

# HDMI® over Cat 5e/6 Extender - 70m

ST121HDBTE



\*actual product may vary from photos

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## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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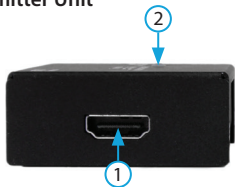
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# Product Diagram

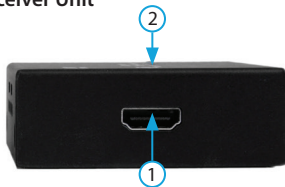
## Front View – Transmitter/Receiver Unit

Transmitter Unit



1. HDMI® IN
2. Status LED

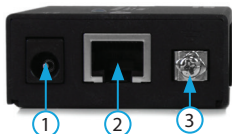
Receiver Unit



1. HDMI® OUT
2. Status LED

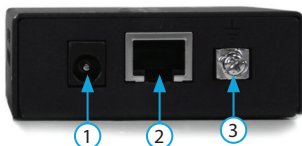
## Rear View – Transmitter/Receiver Unit

Transmitter Unit



1. Power Jack
2. LINK (RJ-45 Connector)
3. Optional grounding bolt

Receiver Unit



1. Power Jack
2. LINK (RJ-45 Connector)
3. Optional grounding bolt

## LED Indicator

Unit / LED	Status		
	Power On	Link OK	No video source or monitor connected
Tx	Green	Blue	Flashing Blue & Green
Rx	Red	Blue	Flashing Blue & Red

# Introduction

The ST121HDBTE HDMI® over CAT5e/6 Video Extender kit lets you extend HDMI video and audio up to 230 feet (70 Meters) over a single Cat5 cable. For added versatility both the Transmitter and Receiver can be powered by the same single power source using Power Over Cable (POC).

With support for resolutions up to 4096 x 2160 (4K) and the accompanying digital audio, this HDMI extender is a plug-and-play solution that can easily be installed using new or existing Ethernet infrastructure wiring.

Backed by a StarTech.com 2-year warranty and free lifetime technical support.

## Packaging Contents

- 1x HDMI over CAT5e/6 transmitter unit
- 1x HDMI over CAT5e/6 receiver unit
- 1x universal power adapter (NA/EU/UK/AU)
- 1x mounting bracket kit
- 2 x grounding wires
- 1x instruction manual

## System Requirements

- HDMI® enabled video source device (i.e. computer, Blu-ray Player)
- HDMI® enabled display device (i.e. television, projector)
- Available AC electrical outlet for either the transmitter or receiver
- HDMI® cables for receiver and transmitter

# Installation

## Preparing Your Site

1. Determine where the local video source (i.e. computer, Blu-ray Player) will be located and set up the device.
2. Determine where the remote display will be located and place/ mount the display appropriately.

**NOTE:** This HDMI® extender kit features Power over cable, allowing both the transmitter and Receiver to be powered from a single power source that can be connected at either end of the connection. Please ensure that either the Transmitter or the Receiver Unit is situated near an available AC electrical outlet. Make sure all devices are turned off before beginning installation.

## Hardware Installation

1. Install Transmitter Unit
  - a) Position the Transmitter Unit near the video source (i.e. Computer, Blu-ray Player).
  - b) Connect an HDMI® cable from the video source device (i.e. computer, Blu-ray Player) to the "HDMI® IN" on the Transmitter Unit.
  - c) (Optional) If you've chosen to power the kit from the Transmitter side, connect the provided power supply.
2. Install RJ45 terminated Cat5e/6 Ethernet Cable
  - a) Connect an RJ45 terminated Cat5e/6 Ethernet cable (not included) to the RJ45 connector on the Transmitter unit.

### **NOTE:**

If you are using surface cabling, ensure you have enough Category 5e unshielded twisted pair (UTP) network cabling to connect the Transmitter Unit to the Receiver Unit's location, and that each end is terminated with a RJ45 connector. The cabling should not go through any networking equipment (i.e. router, switch).

### **OR**

If you are using premises cabling, ensure that the Category 5 unshielded twisted pair (UTP) network cabling between the Transmitter Unit and the Receiver Unit has been properly terminated in a wall outlet in each location and there is a patch cable long enough to connect the Receiver Unit and the Transmitter Unit to their respective outlets. The cabling should not go through any networking equipment (i.e. router, switch).

- b) Connect the other end of the Cat5e/6 cable run to the RJ45 connector on the Receiver Unit.

### 3. Install Receiver Unit

- a) Position the Receiver Unit near the video display (i.e. television, projector).
- b) Connect the video source to the HDMI® OUT on the Receiver Unit using an HDMI® cable.
- c) **(Optional)** If you've chosen to power the kit from the Receiver side, connect the provided power supply.

### 4. **(Optional)** Install the grounding wires.

**Note:** Installation of the grounding wires is optional but recommended in environments with high levels of electromagnetic interference (EMI), or frequent electrical surges.

#### **Transmitter**

- a) Using a Phillips type screw driver (sold separately) remove the optional grounding bolt from the Transmitter Unit.
- b) Attach the loop of one of the grounding wires to the shaft of the grounding bolt that was removed.
- c) Using the Phillips type screw driver (sold separately) drive the grounding bolt back into the hole it was removed from, on the Transmitter Unit.
- d) Attach the other end of the grounding wire (that's not connected to the Transmitter Unit) to an earth ground connection.

#### **Receiver**

- a) Using a Phillips type screw driver (sold separately) remove the optional grounding bolt from the Receiver Unit.
- b) Attach the loop of one of the grounding wires to the shaft of the grounding bolt that was removed.
- c) Using the Phillips type screw driver (sold separately) drive the grounding bolt back into the hole it was removed from, on the Receiver Unit.
- d) Attach the other end of the grounding wire (that's not connected to the Receiver Unit) to a proper earth-ground connection.

### 5. Your source video image will now appear on the remote video display.

# Video Resolution Performance

The video resolution performance of this extender will vary depending on the length of your network cabling. Please review the chart below to determine the best solution for your setup. For best results, StarTech.com recommends shielded CAT6 cable.

Distance	Maximum resolution
35 m (115 ft.) or less	4K x 2K at 30 Hz
Up to 70 m (230 ft.)	1080p at 60 Hz

## Specifications

<b>AV Input</b>	HDMI®
<b>AV Output</b>	HDMI®
<b>Interface</b>	HDMI®
<b>Cabling</b>	Cat 5e/Cat 6 UTP
<b>Audio</b>	Yes
<b>Audio Specifications</b>	7.1 Surround Sound
<b>Max Distance</b>	70m / 230ft
<b>Max Resolution</b>	4K
<b>Wide Screen Supported</b>	Yes
<b>Power Adapter Included</b>	Two
<b>Input Voltage</b>	110~240 AC
<b>Input Current</b>	0.3A A
<b>Output Voltage</b>	12 DCV
<b>Output Current</b>	1.5A
<b>Power Consumption</b>	3W Max Watts



# Technical Support

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For the latest drivers/software, please visit [www.startech.com/downloads](http://www.startech.com/downloads)

## Warranty Information

This product is backed by a two year warranty.

In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

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