



# **Extender for HDMI over one CAT5**

**GTV-HDBT-CAT5**  
**User Manual**

**gefentv.com**



## ASKING FOR ASSISTANCE

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### Notice

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

**Extender for HDMI over one CAT5** is a trademark of Gefen, LLC

**HDMI**, the **HDMI** logo, and **High-Definition Multimedia Interface** are trademarks or registered trademarks of HDMI Licensing in the United States and other countries.

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# INTRODUCTION

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Congratulations on your purchase of the *Extender for HDMI over one CAT5*. Your complete satisfaction is very important to us.

## GefenTV

GefenTV is a unique product line catering to the growing needs for innovative home theater solutions. We specialize in total integration for your home theater, while also focusing on going above and beyond customer expectations to ensure you get the most from your hardware. We invite you to explore our distinct product line and hope you find your solutions. Don't see what you are looking for here? Please call us so we can better assist you with your particular needs.

## The GefenTV Extender for HDMI over one CAT5

The GefenTV *Extender for HDMI over one CAT5* uses one CAT-5e (or better) cable to extend 1080p Full HD and 3DTV over 230 feet (70 meters) away from its HDMI or DVI-D source. It also supports high bit-rate audio formats such as Dolby® TrueHD and DTS-HD® Master Audio™.

3D content can be displayed when a 3D-capable display and 3D source are connected. DVI-D is also supported when used with an HDMI to DVI Adapter, providing greater flexibility and options when integrating several home theater components.

By using standard CAT-5e cables, it makes HDMI signal extensions easier to install within a room or through walls. The Extender's pure digital transmission method insures 100% signal integrity over long distances.

## How It Works

The GefenTV *Extender for HDMI over one CAT5* Extender system consists of a Sender and a Receiver unit. The HDMI source (such as a set-top box, Blu-ray player, or gaming console) connects to the Sender unit with the supplied 6-foot HDMI cable. The Receiver unit connects to the HDTV display, up to 230 feet (70 meters) away. One CAT-5e cable links the Sender to the Receiver unit. Power is applied to the Sender and the Receiver with the two included 5V DC power supplies. A crisp, flawless High-Def picture appears on the HDTV display.

## OPERATION NOTES

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### READ THESE NOTES BEFORE INSTALLING OR OPERATING THE EXTENDER FOR HDMI OVER ONE CAT5

- CAT-5 or CAT-6 cables should not exceed 230 feet (70 meters).
- Shielded (STP) CAT-5 or CAT-6 is recommended. However, unshielded (UTP) CAT-5 or CAT-6 is acceptable, depending on cable quality, but is not the top choice. Care should always be given to keep these cables away from power lines and other electromagnetic interference sources.



**NOTE:** Shielded cable has an advantage by providing immunity to Electromagnetic Interference (EMI) from cell phones and A/C motors.

- This product is Ultra HD 4K x 2K compliant. 4K x 2K resolutions can be extended up to 130 feet (40 meters) over a CAT-5e cable.
- HDBaseT<sup>®</sup> technology allows HDMI, IR (Bi-directional), and power to be sent on one CAT-5e/6 cable.

# FEATURES

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## HDMI Features Supported

- Ultra HD 4K x 2K (3840 x 2160 @ 30Hz)
- 1080p Full HD
- 12 bit Deep Color
- HDCP
- Dolby® TrueHD, DTS-HD® Master Audio™, and PCM digital audio up to 7.1 channels
- Deep Color
- LCPM 7.1 Audio, Dolby® TrueHD and DTS-HD Master Audio™ pass-through
- 3DTV pass-through
- Lip Sync pass-through

## Features

- Extends HDMI at 1080p Full HD up to 230 feet (70 meters) over one CAT-6A and up to 200 feet (60 meters) over one CAT-5e cable
- Extends HDMI at 4K x 2K (3840 x 2160 @ 30Hz) up to 130 feet (40 meters) over one CAT-5e cable
- Uses HDBaseT® Technology
- Built-in automatic video signal equalization
- Locking power supplies
- Easy surface mounting with included Mounting Plates

## Package Includes

- (1) Extender for HDMI over one CAT5 - Sender unit
- (1) Extender for HDMI over one CAT5 - Receiver unit
- (1) 6 ft. HDMI cable (M-M)
- (2) 5V DC Locking Power Supplies
- (1) Set of Mounting Plates
- (1) Quick Start Guide

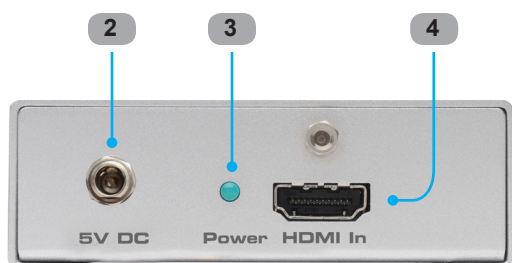
## SENDER UNIT LAYOUT

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Front



Back





## SENDER UNIT DESCRIPTIONS

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**1    *Link***

Connects the Sender to the Receiver unit using CAT-5e (or better) cabling.

**2    *5V DC***

Connect the included 5V DC locking power supply to this connector. Only use the power supply shipped with this unit.

**3    *Power***

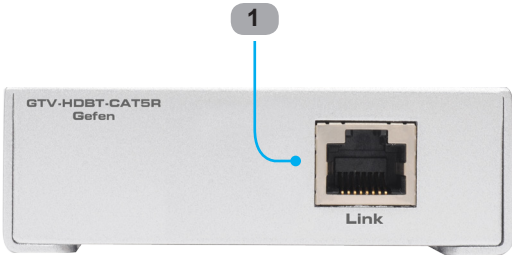
This LED will glow bright blue once the included 5V DC locking power supply has been properly connected to the unit and the locking power supply has been connected to an available wall outlet.

**4    *HDMI In***

Connect a Hi-Def source device to this HDMI port. Please see the Features section on page 3 for supported HDMI features.

# RECEIVER UNIT LAYOUT

Front



Back



## RECEIVER UNIT DESCRIPTIONS

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### **1** *Link*

Connects the Receiver unit to the Sender unit using CAT-5 (or better) cabling.

### **2** *HDMI Out*

Connect an HDTV to this HDMI port. Please see the Features section on page 3 for supported HDMI features.

### **3** *Power*

This LED will glow bright blue once the included 5V DC locking power supply has been properly connected to the unit and the locking power supply has been connected to an available wall outlet.

### **4** *5V DC*

Connect the included 5V DC locking power supply to this connector. Only use the power supply shipped with this unit.

## CONNECTING THE EXTENDER FOR HDMI OVER ONE CAT5

### How to Connect the Extender for HDMI over one CAT5

1. Position the *Extender for HDMI over one CAT5* Sender unit near the Hi-Def source and the Receiver unit next to the display. Connect the Hi-Def source to the Sender with the provided locking HDMI cable. Connect the HDTV display to the Receiver unit with an HDMI cable.
2. Connect the Sender and Receiver units together using a single CAT-5e or CAT-6 cable up to 230 feet (70 meters). 4K x 2K resolutions can be extended up to 130 feet (40 meters).



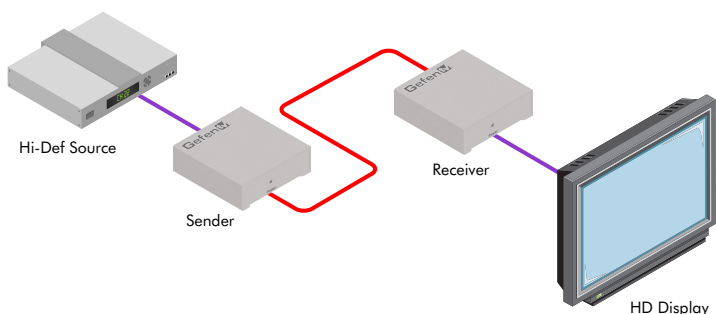
**NOTE:** If terminating network cables in the field, please adhere to the TIA/EIA568B specification (see page 9).

3. Connect the included locking power supplies to the Sender and Receiver unit. Do not overtighten the locking connectors. Plug the two power supplies into available wall outlets. The LED on both the Sender and Receiver will turn bright blue, indicating that both units are powered.

### Wiring Diagram for the Extender for HDMI over one CAT5

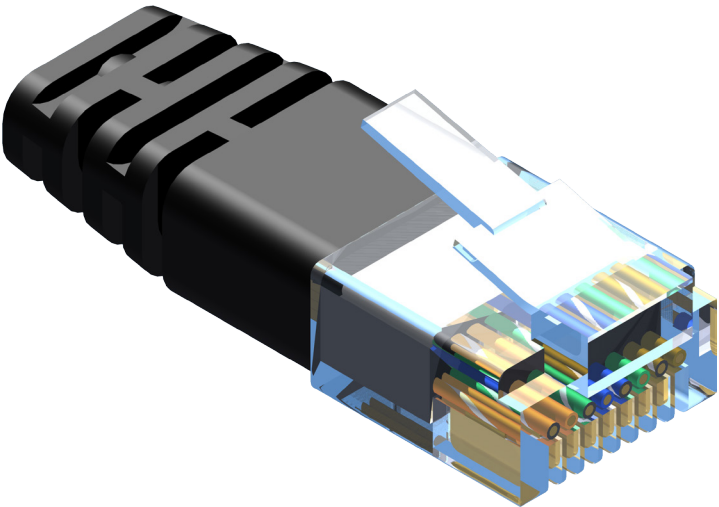
**Gefen**tv.

**CAT5 CABLE**   
**HDMI CABLE** 



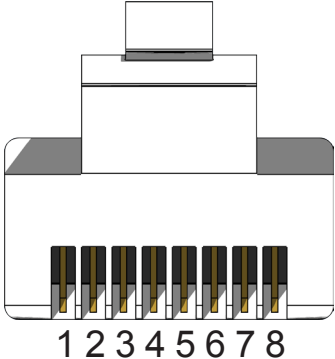
**GTV-HDBT-CAT5**

# NETWORK CABLE WIRING DIAGRAM



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

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

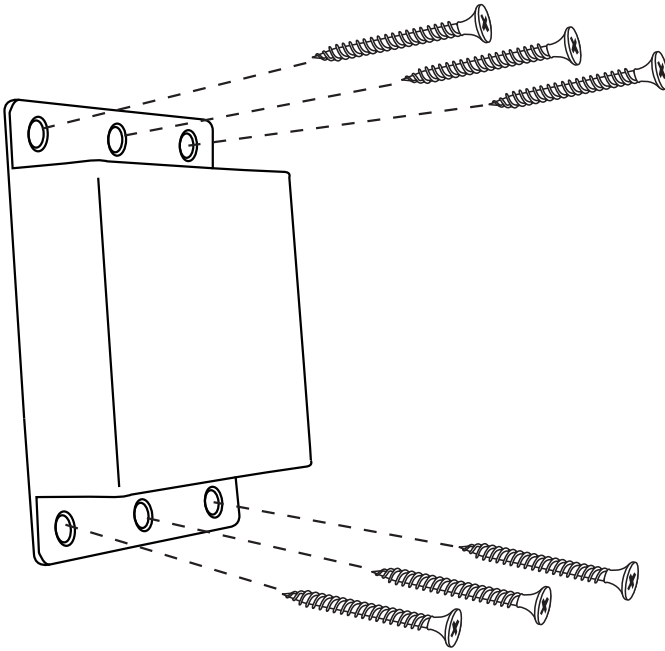


CAT-5, CAT-5e, and CAT-6 cabling comes in stranded and solid core types. Gefen recommends using solid core cabling. CAT-6a cable is also recommended.

It is recommended to use one continuous run from one end to the other. In some cases, connecting through a patch might not work.

## WALL MOUNTING INSTRUCTIONS

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The GefenTV *Extender for HDMI over one CAT5* should be mounted vertically on a wall or inside / outside a cabinet with wood / drywall screws as shown in the diagram above. There should be an inch or two of clearance between the edges of the unit and any walls or vertical surfaces to allow for enough clearance for connection and disconnection of the HDMI cable.

For installation on a drywall surface, use a #6 drywall screw. When installing, it is recommended to use the center hole on a stud.

## SPECIFICATIONS

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Maximum Pixel Clock.....	300 MHz
Video Input Connector (Sender).....	(1) HDMI Type-A, 19-pin, female
Video Output Connector (Receiver).....	(1) HDMI Type-A, 19-pin, female
Link Connectors (Sender / Receiver).....	(1) RJ-45, shielded
Power Indicators (Sender / Receiver).....	LED (blue)
Power Supplies.....	(2) 5V DC, locking
Power Consumption.....	10W per unit (max.)
Operating Temperature .....	+32 to +104 °F (0 to +40 °C)
Dimensions (W x H x D).....	3.2" x 1.3" x 3.3" (80mm x 27mm x 83mm)
Shipping Weight.....	3 lbs. (1.4 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.**











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This product uses UL listed or CE compliant power supplies.