

## *Stretch DVI and Audio with Two Optical Fibers*



### **Description**

Optical DVI and stereo audio extender, M1-203D-TR offers extremely long distance extension of a high-quality, uncompressed data between a host video card and a display. It is an all-fiber extension product, no copper connection like CAT5 or 6e between transmitter and receiver, installed in dual LC for fiber connection. It offers extension up to 2,000 meters at WUXGA resolution (1900x1200) of 60Hz refresh rate with stereo audio.

It offers not only long distance but also various benefits like crystal-clear data, negligible RFI/EMI and elimination of costly distribution amplifiers unlike in analog extension. The digital video and stereo audio data are multiplexed and demultiplexed through CWDM optical module. It is specially designed for uses of both multimode and single mode fibers.

The EDID in a display can be read and restored by just plugging the transmitter to the display before installing. This self-EDID programming feature makes installation of M1-203D-TR much easier and more flexible at any variable resolution displays.

### **Key Features**

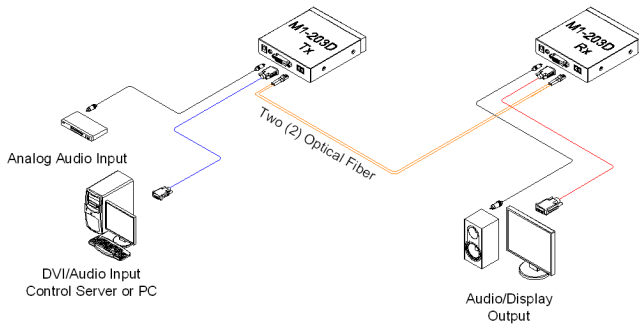
- Extends all VESA resolution up to WUXGA (1,920X1,200) 60Hz DVI data up to 2,000meters (4,920 feet).
- Applicable to both single and multi-mode fibers.
  - (1) Up to 2,000m with two LC single-mode fibers.
  - (2) Up to 500m with two LC multi-mode fibers.
- Offers self-EDID programming feature, detecting from a display and restoring to an EEPROM in the transmitter just by plugging to the display without any physical DDC connection.
- Supports analog stereo audio.
- Includes two (2) +12V DC power adapters for the transmitter and receiver.
- Certifies FCC and CE standards for EMI/RFI emission.

### **Applications**

- Digital display system integration for medical, military, aerospace, factory automation, and traffic control platforms.
- LED signboards for large scale information display and stadiums.
- Home Theatre Systems.

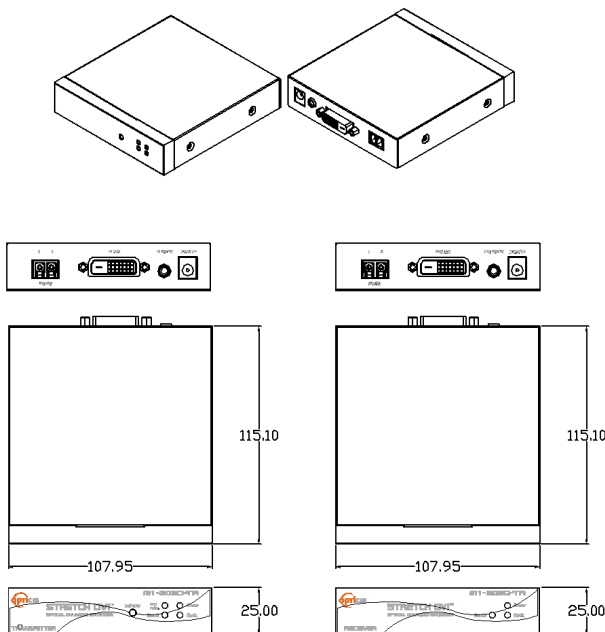
# Detachable DVI and Audio Extension Module (M1-203D-TR)

## Optical Fiber Connection



## Drawings

(Unit : mm)



## Electrical and Optical Characteristics

Transmitter Specifications						
Parameters		Symbol	Min.	Typ.	Max.	Units
Power Supply	Supply Voltage	V <sub>CC</sub>	11.4	12.0	12.6	V
	Supply Current	I <sub>TCC</sub>	460	540	600	mA
	Power Dissipation	P <sub>TX</sub>	5.3	6.5	7.6	W
	Power Supply Rejection	PSR		50		mV <sub>p-p</sub>
TMDS	Data Output Load	R <sub>LD</sub>		50		Ω
	Graphic Supply Voltage	GV <sub>CC</sub>	+ 3.1	+ 3.3	+ 3.5	V
	Single-Ended Input Swing Voltage	GV <sub>ISWING</sub>	0.4	-	0.6	V
Optical Link	Output Optical Power	P <sub>o</sub>	-11	-9	-7	dBm
	Wavelength	λ		1300/ 1550		nm
	Extinction Ratio	Ext	5			dB
	Rising/Falling Time	T <sub>rise</sub> /T <sub>fall</sub>			260	ps
	Jitter in p-p value	T <sub>Jitter</sub>			270	ps
Receiver Specifications						
Parameters		Symbol	Min.	Typ.	Max.	Units
Power Supply	Supply Voltage	V <sub>CC</sub>	11.4	12.0	12.6	V
	Supply Current	I <sub>RCC</sub>	400	480	540	mA
	Power Dissipation	P <sub>RX</sub>	4.6	5.8	6.8	W
	Power Supply Rejection	PSR		50		mV <sub>p-p</sub>
TMDS	Data Input Load	R <sub>LD</sub>		50		Ω
	Graphic Supply Voltage	GV <sub>CC</sub>	+ 3.1	+ 3.3	+ 3.5	V
	Single-Ended Output Swing Voltage	GV <sub>ISWING</sub>	0.2	-	0.4	V
Optical Link	Receiving Optical Power	P <sub>o</sub>	-19			dBm
	Signal Detect Good	SDg			-17	dBm
	Signal Detect Fail	SDf	-25			dBm
	Link Power Budget	P <sub>bgt</sub>	8			dB
	Total Jitter	TR <sub>Jitter</sub>			309	ps

## Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units
Ambient Operating Temp.	T <sub>A</sub>	0	25	+ 50	°C
Storage Temperature	T <sub>S</sub>	-10		+85	°C
Storage Humidity	H <sub>S</sub>	5		85	RH%

### Headquarters

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