

HDMI® Over CAT5 or CAT6 Extender 4K 60Hz

ST121HDBT20L



*actual product may vary from photos

FR: Guide de l'utilisateur - fr.startech.com

DE: Bedienungsanleitung - de.startech.com

ES: Guía del usuario - es.startech.com

NL: Gebruiksaanwijzing - nl.startech.com

PT: Guia do usuário - pt.startech.com

IT: Guida per l'uso - it.startech.com

JP: 取扱説明書 - jp.startech.com

For the latest information, technical specifications, and support for this product, please visit www.startech.com/ST121HDBT20L.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B 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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by StarTech.com could void the user's authority to operate the equipment.

Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

CAN ICES-3 (B)/NMB-3(B)

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference that may cause undesired operation of the device.

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Product Diagram

Actual product may vary from photos

Transmitter Front View



1. LED	3. IR In Port
2. IR Out Port	

Transmitter Rear View



1. Grounding Screw	3. DC 18V Power Port
2. LINK (RJ45 Connector)	4. HDMI In Port

Receiver Front View



1. LED	3. IR Out Port
2. IR In Port	

Receiver Rear View



1. Grounding Screw	3. DC 18V Power Port
2. LINK (RJ45 Connector)	4. HDMI Out Port

Package Contents

- 1 x HDMI Transmitter
- 1 x HDMI Receiver
- 1 x Universal Power Adapter (NA/JP, EU, UK, ANZ)
- 2 x Mounting Brackets
- 8 x Rubber Feet
- 1 x Quick-Start Guide
- 1 x IR (Infrared) Receiver
- 1 x IR (Infrared) Blaster

Requirements

- HDMI Enabled Video Source Device (e.g. computer)
- HDMI Enabled Display Device (e.g. projector)
- Available AC Electrical Outlet for Transmitter or Receiver
- HDMI Cables for Transmitter and Receiver
- CAT5e/CAT6 Network Cable (Shielded CAT6 Cable recommended)
- (Optional) Grounding Wire
- (Optional) Phillips Head Screwdriver

Installation

Installing the HDMI Transmitter/Receiver

Note: Make sure that either the HDMI Transmitter or HDMI Receiver are each located near an AC Electrical Outlet and that all devices connected to them are turned off.

1. Setup the Local Video Source (e.g. computer) and the Remote Display (place/mount the display appropriately).
2. Position the HDMI Transmitter near the Video Source you setup in step 1.
3. On the back of the HDMI Transmitter, connect an HDMI cable from the Video Source (e.g. computer) and to the HDMI IN port.
4. Position the HDMI Receiver near the Video Display you setup in step 1.
5. On the back of the HDMI Transmitter, connect an RJ45 terminated CAT5e/CAT6 Ethernet cable (cables sold separately) to the RJ45 connector.
6. Connect the other end of the CAT5e/CAT6 Ethernet cable to the RJ45 connector on the back of the HDMI Receiver.

Notes: Properly grounding the HDBase Transmitter and HDBaseT Receiver can prevent damage and improve audio/video signal quality.

The cabling should not go through any networking equipment (e.g. router, switch, etc).

7. On the back of the HDMI Receiver, connect an HDMI cable from the Video Sink Device into the HDMI Out port.
8. Connect the Universal Power Adapter to the DC 18V Power Port on either the HDMI Transmitter or Receiver and to an AC Electrical Outlet to power both the HDMI Transmitter and Receiver (using the Power Over Cable feature).

Installing the Ground Wire

Note: Grounding is recommended in environments with high levels of electromagnetic interference (EMI), or frequent electrical surges.

HDMI Transmitter or HDMI Receiver (Back)

1. Using a Phillips Head Screwdriver (sold separately) remove the Grounding Bolt.
2. Attach the Grounding Wire to the shaft of the Grounding Bolt.
3. Insert the Grounding Bolt back into the Ground.
4. Tighten the Grounding Bolt, making sure not to over-tighten.
5. Attach the other end of the Grounding Wire (not connected to the HDMI Transmitter/HDMI Receiver) to a proper earth ground connection.

Installing the IR Receiver and IR Blaster

The IR Receiver and IR Blaster can be connected to either the HDMI Transmitter or HDMI Receiver.

HDMI Transmitter:

If the device receiving the IR signal is at the remote side:

1. Connect the IR Receiver to the IR In Port on the front of the HDMI Transmitter
2. Position the IR Sensor where you'll point your IR Remote Control.

If the device receiving the IR signal is at the local side:

1. Connect the IR Blaster to the IR Out port on the front of the HDMI Transmitter.
2. Position the IR Sensor directly in front of the video source's IR Sensor (if you're unsure, check the manual of your video source to determine the IR sensor location).

HDMI Receiver:

If the device receiving the IR signal is at the remote side:

1. Connect the IR Blaster to the IR Out Port on the HDMI Receiver.
2. Position the IR Sensor directly in front of the device's IR Sensor (if you're unsure, check the manual of your video source to determine the IR sensor location).

If the device receiving the IR signal is at the local side:

1. Connect the IR Receiver to the IR In Port on the HDMI Receiver.
2. Position the IR Sensor where you'll point your IR Remote Control.

Video Resolution Performance

The video resolution performance of this extender will vary depending on the length of your network cabling. For best results, StarTech.com recommends using a shielded CAT6 cable.

Distance	Maximum Resolution
70 m (230 ft.) or less	4K at 60Hz
Up to 100 m (328 ft.)	1080p at 60 Hz

LED Indicators

LED	Connection				
	Link	Video	CP/DCP	HDCP	Monitor
Transmitter					
Green/Flash Off x 1 or x 2	X	X	X	X	X
Green/Flash Blue x 3	X	√	X	X	X
Green/Flash Purple x 1 or x 2	X	√	X	√	X
Flash Blue x 1	√	X	X	X	X
Blue/Flash Off x 1	√	√	X	X	X
Blue/Flash (Blue & Green) x 1	√	√	√	X	X
Purple/Flash off x 1 or x 2	√	√	X	√	HDCP Match
Purple/Flash (Blue & Green) x 1 or x 2	√	√	√	√	HDCP Match
Purple/Flash Red x 1 or x 2	√	√	x	√	HDCP Non-Match
Receiver					
Green/Flash Blue x 3	X	√	X	X	X
Green/Flash Purple x 1 or x 2	X	√	X	√	X
Flash x 1 = HDCP (High-bandwidth Digital Content Protection) 1.4			Flash x 2 - HDCP 2.2		
CP = Compress			DCP = Decompress		
X = No connection established			√ = Connection established		

Product Support

Technical Support

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For the latest drivers/software, please visit www.startech.com/downloads

Warranty Information

This product is backed by a two-year warranty.

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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