector is provided for the audio/data interface. These single fiber, laser based systems are available in both, Multimode and Singlemode modules.

The **ST/SR-1W2A1G/2A1G** system is also compatible with Meridian's *SpectraSmart* Network management and diagnostic PC based system. See the *SpectraSmart* brochure for additional details.

CONFIGURATIONS:

The **ST/SR-1W2A1G/2A1G** product is available as rack mount cards that can be installed in either Meridian's desk chassis or in 19" racking frames. Shelf/surface mount modules are also available. 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/S, SR-1000/s, 1 or 2 slot desk / wall mount chassis (87 VAC- 264VAC)

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

Data

Formats	RS-232, RS-422, RS-485, Manchester or Bi-Phase
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

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST, FC
Power (module)	See SR-500 Brochure for details
Data	3-pin Screw Terminal

Optical

Fiber Data Rate	250 Mb/s

Power **

Card	6 Watts

* *measured @ max. optical budget*
** *Due to variations of drivers and diagnostic options, power shown @ max value*

Indicators (LEDs)

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	Video Sync. Present
1 - Green	Tx Data Present
1 - Green	Rx Data Present
2 - Green	Audio Input Present
2 - Green	Audio Output Present

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

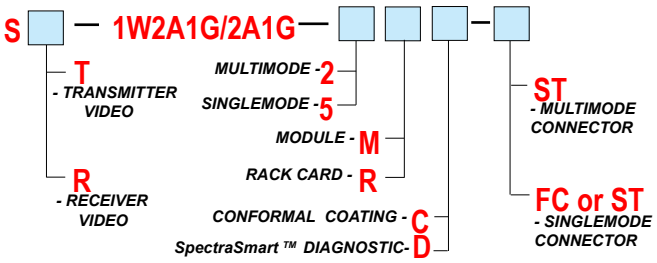
Enviromental

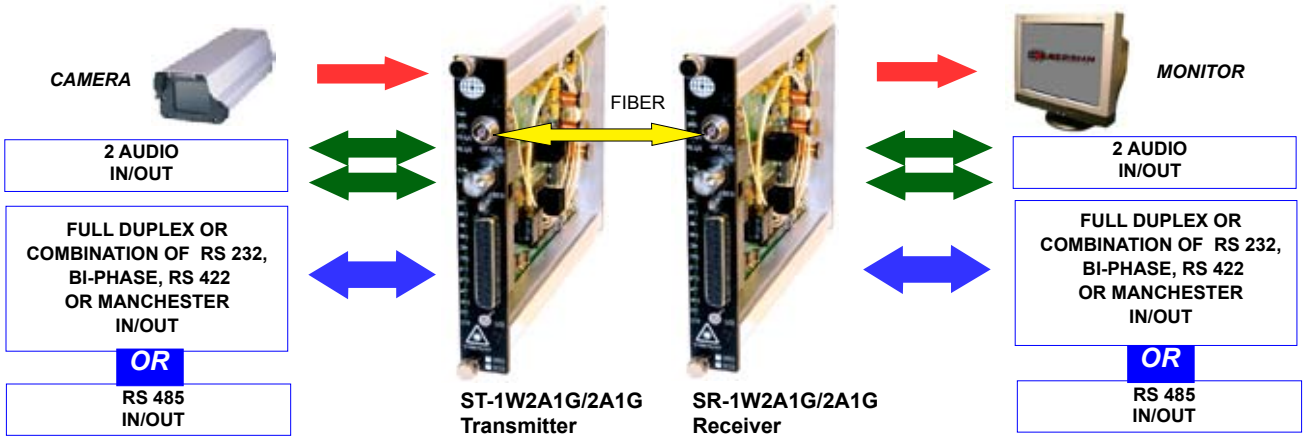
Operating Temperature	-34°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

Quality

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

Part Numbers:





OPTICAL:

Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)
Multimode (FP Laser) 62.5 / 125	-5	-26	21	1300 / 850	ST	24
Singlemode (FP Laser) 9 / 125	-5	-26	21	1310 / 1550	ST, FC	24

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