MERIDIAN TECHNOLOGIES

Digitally-Encoded DVI / RGB Video over One Multimode or Singlemode Fiber

- MULTIMODE SYSTEM -
ST/SR-1RG-0

- SINGLEMODE SYSTEMS -
ST/SR-1RG-20 ST/SR-1RG-21

RGB / DVI

FEATURES:

- Digital transmission of DVI / RGBHV / RGsB over one fiber
- 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 Gbps 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 attenuators
- Multimode or Singlemode Laser Based System

DESCRIPTION:

Meridian's ST/SR-1RG-x product is part of Meridian's DigiView™ product family. This state-of-the-art, cost-effective, high performance video transmission system transmits fully-compliant DVI, RGsB or RGBHV signals over one multimode or singlemode fiber.
This RGB 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.

Note: Options available for Mouse, Keyboard and Audio with additional KVM card.

CONFIGURATIONS:

This ST/SR-1RG-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 1 slot or 2 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

Optical

Number of fibers	1
Fiber type	MM (62.5 µm & 50 µm), SM (9.0 µm)
Wavelength MM, 850 Band	775nm, 800nm, 825nm, 850nm
Wavelength SM, 1310 Band	1290nm, 1310nm, 1330nm, 1350nm
Wavelength SM, 1550 Band	1510nm, 1530nm, 1550nm, 1570nm
Operating distance MM	1Km (50um fiber), 300m (62.5um fiber)*
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)
Optical	ST - MM(default), FC - SM(default)
USB	4-pin USB (type B)
Power	See SR-1000 chassis for details

Power **

1 Slot Card (Multimode Unit)	5 Watts
2 Slot Card (Singlemode Unit)	7 Watts

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

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

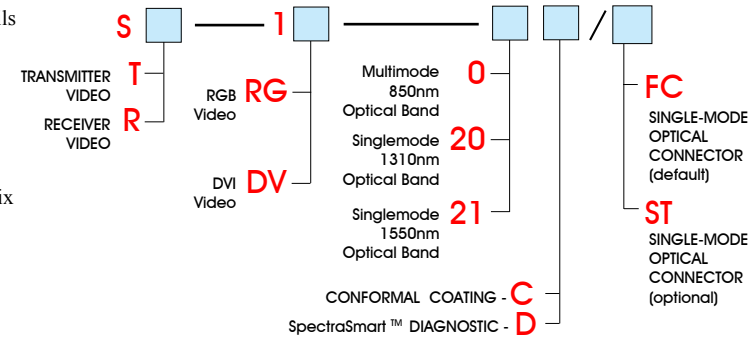
1 Slot Card (Multimode Unit)

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

2 Slot Card (Singlemode Unit)

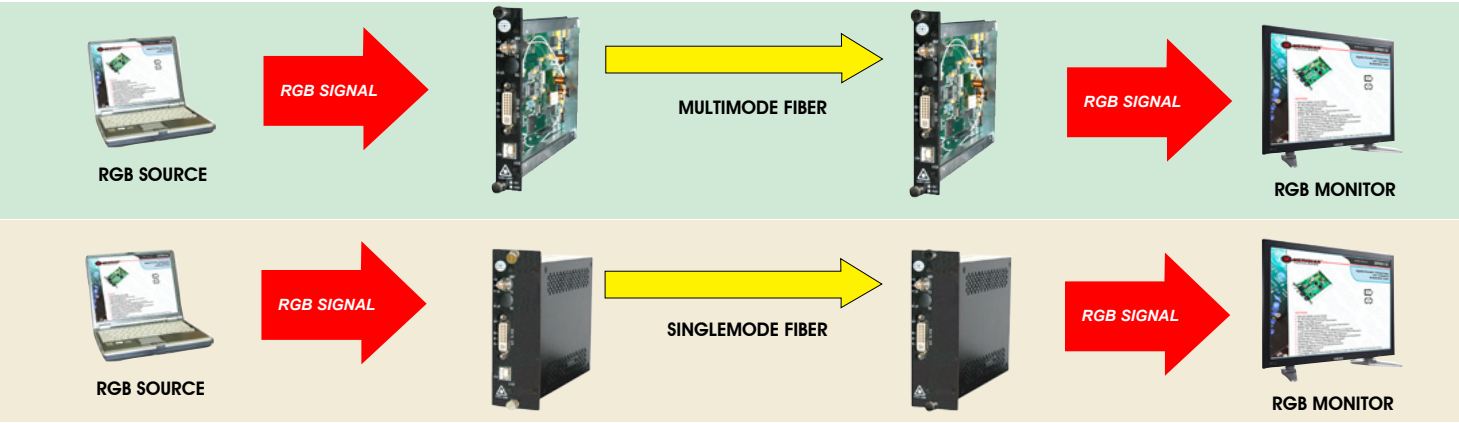
Dimensions	160 mm (6.3") L, 127 mm (5") W 44 mm (1.60") W
Weight	450 gms (16 Oz)
No. of Slots	2
Module	See SR-1002 data sheet

Part Numbers:



* *Based on maximum resolusion & fiber bandwidth*

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



OPTICAL:

Form Factor	Meridian Optical Code	Fiber Type/Size (µm)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Max Distance (Km)
1 Slot Card	0	Multimode (VCSEL) 62.5/125 & 50/125	+2	-8	10	850 Band	ST	15	1
2 Slot Card	20	Singlemode (DFB Laser) 9 / 125	0	-16	16	1310 Band	FC, ST	20	50
2 Slot Card	21	Singlemode (DFB Laser) 9 / 125	0	-16	16	1550 Band	FC, ST	20	5 ***

*** Distance is limited by chromatic dispersion

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