



## **User Manual**

# **EXT-H101L2-RX-HDBT**

**Compact 18Gbps HDMI 2.0 over HDBT Receiver**

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**Version: EXT-H101L2-RX-HDBT\_2021V1.0**

## Preface

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

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated by November, 2021. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers 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, may 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 ensure 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 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.

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## **1. Product Introduction**

This product is an HDMI 2.0 HDBT extender receiver. Supports HDMI 2.0, 4K@60 4:4:4, HDR, HDCP 2.2 It extends 1080p/4K HDMI signal over CAT6a cable up to 70m/40m(PoC) and enables IR and RS232 pass-through to control source or display device remotely. It also adopts a visually lossless video compression technology (CSC) to ensure the HD lossless transmission of HDR and 4K@60Hz 4:4:4 over CAT6a cable.

### **1.1 Features**

- Compact formfactor
- Supports HDMI 2.0b, 4K@60 4:4:4, HDR, HDCP 2.2.
- 4K HDMI signal extension up to 40m, and 1080p is 70m.
- Supports 4K to 1080p auto downscaling.
- Supports CEC, IR, and RS232 pass-through.
- Supports bi-directional 24V PoC for simplified installations.

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**1.2 Packing List**

- 1x EXT-H101L2-RX-HDBT
- 2x Mounting Ears with 2x Screws
- 1x DC power adapter with EU plug (24v1.25A)
- 4x Plastic Cushions
- 1x 3-Pin terminal block
- 1x User Manual

**1.3 Customer Service**

We provide limited warranty for the product within **five years** counting from date of purchase (The purchase invoice shall prevail).

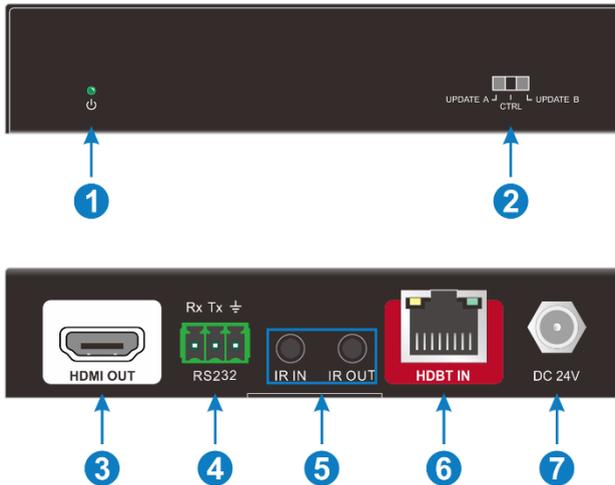
**Note:** *Please contact your distributor immediately if any damage or defect in the components is found.*

## Compact 18Gbps HDMI 2.0 over HDBT Receiver

### 2. Specification

Model	Receiver
Spec	
Input	HDBT IN
Output	HDMI OUT
Control Ports	IR IN, IR OUT, RS232
General	
Transmission Mode & Distance	HDBaseT; 1080p ≅ 70m; 4Kx2K ≅ 40m
Resolution	Up to 4K@60Hz 4:4:4
Bandwidth	18Gbps
HDMI Standard	HDMI2.0b & HDCP2.2
Power Consumption	7W(Max)
Temperature	-10 °C ~ 50°C
Humidity	0% ~ 90%
Power supply	Input: 100VAC~240VAC, 50/60Hz; Output: 24VDC 1.25A
Dimension(W*H*D)	115mm x 84mm x 24mm
Net Weight(g)	235g

### 3. Panel Description



- ① **Power LED:** 1x Green LED. The LED illuminates green when it is powered on and light off when power off.
- ② **MODE Switcher:**
  - CTRL: RS232 pass-through control mode.
  - UPDATE A: Update Valens IC program, connect a PC to the RS232 port, and then double-click the update file (.bat).
  - UPDATE B: Update compression IC program through RS232 port.
- ③ **HDMI OUT:** 1x Type-A HDMI port to connect with HDMI display.
- ④ **RS232:** 1x 3-pin terminal block for RS232 control.
- ⑤ **IR IN:** 1x 3.5mm mini jack to connect IR receiver for IR pass-through.  
**IR OUT:** 1x 3.5mm mini jack to connect IR emitter for IR pass-through.
- ⑥ **HDBT IN:** 1x HDBT input port connects with a transmitter. Supports bi-directional 24V PoC. The green light is always on when the signal is encrypted with HDCP, and flashing when the input signal is without HDCP encryption; the yellow light is always on after the connection between TX and RX is established.
- ⑦ **DC 24V:** Connects with DC24V1.25A power adapter.

## Compact 18Gbps HDMI 2.0 over HDBT Receiver

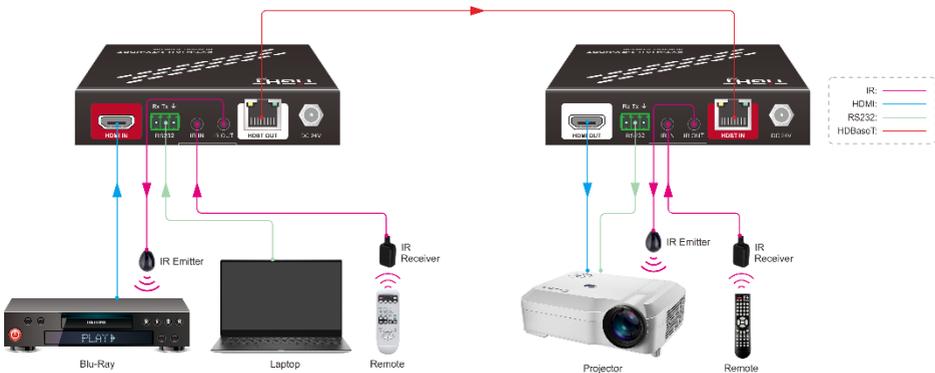
### 4. Video Resolution Auto Downscaling

The product supports automatic video resolution downscaling, the 4K input can be automatically degraded to 1080p output for compatibility with 1080p display, shown in the below chart.

#	Input			Output	
	Resolution	Refresh	Color Space	Downscaling	1080p Specs
1	3840x2160	60	4:4:4	Supported	1080p@60Hz 4:4:4
2	3840x2160	30	4:4:4	Supported	1080p@30Hz 4:4:4
3	3840x2160	24	4:4:4	Supported	1080p@24Hz 4:4:4
4	3840x2160	60	4:2:0	Supported	1080p@60Hz 4:4:4
5	3840x2160	30	4:2:0	Supported	1080p@30Hz 4:4:4
6	3840x2160	24	4:2:0	Supported	1080p@24Hz 4:4:4
7	3840x2160	60	4:2:2	Supported	1080p@60Hz 4:4:4
8	3840x2160	30	4:2:2	Supported	1080p@30Hz 4:4:4
9	3840x2160	24	4:2:2	Supported	1080p@24Hz 4:4:4

### 5. System Connection

The following diagram illustrates a typical input and output connections that can be utilized with the HDMI 2.0 over HDBT Transmitter and Receiver (EXT-H101L2-TX-HDBT and EXT-H101L2-RX-HDBT):



**Compact 18Gbps HDMI 2.0 over HDBT Receiver**

**6. Panel Drawing**

