



HDMI-HBT

Video Extender



USER MANUAL



Pixelhue Technology Ltd

Address: Kruisweg 643-647, 2132 NC, Hoofddorp,
the Netherlands

Website: www.pixelhue.com

E-mail: info@pixelhue.com



Document Version: V1.0.0.0



Intellectual Property

Copyright © 2020 Pixelhue Technology Ltd. All rights reserved.
No part of this document may be copied, reproduced, extracted or transmitted in any form or by any means without the prior written consent of Pixelhue Technology Ltd.

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
V1.0.0.0	2020-07-22	First release

Website: www.pixelhue.com

Table of Contents

1. Overview	P1
1.1 Positioning	P1
1.2 Features	P1
2. Appearance	P2
2.1 HDMI-HBT-T Appearance	P2
2.2 HDMI-HBT-R Appearance	P3
3. Specifications	P4
3.1 Specifications	P4
3.2 Packing List	P5
3.3 Dimensions	P6
4. Applications	P7
4.1 Requirements	P7
4.2 Applications	P7
5. Troubleshooting	P8

1 Overview

1.1 Positioning

The HDMI-HBT video extender adopts HDBaseT technology to realize long-distance transmission of HDMI signal.

HDMI-HBT-T supports 1x HDMI input and 1x HDBaseT output, while HDMI-HBT-R supports 1x HDBaseT input and 1x HDMI output.

With both HDMI-HBT-T and HDMI-HBT-R, HDBaseT connector supports 100-meter transmission distance by using only one CAT 6 Ethernet cable. This solves the problems of bad transmission and image interference due to long Ethernet cable, and improves the HDMI signal transmission distance and image quality.

1.2 Features

- Supports HDMI 1.4 input and downward compatibility.
- Converts HDMI signal to HDBaseT signal for transmission, increasing transmission distance and ensuring image quality.
- Supports up to 4:4:4 10-bit input.
- HDBaseT output uses standard Ethernet cable for easier on-site production and less transmission cost.
- Provides HDMI, LINK and PWR indicators for easy control of the device status.
- Supports plug and play of both input and output, with no drivers required.
- Supports 7-pair device units connected to increase the transmission distance.
- Supports EDID transparent transmission function for various display devices.
- Supports 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 3840x1080@60Hz.
Indicator	Description	
HDMI	<ul style="list-style-type: none"> ■ On: The HDCP-encrypted input source is accessed. ■ Off: The input source is not accessed. ■ Flashing: The input source is accessed but not used. 	
LINK	<ul style="list-style-type: none"> ■ On: Data is being transmitted. ■ Off: HDBaseT connector is not connected. ■ Flashing: HDMI connector is not connected. 	
PWR	<ul style="list-style-type: none"> ■ On: Power supply is connected. ■ Off: Power supply is not connected. 	
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"> ■ On: The HDCP-encrypted input source is accessed. ■ Off: The input source is not accessed. ■ Flashing: The input source is accessed but not used. 	
LINK	<ul style="list-style-type: none"> ■ On: Data is being transmitted. ■ Off: HDBaseT connector is not connected. ■ Flashing: HDMI connector is not connected. 	
PWR	<ul style="list-style-type: none"> ■ On: Power supply is connected. ■ Off: Power supply is not connected. 	
Output Connector	Quantity	Description
HDMI OUT	1	HDMI 1.4 output connector

3.1 Specifications

Connector	Description		
HDMI	HDMI 1.4 connector supports HDCP 1.4 and 10-bit color depth.		
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"> ■ 1080p@60Hz ■ 3840×1080@60Hz
Overall Specifications	Description		
Power supply	DC 12 V		
Power consumption	HDM-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	HDM-HBT-T: 167.4 g, HDM-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



User Manual



Customer Letter

HDMI-HBT-R



HDMI-HBT-R



4-plug 12V 2A power adapter

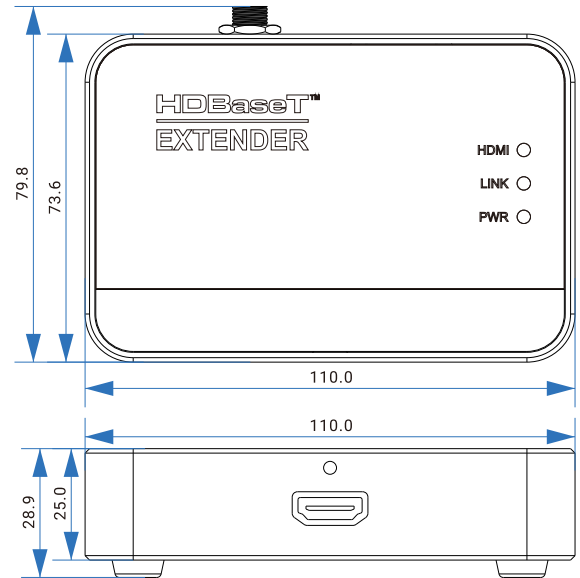


User Manual



Customer Letter

3.3 Dimensions



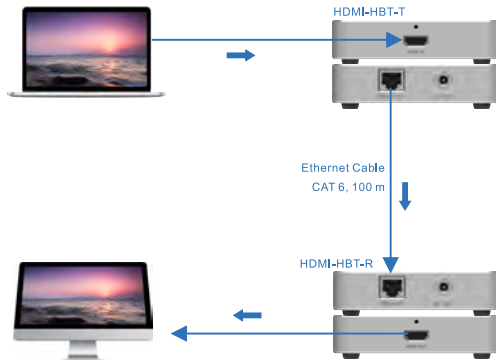
Tolerance: ±0.3 Unit: mm

4 Applications

4.1 Requirements

- Sending device: HDMI signal source sending device, such as set-top box, graphics card, player box and so on
- Receiving device: HDMI signal source receiving device, such as sending card, display and so on
- 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: Bad or unstable image output

- Step 1 Make sure the connected Ethernet cable is less than 100 m.
- Step 2 Check whether the input source is stable.