

## PLX-HDB.1

High Speed HDMI Extender

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### INSTALLATION GUIDE

Features:

- ▶ HDBaseT™ technology extends HDMI® uncompressed over a single CAT6 cable up to 100m, depending on data rate
- ▶ Supports 4K video (2160p24) to **40m**
- ▶ Supports 1080p60 video @ 10-12 bit Deep Color to **70m**
- ▶ Supports 1080p60 video @ 8 bit (standard) color to **100m**
- ▶ Supports all HDMI mandated 3D formats
- ▶ External DC power required to both sides (Tx & Rx)
- ▶ HDCP compliant
- ▶ Domestic, commercial or digital signage applications
- ▶ Vertical surface mountable with optionally attachable brackets (included)

## Contents

- 1x PLX-HDB.1 Transmitter [Tx]
- 1x PLX-HDB.1 Receiver [Rx]
- 2x DC Power Supply 5V 1.2A (one for each side)

## Identifying the units

The PLX-HDB.1 system has a distinct send (transmitter) and receive (receiver) pair. Please ensure that you install each at the correct side.

### **TRANSMITTER - PLX-HDB.1 [Tx] SOURCE SIDE ONLY**

Easily identifiable by two methods;

1. Silk screen label on the top, with the word "TRANSMITTER".
2. The HDMI port on one end panel has the accompanying label "HDMI IN"

### **RECEIVER - PLX-HDB.1 [Rx] SINK/DISPLAY SIDE ONLY**

Easily identifiable by two methods;

1. Silk screen label on the top, with the word "RECEIVER".
2. The HDMI port on one end panel has the accompanying label "HDMI OUT"

## Installation Placement & Ventilation

This is a high performance product which is designed to operate at very high data rates, and it is normal for the system to produce a relatively high operating heat level at both sides. Please keep the transmit/receive pair away from ambient heat (eg; roof space) and radiant heat (eg; AV receivers) sources, taking care to allow adequate ventilation with normal (~< 24°C) room temperature air being allowed to circulate around the unit/s. Ideally you should aim to provide at least 100mm of uninhibited clear air around the ventilation grills on both sides.



Please also keep the PLX-HDB.1 system and link cabling away from electromagnetic interference (EMI) as well as radio frequency interference (RFI). Overheating and/or exposure to EMI/RFI may cause performance inconsistencies or product failure.

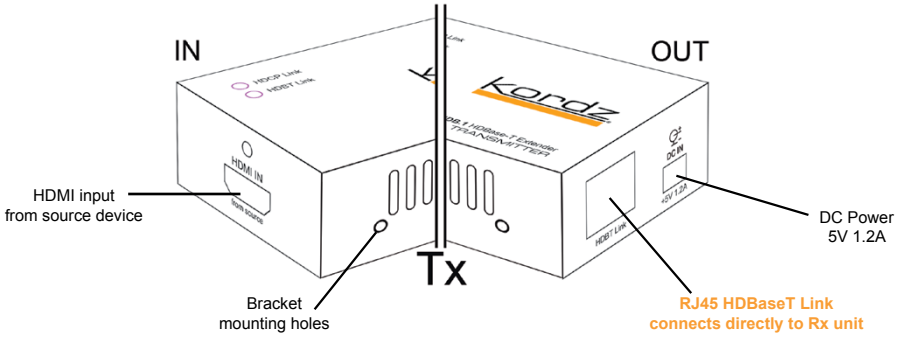
## Wall Mounting

Both Tx and Rx units can be affixed to any vertical surface. Separate keyhole mounting brackets are included. For wall mounting, affix the brackets to each/either respective unit using the supplied screws into the dedicated receptacles on the side panels, then fix two mounting screws or flat head nails (with head diameter no more than 5mm - not supplied) 50mm apart in the horizontal plane. Position each respective Tx/Rx box with the base plate facing the wall and mounting tab at the top.

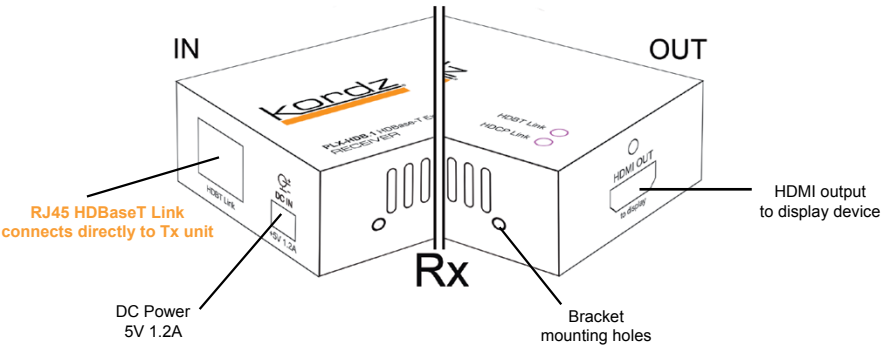
The same recommended installation conditions apply to wall mounting as to counter top mounting, with 100mm clear space on each side and good ventilation with normal (~< 24°C) room temperature air being allowed to circulate around the unit/s. Overheating may cause performance inconsistencies or product failure.

# Connections

**Transmitter - PLX-HDB.1 [Tx]**  
for use at the source side - DVD, Blu-ray, etc.



**Receiver - PLX-HDB.1 [Rx]**  
for use at the sink/display side - TV, projector, etc.



## Cabling

**HDMI cables** (not included) - use only certified High Speed HDMI® cables up to 5m in length.

**HDBase-T Link cable** (not included); - see page 4 “LAN cable configuration for HDBaseT Link”

**DC Power** (included x2) - ensure use of proper specification and safety approvals in your country



**Caution:** All cabling must be away from any equipment with electromagnetic waves, i.e.: microwave, radio equipment, high voltage.

## HDMI

Connection of the extender system requires the use of two (2) HDMI® cables, each of up to 5m (not included). Please use only proven High Speed HDMI cables to ensure compatibility of the high data rate capabilities of the PLX-HDB.1 system.

Connect one HDMI cable from the output receptacle of the source device, switch or AV receiver to the “HDMI IN” receptacle of the PLX-HDB.1 Transmitter (Tx). Connect one HDMI cable from the “HDMI OUT” receptacle of the PLX-HDB.1 Receiver (Rx) to the input receptacle of a sink device such as LCD/LED/PDP display or projector.



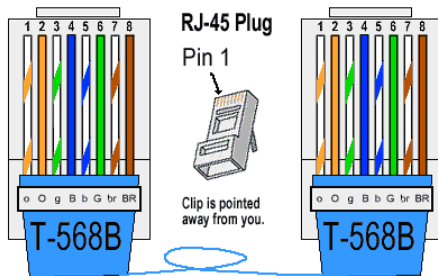
## HDBase-T Link LAN cable configuration

HDBase-T link between Rx & Tx comprises a single, industry standard CAT6 cable with RJ45 termination. We recommend the use of the TIA/EIA-568-B configuration as the preferred CAT6 termination method. However the HDBase-T Link technically only requires a direct pin-pin connection, meaning that TIA/EIA568-A can also be used, depending on existing cable infrastructure, installer preference and/or experience.

### HDBaseT Link (TIA/EIA-568-B)

#### PIN

1. Orange-white
2. Orange
3. Green-white
4. Blue
5. Blue-white
6. Green
7. Brown-white
8. Brown



**WARNING: DO NOT USE CROSSOVER CABLES OR ANY CONFIGURATION WHICH IS NOT DIRECT PIN-PIN**

## DC Power

After all other connections have been made, connect an approved 5V 1.2A DC power supply to end of the Transmitter (Tx) & Receiver (Rx) units to provide operating power.

## Ethernet Patch Panel Routing

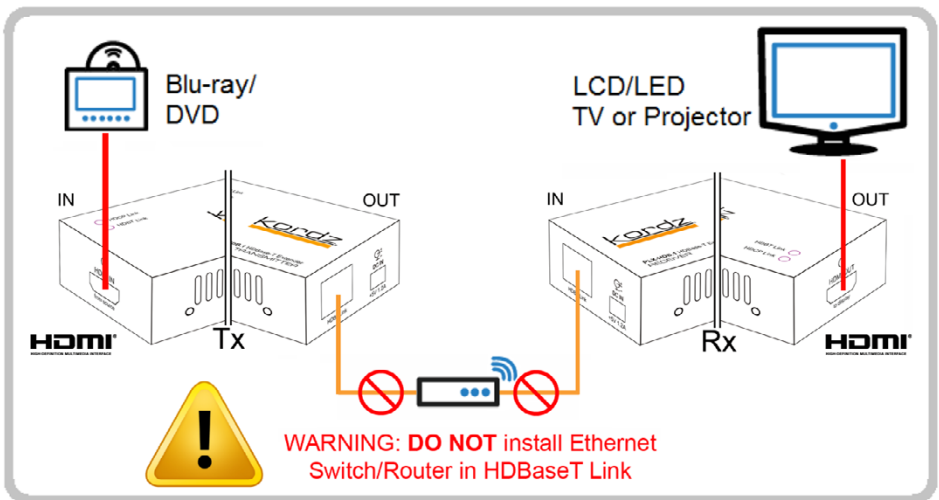
The HDBase-T Link can be connected through a network patch panel, but only where a direct point-to-point connection is achieved between **PLX-HDB.1** Rx and Tx units. However please be aware that this significantly increases data jitter, and if some instances sufficiently to exceed to the operational limits of the extender system. In such cases non-operation will result.

Any installation where connection via a patch panel is desired should always be subjected to a site test, but should be avoided where possible. Direct, single cable Tx to Rx connection is always best.

## Network Switch/Router

The use of industry standard CATx cable for the HDBaseT Link offers a great advantage and installation convenience for the custom installer, but it is NOT to be confused with Ethernet. Under **NO** circumstances can you use a network switch or router within the HDBase-T link section of cabling for the the PLX-HDB.1 extender system. A network passive patch panel is the only consideration for mid-link integration - nothing with a power cord.

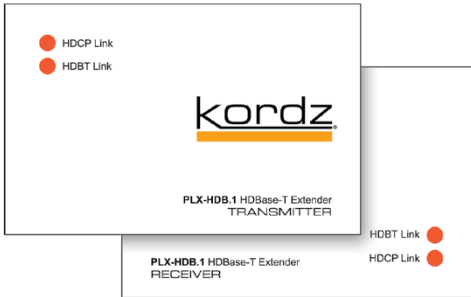
**DO NOT** use Ethernet routers or switches in the HDBaseT Link, or damage **WILL** result and warranty will be voided.



## LED Indicators

The PLX-HDB.1 Transmitter & Receiver units each contain 2x LED indicator lights to provide you with feedback of operating modes. The system has been designed as true *plug'n play*, auto commissioning once all connections including power have been completed. However the presence of the LEDs will provide some operating transparency as well as a guide for troubleshooting, if required. The two LEDs are;

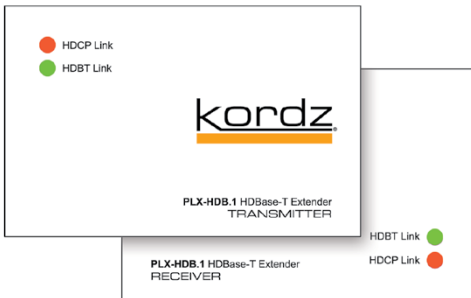
- HDCP** Indicates presence of authenticated HDCP link in the HDMI signal
- HDBT** Indicates successful link of HDBase-T between Tx and Rx



### HDCP RED - HDBT RED both units

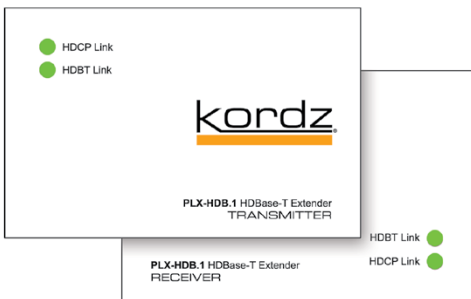
Indicates power is present. HDBase-T link will be imminent within seconds, upon which "HDBT" LED will turn green on both units simultaneously.

*TIP: If one unit does not have any LEDs lit, then check DC power to that unit.*



### HDCP RED - HDBT GREEN both units

Indicates that both Tx and Rx have acknowledged each other and that an active HDBase-T link is now active and ready.



### HDCP GREEN - HDBT GREEN both units

Indicates that an operational encrypted HDMI signal is being transmitted. ie; HDMI with HDCP.

*TIP 1: The HDCP LED cannot turn green before the "HDBT" LED does, as an active HDBase-T link is required before anything else can eventuate.*

*TIP 2: If the "HDCP" LED blinks between green and red, this indicates an operable HDMI signal without HDCP (ie; unencrypted) is being transmitted, such as from PC*

# NOTES

A large rectangular box with a black border, containing 18 horizontal lines for writing. The lines are evenly spaced and extend across most of the width of the box, leaving a small margin on the left and right sides. The box is intended for taking notes.

## Specifications

ITEM NO.	PLX-HDB.1 [Tx]	PLX-HDB.1 [Rx]
HDBaseT™ Link cable	CAT6 UTP recommended, CAT5e also useable	
HDBaseT™ Link cable length	≤ 100m / 327' (see below)	
Supported connectivity formats	HDMI® only	
Data Rate Support Capability - 10.2Gbps - 6.75Gbps - 4.455Gbps	≤ 40m cable length (approx) ≤ 70m cable length (approx) ≤ 100m cable length (approx)	
Video Performance - HDMI Video Bandwidth - Supported Formats SD/HD XHD 3D - Color Space formats	297MHz  480i/p, 576i/p, 720p, 1080i, 1080p 24-120Hz 4K (up to 3840/4096x2160) 24/29.97/30p All HDMI® mandated 3D formats 8 bit color, 10-16 bit Deep Color, x.v.Color™ (depending on video resolution & frame rate)	
Audio Format support	PCM 2.0/5.1/7.1 Dolby Digital® 5.1/EX/Plus/TrueHD DTS®/DTS-ES/Neo6/96-24/DTS-HD/DTS-HD Master Audio™	
HDBaseT™ Link Connector	RJ-45 Shielded x 1 (Output)	RJ-45 Shielded x 1 (Input)
HDMI® Cable Distance	≤ 5m High Speed only	
HDMI® Connector	HDMI A Type x 1 (Input)	HDMI A Type x 1 (Output)
HDMI® Audio Return Channel	Supported, but pre-installation interoperability test recommended	
HDMI® Ethernet Channel	not supported	
Ethernet port connectors I/O	N/A	N/A
IR connection I/O	N/A	N/A
RS-232 connection I/O	N/A	N/A
Power input	DC 5V 1.2A	DC 5V 1.2A
Temperature (°C)	Operation: 0 to 55°, Storage: -20° to 85°, Humidity: up to 90%	
DIMENSIONS W x H x D mm	77.2 x 50 x 25 (excl bracket)	77.2 x 50 x 25 (excl bracket)
Weight	300g	300g

[www.kordz.com](http://www.kordz.com)



HDBaseT Adopter since 2010



HDMI Adopter since 2005



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CUSTOM  
ELECTRONIC  
DESIGN &  
INSTALLATION  
ASSOCIATION

Member



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