

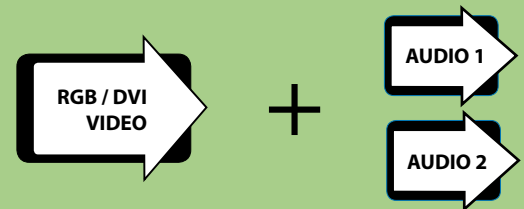
Digitally-Encoded DVI / RGB Video with 2 Channels of 24-Bit Audio over One Single-mode Fiber



ST/SR-1RG-20X ST/SR-2A-4

FEATURES:

- Digital transmission of DVI / RGBHV / RGsB over one fiber
- Two Simplex 24-bit Audio Channels
- Supports VGA, SVGA, XGA, SXGA & UXGA (640x480x60Hz to 1920x1200x60Hz)
- 1080p HDTV resolution for DVI signals
- H & V Sync Frequency range of 60 to 150Hz (vertical), 30 to 130kHz (horizontal)
- Uses all-digital processing & transmission for crystal-clear signals and no color skewing
- Real-time video transmission for exceptional quality & resolution – no video compression
- Auto detects & switches resolution & sync configurations
- Requires no adjustments, equalization or de-skewing during setup
- Data throughput in excess of 6 Gbps (uncompressed)
- Most systems have 1.25 Gb/s throughput with significant compression
- DDC (Data Display Channel) optional
- Standard DVI-I video connector with HD-15 dongle included for RGB interface
- USB interface for remote monitor adjustments
- Wide optical dynamic range:
Eliminates need for optical attenuation
- Single-mode Laser Based System



DESCRIPTION:

Meridian's ST/SR-1RG2A-x is high performance Video and Audio transmission system that transports fully-compliant DVI, RGsB or RGBHV and two Simplex 24-Bit audio signals over one single-mode fiber.

The ST/SR-1RG2A-x product consist of two Meridian's cards

1. ST/SR-1RG-xX - 1-ch RGB/DVI Video w/eXpansion Port
2. ST/SR-2A-4 - 2-ch 24-Bit Audio

connected trough Xpansion port in order to combine CWDM 1310nm Band and 1550nm Band wavelengths on one single-mode fiber.

This product provides real-time, digitized transmission of DVI, RGB and H&V sync signals. Because it transmits signals in real-time, no video information is lost and is a perfect solution for dynamic video signals with crystal clear video and no color pixel skewing. Having both DVI and RGB input capability, this system offers an easy upgrade path from RGB to DVI systems with the same modules. In addition, this dual format capability allows the user to convert from one format to the other (RGB to DVI, DVI to RGB) to ensure compatibility with a wide variety of video sources and monitors. An example of this would be to supply a RGB signal at one end of the link and output a DVI signal at the other end.

The supplied adapters (dongles) allow easy interface to standard RGBHV connectors on computers and monitors.

The user can further enhance the video performance with the use of the computer USB interface. This data channel allows the user to adjust brightness, contrast, H&V position, picture sharpness, color, check temperature of the card and load voltage.

CONFIGURATIONS:

This ST/SR-1RG2A-x product is available as either a rack mount card that can be installed in either Meridian's desk chassis or in 19" racking frames. This product can also be configured as a stand-alone module by using 4 slot or 6 slot desk/wall mount chassis (SR-500 or SR-1002).

MARKETS:

- ✓ Courtrooms
- ✓ Medical & MRI displays
- ✓ Air traffic control
- ✓ Military information displays
- ✓ Stock exchanges
- ✓ Concert & sporting event video displays
- ✓ Video walls
- ✓ CAD / CAM

SPECIFICATIONS:

Video

Number of Video Channels	1 of DVI, RGsB (sync-on-green) or RGBHV (TTL H & V sync)
Horizontal Scan Rate	30kHz to 130kHz (auto sensing)
Vertical Scan Rate	60-150Hz (auto sensing)
SNR	>60dB
Resolution Range (RGB)	640x480x60 to 1600x1200x75
Resolution Range (DVI)	640x480x60 to 1920x1200x60
HDTV Resolution support (DVI)	480p, 720p, 1080i, 1080p
RGB Processing	24-bits, no compression or scaling
Input Impedance/Level	RGB: 75 Ω / 714 mV p-p, H&V 3-5V p-p, 1V p-p w/S.O.G

Audio

In/Out Impedance	600 Ohms (Bal. / Un Bal.)
Frequencet Response	10Hz to 20KHz
SNR	>90dB (Weighted) @ 1KHz.
In / Out Level	-8 to +8 dBm (4VP-Pmax.)
	(+18dBm available on Request)
Total Harmonic Distortion	< 0.01% @ 1 KHz
Resolution	24 Bit

Optical

Number of fibers	1
Fiber type	SM (9.0 μ m)
Wavelength 1310 Band	Video: 1270, 1290, 1310, 1330 nm
Wavelength on eXpansion port	Audio: 1550 nm
Wavelength 1550 Band	Video: 1510, 1530, 1550, 1570 nm
Wavelength on eXpansion port	Audio: 1310 nm
Operating distance SM, 1310 Band	Up to 25 Km *
Operating distance SM, 1550 Band	Up to 5 Km *

Connectors

Video	DVI-I (female), HD-15 female (on dongle)
Audio	3-pin connectors
Optical	ST - MM(default), FC - SM(default)
USB	4-pin USB (type B)
Power	See stand-alone chassis for details

Power **

DVI/RGB Video card	7 Watts
Audio card	4 Watts

Indicators (LEDs)

Power	Green
Diagnostic	Green (OK), Red (alarm)
Tx carrier	Green (OK), Red (alarm)
Rx carrier	Green (OK), Red (alarm)
DVI active	Green
RGB active	Green
SHV (sync H&V)	Green
SOG (sync on green)	Green
USB active	Green (Rx-Data), Red (Tx-Data)

Physical

1 Slot Card (Audio card)

Dimensions	160 mm (6.3") L, 127 mm (5") W
	20mm (0.80") W
Weight	450 gms (16 Oz)
No. of Slots	1

2 Slot Card (RGB Video card)

Dimensions	160 mm (6.3") L, 127 mm (5") W
	44 mm (1.60") W
Weight	450 gms (16 Oz)
No. of Slots	2

Quality

MTBF	>150,000 hours @ Ground Fix 35°C per MIL217F
------	---

Environmental

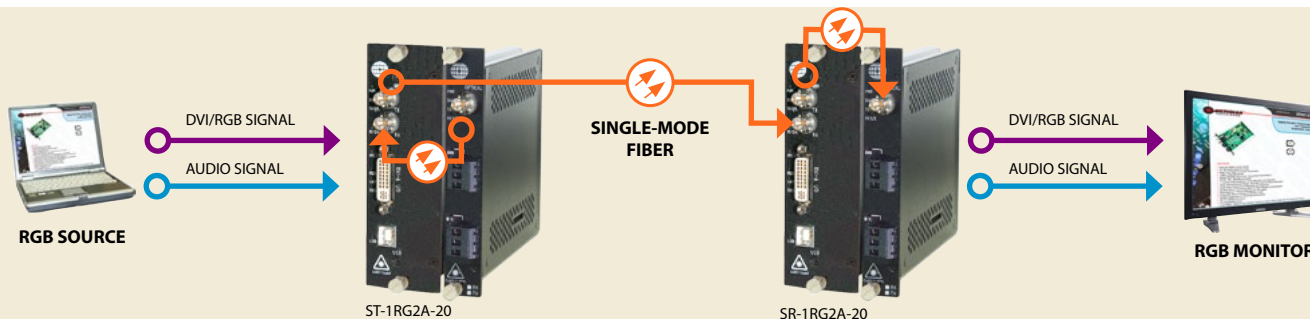
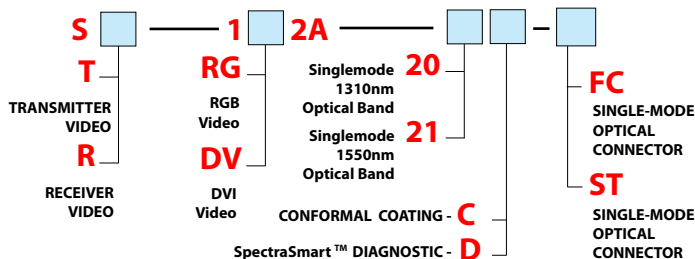
Operating Temperature	-10°C to +50°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

* Based on maximum resolution & fiber bandwidth

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

Part Numbers:

Card	Wavelength
ST/SR-1DV-20X, ST/SR-1RG-20X DVI/RGB Video Tx/Rx, SM	ch1=1270nm, ch2=1290nm, ch3=1310nm, ch4=1330nm
ST/SR-2A-4 Audio Tx/Rx, SM	ch5=1550nm
ST/SR-1DV-21X, ST/SR-1RG-21X DVI/RGB Video Tx/Rx, SM	ch1=1510nm, ch2=1530nm, ch3=1550nm, ch4=1570nm
ST/SR-2A-4 Audio Tx/Rx, SM	ch5=1310nm



OPTICAL:

Product Optical Code	Fiber Type/Size (μ m)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Max Distance (Km)
20	Singlemode (DFB Laser) 9 / 125	0	-16	16	1310 Band + 1550nm	FC, ST	20	50
21	Singlemode (DFB Laser) 9 / 125	0	-16	16	1550 Band + 1310nm	FC, ST	20	5 ***

*** Distance is limited by chromatic dispersion