

Specification

KEX-HBT3-SH90	Transmitter Unit	Receiver Unit
Maximum Resolution	4096 x 2160 @60Hz (4:4:4) 3840 x 2160 @60Hz (4:4:4) 5120 x 1440 @60Hz (4:4:4)	HDMI Input x 1 (720P Video Return)
Video Interfaces	HDMI 2.0 Input x 1 HDMI 2.0 Out x 1 (Local or Video Return)	HDMI 2.0 Output x 1
Link Port	RJ-45 x 1 (Cat6a/7)	
Extension Distance	85 ~ 100m @ 4K60Hz (4:4:4)	
USB 2.0 Extension	USB-B x 1 (To Host) USB-A x 3	
Serial Extension	RJ-11 x 1	
Audio Extension	3.5mm Audio Input x 1 3.5mm MIC Output x 1	3.5mm Audio Output x 1 3.5mm MIC Input x 1
Push Buttons	Audio Embed x 1 Video Local Out x 1	Audio Embed x 1 Audio Extract x 1
LED Indicators	Audio Embed x 1 Video Local Out x 1 Status x 1	Audio Embed x 1 Audio Extract x 1 Status x 1
Power Consumption	6W (12V, 500mA) / 9W (12V, 740mA)	
H x W x D (mm)	30 x 110 x 135	
Operating Environment	Temperature 0 ~ 50°C, Humidity 0 ~ 80%	
Storage Temperature	-20 ~ 60°C	

Installation



WARNING

- Ensure all devices are powered off before connecting to the Unit.
- Make sure all devices you are connecting are properly grounded.

1. Use a Cat6a/7 cable to connect the transmitter & receiver.
2. Use a HDMI 2.0 cable to connect the source device to the HDMI input port on the transmitter unit. Connect the stereo audio I/O to 3.5mm audio jacks (if necessary).
3. Use a HDMI 2.0 cable for connection between display and the HDMI output port on the receiver unit. Connect the stereo audio I/O to 3.5mm audio jacks (if necessary).
4. Apply proper power to the units, then power on all the attached sources and devices.

NOTE: If users encounter no video display in computer connection:

1. Make sure the devices' cables are correctly and firmly attached.
2. Set your display device's input source as HDMI 2.0.
3. Check the PC BIOS configuration about the boot video output setting.
4. Connect your computer to the display directly to check if the video signal gets through.

LED Indicators

System LED [Ls]	
Transmitter Unit	Power ON: Green / Link OK: Blue / HDCP Video: Purple
Receiver Unit	Power ON: Red / Link OK: Blue / HDCP Video: Purple

Video Mode LED [Lv]	
Local Output Mode	Emit Green
Video Return Mode	Off (Default)

Audio Embed LED [La]	
Audio Embed On	Emit Green
Audio Embed Off	Off (Default)

Audio Extract LED [La ^x]	
Audio Extract On	Emit Green
Audio Extract Off	Off (Default)

Limited Warranty

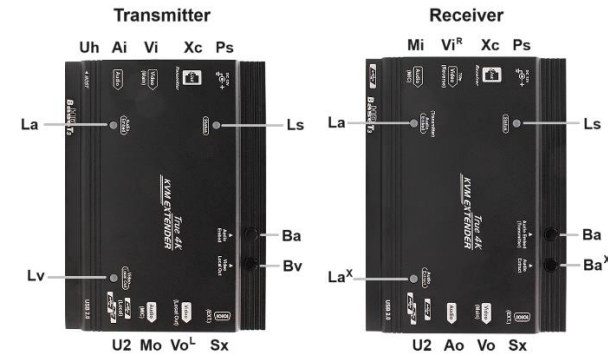
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Product Description



Xc	Xc	RJ-45 Jack (Link Port)	Use a Cat6a/7 Cable for Connection Between 2 Units
Vi	Video Input (Main)	[Vi]	Connects to Local 4K HDMI Source
Vo	Video Output (Main)	[Vo]	Connects to Remote 4K/8K Display
Ai	Audio Input	Speaker Input [Ai]	Connects to PC's Speaker Out
Ao	Audio Output	Speaker Output [Ao]	Connects to an Active Speaker
Uh	USB-B Connector	USB-B [Uh]	Connects to PC (USB Host)
U2	USB-A Connector	Connects to USB 2.0 / HID Devices (Keyboard/Mouse)	
Mi	Audio Input (MIC)	MIC Input [Mi]	Connects to an Active Microphone
Mo	Audio Output (MIC)	MIC Output [Mo]	Connects to PC's Microphone Input
Vo ^l	Video Output (Local Out)	[Vo ^l]	Connects to Local Display (4K Local Output / 720P Video Return)
Vi ^R	Video Input (Reverse)	[Vi ^R]	Connects to Remote 720P HDMI Source (Video Return)
Sx	Serial Extension*	[Sx]	Connects to Serial Host
Sx	Serial Extension*	[Sx]	Connects to Serial Device
Ps	Power	Connects to 12V DC	
Ba	Ba	Audio Embed Button	Press & Hold for 2 Secs to Turn On/Off Audio Embed
Bv	Bv	Video Mode Button	Press & Hold for 2 Secs to Switch Between <u>Local Console Mode</u> & <u>Video Return Mode</u>
Ba ^x	Ba ^x	Audio Extract Button	Press & Hold for 2 Secs to Turn On/Off Audio Extract
Lv	Lv	Video Mode LED	Emit Green in Local Output Mode
La ^x	La ^x	Audio Extract Mode	Emit Green in Audio Extract Mode
La	La	Audio Embed LED	Emit Green in Audio Embed Mode
Ls	Ls	System LED	See LED Indicators

*Use RJ11-to-DB9 and DB9-to-USB Adapter if necessary

Local Output Mode & Video Return Mode

	Status
Local Console Mode	Local HDMI Output [Vo ^l] displays the video of Transmitter's Video Input [Vi] & supports up to 4K 60Hz (4:4:4) resolution
Video Return Mode	Local HDMI Output [Vo ^l] displays the video of Receiver's Video Input [Vi ^R] & supports up to 720p resolution

* Press & Hold Video Mode Button [Bv] for 2 secs to Toggle between Video Modes

Audio Modes

Users can switch audio embedding or audio extraction On/Off to enable the following three audio modes.

Audio Modes	Audio Embed*	Audio Extract**	Receiver's Audio Outputs (Behaviour)	
			HDMI Out [Vo]	Audio Out [Ao]
1. Independent Transmission	OFF	OFF	HDMI [Vi]	Audio Input [Ai]
2. Audio Embed Mode	ON	ON or OFF	Audio Input [Ai]	Audio Input [Ai]
3. Audio Extract Mode	OFF	ON	HDMI [Vi]	HDMI [Vi]

Audio Modes	Status
Independent Transmission	Native HDMI Audio Extends to The Receiver's HDMI (Vi - Vo) 3.5mm Audio Extends to The Receiver's Audio Output (Ai - Ao)
Audio Embed Mode	3.5mm Audio Extends to The Receiver's HDMI (Ai - Vo) 3.5mm Audio Also Extends to The Receiver's Audio Output (Ai - Ao)
Audio Extract Mode	Native HDMI Audio Extends to The Receiver's HDMI (Vi - Vo) Native HDMI Audio Extends to The Receiver's Audio Output (Vi - Ao)

* Press & Hold Audio Embed Button [Ba] for 2 Secs to Turn On/Off Audio Embed
** Press & Hold Audio Extract Button [Ba^x] for 2 Secs to Turn On/Off Audio Extract

RECOMMENDATION

Grounding

While using the HDBaseT product, the high-speed digital application may be sensitive to the environment. We strongly recommend grounding.

Features

- Enables reliable remote access to a computer or video source via a Cat6a/7 cable up to 100 meters (330 feet)
- Uncompressed True 4K HDMI 2.0 extension enabled by HDBaseT 3.0 Technology
- HDMI 2.0 video supports most popular resolutions up to 4K@60Hz (4:4:4), and also supports equivalent-bandwidth resolutions such as 5K@60Hz (4:4:4) and 8K@30Hz (4:2:0)
- HDCP 2.2 and HDCP 1.4 compliance
- HDR10 support for the best visual experience
- Auxiliary HDMI allows flexible monitoring:
 1. HDMI 2.0 local KVM console.
 2. 720p Video Return from the Receiver facilitates monitoring and recording purposes.
- USB 2.0 extension supports keyboard, mouse, USB storage, and USB camera.
- Serial extension allows for extensive RS-232 control applications.
- CEC pass-through allows easy control.
- Audio embedding allows users to insert informative audio content into the HDMI signal.
- Audio extracting enables easy connection to an analog audio amplifier.
- Audio Embed Controls on both sides allow versatile audio applications.

Package Contents

- 1 x Transmitter Unit
- 1 x Receiver Unit
- 2 x Power Adapter
- 1 x USB A-B Cable (for USB Host)
- 2 x Serial Adapter
- 1 x User Manual
- 2 x Foot Pad Set
- 2 x Mounting Bracket Set

* Video Extension Distance Depends on Cable Quality. Use High Quality HDBaseT 3.0 Certified Cable for Optimum Result.

User Manual

HDBT HDBaseT 3.0

4K 60Hz 4:4:4 HDBaseT Extender over 90M Cat6a/7 Cable [HDMI 2.0, Local Out, Serial, USB 2.0]



KEX-HBT3-SH90
Transmitter Unit + Receiver Unit

Product Family					
Model	Video Ext	PoH (TX to RX)	IR Ext	USB Ext	Serial Ext
KEX-HBT3-SH90	HDMI 2.0	-	-	-	-
KEX-HBT3-SH90P	HDMI 2.0	Yes	-	Yes	Yes
KEX-HBT3-SD90P	DisplayPort	Yes	-	-	-



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■ The final specification is based on the actual product.
■ Features and functions may be added or changed after the manual was written. Please visit our website to download the latest version of manual for reference.

RXN-HBT3-R01.1



Connection Diagram

