M1-1P0 DVI - HDCP Extension Cable

Stretch your Digital Visual Interface Experience

Description

The Digital Visual Interface is a low cost, high quality graphics interface between a host processor video card and a display panel. 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 M1-1P0 consists of a transmitter and a receiver, connected by bundled H-PCF (Hard-Polymer Clad Fiber) jacketed fibers with male DVI-D connectors at each end. The Transmitter and Receiver connectors respectively have Opticis designed and manufactured 850nm VCSEL and PIN-PD arrays.

The M1-1P0 product offers DDC/HDCP interconnection and power management over copper wire with the R,G,B,Clk TMDS graphic data over four H-PCF fibers. The cable can be any length up to 100m (326feet).

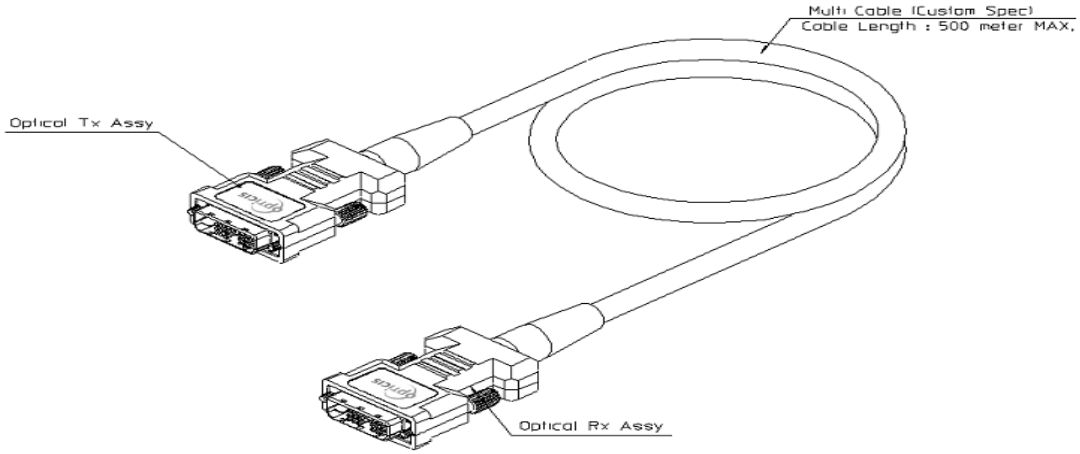
No external power is required as most video cards provide at least 500mA of +5V voltage to the cable.

Features

- Supports all VESA resolutions up to WUXGA (1920x1200), at 60Hz refresh rate with 1 pixel/clock mode.
- Hybrid cable with four H-PCF fibers cables for the TMDS video interface and embedded copper wires to support the DDC2B/HDCP, Hot Plug Detect and power management.
- Extends up to 100 meters (326 feet).
- Compact end connector design easily allows direct connect to the host video card and display peripheral.
- No software to install; Plug and Play.
- Data security with negligible RFI/EMI emissions.

Applications

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



Optical DVI Cable (M1-1P0)

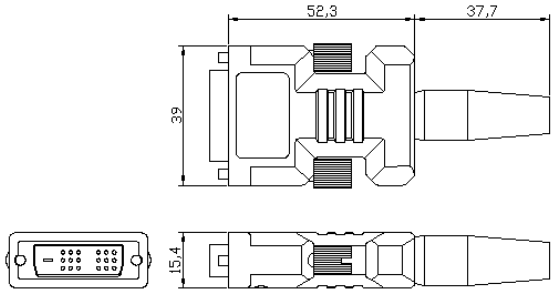
Factory Options for the H-PCF Cable

M1-1P0E uses an external AC/DC adapter to enable the supply of +5V to the transmitter and receiver modules where the +5V host power is judged to be inadequate or non-existent. If the video card can provide 500mA of +5V to pin 14, this option is unnecessary.

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

Drawing

Dimension [mm]



Compliance with International Standards

M1-1P0 meets the requirements of North American FCC and European CE standards for RFI/EMI emissions, material ratings, and laser safety. Consult the product specification for further details.

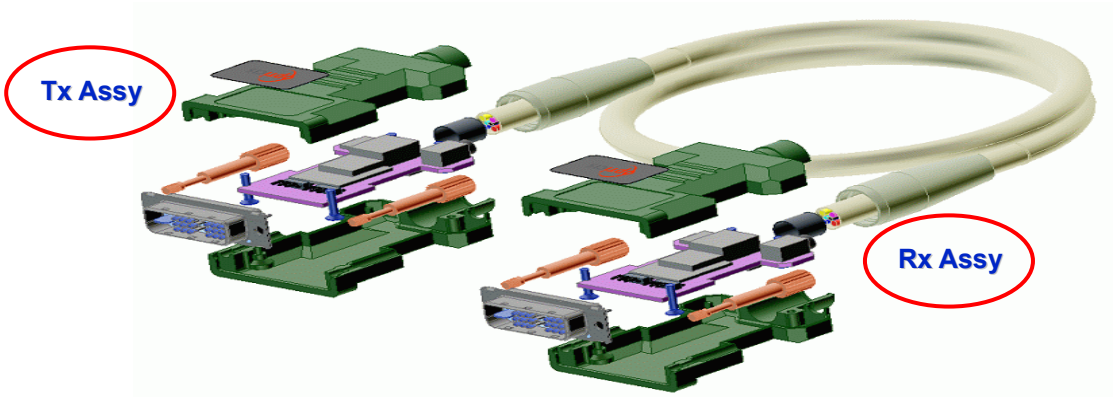
Recommended Operating Conditions

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 °C to +50 °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}	-	170	200	mA
	RX	I_{RCC}	-	130	150	mA
Power Dissipation	TX	P_{TX}		0.85	1.1	W
	RX	P_{RX}	-	0.75	0.825	W



Ordering Information

Model number: M1-1P0-xxx, where xxx = length in meters. Standard lengths are 10, 20, 30 and 50 meters.

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