

M1-100A Express DVI Graphic Extension Cable

Stretch your Digital Visual Interface Experience!



Description

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

The M1-100A **Express** DVI Graphic Extension Cable consists of a transmitter and a receiver, connected by a rugged sheath containing glass optical fibers, with male DVI-D connectors at each end. All modules are designed and manufactured by Opticis with 850nm VCSEL and PIN-PD arrays from its in-house fabrication process.

The **Express** M1-100A transmits Red, Green, Blue, and Clock TMDS graphic data over fiber and does DDC (Digital Display Channel) interface by programming an EDID (Extended Display Identification Data) into an EEPROM inserted in the transmitter module of M1-100A instead of directly reading it from your connected display. Programming the EDID would have been done so to match to your display before shipping.

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

Features

- ◆ Supports all VESA resolutions up to WUXGA (1,920x1,200), at 60Hz refresh rate with 1 pixel/clock mode. Maximum Single-Link DVI rate of 165 Mpixels/sec.
- ◆ Embedded glass optical fiber-only distribution cable with 4 strands Multimode Glass fibers only for the TMDS video interface with perfect electrical isolation.
- ◆ Enables graphic cards recognize the monitor EDID without any physical connection for DDC. That is, enabled by virtual DDC. (an EDID into EEPROM inserted in the transmitter)
- ◆ Extends up to 500 meters (1,640 feet).
- ◆ Both modules are capable of receiving +5V externally if not available through the connector interface. If both provided, power contention circuitry will prevent voltage conflict.
- ◆ No software to install - Plug and Play on the PC and Apple systems designated for EDID programming.
- ◆ Data security with negligible RFI/EMI emissions and loss of video quality due to no copper conductors present.

Applications

- ◆ Ideal for medical, military, aerospace, factory automation and traffic control system integrations.
- ◆ Digital FPD, PDP and projector installation in conference rooms, auditoriums and kiosk systems.
- ◆ LED signboards for large scale information displays.
- ◆ Professional broadcast studios.

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M1-100A Express Technical Highlights

The **M1-100A** is designed to do DDC interface by programming an EDID into an EEPROM inserted in the transmitter module of M1-100A without any physical connection for DDC.

Custom Lengths: 10m, 20m, 30m, 50m, 70m and 100m are standard stock lengths. Other lengths up to 500m can be ordered from the factory.

Compliance with International Standards

The **Express** meets the requirements of North American FCC and European CE standards for RFI/EMI emissions, material ratings, and laser safety. The cable assembly is RoHS compliant. Consult the product specification for further details.

Recommended Operating Conditions

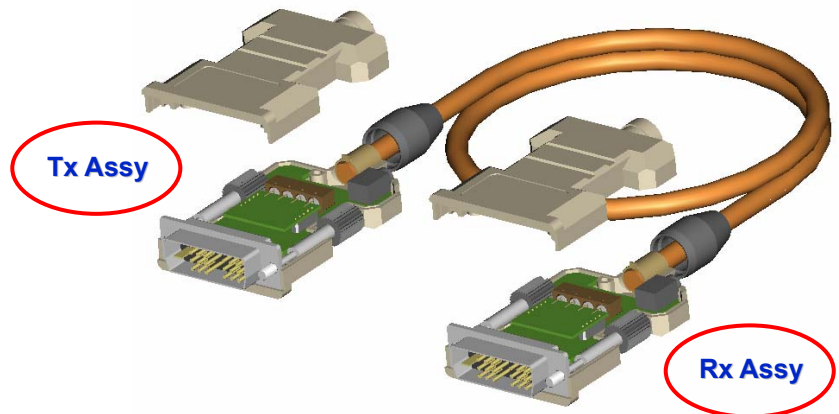
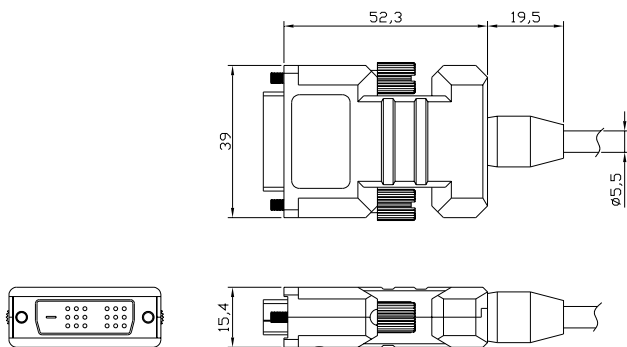
Parameter	Symbol	Min	Typ	Max	Units
Ambient Operating Temperature	T_A	0	25	+ 50	°C
Storage Temperature	T_s	-30		+ 70	°C
Storage Humidity	H_s	10		85	RH%

Electrical Power Supply Characteristics

($T_A = 0\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Units
Supply Voltage	V_{CC}	4.5	5	5.5	V
Supply Current	TX	I_{TCC}	-	180	200 mA
	RX	I_{RCC}	-	150	170 mA
Power Dissipation	TX	P_{TX}		0.9	1.1 W
	RX	P_{RX}	-	0.9	1.1 W

Tx and Rx Connector Drawing
Dimension [mm]



M1-100A Cable Ordering Information

Model number: M1-100A-xxx, where xxx = length in meters. Standard lengths are 10, 20, 30, 50, 70 and 100

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Due to ongoing development activity, Opticis Co. reserves the right to update specifications without notice.

Version 1.00 December 2006