

Specification

KEX-HBT3-DH90		Transmitter Unit	Receiver Unit
Max Resolution (see Resolution section)		Dual 5120x1440 @60Hz (4:4:4) Dual 3840x2160 @60Hz (4:4:4)	
Video Extension	Main	Video Input x 2	Video Output x 2
	AUX	HDMI Out x 1 (720P Video Return)	HDMI Input x 1 (720P Video Return)
Link Port		RJ-45 x 1 (CAT6a/7)	
Extension Distance		70 ~ 100m @ 4K60Hz (4:4:4)	
USB 2.0 Extension		USB-B x 1 (To Host)	USB-A x 3 (Front) USB-A x 1 (Rear)
Serial Extension		RJ-11 x 1	RJ-11 x 1
Audio Extension		3.5mm Audio Input x 1	3.5mm Audio Output x 1
		3.5mm MIC Output x 1	3.5mm MIC Input x 1
Push Buttons		Audio Embed x 1	Audio Embed x 1 Audio Extract x 1
LED Indicators		Status x 1 Input x 2	Status x 1 Output x 2
Power Supply (Max) / Typical Consumption		DC 12V/3A (36W) 17.5W (Typical)	DC 12V/3A (36W) 18.5W (Typical)
H x W x D (mm)		44 x 97 x 133	
Operating Environment		Temperature 0 ~ 50°C, Humidity 0 ~ 80%	
Storage Temperature		-20 ~ 60°C	

Installation



WARNING

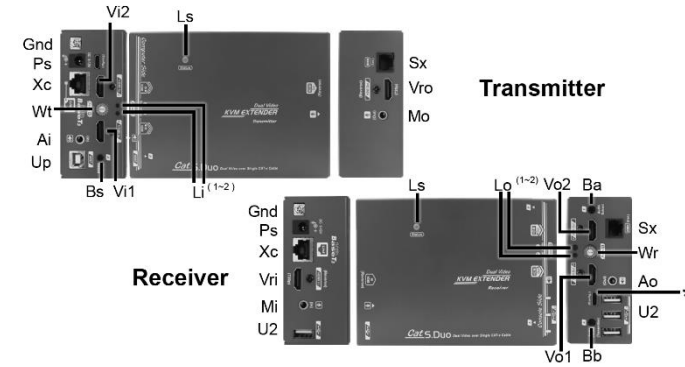
- Ensure all devices are powered off before connecting to the Unit.
- Make sure all devices you are connecting are properly grounded.

1. Connect the Transmitter unit to the PC (Video In / Audio In / MIC Out / Serial Ext. / USB Ext.).
2. Connect the Receiver unit to a KVM Console (Video Out / Audio Out / MIC In / Serial Ext. / USB Ext.).
3. Connect the Transmitter and the Receiver with a good-quality CAT6a/7 cable.
4. Apply proper power and grounding to the system.

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 video output setting.
4. Connect your computer to the display directly to check if the video signal gets through.

Product Description



Tx	Rx	Functions
Vi1	Vo1	[Vi1 ⁽¹⁻²⁾] Connects to Local Video Sources [Vo1 ⁽¹⁻²⁾] Connects to Remote 4K/8K Displays
Vi2	Vo2	[Vi2 ⁽¹⁻²⁾] Connects to Remote 4K/8K Displays [Vo2 ⁽¹⁻²⁾] Connects to Local Display
Vro	Vri	[Vri] Connects to Remote 720P HDMI Source [Vro] Connects to Local Display
Ai	Ao	Speaker Input [Ai] Connects to PC's Speaker Out Speaker Output [Ao] Connects to an Active Speaker
Mo	Mi	MIC Input [Mi] Connects to an Active Microphone MIC Output [Mo] Connects to PC's Microphone Input
Up	U2	USB-B [Up] Connects to PC (USB Host) USB-A [U2] Connects to Device (KB/MS/Storage)
Ps	Ps	Power Supply Connects to 12V DC
Sx	Sx	Serial Extension [Sx] Connects to Serial Host or Serial Device
Ls	Ls	Status LED See LED Indicators
Li	-	Video Input LEDs ⁽¹⁻²⁾ Emit Blue: Video Signals OK (Off: No Video Signal)
-	Lo	Video Output LEDs ⁽¹⁻²⁾ Emit Blue: Monitors OK (Off: No Monitor)
Xc	Xc	RJ-45 (Link Port) Use a CAT6a/7 Cable for Connection Between 2 Units
Gnd	Gnd	Ground Terminal Connects to Proper Ground
Bs	-	Audio Embed Button Press > 2 Secs to Toggle Audio Embed Function On / Off (Audio Embed: Replace the 2 HDMI Audios [Vo1~2] with Speaker Input [Ai])
-	Bb	Audio Embed Button Press > 2 Secs to Extract the HDMI Audio 1 [Vo1] to Speaker Output [Ao]
Wt	Wr	Resolution Switch Turn Both Switch to Set Resolution (See "Resolution") Set Them to the Same Position

* Reserved for Future Upgrade

Features

- Enables reliable 70 ~ 100m* remote access to a 4K60 HDMI 2.0 Dual-Head computer via a CAT6a/7 cable.
- Popular resolutions supported by the HDMI 2.0 video up to 4K@60Hz (4:4:4), 5K, 2048x2048 (ATC) and 6MP (Medical).
- EDID Management supports copying of EDID or manually select EDID to mitigate monitor incompatibility (covers both popular & special resolutions).
- HDCP 2.2 and 1.4 Compliance ensures proper HDCP video playback (HDCP version auto select).
- USB 2.0 Extension supports keyboard, mouse, USB devices etc.
- HDBaseT 3.0 Technology allows uncompressed HDMI extension.
- Video Return Mode** allows an auxiliary 720P video from the Receiver.
- Serial Extension facilitates integration with RS-232 Control Systems.
- Audio Extension allows flexible audio/mic applications.
- Audio embedding allows the replacement of HDMI Audio with the Analog Audio Input (Audio Embed On / Off controllable at both the Transmitter and the Receiver).
- Audio extracting allows the replacement of the Analog Audio Output of the Receiver with the HDMI Audio of the Input.

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 Premium Certified Cable for Optimum Result.

** Video Return Mode and other upstream extensions (e.g., USB 2.0 or Serial) share the available upstream bandwidth. If Video Return Mode is enabled, it may affect the performance of other extensions, and media playback (e.g., playing of audio/video file from an extended USB drive) should be avoided.

User Manual

HDBaseT 3.0

Dual Head 4K 60Hz 4:4:4 HDBaseT Extender with EDID Mgmt, Audio Embedding/Extracting, RS-232 & USB 2.0 Extension, 90m



KEX-HBT3-DH90 Transmitter Unit + Receiver Unit



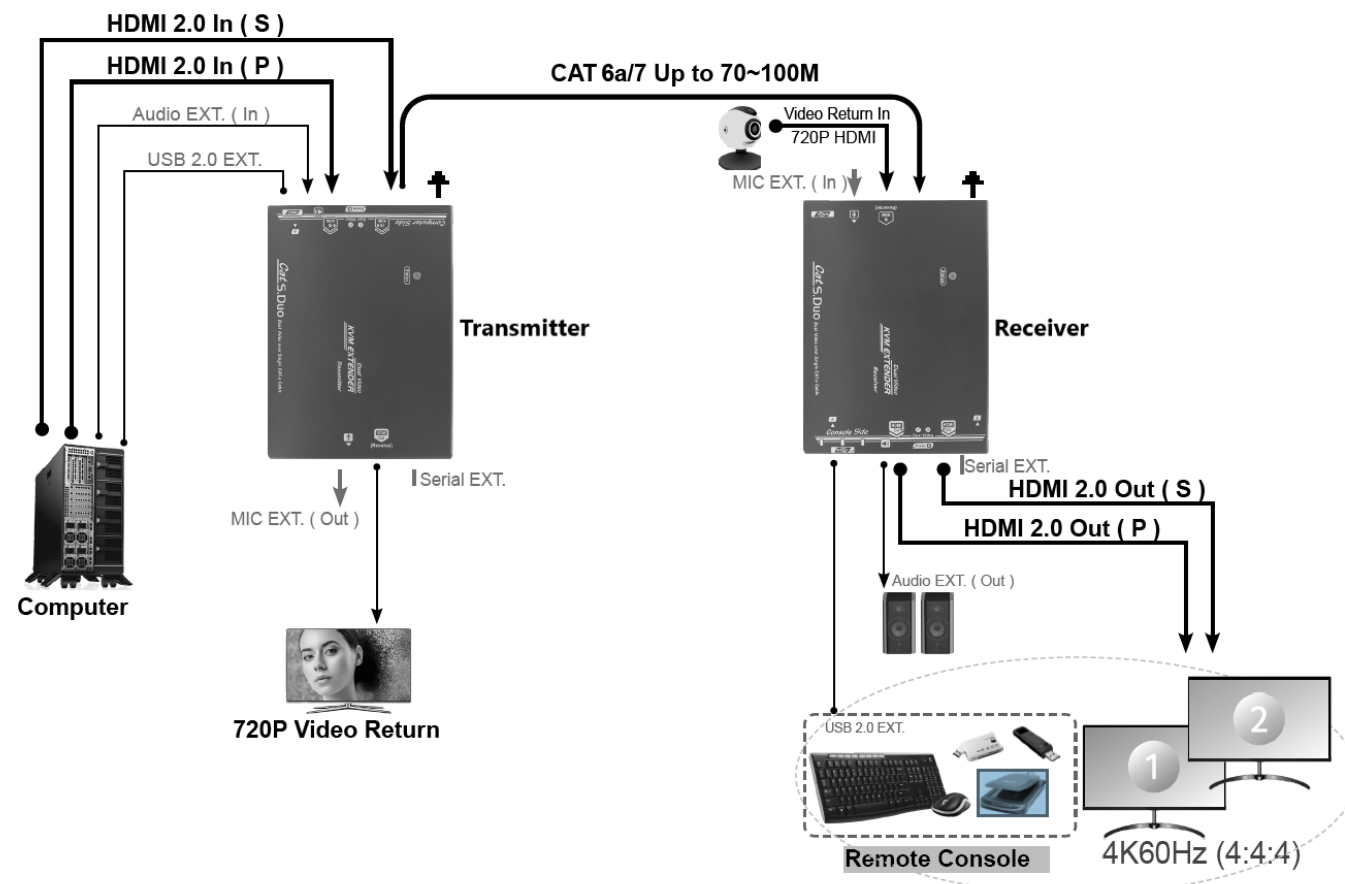
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■ The final specification is based on the actual product.
■ Features and functions may be added or changed after the manual was written. Please visit our website to download the latest version of manual for reference.

RXN-HBT3-R03.1



Connection Diagram



Resolution



Adjust the Resolution Switch to Set the Desired Resolution According to the Following Table :

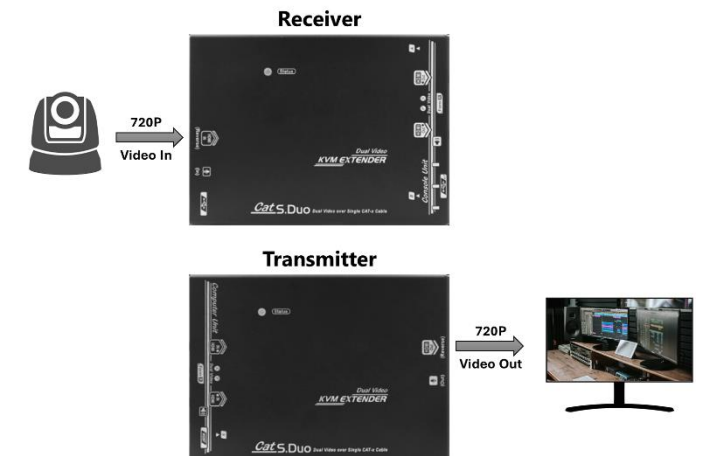
Wt & Wr *	Monitor Resolution	Total Transmission Resolution
0	Dual 2048x2048 @ 60Hz	4096x2048
1	Dual 1920x1080 @ 60Hz	3840x1080
2	Dual 2560x1440 @ 60Hz	5120x1440
3	Dual 3840x2160 @ 30Hz	7680x2160
4	Dual 3840x2160 @ 60Hz	7680x2160
5	Dual 2560x2880 @ 50Hz	5120x2880
6	Dual 1920x1920 @ 60Hz	3840x1920
7	Dual 1536x2048 @ 60Hz	3072x2048
8	Dual 1640x2048 @ 60Hz	3280x2048
9	Dual 2100x2800 @ 60Hz	4200x2800
A	Dual 5120x1440 @ 60Hz	5120x2880
B	Dual 1920x1080 @ 60Hz	1920x2160
C	Dual 2560x1440 @ 60Hz	2560x2880
D	Dual 3840x2160 @ 30Hz	3840x4320
E	Dual 3840x2160 @ 60Hz	3840x4320
F	Dual 2560x1080 @ 60Hz	2560x2160

* Applies the Same Rotary Switch Setting to TX and RX

Video Return

Video Return Mode	Local HDMI Output [Vro] displays the Receiver's Video Input [Vri] and supports up to 720P resolution (or equivalent bandwidth)
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* Video Return Mode and other upstream extensions (e.g., USB 2.0 and Serial) share the available upstream bandwidth. If the Video Return Mode is Enabled, it may affect the performance of other extensions, and media playback (e.g., playing of audio/video file from an extended USB drive) should be avoided.

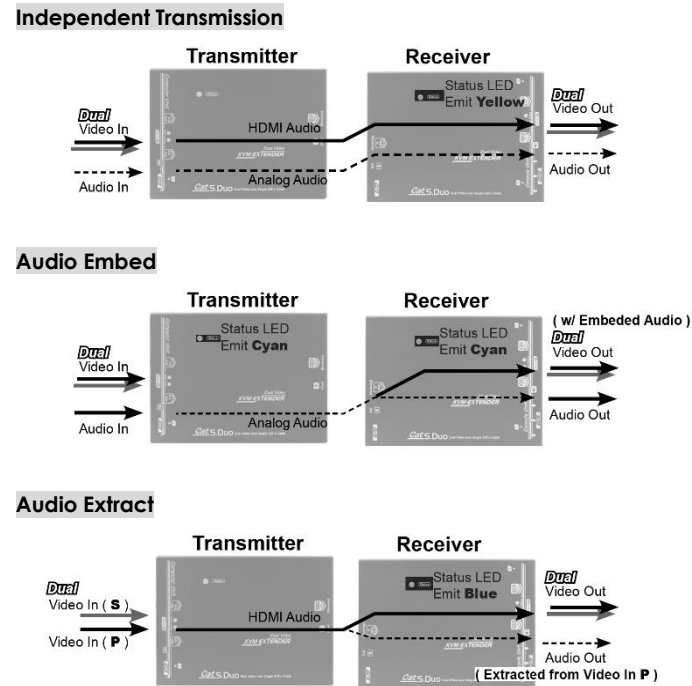
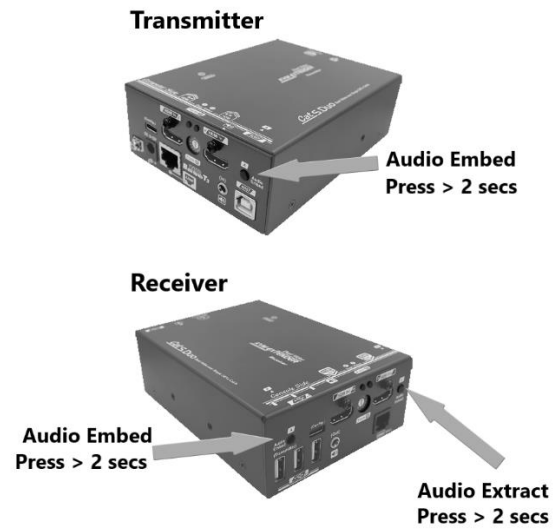


Audio Modes (Independent Transmission / Embed / Extract)

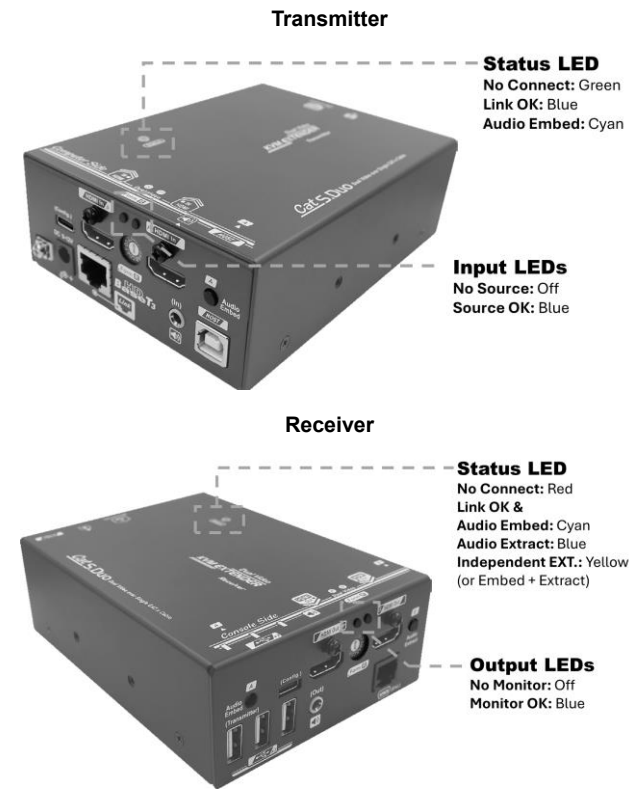
Users can switch audio embedding or audio extraction On/Off to enable the following three audio modes:

Audio Modes	Audio Embed*	Audio Extract	Audio Source for Receiver's Audio Outputs	
			HDMI Out [Vo]	SPK Out [Ao]
1. Independent Transmission	OFF	OFF	HDMI In (Tx)	SPK In (Tx)
2. Audio Embed Mode	ON	ON or OFF	SPK In (Tx)	
3. Audio Extract Mode	OFF	ON	HDMI In (Tx)	HDMI In (P)

* When Audio Embed Status is Changed, **Re-Powering the Units are Required.**

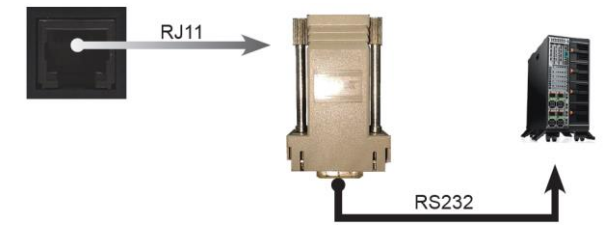


LED Indicators

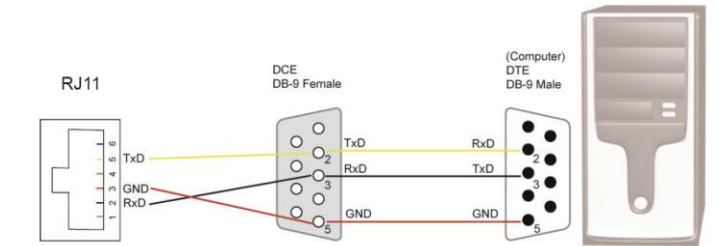


Serial Extension

- RJ-11 with DB9 Adaptor (Recommended) :**
User may use the RJ11-to-DB9 adaptor to convert the RJ-11 connector to a standard RS-232 (DB9) connector. This allows serial control extension via either a computer or a central control unit.



- RJ-11 Hard-Wiring :**
Experienced users may connect the serial extension to a central control panel or unit by hard-wiring the RJ-11 cable. The following is the pinout definition of the serial extension connector.



Scale Up / Down (Advance Operation)



User may select different Desktop Resolution on the TX, and the Output Resolution will be scaled to the Target Resolution (the Aspect Ratio must be the same).

For example, if the Source Resolution is set to FHD (**Wt = 1**), you can set the Monitor Resolution to FHD ~ UHD (**Wr = 1 ~ 4**), and the Output will be scaled up/down accordingly.

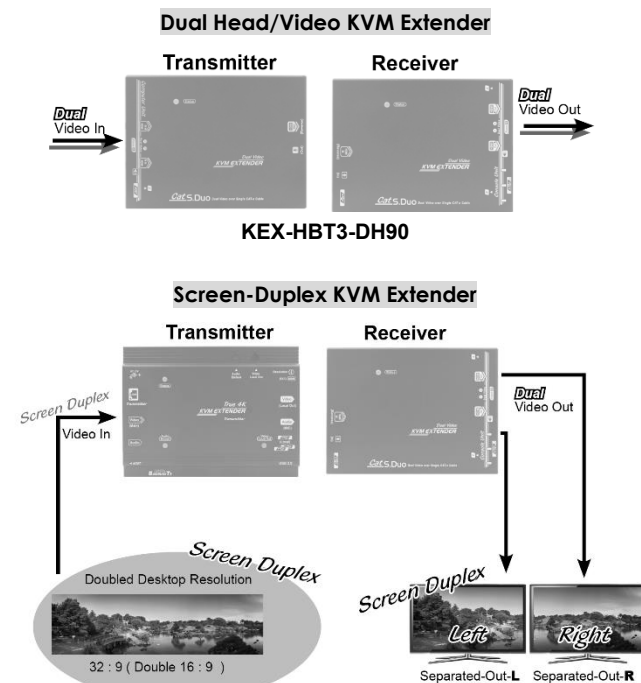
Wt	Resolution	Available Target Outputs Resolution Switch (Wr)
1	1920x1080@60Hz (16:9)	1 (FHDx2) 2 (QHDx2) 3 (UHD@30Hz x2) 4 (UHDx2)
2	2560x1440@60Hz (16:18)	
3	3840x2160@30Hz (32:9)	
4	3840x2160@60Hz (32:9)	
7	1536x2048 (Medical) (3:4)	7 (1536x2048) 8 (1640x2048) 9 (2100x2800)
8	1640x2048 (Medical) (3:4)	
9	2100x2800 (Medical) (3:4)	
0	2048x2048@60Hz (1:1)	0 (2048x2048) 6 (1920x1920)
6	1920x1920@60Hz (1:1)	

* The Scaling Function is useful when the Source has limited video capability. For example, Gaming Content requiring much more bandwidth than the GPU can handle.

Screen-Duplex Operation

In addition to the standard Dual Head/Video application, you may encounter Screen-Duplex application which only one video output is available for the source.

For example, certain MAC Systems have only one video output, and do not support MST. In situations where the user can only implement a Screen-Duplex configuration to extend a single desktop across dual monitors, a Screen-Duplex Extender model is required. The following diagrams illustrate the differences between Dual Head/Video and Screen-Duplex KVM Extenders:



Kindly contact our Sales Consultant for the Screen-Duplex KVM Extender



Limited Warranty

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RECOMMENDATION

Grounding

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