

**LOGIC**

# User Manual

## LG-HRx HDBaseT Receiver



All Rights Reserved  
Version: LG-HRx\_2021

## HDBaseT Extender

---

### Preface

Read this user manual carefully before using the product. Pictures shown in this manual is for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction only. The functions described in this version are updated till February 2021. To improve our product, we reserve the right to make changes the functions or parameters without notice or obligation. Please refer to Logic for the latest details.

### FCC Statement

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, can cause harmful interference to radio communications. It 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 commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case, the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



**SAFETY PRECAUTIONS**

To insure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

### Table of Contents

1. Introduction .....	1
1.1 Introduction to LG-HRx.....	1
1.2 Features.....	1
1.3 Package Contents.....	1
2. Panel Description .....	2
3. System Connection.....	4
3.1 Usage LG-HRXXrecutions.....	4
3.2 System Diagram.....	4
3.3 Connection Procedure.....	4
3.4 Twisted Pair Cable Connection .....	5
4. Specification .....	6
5. Panel Drawing.....	7
6. Troubleshooting & Maintenance.....	8
7. Customer Service.....	9

## HDBaseT Extender

---

### 1. Introduction

#### 1.1 Introduction to LG-HRx

The LG-HRx is a mini-size HDBaseT Receiver designed with HDBaseT technology to transmit high-resolution 1080p/4k signal from HDBaseT Transmitter to the LG-HRx via a CAT5e/CAT6a cable at a distance of up to 70/40 m. Moreover, LG-HRx support CEC, bi-directional RS232 & IR control, and unidirectional PoH function.

#### 1.2 Features

- Support Full HD: Delivers high resolution image (1080p@60Hz@48 b/pixels/3D/4Kx2K).
- Maximum transmission distance is 70 m for 1080p and 40 m for 4K x 2K over single CAT5e/CAT6a cable.
- High Bandwidth: 10.2 Gbps.
- HDTV Compatible, use HDMI 1.4 and HDCP 2.2 compliant.
- Support CEC/IR/RS232 pass-through.
- Support PoH, the LG-HRx can be powered by HDBaseT Transmitter.
- Bi-directional RS232/IR control.
- Use HDBaseT technology.
- LED indicators show work status.

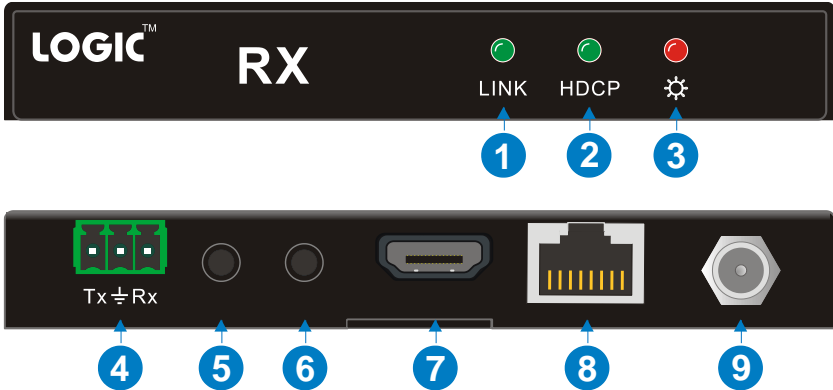
**Note:** Please use a CAT5e cable with low impedance (Shielded twisted pair will be better and should be well grounded) for good transmission effect.

#### 1.3 Package Contents

- 1 x LG-HRx HDBaseT Receiver
- 2 x Mounting Ears with 2 Screws
- 4 x Plastic Cushions
- 1 x RS232 Cable
- 1 x User Manual

**Note:** Please confirm if the product and the accessories are all included, if not, please contact with the dealers.

### 2. Panel Description



No.	Name	Description
①	LINK	HDBT Link status indicator: <ul style="list-style-type: none"> <li>▪ OFF: No Link</li> <li>▪ GREEN: Link Successful</li> <li>▪ Blinking GREEN: Link Abnormal</li> </ul>
②	HDCP	HDCP Compliant Indicator <ul style="list-style-type: none"> <li>▪ OFF: No HDMI traffic (No picture)</li> <li>▪ GREEN: Traffic with HDCP.</li> <li>▪ Blinking GREEN: Traffic without HDCP</li> </ul>
③	Power	OFF: No power; RED: DC power present
④	RS232	RS232 connector
⑤	IR IN	Connect with 5V IR receiver (with carrier) to collect infrared signal, work with far-end IR OUT port.
⑥	IR OUT	Connect with 5 V IR Emitter to send infrared signal, work with far-end IR IN port.
⑦	HDMI OUT	Connect with HDMI display
⑧	HDBT IN	Connect to the HDBT OUT socket on the HDBaseT Transmitter via CAT5e/ CAT6a cable
⑨	DC 24 V	Connect with power supply (Not necessary if HDBaseT Transmitter

## HDBaseT Extender

		connects with power).
--	--	-----------------------

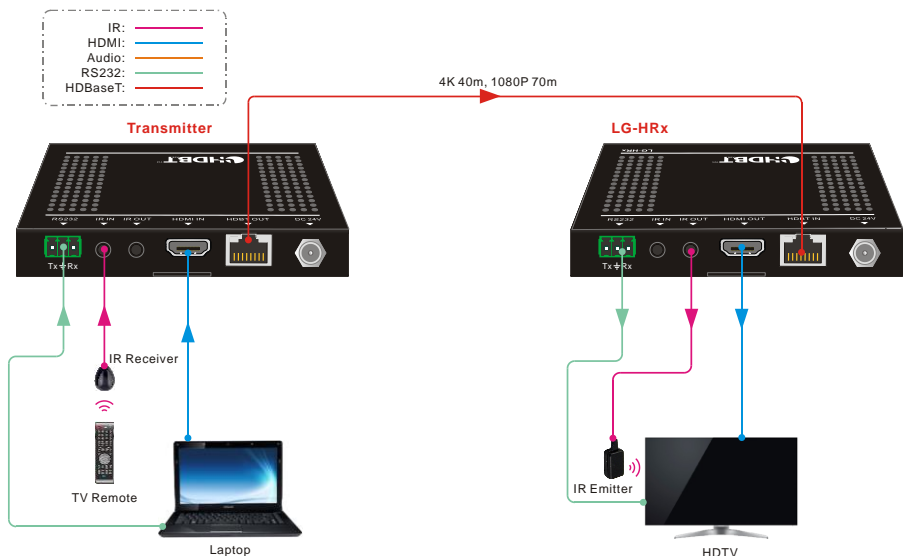
## HDBaseT Extender

### 3. System Connection

#### 3.1 Usage Precautions

- System should be installed in a clean environment with prop temperature and humidity.
- All of the power switches, plugs, sockets and power cords should be insulated and safety.
- All devices should be connected before power on.
- Use shielded straight-thru CAT5e/CAT6a cable with TIA/EIA T568B terminations for good transmission effect.

#### 3.2 System Diagram



#### 3.3 Connection Procedure

- Step1.** Connect HDMI source (such as Blue-ray DVD) to HDMI IN port of HDBaseT Transmitter with HDMI cable.
- Step2.** Connect HDBT OUT port of HDBaseT Transmitter and HDBT IN port of LG-HRx, with single CAT5e/CAT6a cable.



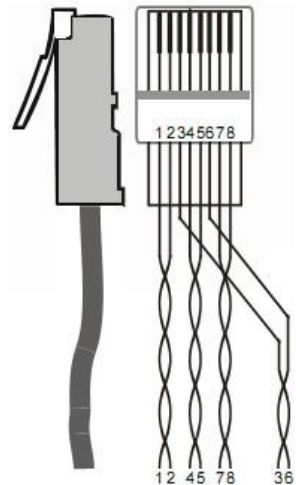
## HDBaseT Extender

- Step3.** Connect HDMI displayer (such as HDTV) to HDMI OUT port of LG-HRx with HDMI cable.
- Step4.** Both t HDBaseT Transmitter and LG-HRx have IR IN and OUT. When one end is used as an IR receiver, the signal sent from the end can only be transmitted via the other end.  
**For example:** When "IR IN" of HDBaseT Transmitter connects with an IR receiver, the IR transmitter must connect to IR OUT of LG-HRx.
- Step5.** Connect the RS232 port of the devices to be controlled and the LG-HRx or the Transmitter.
- Step6.** Connect with DC 24 V power adaptor (s) (One is enough if HDBaseT Transmitter is connected with adapter as its PoH function).

### 3.4 Twisted Pair Cable Connection

The twisted pair used in this extender **MUST** be a straight-through cable.

TIA/EIA T568A		TIA/EIA T568B	
Pin	Cable Color	Pin	Cable Color
1	Green White	1	Orange White
2	Green	2	Orange
3	Orange White	3	Green White
4	Blue	4	Blue
5	Blue White	5	Blue White
6	Orange	6	Green
7	Brown White	7	Brown White
8	Brown	8	Brown
1st Ground	4--5	1st Ground	4--5
2nd Ground	3--6	2nd Ground	1--2
3rd Group	1--2	3rd Group	3--6
4th Group	7--8	4th Group	7--8



**Notice:** Cable connectors **MUST** be metal one, the shielded layer of cable **MUST** be connected to the connector metal shell to make a better transmission.

## HDBaseT Extender

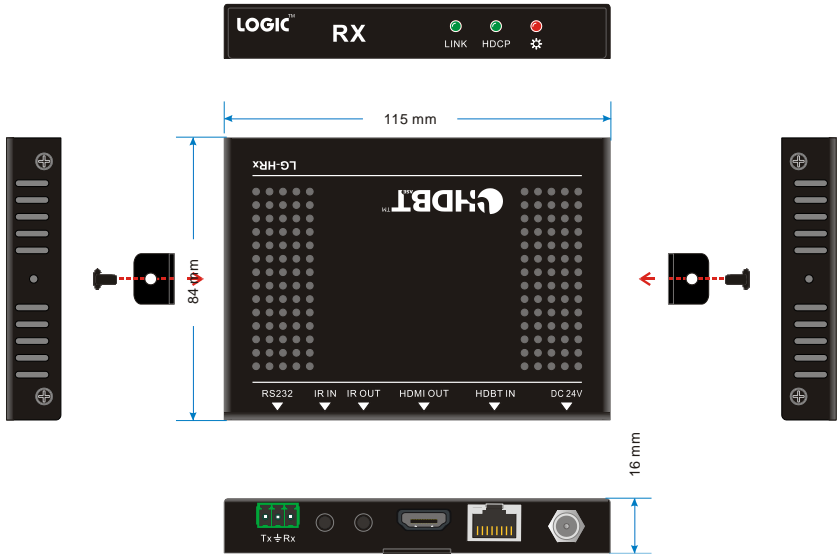
### 4. Specification

<b>Input</b>	
Input Signal	(1) IR; (1) RJ-45; (1) RS232
Input Connector	(1) 3.5 mm Mini Jack; (1) RJ-45; (1) 3-pin Terminal Block
Audio	Digital audio, transmit through HDMI audio
<b>Output</b>	
Output	(1) HDMI; (1) IR; (1) RS232
Output Connector	(1) HDMI female; (1) 3.5 mm mini jack; (1) 3-pin Terminal Block
<b>General</b>	
Resolution Range	640x480@60Hz -4Kx2K@30Hz
Transmission Mode	HD Base T
Transmission Distance	1080p≤70m; 4K×2K≤40m
Bandwidth	10.2 Gbps
HDMI Standard	HDMI 2.0, HDCP 2.2
Impedance	75Ω
Temperature	-20 °C - +70 °C
Humidity	10%- 90%
Power Supply	Input: 100 VAC- 240 VAC, 50/60 Hz Output: DC 24 V, 1.25 A
Power Consumption	11 W
Case Dimension	W115 mm x H16 mm x D84 mm
Net Weight	150 g

**Note:**

- All nominal levels are at ±10%.
- The LG-HRx supports 4K HDMI signal, please adopt quality HDMI cables compliant with HDMI 2.0 for reliable transmission.

### 5. Panel Drawing



### 6. Troubleshooting & Maintenance

- No image on display:
  - ✓ Ensure that the display device has been set to the correct input.
  - ✓ Ensure that the HDMI cables used for both the source/transmitter and the receiver/display are properly connected and are working. Test the HDMI cables directly from a source to display and ensure their operation.
  - ✓ Ensure that the CAT5e/CAT6a cable has not been damaged and that it has been terminated correctly with T568B on both ends. A temporary length of CAT5e/Cat6 can be used for testing to ensure that the devices are all compatible and working properly.
  - ✓ Ensure proper grounding of the power supply.
  - ✓ Known issues with HDMI 1.2 source devices:
  - ✓ Older compatibility (HDMI 1.2) may result in HDBaseT transmission issues. Please contact Technical Support of your director for a solution to these issues.
  
- **Color lose or poor picture quality:**
  - ✓ Ensure that the HDMI cables used for both the source and transmitter and the receiver and display are properly connected and are of good quality. Test the HDMI cables directly from a source to display and ensure their picture quality.
  - ✓ Ensure proper grounding of the power supply.
  - ✓ If the static becomes stronger or picture quality becomes worse when connecting the video connectors, this may be due to improper grounding.
  - ✓ Check the grounding and make sure all the components are properly grounded to a common ground. Improper grounding may cause damage to the receiver.

If your problem persists after following the above troubleshooting steps, seek further help from authorized dealer or our technical support.

### 7. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. These terms and conditions may be changed without prior notice.

① **Warranty**

The limited warranty period of the product is fixed 3 (three) years.

② **Scope**

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

③ **Warranty Exclusions:**

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
  - ✓ Normal wear and tear.
  - ✓ Use of supplies or parts not meeting our specifications.
  - ✓ No certificate or invoice as the proof of warranty.
  - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
  - ✓ Damage caused by force majeure.
  - ✓ Servicing not authorized by the distributor.
  - ✓ Any other causes which does not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

④ **Documentation:**

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

**Remarks:** For further assistance or solutions, please contact your local distributor.