

Stretch HDMI with One Optical Fiber



Description

The Optical HDMI extender, M1-203H-TR offers extremely long-distance extension of digital video and audio of HDMI 1.3 up to 1 km (3,280 feet).

It is an all-fiber extension product, no copper connection like CAT5 or 6e between transmitter and receiver, installed in one SC optical fiber for connection.

Optical technology makes the HDMI transmission stretch the performance beyond limitation of copper wire extension with various benefits of long distance, crystal-clear data, negligible RFI/EMI and elimination of costly distribution amplifiers unlike in analog extension.

The M1-203H-TR consists of a transmitter and receiver boxes, which are designed to multiplex and de-multiplex the HD video, Display Data Channel (DDC) and High Definition Contents Protection (HDCP) so as to be linked over only one optical fiber. Digital or analog audio is additionally supported for users' convenience. All ports are deployed on the back panel and only indicators on the front panel.

User can also install the system using M1-203H-TR connecting Opticis HDMI Distributors, Selectors and Matrices into Samsung, LG and SONY LCD TVs.

Key Features

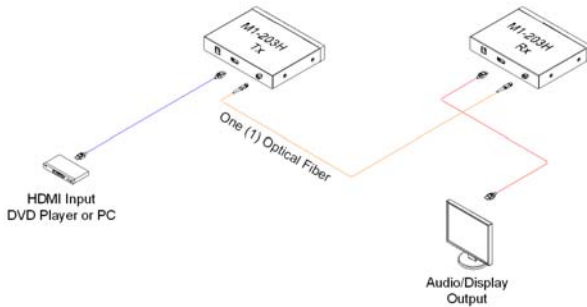
- Extends all HD resolution up to 1080p (1,920x 1,080) 60Hz up to 1 km (3,280 feet).
- Provides lossless and uncompressed image quality without frame dropping.
- Supports HDMI 1.3a up to 24 bits in color depth
- Complies with HDCP.
- Loading time : Less than 6sec.
- Includes two (2) +5V DC power adapters for the transmitter and receiver.
- Certifies FCC and CE standards for EMI/RFI emission.
- Supports 48KHz embedded audio signal in HDMI.
- Compatible with Opticis HDMI Distributors, Selectors and Matrices.

Applications

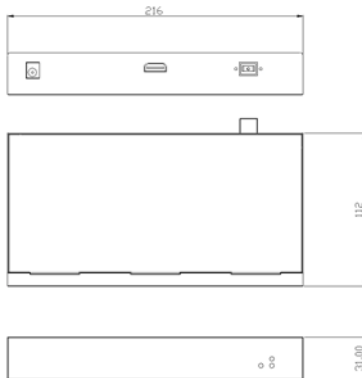
- Digital FPD, PDP and projector installation in conference rooms, auditoriums and for kiosk systems.
- Digital display system integration for medical, military, aerospace, factory automation, and traffic control platforms.
- LED signboards for large scale information display and stadiums.

One-fiber HDMI Extender (M1-203H-TR)

Optical Fiber Connection



Drawings (unit: mm)



Electrical and Optical Characteristics

Transmitter Specifications						
Parameters		Symbol	Min.	Typ.	Max.	Units
Power Supply	Supply Voltage	V _{CC}	4.5	5	5.5	V
	Supply Current	I _{TCC}	-	800	1500	mA
	Power Dissipation	P _{TX}	-	4	-	W
	Power Supply Rejection	PSR		50		mV _{p-p}
TMDS	Data Output Load	R _{LD}		50		Ω
	Graphic Supply Voltage	GV _{CC}	+ 3.1	+ 3.3	+ 3.5	V
	Single-Ended Input Swing Voltage	GV _{ISWING}	0.2	-	0.8	V
Optical Link	Output Optical Power	P _o	-8		-4	dBm
	Wavelength	λ		1310/ 1550		nm
	Extinction Ratio	Ext		6		dB
	Rising/Falling Time	T _{rise} /T _{fall}			120	ps
	Jitter in p-p value	T _{jitter}			100	ps
Receiver Specifications						
Parameters		Symbol	Min.	Typ.	Max.	Units
Power Supply	Supply Voltage	V _{CC}	4.5	5	5.5	V
	Supply Current	I _{RCC}	-	800	1500	mA
	Power Dissipation	P _{RX}	-	4	-	W
	Power Supply Rejection	PSR		50		mV _{p-p}
TMDS	Data Input Load	R _{LD}		50		Ω
	Graphic Supply Voltage	GV _{CC}	+ 3.1	+ 3.3	+ 3.5	V
	Single-Ended Output Swing Voltage	GV _{ISWING}	0.4	-	0.8	V
Optical Link	Receiving Optical Power	P _o	-12			dBm
	Receiving Wavelength	λ		1550/ 1310		nm
	Signal_Detect Good	SDg			-18	dBm
	Signal_Detect Fail	SDf	-23			dBm
	Link Power Budget	P _{bgt}		7		dB
	Total Jitter	TR _{jitter}		100	150	ps

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units
Ambient Operating Temp.	T _A	-10	25	+ 50	°C
Storage Temperature	T _s	-30		+85	°C
Storage Humidity	H _s	5		95	RH%

Headquarters

Opticis Co., Ltd.
 # 304, Byucksan Technopia, 434-6
 Sangdaewon-Dong, Chungwon-Ku,
 Sungnam City, Gyeonggi-Do, 462-716
 South Korea
 Tel : +82 (31) 737-8033~8
 Fax: +82 (31) 737-8079
www.opticis.com
tosales@opticis.com

North American Office

Opticis USA LLC
 649 Route 206
 Unit 9 Suite 307
 Hillsborough, NJ 08844 USA
 Tel : +1 (908) 837-9652
 Fax: +1 (908) 837-9078
cdkim@opticis.com