

Linear®

Building On Innovation.

Extreme CAT5 Extender For **HDMI™**

Model # HDMI-CAT5-EXT

USER MANUAL



1080P
PROGRESSIVE

HDMI
HIGH DEFINITION MEDIA INTERFACE

EDTV

HD DVD

Blu-ray Disc™

www.linearcorp.com



ASKING FOR ASSISTANCE

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Notice

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

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INTRODUCTION

The Linear Extreme CAT5 Extender for HDMI extends your HDTV display up to 200 feet (60m) away from your HDTV source using two CAT-5, CAT-5e, or CAT-6 cables. It is equipped with HDMI (high definition multimedia interface) connectors and is capable of supporting DVI (digital visual interface) equipment when used with a HDMI to DVI Adapter, providing greater flexibility and options when integrating several home theater components

How It Works

The Extreme CAT-5 Extender for HDMI sender unit sits next to your computer, set-top box or DVD player source. The cable supplied with the Extreme CAT5 Extender for HDMI connect your DVI or HDMI source to the sender unit. The Extreme CAT-5 Extender for HDMI receive unit sits next to your HDTV display - up to 200 feet (60m) away. The display plugs into the back of the Extreme CAT-5 Extender for HDMI receiver unit. Two CAT-5, CAT-5e, or CAT-6 cables (not included) connect the sender and the receiver units to each other.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE EXTREME CAT5 EXTENDER FOR HDMI SYSTEM

- Use industry CAT-5, CAT-5e or CAT-6 cable to operate the Extreme CAT5 Extender. Solid core CAT-6 cable is recommended for best results.
- The Extreme CAT5 Extender For HDMI is housed in a metal box for better RF shielding.
- For 1080i video, your CAT-5, CAT-5e or CAT-6 cable should not exceed 200 feet (60m).
- For 1080p video, your CAT-5, CAT-5e or CAT-6 cable should not exceed 150 feet (45m).
- Each cable run must be one continuous run from one end to the other. No splices or use of punch down blocks.
- Only the sending side needs to be powered. Do not connect power to the receiver unless the CAT-5, CAT-5e or CAT-6 cable run is longer than 150 feet (45m).

FEATURES

Features

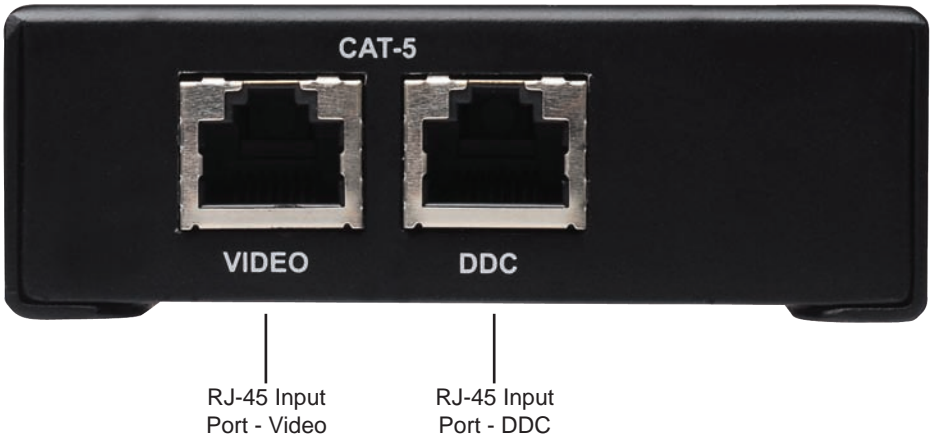
- Extends high definition displays up to 200 feet (60 meters) from the source at 1080i
- Extends high definition displays up to 150 feet (45 meters) from the source at 1080p
- Improved compensation for cable skew
- Eliminates equipment noise in the viewing environment
- Supports resolutions up to 1080p, 2K, and 1920 x 1200
- Audio and video are transmitted digitally over two CAT-5, CAT-5e or CAT-6 cables with no signal loss
- HDMI/HDCP compliant

Includes:

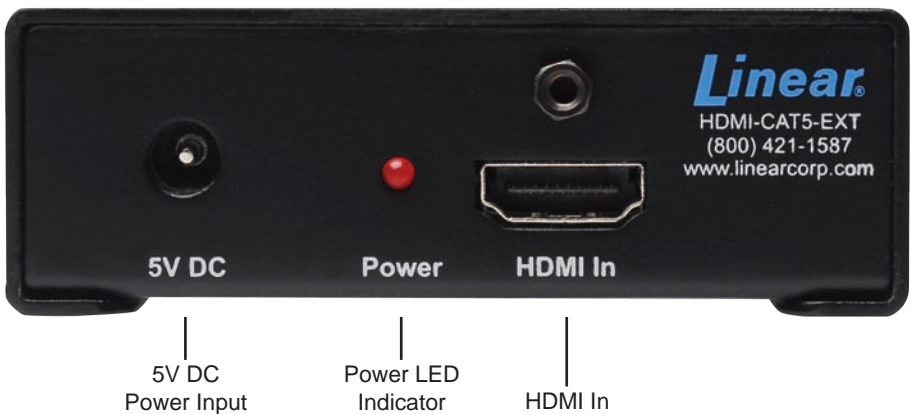
- (1) Extreme CAT5 Extender For HDMI Sender
- (1) Extreme CAT5 Extender For HDMI Receiver
- (1) 6 ft HDMI to HDMI Cable M-M
- (2) Extreme CAT5 Extender For HDMI Wall mounts
- (2) 5V DC power supply
- (1) User's manual

SENDER PANEL DESCRIPTIONS

Front Panel

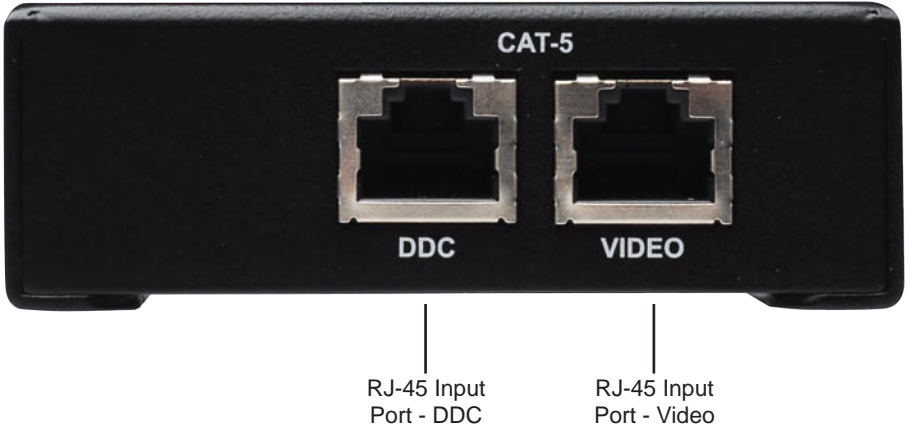


Back Panel

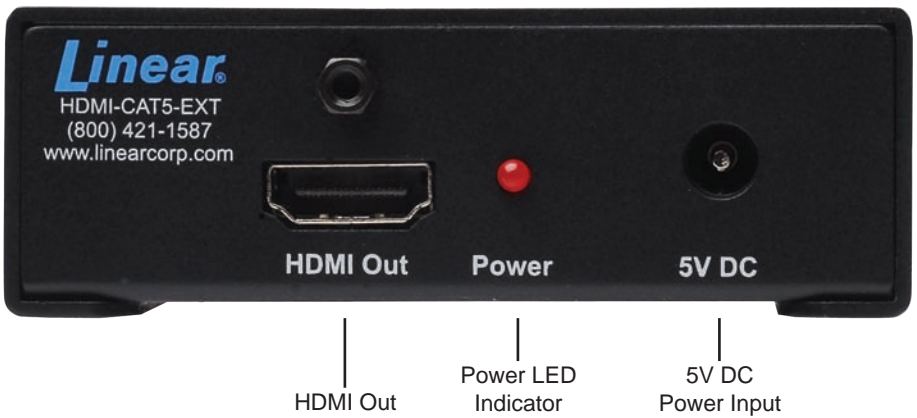


RECEIVER PANEL DESCRIPTIONS

Front Panel



Back Panel



CONNECTING AND OPERATING THE EXTREME CAT5 EXTENDER FOR HDMI

How to Connect the Extreme CAT5 Extender for HDMI

1. Connect your source to the Extreme CAT5 Extender for HDMI sender unit using the supplied HDMI cable.
2. Connect your display to the Extreme CAT5 Extender for HDMI receiver unit using a user supplied HDMI cable.
3. Connect the Extreme CAT5 Extender for HDMI sender and receiver units together using a user supplied CAT-5, CAT-5e, or CAT-6 cable.
4. Plug the included 5V DC power supplies into the Extreme CAT5 Extender for HDMI sender unit.
5. If there is no image or video noise on the display, please refer to the DIP SWITCH Usage Guide in the following section to adjust the video signal.
6. Please ensure that all cables are properly connected.
7. Wire your CAT-5, CAT-5e or CAT-6 as a "straight through" cable, using the TIA/EIA-568-B wiring standard. Do not mix different types of cable. Please see page 8 for a network cable wiring diagram.
8. Only the sending side needs to be powered. Do not connect power to the receiver unless the CAT-5, CAT-5e or CAT-5e cable run is longer than 150 feet (45m).

DIP SWITCH USAGE GUIDE

The sender and receiver of the Extreme CAT5 Extender For HDMI both contain a set of DIP SWITCHES located underneath each unit. Peeling back the silver sticker on the bottom of each unit will reveal the DIP SWITCH bank. These service switches are used to boost and equalize the signal to best match the conditions in your setup. (*Note: Adjustments should be done with the source and display on. Switches 3 and 4 on both sender and receiver banks are not used.)

Sender DIP SWITCH Settings		
Setting	Switch 1	Switch 2
No Boost	OFF	ON
Normal Boost (Default)	OFF	OFF
Strong Boost	ON	OFF
Not Used	ON	ON

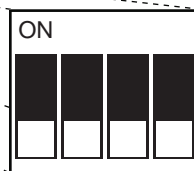
Receiver DIP SWITCH Settings		
Setting	Switch 1	Switch 2
No EQ (Default)	OFF	OFF
EQ Setting 2	ON	OFF
EQ Setting 3	OFF	ON
Maximum EQ	ON	ON

Adjustment Guidelines:

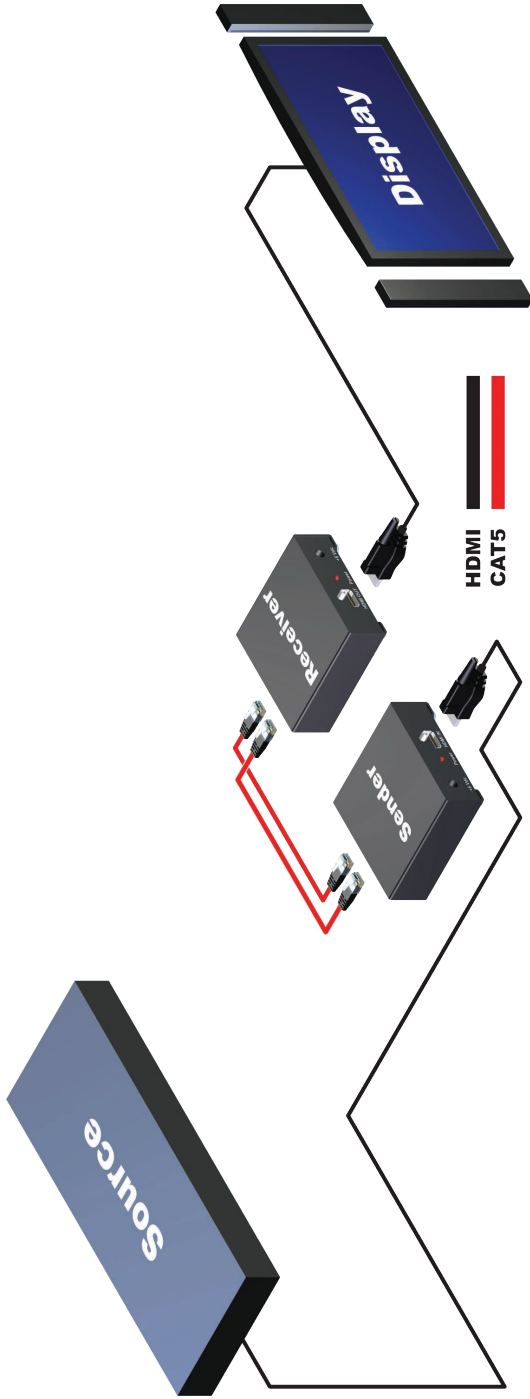
1. Strong boost should not be used on stranded cables. A strong boost will cause pixelation or no picture on these cables.
2. Using the wrong settings will not damage the units; it will either produce no image or a noisy image.
3. To eliminate the possibility of cross talk and interference, cables must be terminated with TIA/EIA-568-B specifications. Please see page 8 for a network cable wiring diagram.



**DIP SWITCH
DEFAULT POSITION
FOR SENDER AND RECEIVER**

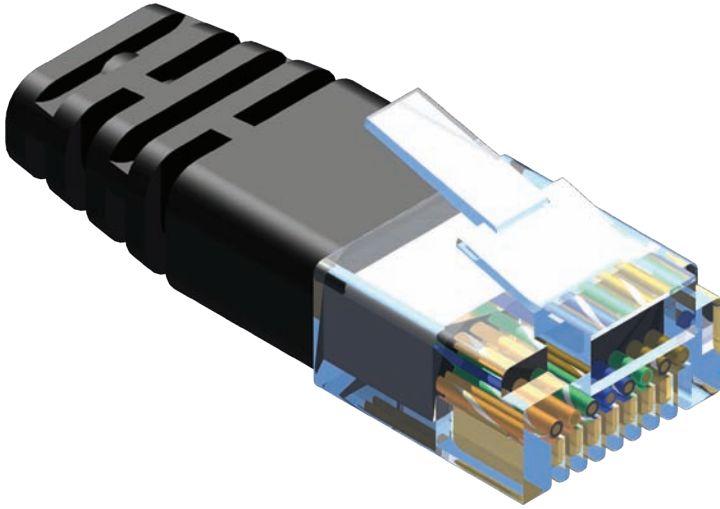


WIRING DIAGRAM



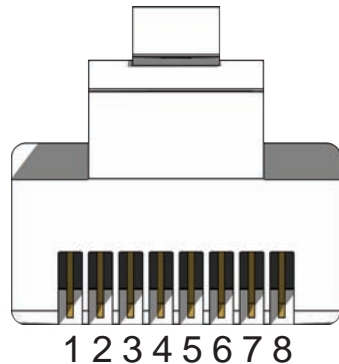
Maximum HDMI cable length is 15 ft at 1080P resolution without the use of an HDMI-SB or HDMI-CAT5-EXT

NETWORK CABLE WIRING DIAGRAM



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

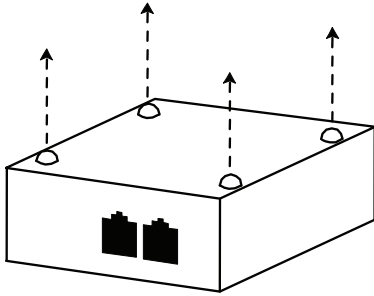
Pin	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown



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

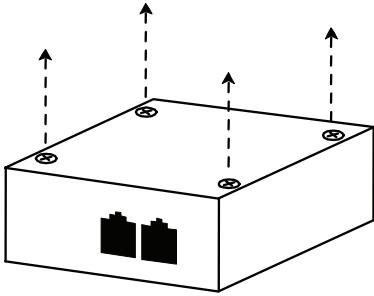
Each cable run must be one continuous run from one end to the other. No splices or use of punch down blocks.

Mounting Plate Installation



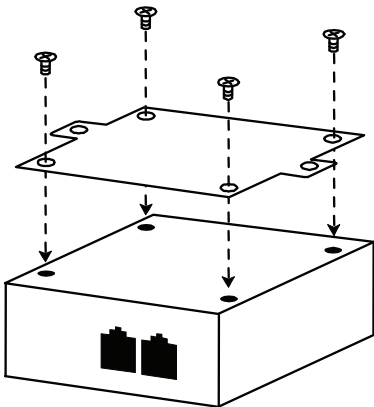
1

Remove the rubber feet covering the screws off the bottom of the unit.



2

Remove the screws.



3

Line up the mounting plates and screw it on to the unit.

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
HDMI Connector Type	Type A 19 pin female
Link Connector	RJ-45 Shielded
Power Consumption	20 Watts (max)
Power Supply	5V DC
Dimensions	3.4" D x 3.25" W x 1.25" H
Shipping Weight	4 lbs.

WARRANTY

Note: These products are designed to be installed and serviced by trained professional installation companies.

Linear LLC warrants this product to be free from defects in material and workmanship. For the term of the warranty, see the list of products below. The Warranty Expiration Date is reflected by a date code that is affixed to all of Linear's products. This warranty extends only to wholesale customers who buy direct from Linear or through Linear's normal distribution channels. Linear does not warrant this product to consumers. Consumers should inquire from their selling dealer as to the nature of the dealer's warranty. There are no obligations or liabilities on the part of Linear LLC for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation or reinstallation. All implied warranties, including implied warranties for merchantability and implied warranties for fitness, are valid only until warranty expiration date as labeled on the product. This Linear LLC Warranty is in lieu of all other warranties express or implied. Some states and countries do not allow limitations or how long an implied warranty lasts or the exclusion or limitation or incidental or consequential damages, so the above exclusions may not apply. The Linear LLC warranty gives specific legal rights in addition to other rights, which may exist and vary from state to state and country to country.

All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Linear Technical Services at 1-800-421-1587 for an RPA# and other important details.

Consumers: If you have trouble locating your installing company, please contact Linear LLC at 1-800-421-1587 and we will assist you with locating a service and Installation Company.

The following warranty period applies to this set of Linear branded products.

1. Linear High Definition Video products — Two (2) years. There is no warranty offered on the batteries supplied with the IR remote Control.

The warranty is limited to repair or replacement of products returned, freight prepaid, to Linear LLC. There is NO PROVISION FOR LABOR COST OR OTHER REIMBURSEMENTS OF ANY KIND.

1. Failures due to product abuse, negligence, improper installation, improper use, and electrical surge including damage from lightning, water damage or other damage due to natural disasters are not covered by the warranty.
2. The warranty shall also be voided by any tampering with the date code, labels or other markings on the product.
3. Products that are damaged in transit to Linear LLC due to improper packaging or by the carrier (shipping company) will not be covered under the warranty. If the product was damaged or lost by the carrier, it is the sender's responsibility to create a claim against the carrier.
4. The user is responsible for all labor costs associated with removing, reinstalling and returning the product to Linear LLC.
5. Linear LLC, at its option, will repair or replace the defective product.
6. Replacements will be made from B-Stock. If an exact replacement is not available Linear LLC, at its option will select the nearest equivalent product. The user is responsible for freight charges to Linear LLC.
7. Linear LLC will return warranted repaired or replacements by UPS Ground or an equivalent service. A customer may pay the additional costs for second day or next-day service.

HDMI-CAT5-EXT



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Rev A