

# Gefen

## DVI 1FO Extender

**EXT-DVI-FM15**  
**User Manual**



[www.gefen.com](http://www.gefen.com)



## ASKING FOR ASSISTANCE

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### Technical Support:

Telephone (818) 772-9100  
(800) 545-6900

Fax (818) 772-9120

### Technical Support Hours:

8:00 AM to 5:00 PM Monday through Friday, Pacific Time

### Write To:

Gefen LLC  
c/o Customer Service  
20600 Nordhoff St  
Chatsworth, CA 91311

[www.gefen.com](http://www.gefen.com)  
[support@gefen.com](mailto:support@gefen.com)

### Notice

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# INTRODUCTION

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Congratulations on your purchase of the DVI 1FO Extender. 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 1FO Extender**

The DVI fiber optic module extender with Virtual EDID extends DVI up to 3300 feet (1 kilometer) to a display supporting resolutions up to 1920 x 1200 (WUXGA) using a single-strand 50/125um laser-optimized multimode (OM3) SC-terminated fiber optic cable. Optical signal transmission provides galvanic isolation and immunity to electromagnetic interference compared to similar copper-based extension modules. The Virtual EDID feature programs the display EDID into the Sender module to ensure fast integration and compatibility between the source and the display. The attractive and compact Sender and Receiver modules fit neatly behind the equipment for a clean installation, making it a great way to extend DVI.

## **How It Works**

The Sender module plugs into the DVI source. The Receiver module plugs into the display. Connect a single-strand multimode SC-terminated fiber optic cable from the Sender to the Receiver module. Plug the power supply into the Receiver module and a vibrant Hi-Def picture will appear on your display.

## **OPERATION NOTES**

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### **READ THESE NOTES BEFORE INSTALLING OR OPERATING THE DVI 1FO EXTENDER**

- The fiber optics cable must be treated carefully when connectors are exposed. They are susceptible to dust which can contribute to loss of pixels.
- The DVI 1FO Extender works for all DVI displays and supports resolutions up to 1920 x 1200.
- Extension distance will depend upon the type of fiber optic cable that is used:
  - Up to 3300 feet (1 kilometer) using single-strand OM3 multimode fiber.
  - Up to 1650 feet (500 meters) using single-strand OM2 multimode fiber.
  - Up to 1000 feet (300 meters) using single-strand OM1 multimode fiber.
- Supports DDWG standard for DVI monitors.

# FEATURES

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## Features

- Extends DVI up to 3300 feet (1 kilometer) over a single-strand of OM3 (laser-optimized 50/125µm) multimode fiber optic cable
- Supports resolutions up to 1920 x 1200 (WUXGA)
- Virtual EDID allows EDID copying from the display to the source
- Fiber optic transmission eliminates electromagnetic interference (EMI)
- Compact Sender and Receiver modules provide a clean, easy installation
- Use Gefen CAB-1SC-xxxx OM1 Fiber Optic Link Cables for distances from 30 - 330 feet (9-100 meters)
- FCC and CE compliant for EMI/RFI emission

## Package Includes

- (1) DVI 1FO Extender - Sender module
- (1) DVI 1FO Extender - Receiver module
- (1) 5V DC Power supply
- (1) Quick Start Guide

# SENDER MODULE LAYOUT

Top



1

Back



3

2

Side



4

Front



5



## SENDER MODULE DESCRIPTIONS

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### 1 **Status Indicator**

This LED will glow bright blue when the Sender module is powered. This LED is also used to indicate the status of the Sender module when programming the EDID. See page 9 for details.

### 2 **5V DC Power Receptacle**

Connect the optional 5V DC power supply to this receptacle only if the source does not supply enough voltage to power the Sender module.



**IMPORTANT:** In most cases the Sender module will *not* require a power supply as long as the DVI source provides sufficient power on pin 14 of the DVI connector. If the source does not supply enough power to the Sender module, then a power supply must be connected to the Sender module.

### 3 **SC Fiber Connector**

Connect a single strand of OM3 SC-terminated multimode fiber optic cable from the Sender module to the Receiver module. OM1 and OM2 multimode fiber cables are also supported. See page 2 for more information.

### 4 **EDID Programming Button**

See page 9 for more information on using this feature.

### 5 **DVI Input**

Connect this part of the Sender module to the DVI port on the computer.

# RECEIVER MODULE LAYOUT

Top



1

Back



3

2

Front



4

## RECEIVER MODULE DESCRIPTIONS

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**1 Status Indicator**

This LED will glow bright blue when the Receiver module is powered.

**2 5V DC Power Receptacle**

Connect this cable to the included 5V DC power supply.

**3 SC Fiber Connectors**

Connect a single strand of OM3 SC-terminated multimode fiber optic cable from the Sender module to the Receiver module. OM1 and OM2 multimode fiber cables are also supported. See page 2 for more information.

**4 DVI Output**

Connect this part of the Receiver module to the DVI display.

# CONNECTING THE DVI 1FO EXTENDER

## How to Connect the DVI 1FO Extender



**STOP:** If EDID programming is required, then skip to the EDID Programming Procedure on the next page. If an EDID is not required by the DVI source, then programming is not necessary.

1. Connect the Sender module to the DVI source.
2. Connect the Receiver module to the DVI display.
3. Connect the Sender module and Receiver module together using a single-strand multimode SC-terminated fiber optic cable.
4. Connect the included power supply to the Receiver module.

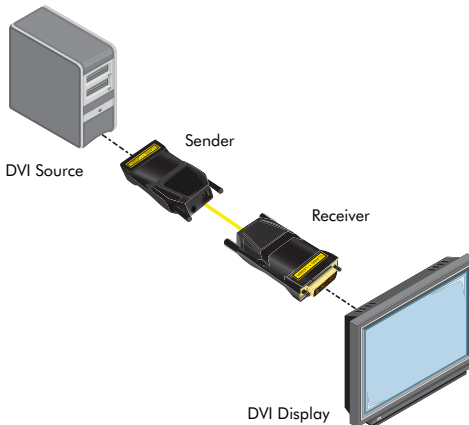


**IMPORTANT:** In most cases the Sender module will *not* require a power supply as long as the DVI source provides sufficient power on pin 14 of the DVI connector. If the source does not supply enough power to the Sender module, then a power supply must be connected to the Sender module.

## Wiring Diagram for the DVI 1FO Extender



**FIBER OPTIC CABLE** 



**EXT-DVI-FM15**

# EDID PROGRAMMING

## EDID Programming Procedure

EDID programming is *required* if the maximum resolution of the display does not support 1600 x 1200 (UXGA).



**IMPORTANT:** The DVI 1FO Extender (Sender module) has a default built-in EDID of 1600 x 1200. If the Sender module is programmed with another EDID, the default EDID will be erased. Once the default EDID is erased, it cannot be restored.

1. Power on the DVI display (or other sink device).
2. Make sure that the Sender module is powered using one of the included 5V DC power supplies.
3. Use a small pin or paperclip to press the recessed EDID button on the Sender module. The blue status indicator LED light will blink twice and then turn off.



4. Connect the Sender module to the display (or the sink device containing the EDID to be recorded).
5. The Status LED on the top of the Sender module will begin to blink rapidly, indicating that the EDID is being read from the sink and stored by the Sender module. The Status LED will stop flashing once EDID programming is complete.
6. Disconnect the Sender module from the sink.
7. Disconnect the power supply from the Sender module.
8. Connect the 5V DC power supply to the Receiver module and connect the Receiver module to the display (sink).
9. Connect the Sender module to the DVI source.

## SPECIFICATIONS

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|   |  |
|---|--|
| Maximum Pixel Clock.....                | 165 MHz  |
| Video Input Connector (Sender).....     | DVI-D, 19-pin, male                                    |
| Video Output Connector (Receiver).....  | DVI-D, 19-pin, male                                    |
| Link Connector (Sender / Receiver)..... | (1) Type SC fiber (50/125µm)                           |
| Power Supply (Sender / Receiver).....   | 5V DC  |
| Power Consumption (Receiver).....       | 0.95 W (max.)  |
| Operating Temperature.....              | 0° to +50° C   |
| Storage Temperature.....                | -30° to +70° C   |
| Relative Humidity.....                  | 5% to 85%  |
| Dimensions (W x H x D).....             | 1.96" x 0.59" x 2.98"<br>(49.78mm x 14.98mm x 75.69mm) |
| Shipping Weight.....                    | 2 lbs. (0.91 kg)                                       |

## WARRANTY

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Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at [www.gefen.com](http://www.gefen.com).

## PRODUCT REGISTRATION

**Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.**



**20600 Nordhoff St., Chatsworth CA 91311**  
**1-800-545-6900 818-772-9100 fax: 818-772-9120**  
**www.gefen.com support@gefen.com**



This product uses UL or CE listed power supplies.