

# HDMI-HBT

Extender



## User Manual



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## Safety

- Before installation, distinguish HDMI-HBT-T and HDMI-HBT-R.
- Do not unplug the Ethernet cable during operation.
- Use the power adapter packed with the product or other power adapters approved by Pixelhue Technology Ltd.
- The device should be located at a place free from humidity, high temperature, dust, corrosion and oxidizing gases to avoid damage.
- All components should be handled with care. Shock, knock, falling or collision should be avoided.
- Disconnect the power cord when the device is not used for a long time.
- Do not remove the device cover by yourself. Do not touch any components inside the device.

## Change History

Version	Release Date	Description
V1.0.1	2024-03-19	<ul style="list-style-type: none"> <li>■ Updated the product features.</li> <li>■ Updated the manual style.</li> </ul>
V1.0.0	2020-07-22	First release

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# 1 Overview

## 1.1 Introduction

The HDMI-HBT video extender utilizes HDBaseT technology for long-distance transmission of HDMI signals.

The HDMI-HBT-T features 1x HDMI input and 1x HDBaseT output, while the HDMI-HBT-R features 1x HDBaseT input and 1x HDMI output. The HDBaseT connector supports a 100-meter transmission distance using a single CAT 6 Ethernet cable. This resolves issues related to poor transmission and image interference over long Ethernet cables, enhancing HDMI signal transmission distance and image quality.

## 1.2 Features

- Supports HDMI 1.4 input with backward compatibility.
- Converts HDMI signal to HDBaseT signal for transmission, extending transmission distance and ensuring image quality.
- Supports up to 4:4:4 10-bit input.
- HDBaseT output uses standard Ethernet cable for convenient on-site installation and reduced transmission costs.
- Includes HDMI, LINK and PWR indicators for easy monitoring of device status.
- Supports plug and play functionality for both input and output, requiring no drivers.
- Allows connection of 7-pair device units to extend the transmission distance.
- Supports EDID transparent transmission function for compatibility with various display devices.
- Supports audio transmission.
- Complies with various certifications, such as RoHS.

# 2 Appearance

## 2.1 HDMI-HBT-T Appearance



Input Connector	Quantity	Description
HDMI IN	1	HDMI 1.4 input connector Supports input resolutions up to 3840×1080@60Hz.
Indicator	Description	
HDMI	<ul style="list-style-type: none"> <li>■ On: The HDCP-encrypted input source is accessed.</li> <li>■ Off: The input source is not accessed.</li> <li>■ Flashing: The input source is accessed but not used.</li> </ul>	
LINK	<ul style="list-style-type: none"> <li>■ On: Data is being transmitted.</li> <li>■ Off: HDBaseT connector is not connected.</li> <li>■ Flashing: HDMI connector is not connected.</li> </ul>	
PWR	<ul style="list-style-type: none"> <li>■ On: Power supply is connected.</li> <li>■ Off: Power supply is not connected.</li> </ul>	
Output Connector	Quantity	Description
HDBaseT OUT	1	HDBaseT output connector is used for data transmission.

# 3 Specifications

## 2.2 HDMI-HBT-R Appearance



Input Connector	Quantity	Description
HDBaseT IN	1	HDBaseT input connector
Indicator	Description	
HDMI	<ul style="list-style-type: none"> <li>■ On: The HDCP-encrypted input source is accessed.</li> <li>■ Off: The input source is not accessed.</li> <li>■ Flashing: The input source is accessed but not used.</li> </ul>	
LINK	<ul style="list-style-type: none"> <li>■ On: Data is being transmitted.</li> <li>■ Off: HDBaseT connector is not connected.</li> <li>■ Flashing: HDMI connector is not connected.</li> </ul>	
PWR	<ul style="list-style-type: none"> <li>■ On: Power supply is connected.</li> <li>■ Off: Power supply is not connected.</li> </ul>	
Output Connector	Quantity	Description
HDMI OUT	1	HDMI 1.4 output connector Supports output resolutions up to 3840×1080@60Hz.

## 3.1 Specifications

Connector	Description		
HDMI	.HDMI 1.4 connector supports HDCP 1.4.		
HDBaseT	HDBaseT connector supports HDBaseT transmission protocol.		
Ethernet Cable	Description		
Ethernet cable	CAT 5e, CAT 6, CAT 6a, CAT 7		
Transmission distance	CAT 5e/CAT 6	100 m	1080p@60Hz
		70 m	3840×1080@60Hz
	CAT 6a/CAT 7	100 m	<ul style="list-style-type: none"> <li>■ 1080p@60Hz</li> <li>■ 3840×1080@60Hz</li> </ul>
Overall Specifications	Description		
Power supply	DC 12 V		
Power consumption	HDMI-HBT-T: 4 W, HDMI-HBT-R: 6 W		
Operating temperature	0°C to +50°C		
Storage temperature	-10°C to +60°C		
Operating humidity	10% RH to 90% RH, noncondensing		
Dimensions	110.0 mm × 79.8 mm × 28.9 mm		
Material	Metal		
Net weight	HDMI-HBT-T: 167.4 g, HDMI-HBT-R: 172.1 g		

**Note:**

The transmission distance data is tested by Pixelhue Technology Ltd lab. The test data may differ due to the influence of environment and cable material, and the actual working environment shall prevail. The specifications of Ethernet cable and video cable used by the lab test are as follows.

- Video cable: 28AWG core  
The positive and negative terminals of the power supply are as follows.



### 3.2 Packing List

#### HDMI-HBT-T



HDMI-HBT-T



4-plug 12V 2A power adapter



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#### HDMI-HBT-R



HDMI-HBT-R



4-plug 12V 2A power adapter

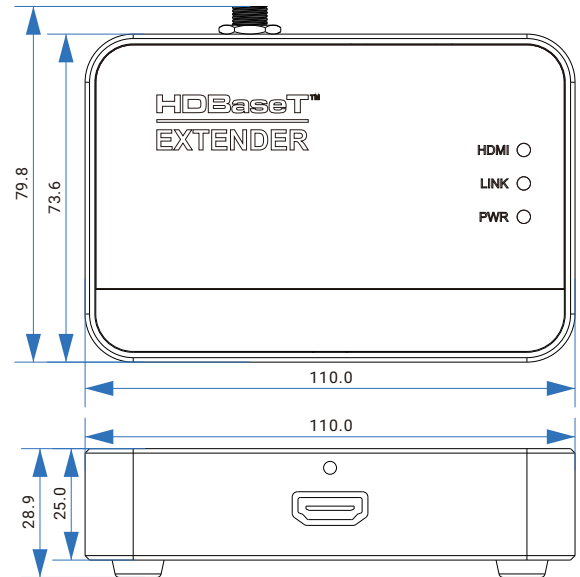


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### 3.3 Dimensions



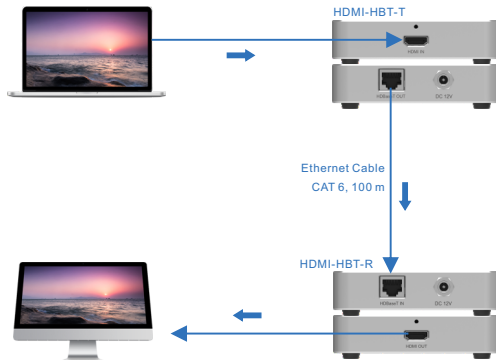
Tolerance: ±0.3 Unit: mm

# 4 Applications

## 4.1 Requirements

- Sending device: HDMI signal source sending device, such as set-top box, graphics card, player box and more
- Receiving device: HDMI signal source receiving device, such as sending card, display and more
- Ethernet cable: Shielded or unshielded CAT 5/6/7 Ethernet cable

## 4.2 Applications



# 5 Troubleshooting

## Q1: No image output

- Step 1** Check the cable connection and indicator status.
- Step 2** Make sure the crystal head is well connected.
- Step 3** Make sure the resolution of HDMI signal source is within the supported resolution range.
- Step 4** Disconnect and then reconnect the power cord of the HDMI-HBT extender.

## Q2: Poor or unstable image output

- Step 1** Make sure the connected Ethernet cable is less than 100 meters.
- Step 2** Check the stability of the input source.