



## ***Two (2) Fibers Detachable DVI Extension Module, M1-201DA-TR***

### **Description**

The Digital Visual Interface is a high-quality, uncompressed data link between a host processor video card and a display peripheral. Optical technology for this transmission stretches the performance beyond the limitations of copper wire with longer length, data security, negligible RFI/EMI and the elimination of costly analog distribution systems.

The EDID in a display can be read and restored by just plugging it to the display. This self EDID programming feature makes the installation of M1-201DA-TR easier and more flexible with any resolutions in the display systems.

The four (4) optical data, Red, Green, Blue and clock are multiplexed and de-multiplexed through CWDM optical module. Graphic data can be extended up to 500meters (1,640feet) at 2K resolution over two (2) LC multi-mode fibers or 1,500meters (4,920ft) at WUXGA resolution (1900x1200) of 60Hz vertical refresh rate over two (2) LC single-mode fibers.

An external power adapter is required for the receiver module, while most video cards can provide +5V DC power for the transmitter module. The transmitter and receiver modules are clearly labeled to prevent reverse installation of the modules.

### **Specification**

- Extends all VESA resolution up to 2K resolution or WUXGA (1,920x1,200) at 60Hz DVI data.
- Applicable to both single and multi-mode fibers.
  - Up to 1,500m with two LC single-mode fibers.
  - 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.
- The modules are compact enough to directly plug to graphic sources and displays by adopting DVI-plugs.
- Includes two (2) +5V DC power adapters for the transmitter and receiver.
- Data security with negligible RFI/EMI emissions and loss of video quality due to no copper conductor present.
- Certifications: CE / FCC, Class 1 Laser Eye Safety

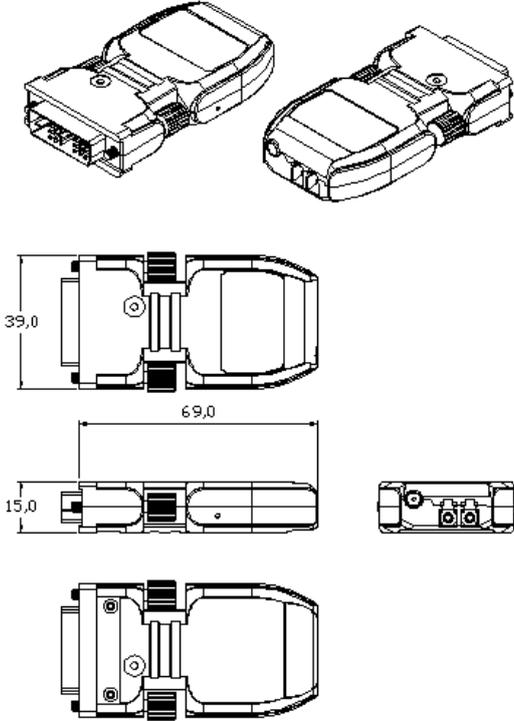
### **Applications**

- Conference rooms/ auditoriums / Stadiums
- Medical Imaging System
- Military / aerospace
- Factory automation / traffic control platforms.

# Two (2) Fibers Detachable DVI Extension Module, M1-201DA-TR

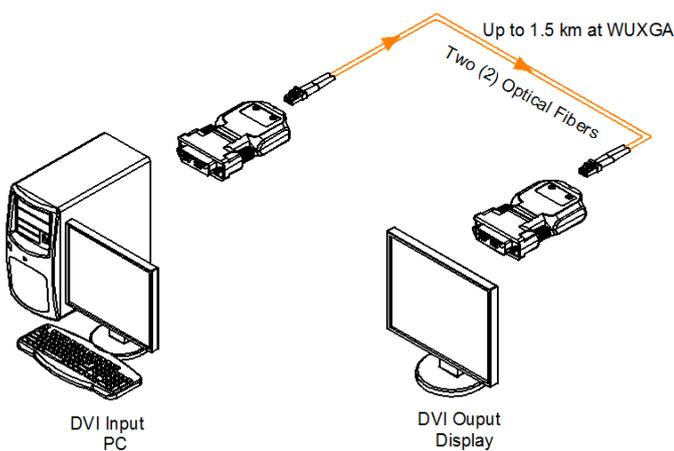
## Dimension

39 x 69 x 15 mm (WDH)



Note: The transmitter, M1-201DA-Tx and the receiver, M1-201DA-Rx have the same mechanical dimensions.

## Connection Diagram



## Electrical Power Supply Characteristics

Transmitter Specifications						
Parameters		Symbol	Min.	Typ.	Max.	Units
Power Supply	Supply Voltage	V <sub>CC</sub>	4.5	5.0	5.5	V
	Supply Current	I <sub>CC</sub>	350	400	570	mA
	Power Dissipation	P <sub>TX</sub>	1.75	2.0	2.85	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>	-10.0		-3.0	dBm
	Wavelength	λ <sub>c1</sub>	1260	1310	1360	nm
		λ <sub>c2</sub>	1480	1550	1580	
	Extinction Ratio	Ext	4	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>	4.5	5.0	5.5	V
	Supply Current	I <sub>CC</sub>	350	420	570	mA
	Power Dissipation	P <sub>RX</sub>	1.75	2.1	2.85	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>	-20		-3.6	dBm
	Receiving Wavelength	λ <sub>c1</sub>	1260	1310	1360	nm
		λ <sub>c2</sub>	1480	1550	1580	
	Signal Detect Good	SDg			-17	dBm
	Signal Detect Fail	SDf	-25			dBm
	Link Power Budget	P <sub>bgt</sub>	7	10		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>	-30		+70	°C
Storage Humidity	H <sub>s</sub>	10		95	RH%



**Opticis Co., Ltd.**  
 3F, 305, Sanseong-daero Sujeong-gu  
 Seongnam-si, Gyeonggi-do, 13354 South Korea  
 Tel: +82 (31) 719-8033  
 Fax: +82 (31) 719-8032

tosales@opticis.com



All contents are subject to be changed without prior notice.