

# DVI 1500HD

EXT-DVI-1500HD

User Manual

Release A7



# Important Safety Instructions

## GENERAL SAFETY INFORMATION

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Batteries that may be included with this product and/or accessories should never be exposed to open flame or excessive heat. Always dispose of used batteries according to the instructions.

# Warranty Information

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.**

# Contacting Gefen Technical Support

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c/o Customer Service  
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Chatsworth, CA 91311

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Visit us on the Web: [www.gefen.com](http://www.gefen.com)

Technical Support Hours: 8:00 AM to 5:00 PM Monday - Friday, Pacific Time

**DVI 1500HD** is a trademark of Gefen, LLC.

### **Important Notice**

Gefen, LLC reserves the right to make changes in the hardware, packaging, and any accompanying documentation without prior written notice.

## Operating Notes

- 50 or 62.5 micron multimode fiber optic cable is required for operation of the DVI 1500HD.
- Maximum extension range of 330 feet (100 meters) when the source requires HDCP. One CAT-5, CAT-5e or CAT6 cable is used to transmit DDC and HDCP data back to the source.
- Maximum range of 1650 feet (500 meters) when the source does not require HDCP. This scenario does not require the CAT-5, CAT5e or CAT-6 cable if the source does not require DDC information. If DDC is required, the use of an EDID storage device (Gefen part no. EXT-DVI-EDIDN or EXT-DVI-EDIDP) can be used to transmit DDC information back to the source.
- Compatible with all DVI and HDMI (when used with a HDMI-to-DVI adapter) displays.

# Features and Packing List

## Features

- Extends any DVI device without HDCP up to 1650 feet (500 meters)
- Extends any DVI device with HDCP up to 330 feet (100 meters) (requires additional CAT-5e cable)
- Supports resolutions up to 1920 x 1200
- Uses a four-strand multimode LC-LC fiber optic cable
- Uses one CAT-5e cable for DDC and control signals
- Eliminates computer noise at your workstation
- Supports DDWG standard for DVI-compliant monitors
- HDCP compliant (maximum distance is 330 feet with HDCP)
- Rack-mountable



## Packing List

The *DVI 1500HD* ships with the items listed below. If any of these items are not present in your box when you first open it, immediately contact your dealer or Gefen.

- 1 x DVI 1500S Sender Unit
- 1 x DVI 1500R Receiver Unit
- 2 x 5V DC Power Supply with locking connector
- 1 x 6 ft. DVI cable (M-M)
- 2 x Sets of Rack Ears
- 1 x Quick-Start Guide



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# DVI 1500HD

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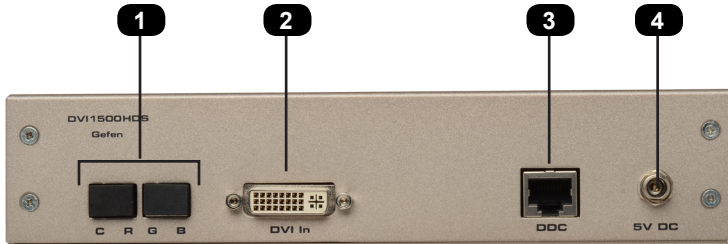
# Sender Unit

## Sender - Front Panel



ID	Name	Description
1	Power indicator	This LED indicator will glow solid red once the power supply is connected between the Sender unit and an available electrical outlet.
2	Status indicator	This LED will glow bright green to indicate a solid connection between the Sender unit and Receiver unit.

## Sender - Back Panel



ID	Name	Description
1	C R G B	Connect four LC-terminated fiber optic cables between each of these ports to the associated ports on the Receiver unit. See <a href="#">Connecting the DVI 1500HD</a> for details on connecting fiber optic cables.
2	DVI In	Connect the included DVI cable between the <b>DVI In</b> port and the DVI source.
3	DDC	Connect a CAT-5e cable between this port and the DDC port on the Receiver unit. This connection is only required when extending HDCP content.
4	5V DC	Connect the included locking 5V DC power supply from this power receptacle to an available electrical outlet.

# Receiver Unit

## Receiver - Front Panel



ID	Name	Description
1	Status indicator	This LED will glow bright green to indicate a solid connection between the Sender unit and Receiver unit.
2	Power indicator	This LED indicator will glow solid red once the power supply is connected between the Sender unit and an available electrical outlet.

## Receiver - Back Panel



ID	Name	Description
1	5V DC	Connect the included locking 5V DC power supply from this power receptacle to an available electrical outlet.
2	DDC	Connect a CAT-5e cable between this port and the DDC port on the Sender unit. This connection is only required when extending HDCP content.
3	DVI Out	Connect a DVI cable between this port and the display.
4	R C B G	Connect four LC-terminated fiber optic cables between each of these ports to the associated ports on the Sender unit. See <a href="#">Connecting the DVI 1500HD</a> for details on connecting fiber optic cables.

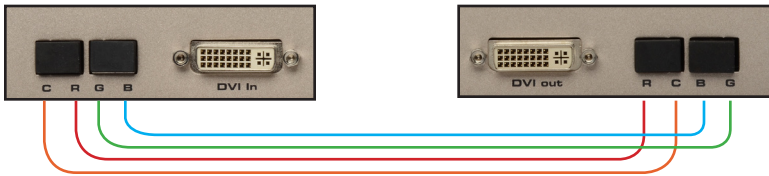
# Installation

## Connecting the DVI 1500HD

1. Connect the included DVI cable from the source to the **DVI In** port on the Sender unit.
2. Connect a DVI cable from the display to the **DVI Out** port on the Receiver unit.
3. Connect 4 strands of LC-terminated multimode fiber optic cable from the Sender unit to the Receiver unit. Remove the protective rubber covers to expose each of the LC ports.



**IMPORTANT:** Each fiber optic port is identified by the letter R,G,B, and C. Make sure that the fiber optic cables between the Sender and Receiver unit are connected to the proper port, as shown below.



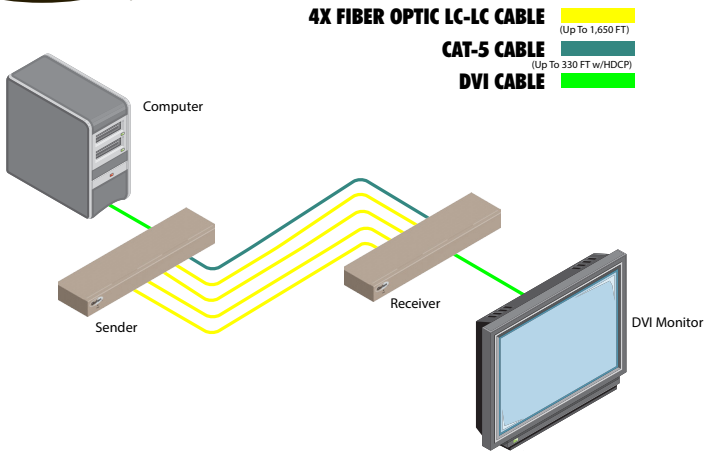
4. **OPTIONAL:** If HDCP content will be used, connect a CAT-5e cable between the **DDC** port on the Sender and Receiver unit.

When extending HDCP content, the maximum extension distance for the fiber optic and CAT-5e cable is 330 feet (100 meters).

5. Connect the included locking 5V DC power supplies to the power receptacles on both the Sender and Receiver unit. Do not overtighten the locking connectors.



### Sample Wiring Diagram



**EXT-DVI-1500HD**

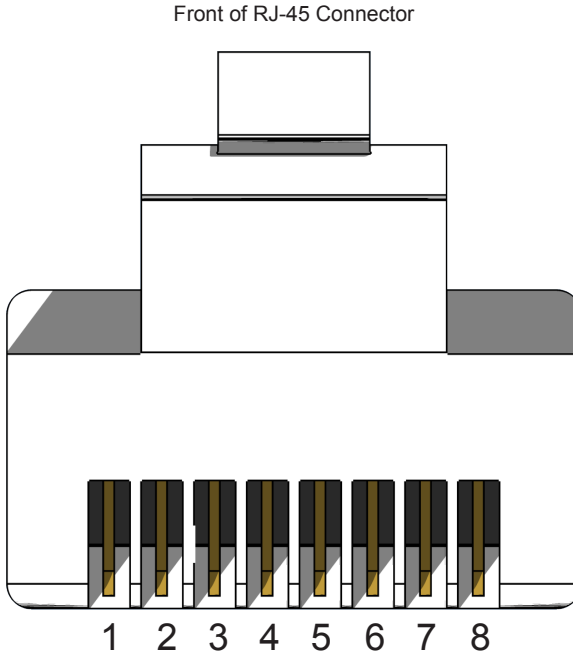


# DVI 1500HD

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# Network Cable Diagram



Gefen recommends the TIA/EIA-568-B wiring option. Use the table below when field-terminating cable for use with Gefen products.

Pin	Color	Description
1	Orange / White	TD+ (Transmit Data, positive differential signal)
2	Orange	TD- (Transmit Data, negative differential signal)
3	Green / White	RD+ (Receive Data, positive differential signal)
4	Blue	Unused
5	Blue / White	Unused
6	Green	RD- (Receive Data, negative differential signal)
7	Brown / White	Unused
8	Brown / White	Unused

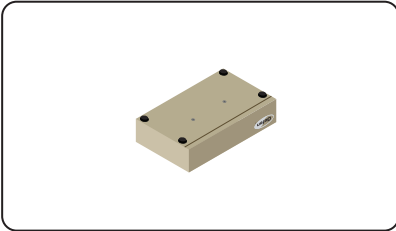
CAT-5e cabling comes in stranded and solid core types. Gefen recommends using solid core cabling.

It is recommended to use one continuous run from one end to the other. Patch cable is not recommended.

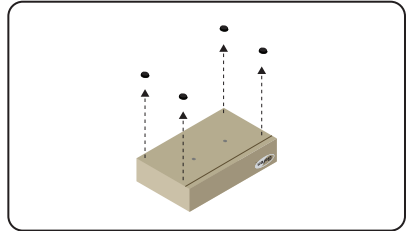
# Rack Tray Installation

The following illustrations provide instructions for installing the Sender and/or Receiver unit(s) in the *Gefen 1U Rack Tray* (Gefen part no. EXT-RACK-1U).

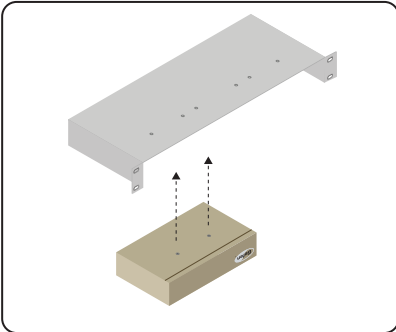
**Step 1** Turn unit upside down.



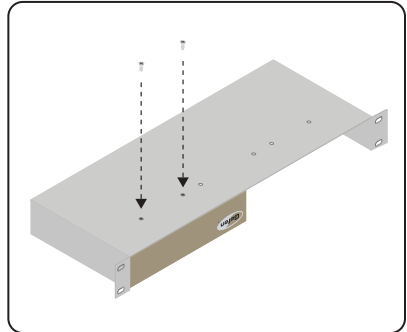
**Step 2** Remove rubber feet.



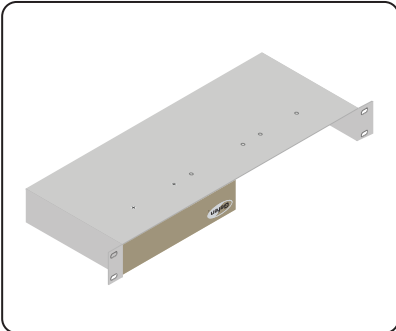
**Step 3** Line up holes on unit and rack tray.



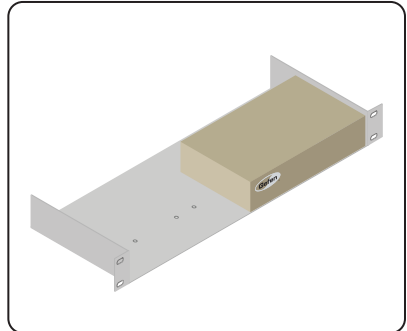
**Step 4** Install countersink screws.



**Step 5** Ensure the unit is installed securely.



**Step 6** Unit has been installed into rack tray.



# Specifications

## Supported Formats

Resolution (max.)	• 1920 x 1200
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## Electrical

Maximum Pixel Clock	• 165 MHz
Input Video Signal	• 1.2V p-p
Input DDC Signal	• 5V p-p (TTL)

## Connectors

Video Input	• 1 x DVI-D 19-pin, female (digital only)
Video Output	• 1 x DVI-D 19-pin, female (digital only)
Fiber Connectors (Sender / Receiver)	• 4 x LC-type
DDC Connector	• 1 x RJ-45, sheilded
Power Supply	• Locking

## Operational

Power Input	• 1 x 5V DC
Power Consumption	• 10W (max.) each
Operating Humidity	• 5% to 80%
Storage Humidity	• 5% to 90%

## Physical

Dimensions (W x H x D)	• 6.5" x 1.7" x 4.5" (165mm x 43mm x 114mm)
Unit Weight (each)	• 0.8 lbs (0.37 kg)





Stretch it, Switch it, Split it, Control it.  
Gefen's got it. ®

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This product uses UL or CE listed power supplies.