

Gefen

DVI RS-232 Over Fiber

EXT-DVI-FO-141

User Manual



www.gefen.com

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Notice

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INTRODUCTION

Congratulations on your purchase of the DVI RS-232 over Fiber. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

The Gefen DVI RS-232 over Fiber

The Gefen DVI RS232 over Fiber is a perfect solution for extending and managing control systems, touchscreen or digital signage applications at great distances. The DVI RS232 sends DVI, RS232, and IR signals up to 1000 feet using a single CAT5 and single SC fiber. RS232 and IR signals are transmitted over a single CAT5 cable while the DVI signal is transmitted over a single SC fiber.

How It Works

The DVI RS232 over fiber system consists of a Sender and a Receiver unit. The Sender connects to the computer's DVI-compliant video card output, and RS-232 port. The DVI RS232 over fiber Receiver connects to the remote display and RS232 and IR devices. One strand of SC fiber optic cable and a CAT5 cable connects the Sender and Receiver together.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE DVI RS-232 OVER FIBER

- Use one SC terminated multi-mode fiber optic cable and one industry standard CAT-5, CAT-5e or CAT-6 cables to operate the DVI RS-232 over Fiber. Gefen recommends CAT-6 cabling for maximum performance.
- For 1080p video, maximum extension is 1000 feet (330 meters).
- IR repeater functionality is only from the receiving unit to the sending unit. IR data cannot be transmitted from the sending unit to the receiving unit.

FEATURES

Features

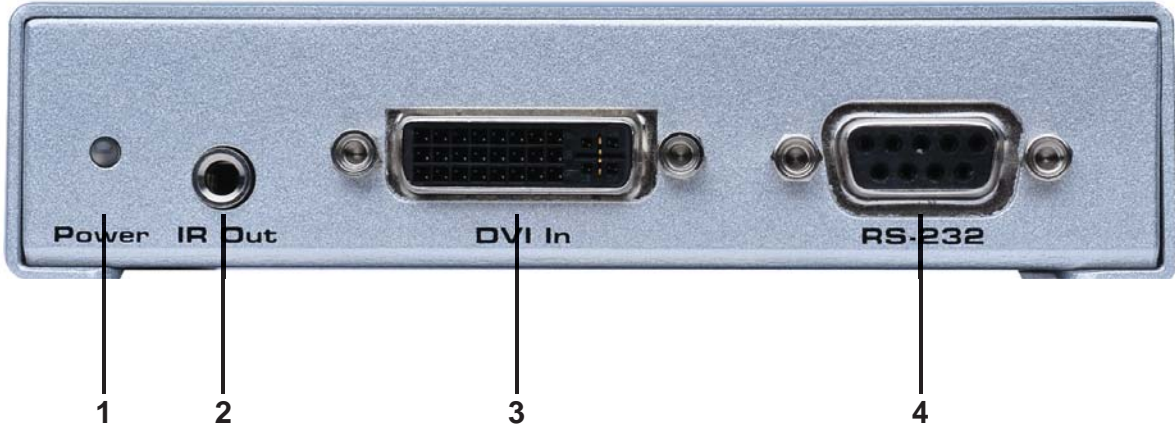
- Extends any DVI and RS-232 compliant device up to 1000 feet from the computer
- Perfect for digital signage applications
- Video is transmitted digitally over fiber optic cable for zero signal loss
- Supports resolutions up to 1080p, 2K, and 1920 x 1200
- This device is HDCP Compliant.
- Supports DDWG standard for DVI-compliant monitors

Package Includes

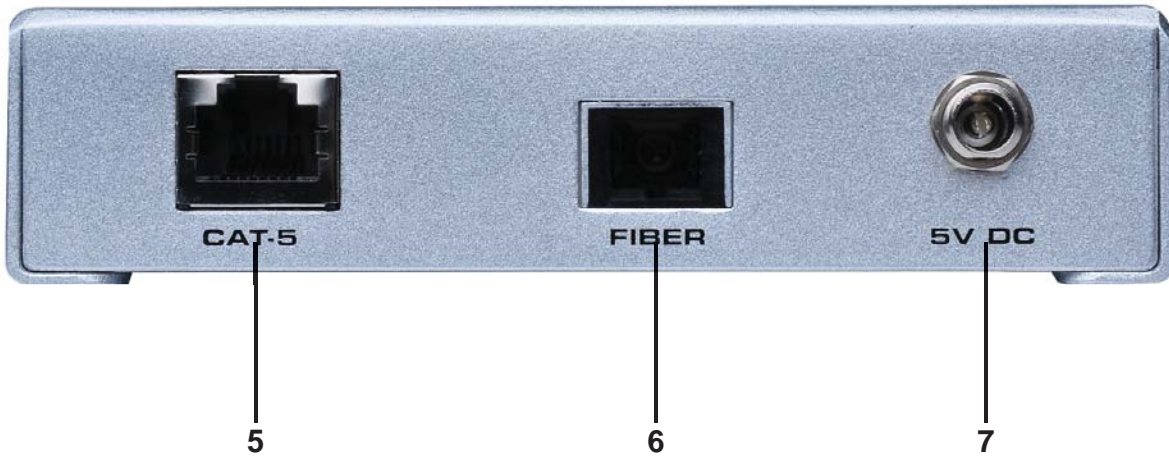
- (1) DVI RS232 Sender
- (1) DVI RS232 Receiver
- (1) 6 ft. DVI Cable (M-M)
- (1) 6 ft. RS232 Cable (M-F)
- (2) 5V DC Power Supply
- (1) User's Manual

SENDER PANEL LAYOUT

Front Panel



Back Panel



SENDER PANEL DESCRIPTIONS

1 LED Power Indicator

This LED will become active once the included 5V DC power supply is properly connected between the sender and an open wall power socket.

2 IR Out (Blaster)

An optional IR transmitter/blaster (EXT-2IREMIT) connects to this output port. The IR blaster's IR emitter will need to be placed on or near the IR receiver of a device for proper relaying of commands from the receiver.

3 DVI-D Input

This receptacle will accept a DVI Single-Link source device.

4 RS-232 Serial Communications Input

This port is capable of 2-way serial communication between RS-232 devices connected to the sender and receiver. This port can be connected to a computer's serial communications port for interaction with a RS-232 serial communications device connected to the receiver.

5 RJ-45 Link Connector

This port is used to connect the sending and receiving units together for data traffic. Use a CAT-5, CAT-5e or CAT-6 cable. When field terminating cable please adhere to the TIA/EIA-568-B specification (page 9).

6 Fiber Optic Connector (Multi-Mode SC Type)

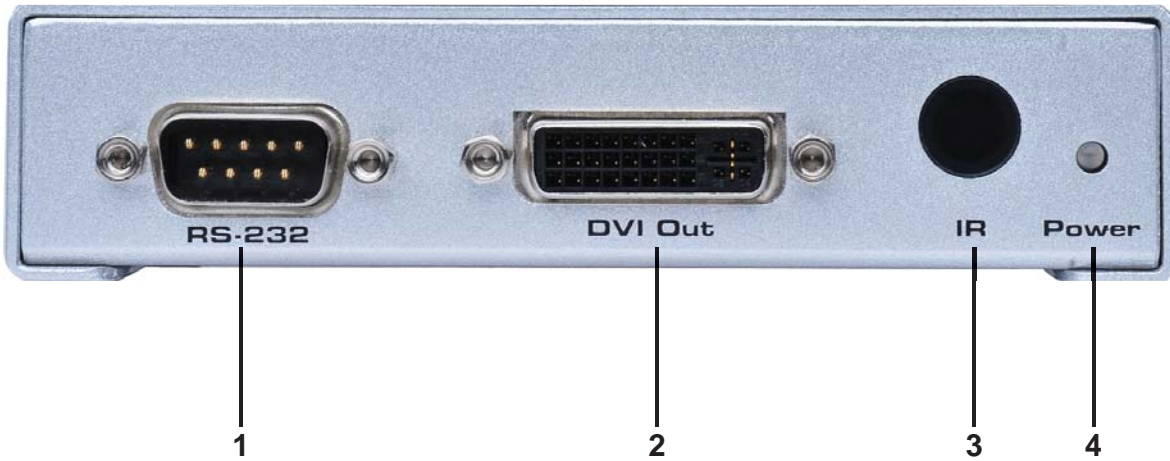
This connector accepts 1 strand of SC terminated fiber optic cable that will link the sending and receiving unit together. The DVI RS-232 over Fiber system will only accept multi-mode fiber optic cabling.

7 Locking 5V DC Power Input

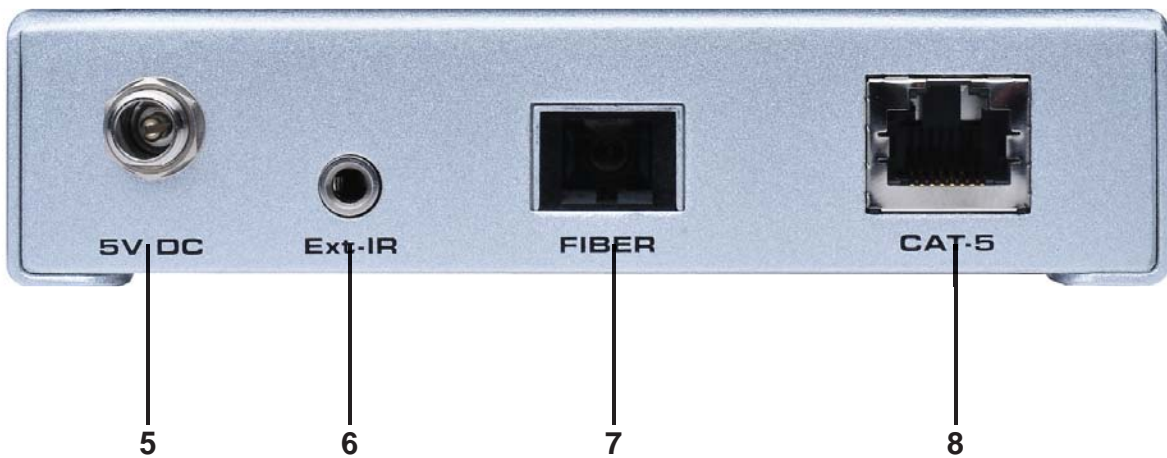
Connect the included 5V DC power supply to this input. The Power LED will become active when the 5V DC power supply has been properly connected to the unit and an open wall power socket. This receptacle features a locking connector for a secure connection.

RECEIVER PANEL LAYOUT

Front Panel



Back Panel



RECEIVER PANEL DESCRIPTIONS

1 *RS-232 Serial Communications Input*

This port is capable of 2-way serial communication between RS-232 devices connected to the sender and receiver. This port can be connected to a computer's serial communications port for interaction with a RS-232 serial communications device connected to the receiver.

2 *DVI-D Output*

This receptacle will accept a DVI capable Single-Link output device.

3 *Infrared (IR) Receiver*

This IR receiver will relay IR commands from the receiving unit to the sending unit for output to a IR transmitter (blaster) on a IR controllable device.

4 *LED Power Indicator*

This LED will become active once the included 5V DC power supply is properly connected between the receiver and an open wall power socket.

5 *Locking 5V DC Power Input*

Connect the included 5V DC power supply to this input. The Power LED will become active when the 5V DC power supply has been properly connected to the unit and an open wall power socket. This receptacle features a locking connector for a secure connection.

6 *Infrared (IR) Receiver Extension Port*

This port will accept an optionally purchased IR extension cable (Gefen part# EXT-RMT-EXTIR). This is useful for installations where the IR receiver, located on the front panel (Item 2 on this page), is not in line-of-sight with the IR remote control used to relay commands to the device at the sender's location.

7 *Fiber Optic Connector (Multi-Mode SC Type)*

This connector accepts 1 strand of SC terminated fiber optic cable that will link the sending and receiving unit together. The DVI RS-232 over Fiber system will only accept multi-mode fiber optic cabling.

8 *RJ-45 Link Connector*

This port is used to connect the sending and receiving units together for data traffic. Use a CAT-5, CAT-5e or CAT-6 cable. When field terminating cable please adhere to the TIA/EIA-568-B specification (page 9).

CONNECTING AND OPERATING THE DVI RS-232 OVER FIBER

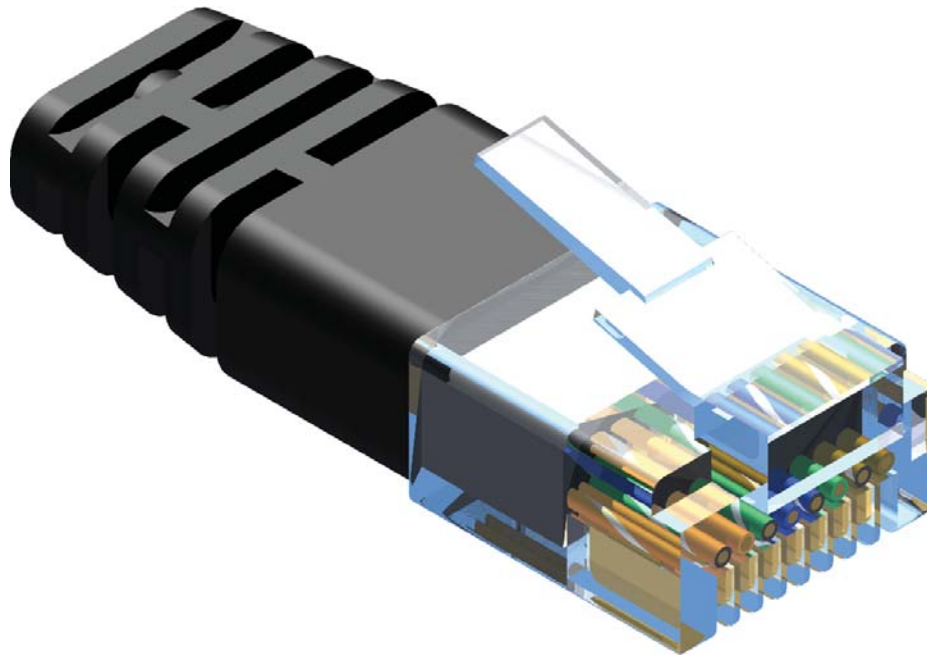
How to Connect the DVI RS-232 over Fiber

1. Connect the Single-Link DVI-D source to the DVI RS-232 over Fiber sending unit's DVI input port using the supplied DVI cable.
2. Connect the RS-232 source to the DVI RS-232 over Fiber sending unit's RS-232 input port using the supplied DB-9 serial cable.
3. For IR repeater functionality, please connect the IR emitter's mini-jack (sold separately, part # EXT-2IREMIT) into the DVI RS-232 over Fiber sending unit. Place the IR emitter directly on or above the IR receiver of the desired source device.
4. Connect the DVI RS-232 over Fiber sending and receiving units together using one user supplied SC terminated multi-mode fiber optic cable and one CAT-5, CAT-5e or CAT-6 cable.

NOTE: If field terminating network cable, please adhere to the TIA/EIA568B specification. Please see page 9 for more information.

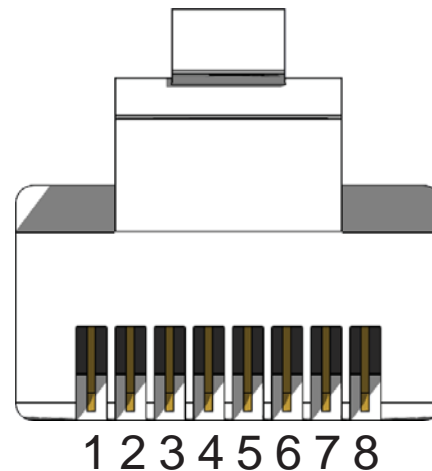
5. Connect the DVI-D capable output device to the DVI output port of the DVI RS-232 over Fiber receiving unit using a user supplied DVI-D cable.
6. Connect the RS-232 device to the RS-232 output port of the DVI RS-232 over Fiber receiving unit using a user supplied DB-9 serial cable.
7. Plug the included 5V DC power supplies into both the DVI RS-232 over Fiber sending and receiving units.
8. Power on the display first and the source second.

NETWORK CABLE WIRING DIAGRAM



Gefen has specifically engineered their products to work with the TIA/EIA-568-B specification. Please adhere to the table below when field terminating cable for use with Gefen products. Failure to do so may produce unexpected results and reduced performance.

Pin	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown



CAT-5, CAT-5e, and CAT-6 cabling comes in stranded and solid core types. Gefen recommends using solid core cabling. CAT-6 cable is also recommended for best results.

Each cable run must be one continuous run from one end to the other. No splices or use of punch down blocks.

SPECIFICATIONS

Video Amplifier Bandwidth	165 MHz
Input Video Signal	1.2 Volts p-p
Input DDC Signal	5 Volts p-p (TTL)
Single Link Range	1080p/1920 x 1200
DVI I/O Connectors	DVI-I (29 pin) female (digital only)
RS232 Input Connector	DB-9 female
RS232 Output Connector	DB-9 male
Power Supply	5V DC
Power Consumption	20 Watts (max)
Link Connector	RJ-45
Video Link Connector	SC
Serial Communication Standard:	RS-232 standards
HDCP.....	Compliant
Dimensions	4.75"W x 1.125"H x 3.375"D
Shipping Weight	5 lbs.