DVI Extender via 4 Fiber Channel LC Duplex Connector

Self-EDID Programming and Extends DVI Connection up to 500 Meters

DESCRIPTION

DVI (Digital Visual Interface) recently became a popular interface between monitor and PC. Electrical signal limits the transmission length and quality. DVI extender helps DVI to transmit far away via optical fiber. The self-EDID programming feature is also built-in to make the field installation easier and more flexible.

FEATURES

- Long distance image transmission
- High resolution and quality
- No RF interference by optical fiber
- Class 1 laser product complies with EN 60825-1
- CE/FCC certifications for EMI/RFI

APPLICATIONS

- Remote monitor for traffic, industrial and military control
- LCD, projector and plasma display connection
- Large video wall system
- Multi-monitors for advertising

APPLICATION NOTE
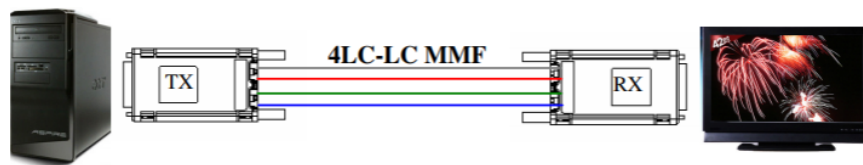
ORDERING INFORMATION

PART NUMBER	PLUG FOR AC ADAPTER	Package includes:
DVI-TXRX-4LC-500	US Plug	• **DVI-TX-4LC-50x** (TX module) x 1
DVI-TXRX-4LC-501	EU Plug	• **DVI-RX-4LC-50x** (RX module) x 1
DVI-TXRX-4LC-502	BS Plug	• 5V adapter x 2
DVI-TXRX-4LC-503	AU Plug	Optional: DVI cable, EU/BS/AU Plug converter of 5V adapter

** This product does not include optical fibers.

SPECIFICATION

PARAMETER	SPECIFICATION	NOTE
Max transmission distance	500m	50/125 um multimode MPO fiber
Max resolution	1920 x 1200 (16:10) 1600 x 1200 (4:3) 1920 x 1080p (16:9)	
EDID support	Self-EDID programming	
HDCP compliant	Not available	
Operating voltage	DC 5V	
Supply current	TX module: 180mA; RX module: 180mA	
Optical connector	4LC connector	
Recommended fiber	50/125 um multimode fiber	Use of 62.5/125 um multimode fiber may reduce maximum transmission distance.
Operating temperature	0ºC to 70ºC	
Storage temperature	-20ºC to 85ºC	
Dimensions	TX unit: 68.7 x 39.3 x 15 RX unit: 68.7 x 39.3 x 15	L x W x H (mm)
Weight	TX unit: 96 g; RX unit: 96 g	

DEFAULT EDID RESOLUTION SETTING

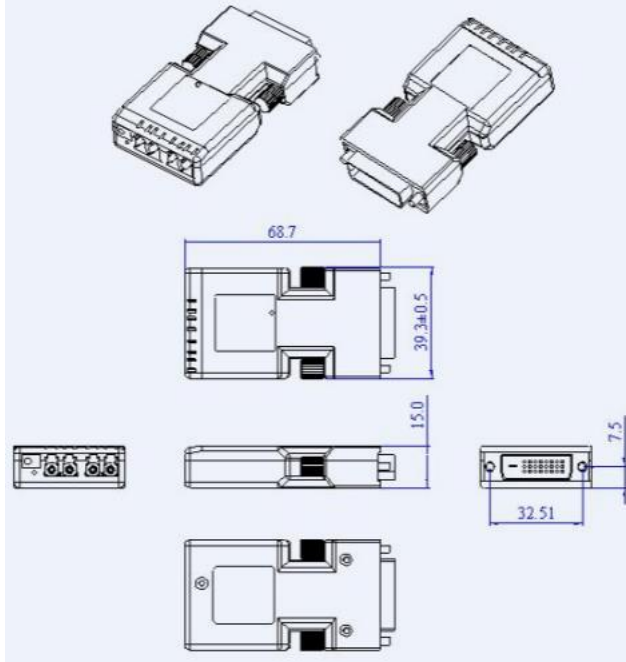| TIMING ITEMS	RESOLUTION
Established Timings:	720 x 400 @70Hz; 640 x 480 @60Hz; 640 x 480 @72Hz 640 x 480 @75Hz; 800 x 600 @60Hz; 800 x 600 @72Hz 800 x 600 @75Hz; 1024 x 768 @60Hz; 1024 x 768 @70Hz 1024 x 768 @75Hz; 1280 x 1024 @75Hz; 1152 x 870 @60Hz
Standard Timings: (4:3,5:4,16:9,16:10 rate)	1280 x 1024 @60Hz; 1280 x 960 @60Hz; 1152 x 864 @75Hz 1600 x 1200 @60Hz; 1280 x 720 @60Hz; 1440 x 900 @60Hz 1680 x 1050@60Hz
Detailed Timings:	1360 x 768@60Hz; 1920 x 1080@60Hz; 1920 x 1200@60Hz

ADAPTER SPECIFICATION

PARAMETER	SPECIFICATION	NOTE
Input	100-240VAC, 50-60Hz	
Output	DC 5V, 2A	
DC Jack	Inside 5V / Outside ground	

US Plug   EU Plug   BS Plug   AU Plug

REQUIREMENTS

- DVI PC or DVI source (Transmitter)
- DVI monitor or projector (Receiver)
- 100-240 VAC, 50-60 Hz, 0.2A

DIMENSIONS (unit: mm)
All dimensions are all in ±0.3mm tolerance if not specified.

DVI-TX-4LC-50x (Transmitter)	DVI-RX-4LC-50x (Receiver)
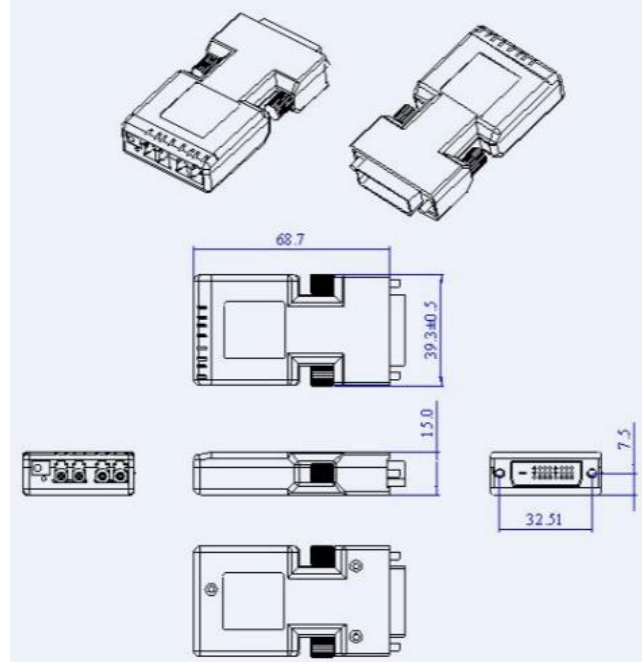
SAFETY REGULATION

CE and FCC approved.

SELF-EDID PROGRAMMING FUNCTION
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 easier and more flexible at any variable resolution display systems. If the display resolution cannot meet default EDID stored in transmitter module, user can just follow "Self-EDID Programming Procedures" to perform this function.

INSTALLATION

Step 1: Unpack the box and check the contents. You should have the following items:

- TX module × 1
- RX module × 1
- AC/DC Adaptor × 2

Step 2: Plug the transmitter to the DVI source such as PC.
Note: You do not need to adopt the AC/DC adapter. PC source provides enough power to supply the transmitter module. Any additional intermediate cable using between transmitter and DVI source might bring undesirable performance degradation.

Step 3: Plug the 5V power adapter to the power jack of the receiver. Ensure that the LED beside the power jack is turned on same as Step 2.

Step 4: Plug one end of the 4LC optical cable into the transmitter and plug in the other end into the receiver (See Figure 1).

Figure 1 – Installation of Optical DVI Extender
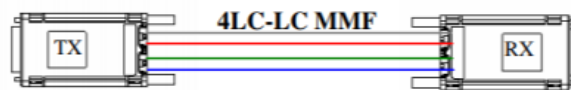
Note: The maximum transmitting distance in multimode fiber is 500m.

Step 5: Plug the receiver to the display.

Step 6: Then power on the display and you will see the video pictures. If you cannot get the proper resolution on the display, please refer to "Self-EDID Programming Procedure" and repeat the installation procedure again.

Note: You can replace any DVI cable by following the Step 1 to Step 6 while all powers of PC and display are ON.

SELF-EDID PROGRAMMING PROCEDURE

EDID contains resolution and timing information which a display can support. The graphic source equipment generally required to read the EDID from the sink equipment (display). there is a Default EDID Setting before shipment. Please refer to the "Default EDID resolution setting" table. This setting stores in the transmitter unit to initiate as a display. Sometimes this default EDID might not contain the resolutions which the display can support and result in an abnormal picture. To solve this problem, a supported Self-EDID programming function can copy the EDID information from the display. Please follow the steps below to copy the EDID of the display into the transmitter unit.

Step 1: Power on the display.

Step 2: Plug 5V DC power adapter into the transmitter.

Step 3: Connect the transmitter to the display. (Not PC)

Step 4: Push the self-EDID button with a narrow pin. The green LED will be blinking to indicate the proceeding of copying EDID information. When this LED stopped blinking, the EDID copying procedure is done.

Step 5: Disconnect the transmitter from the display. Follow the installation procedure from step 2 to 7 again to get the desired resolution and timing setting.

RECOVERY OF DEFAULT EDID SETTING

Step 1: Plug 5V DC power adapter into the transmitter and disable all DVI connections (PC and monitor).

Step 2: Push the self-EDID button with a narrow pin. The green LED will be blinking to indicate the recovery of EDID information. When this LED stopped blinking, the recovery procedure is done. Now, the EDID in transmitter has been recovered to the default EDID setting.

Note: The specifications subject to change without notice.

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