PIXELHUE

DVI-HBT
Video Extender

USER MANUAL

PIXELHUE

Intellectual Property

Safety

▮ Before installation, distinguish DVI-HBT-T and DVI-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

1.1 Positioning

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

DVI-HBT-T supports 1x DVI input and 1x HDBaseT output, with the same resolution of 1920×1080@60Hz. DVI-HBT-R supports 1x HDBaseT input and 1x DVI output, with the same resolution of 1920×1080@60Hz.

With both DVI-HBT-T and DVI-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 DVI signal transmission distance and image quality.

1.2 Features

▌ Supports input and output resolutions up to 1920×1080@60Hz.

▌ Converts DVI signal to HDBaseT signal for transmission, increasing the transmission distance and ensuring image quality.

▌ Supports up to 4:4:4 input.

▌ HDBaseT output uses standard Ethernet cable for easier on-site production and less transmission cost.

▌ Provides DVI, 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.

2.1 DVI-HBT-T Appearance

Input Connector	Quantity	Description
DVI IN	1	DVI-D Single Link 18+1 input connector Supports input resolutions up to 1920×1080@60Hz.

Indicator	Description	
DVI	▌ 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	▌ On: Data is being transmitted. ▌ Off: HDBaseT connector is not connected. ▌ Flashing: DVI connector is not connected.	
PWR	▌ 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 DVI-HBT-R Appearance

Input Connector	Quantity	Description
HDBaseT IN	1	HDBaseT input connector
Indicator	**Description**	
DVI	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	On: Data is being transmitted. Off: HDBaseT connector is not connected. Flashing: DVI connector is not connected.	
PWR	On: Power supply is connected. Off: Power supply is not connected.	
Output Connector	**Quantity**	**Description**
DVI OUT	1	DVI-D Single Link 18+1 output connector Supports output resolutions up to 1920×1080@60Hz.

3.1 Specifications

Connector	Description
DVI-D 18+1	DVI Single Link connector supports HDCP 1.4 and 8-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	100 m 1080p@60Hz
Overall Specifications	**Description**
Power supply	DC 12 V
Power consumption	DVI-HBT-T: 4 W, DVI-HBT-R: 6 W
Operating temperature	0℃ to +50℃
Storage temperature	−10°C to +60°C
Operating humidity	10% RH to 90% RH, non-condensing
Dimensions	110.0 mm × 83.6 mm ×28.9 mm
Material	Metal
Net weight	DVI-HBT-T: 173.7 g, DVI-HBT-R: 181.4 g

Note:
The transmission distance data is tested by the 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

DVI-HBT-T

DVI-HBT-T   4-plug 12V 2A power adapter   User Manual   Customer Letter

DVI-HBT-R
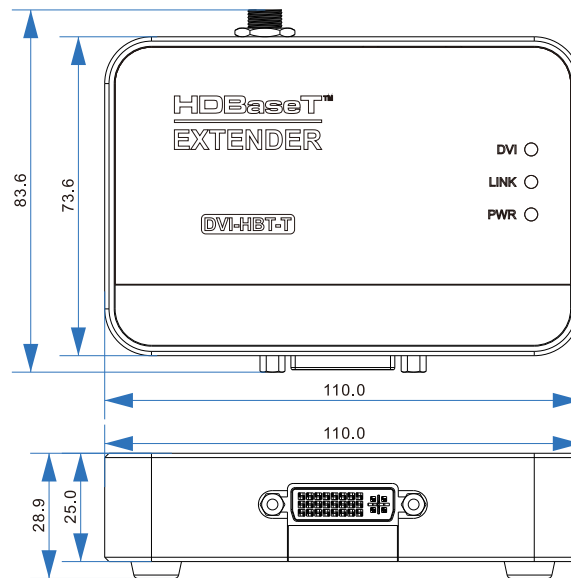
DVI-HBT-R   4-plug 12V 2A power adapter   User Manual   Customer Letter

3.3 Dimensions

HDBaseT™
EXTENDER
DVI-HBT-T

DVI
LINK
PWR

83.6
73.6
110.0
110.0
28.9
25.0

Tolerance: ±0.3   Unit: mm

4 Applications

4.1 Requirements

▌ Sending device: DVI signal source sending device, such as graphics card, video server and so on

▌ Receiving device: DVI 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

DVI-HBT-T

Ethernet Cable
CAT 6, 100 m

DVI-HBT-R
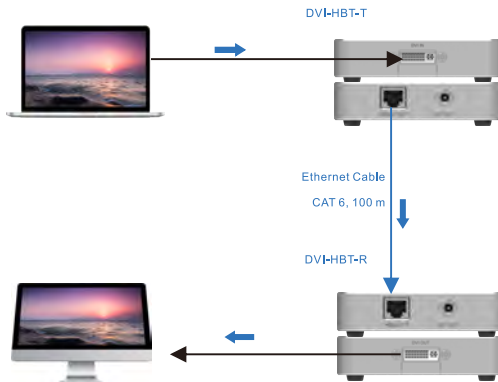
5 Troubleshooting

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 DVI signal source is within the supported resolution range.

Step 4   Disconnect and then reconnect the power cord of the DVI-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.