

Troubleshooting

The display shows only black screen.

- Ensure that all plugs and jacks used by external power supplies are firmly connected. Ensure that the Power and Status LED are ON.
- Ensure that the DVI ports are firmly plugged into the PC and display.
- Ensure that the transmitter and receiver modules plugged correctly to the PC and display, respectively.
- Check if the PC and display are powered on and properly booted.
- Reset the system by de-plugging and re-plugging the transmitter DVI port or receiver DVI port, or by de-plugging and re-plugging the power plugs of transmitter and receiver modules.
- Re-boot up the system while connecting the optical DVI extension module.

Screen is distorted or displays noises.

- Check if the graphic resolution is properly set. Go to the display properties of Windows and tap the settings.
- Ensure that the resolution is set less than or equal to WUXGA (1920x1200) at 60Hz refresh ratio.
- Reset the system. Disconnect and reconnect the optical DVI cables or 5V power adapters.

Maintenance

No special maintenance is required for the optical DVI module and power adapters. Ensure that the DVI modules and power adapters are stored or used in a benign environment free from liquid or dirt contamination.

There are no user serviceable parts. Refer all service and repair issues to Evertz.

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DVI Extender User Manual

For the following kits:

DVI-EXT-PKG3-SC

(Kit includes DVI-EXTND-SC Transmitter, DVI-EXTND-SC Receiver and two DVI-EXT-PKG3-SC-PS North American Power Supplies)

DVI-EXT-PKG3-SC-EU

(Kit includes DVI-EXTND-SC Transmitter, DVI-EXTND-SC Receiver and two DVI-EXT-PKG3-SC-PS-E European Power Supplies)

DVI-EXT-PKG3-SC-UK

(Kit includes DVI-EXTND-SC Transmitter, DVI-EXTND-SC Receiver and two DVI-EXT-PKG3-SC-PS-U United Kingdom Power Supplies)

Installation

Important: Please use the installation procedure below. Improper or no operation may result if the start-up sequence is not correctly followed.

Step 1 Carefully unpack the contents of the package.

Step 2 Plug the 5V power adapters to the power jack of the transmitter and receiver. Ensure Power LED is ON (Green) and Status LED is blinking slowly (Green).

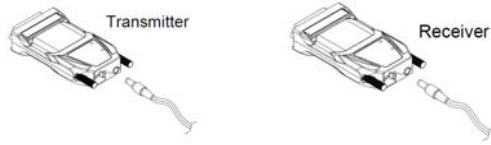


Figure 2 – Connection of power adapter to the transmitter and receiver

Step 3 Check if the maximum resolution of the display is UXGA (1600x1200). If higher, please follow the **Self-EDID Programming Procedure** on page 1-3.

Step 4 Connect SC optical fiber between transmitter and receiver as in Fig. 3.

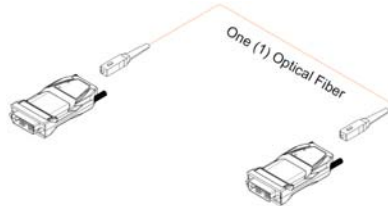


Figure 3 – Connection of optical fiber

Note: Both single-mode or multi-mode fibers can be used with the DVI-EXTND-SC. The maximum extension length with single-mode fiber is 1,000 meters and 500 meters with multi-mode.

Step 5 Plug the transmitter to the DVI receptacle of the DVI source such as PC and the receiver to the DVI receptacle of the display.

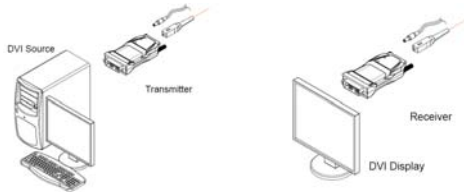


Figure 4 – Connection of the transmitter to the DVI source and receiver to the display

Recommendation: Do NOT use any intermediate cable or adapter between the TX and RX units and the source and display, respectively, to avoid any undesirable performance degradation.

Step 6 Turn the PC and the display power ON. And ensure that the Status LED in transmitter and receiver are turned on.

1-2 Installation

Self-EDID Programming Procedure

The graphic source equipment generally requires display information (EDID). It contains resolution and timing information of the display.

DVI-EXTND-SC supports Self-EDID programming. It is a procedure that reads the EDID from the display and stores it in the EEPROM of the transmitter. You have to do Self-EDID programming if the maximum resolution of the user's display is not UXGA (1600x1200). Follow the steps below to do it correctly.

Note1: If you know that EDID is not required by the user's DVI source, Self-EDID programming is not necessary.

Note2: The default EDID is factory programmed to the VESA standard of UXGA (1600x1200), 60Hz.

Step 1 Power on the display.

Step 2 Plug the 5V power adapter to the power jack of the DVI-EXTND-SC transmitter. Ensure the Power LED ON and Status LED are blinking slowly.

Step 3 Push the EDID PRGM button of the transmitter with a narrow pin. The status LED will turn off.

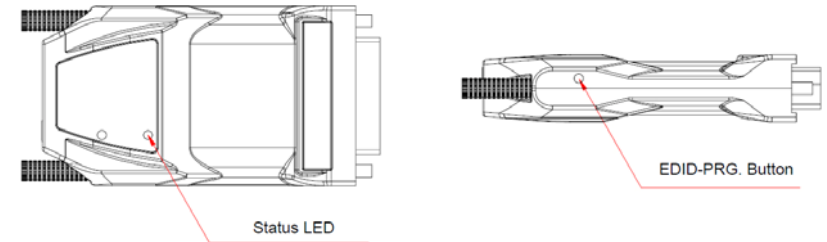


Figure 5 – Position of EDID-PRGM button and Status LED

Step 4 Connect the transmitter to the display, not to the PC.

The status LED will begin to blink rapidly.

The TX is reading the EDID from the display and storing it in the EEPROM.

After 7~8 sec, the status LED will blink slowly and it indicates completion of the procedure.

Step 5 Disconnect the transmitter from the display.

1-3 Self-EDID Programming Procedure

Product Specifications

DVI-EXTND-SC Optical DVI Extension Modules

- **Compliance with DVI standard:** Supports DVI1.0, fully implemented by fiber-optic communication and DDC2B by virtual DDC.

- **Extension limit:**

Fiber Type	Extension Length at WUXGA (1920x1200) at 60Hz refresh rate
Multi-mode Fiber	500 meters (1,640 ft)
Single-mode Fiber	1,000 meters (3,280 ft)

- **Graphic transmission bandwidth:** Supports up to WUXGA, 60Hz, or 1.65Gbps bandwidth per graphic channel.
- **Supporting resolution (Based on DVI input)**
HDTV: 480p, 576p, 720p, 1080p
VESA: VGA, SVGA, XGA, WXGA, SXGA, SXGA+, WXGA+, UXGA, WSXGA+, WUXGA
- **Fiber-optic connection:** The transmitter and receiver modules of DVI-EXTND-SC have one (1) SC receptacle to be connected with one (1) SC simplex single-mode or multi-mode fiber, having 9(8)/125µm or 62.5(50)/125µm core.
- **DDC connection:** Virtual DDC by Self-EDID programming.
- **Mechanical specifications of transmitter and receiver modules**
 - **Dimensions:** 39mm x 14.6mm x 68mm (W/H/D)
- **Environmental Specifications**
 - Operating temperature: 0°C to 50°C
 - Storage temperature: - 10°C to 85°C
 - Humidity: 5% to 85%

AC/DC Power Adapter

- **Power Input:** AC 100-240V, 50/60Hz 0.1A
- **Power Output:** +5 V, 2A SMPS DC-power Adapter
- **Cord DC Jack:** Core is 5 V and outer is GND.

1-4 Product Specifications

Welcome!

This manual contains information that will assist you in installing and operating the *DVI-EXTND-SC* Optical DVI (Digital Visual Interface) Extension Module.

Product Description

The DVI-EXTND-SC optical DVI module transmits 4 signals, Red, Green, Blue and clock optically over up to 1000 meters (3280ft) over one (1) SC single-mode fiber or 500 meters (1640ft) over one (1) multi-mode fiber at WUXGA (1920x1200), 60Hz vertical refresh rate. The EDID (Extended Display Identification Data) can be read and restored by just plugging the transmitter to the display once. This **Self-EDID programming** makes the installation of DVI-EXTND-SC easy and flexible with any variable resolution display systems.

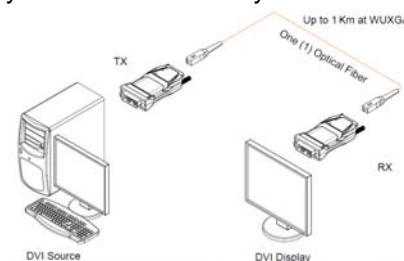


Figure 1 – Connection Diagram of Optical DVI Extension Module

System Requirements for Setup

- **Hardware requirements**
 - You must have a DVI graphic controller or card having a DVI port in your PC, SUN or Mac systems. It should support the maximum graphic resolution feature of displays to be connected.
 - No special requirements for memory size, CPU speed and chipsets, if you have already properly installed your DVI graphic controllers or cards.
- **Software requirements**
 - No special restrictions, if you have already properly installed your DVI graphic controller in your video source operating system.

AC/DC Power Adapter Technical Advisory

The transmitter (TX) module of DVI-EXTND-SC is designed with a power protection circuit to avoid conflict between the external AC/DC power adapter and your DVI source power supply present on pin #14.

We strongly recommend using external AC/DC adapter for Transmitter (TX) for stable power supply. Receiver (RX) power should be supplied by AC/DC adapter due to no internal power supply from most displays.

1-1 Welcome, Product Description, System Requirements for Setup

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Package Contents

- **DVI-EXTND-SC Optical DVI Extension Module:** One (1) pair
- **AC/DC power adapter:** Two (2) units of +5V, 2A
- **User's Manual**

Dispose of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

UL/EN Statement

This equipment has been tested and found to comply with the limits for medical devices in UL/EN 60601-1 and FCC/CE. These limits are designed to provide reasonable protection against harmful interference in a typical medical installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between the equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer or field service technician for help.
- Type of protection against electric shock: Class I equipment
- Degree of protection against electric shock: Not classified - no applicable parts
- Classification according to the degree of protection against ingress of water as detailed in the current edition of IEC 529: IPX0, ordinary equipment
- This equipment is not suitable for use in the presence of flammable anesthetics or oxygen
- Mode of operation: continuous operation

Certification of Eye Safety

This laser product inside is implemented by using a 1310/1550nm optical module which is certified by UL/EN 60601-1 and classified Class1 LASER eye safety.

