MERIDIAN
T E C H N O L O G I E S

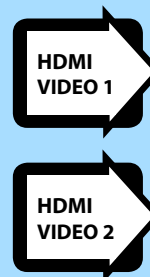## HDMI Optical Transceiver

ST/SR-2DM-0
Card with LC
optical connector

ST/SR-2DM-0/ST
Card with ST
optical connector

HDMI VIDEO 1

HDMI VIDEO 2

FEATURES

- Supports HDMI Video up to 4Kx2Kx30 Resolution

- HDMI 1.4a with HDCP Support

- DDC HPD Signal Support

- No Settings or Adjustments Necessary, Automatically Recognizes HDCP & EDID

- Supports up to 300m Transmission Distance with OM4 multimode fiber

- Standard HDMI Connector

- Rack Mounted Card Units

- Hot-Pluggable

- EMI/RFI Resistant

- 850nm VCSEL and PIN Photo detector

- Reliable LC or ST Optical Connectors

- Operating Temperature: 0~74°C

MARKETS

√ Digital Signage
√ Video distribution systems
√ Educational
√ Video walls
√ Home theater
√ Entertainment centers

DESCRIPTION

The Meridian **ST/SR-2DM-0** HDMI optical transmitter and receiver system is designed to send 2 channels of 1.4a compliant HDMI Video with embedded audio over two optical fibers. HDCP is automatically supported for the transmission of content-protected video.

The 4K HDMI optical transceiver supports transmission of an uncompressed lossless HDMI 1.4a signals over multimode optical fiber at 850nm, for distances up to 300 meters, at a resolution of 4Kx2K.

Transmitter converts an HDMI signal to a single 10Gb/s serial data stream for transmission over first Optical fiber and HDCP & EDID sent back over second optical fiber.

Receiver converts the serial data back to an HDMI signal.

The link will operate over one fiber in DVI mode when the HDCP compliance is not required.

This product is ideal for large-screen displays, conference systems and home entertainment.

This fiber link meets all of the standards of interference immunity, to ensure the stability of the signal.

These HDMI optical transmitter and receiver provide broadcast quality transmission of the industry standard range of digital video data rates. The entire electrical and optical subsystems are housed in a standard Meridian 1-slot card design for mounting in any venue, particularly those with space constraints. No user adjustments are needed thus ensuring fast deployment and setup with broadcast quality results.

Note: This system is fully compatible with Meridians micro modules MT/MR-1DM-0 (1 channel HDMI optical Tx/Rx).

CONFIGURATIONS

The **ST/SR-2DM-0** products are available as rack mount cards and modules that can be installed in either 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 made a standalone system by using the SR-500, SR-1000, 1 or 2 slot desk/wall mount chassis (87 VAC- 264VAC).

SPECIFICATIONS:

Video

HDMI compliance	1.4a
HDCP compliance	v1.2
Max resolution	Up to 4Kx2K
Refresh Rate	Up to 120 Hz
Depth	Up to 48-bit
Bit-Error Rate	10^{-12}
Support 3D	Yes

Optical

Optical Fiber	multimode fiber
Wavelength	850 nm
Data Rate Per Lane	10Gb/s
Laser Output Power	Class 1 EN 60825-1 2007 EN 60825-2 A2 2010
Operating distance	Up to 300m
Loss budget	10 dB

Connectors

Video	19 Pins HDMI A Type Port
Optical	LC (default), ST (optional)

Indicators

1-Green	Power

Power

TX	3.0 W
RX	2.5W

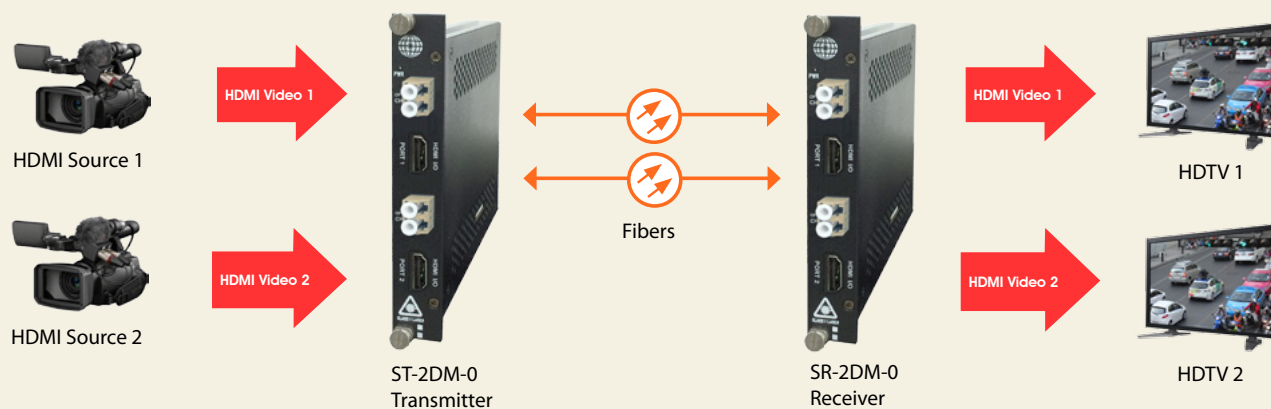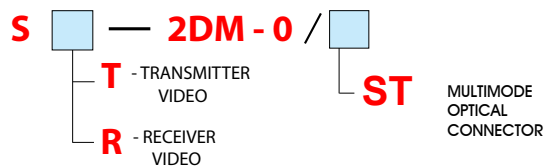## Physical

Dimensions (Card)	20 (W) x 127 (H) x 160 (D) mm (0.8 x 5.0 x 6.3 inch)
Weight (Card)	450 gms (16 Oz)
No. of Slots	1
Module	See SR-500 Brochure

Enviromental

Operating Temperature	0ºC to +74ºC
Storage Temperature	-20ºC to +85ºC
Relative Humidity	10 to 90% Non-condensing

Quality

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

S ☐ — 2DM - 0 / ☐ ST

T - TRANSMITTER VIDEO
R - RECEIVER VIDEO
ST MULTIMODE OPTICAL CONNECTOR

HDMI Source 1 → HDMI Video 1 → ST-2DM-0 Transmitter → Fibers → SR-2DM-0 Receiver → HDMI Video 1 → HDTV 1

HDMI Source 2 → HDMI Video 2 → ST-2DM-0 Transmitter → Fibers → SR-2DM-0 Receiver → HDMI Video 2 → HDTV 2

OPTICAL:

Meridian Fiber Code	Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Fiber Standard	Estimated Maximum Transmission Distance (meters)
0	Multimode (VCSEL)	-3	-13	10	850	LC or ST	12	OM4 OM3 VSDN	300m 150m 30m

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