

**4K HDMI Optical Transceiver
with HDCP 1.2 Support using
Small Form Pluggable (SFP)
Optical Device****FEATURES**

- Supports 4K (UHD) HDMI Video up to 3840*2160@30Hz
- Supports 3D Video Signal
- Compliant with HDMI 1.4a with HDCP 1.2 Support
- No Settings or Adjustments Necessary, Automatically Recognizes HDCP & EDID
- Supports up to 300m Transmission Distance with OM3 multimode fiber
- Supports up to 2Km (standard), 60Km max. Transmission Distance with single-mode fiber
- CWDM wavelengths selection available by using appropriate SFP module
- Standard HDMI Connector
- Built-in ESD protection system;
- Simple to install, plug and play;
- Hot-Pluggable
- EMI/RFI Resistant
- Operating Case Temperature: 0~74°C

DESCRIPTION

The Meridian **MT/MR-1DM/1CP-SFP** is 4K HDMI optical transmitter and receiver is designed to send 1 channel of 1.4a compliant HDMI Video with embedded audio over two optical fibers, using the industry standard Small Form Pluggable (SFP) optical device.

The SFP modules give you the option for either single-mode, multimode or CWDM wavelength selections by simply plugging-in the appropriate SFP module.

HDCP 1.2 standard is automatically supported for the transmission of content-protected video.

The HDMI optical transceiver supports transmission of an uncompressed lossless HDMI 1.4a signal over OM3 multimode optical fiber at 850nm, for distances up to 300 meters or single-mode optical fiber 1310nm - up to 2km (standard) with maximum distance up to 60km.

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

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

CONFIGURATIONS

The MT/MR-1DM/1CP-SFP are available in small stand-alone modules for easy mounting on walls, shelves and other convenient flat surfaces.

MARKETS

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

SPECIFICATIONS:

Video

HDMI compliance	1.4a
HDCP compliance	v1.2
Max resolution	3840*2160@30Hz
Max Data Rate	10.2 Gb/s
Max Pixel Clock	340 MHz
Refresh Rate	120 Hz
Depth	Up to 48-bit
Bit-Error Rate	10 ⁻¹²
Impedance	100 Ohm
3D Support	Yes

Optical

Optical Fiber	Multimode or Single-mode fiber
Wavelength	MM - 850 nm, SM - 1310nm
Data Rate	10 Gb/s
Operating distance	MM - 300m, SM - 2Km (standard), 60Km (max)
Loss budget	12dB

Connectors (Ports)

Power	5VDC Power adapter socket
Video (HDMI IN/OUT)	19 Pins HDMI A Type Port
Optical (SFP)	SFP module - LC connector
RESET	System Reset button

Power

TX	4 Watts @ 5VDC
RX	4 Watts @ 5VDC

Indicators

D1	Power
D2	Tx - Sink / Rx - Optical In
D3	Optical Signal - ON: LOS / OFF: OK
D4	Source plug in

Physical

Dimensions	1.1"x 3.5" x 4"
	28 x 89 x 104mm
Weight (unit)	150 gms (0.33 lb.)

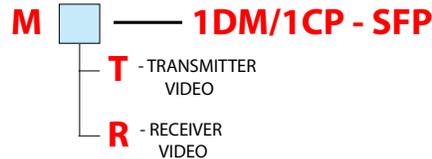
Environmental

Operating Temperature	0°C to +74°C
Storage Temperature	-20°C to +85°C
Relative Humidity	5 to 90% Non-condensing

Quality

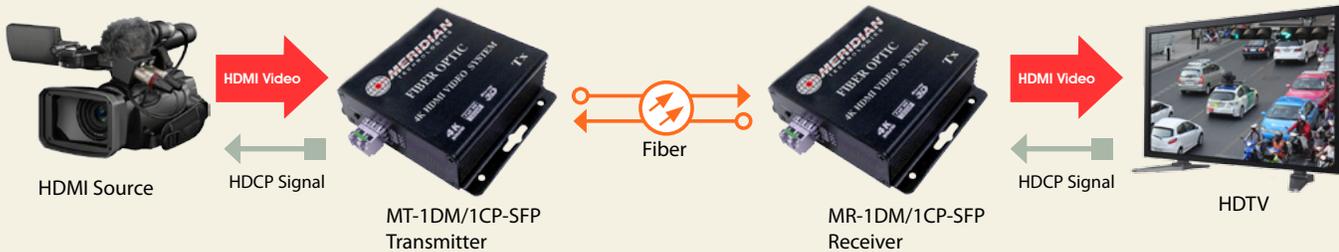
MTBF	>170,000 hours @ Ground Fix 35°C per MIL217F
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Part Numbers:



Ordering Info

Part Number	Description
MT/MR-1DM/1CP-SFP	4K (3840*2160/30P) HDMI Fiber Tx/Rx, SFP Port (Excl. SFP), including 1 transmitter & 1 receiver, used in pairs



SFP OPTIONS:

The SFP series products are available for both single-mode and multimode fiber applications and either one or two fiber versions.

Recommended optical speed for this product is 10 Gb/s.

For more specifications on a SFP optical devices go to **SFP data sheet** or visit:

WWW.MERIDIAN-TECH.COM -> PRODUCTS -> ACCESSORIES -> SFP OPTICAL DEVICES