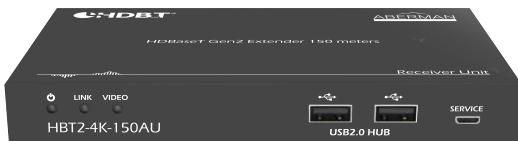


ABERMAN
PROFESSIONAL AUDIO-VIDEO SOLUTIONS
HBT2-WP4K-100AUC




**HDMI 2.0 4K60 4:4:4 & USB2.0
HDBaseT Extender up to 150 meters**

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1. Introduction

Aberman HBT2-WP4K-100AUC – is a HDMI 4K 4:4:4 HDBaseT extender. The transmitter unit works as HDMI/USB-C switcher and housed in the standard 86mm×86mm wall box. System supports point-to-point extension, featured bidirectional transmission for USB2.0, RS232 and IR ports. Extender supports the maximum signal resolution up to 4K@60 4:4:4 with 18Gbps video bandwidth. Receiver has equipped with 2x ports USB2.0 HUB and unbalanced analog stereo out port for de-embedding audio signal from HDMI stream. Extender based on Valens chipset, supported specification is HDBaseT 2.0. To achieve maximum distance and resolution support the recommended cable is CAT6A/CAT7. Extension distance support is varying based on cable type and signal bandwidth: for 1080p up to 150m and for 4K up to 100m. Receiver unit housed in the compact and robust metal case and ensure protection and cooling the system components. Units could be powered by the external power supplies or over CAT cable using PoC technology.

2. Features

- HDMI 2.0b, HDCP 2.2/1.x and DP 1.2a compliant
- HDMI input supports 18Gbps video bandwidth
- USB input supports 5.4Gbps video bandwidth
- Support video resolution up to 4K2K@60Hz (4:4:4)
- Up to 7.1 channels HD audio
- Input signal source selection supports button switching
- Built-in mode DIP switch for selecting the HBT mode or LRM mode
- HBT mode: transmission distance up to 100m for 4K60/4K30/1080P
- LRM mode: transmission distance up to 150m for 4K30/1080P
- Built-in EDID DIP switch supports intelligent EDID management
- Built-in audio DIP switch supports analog audio embedding
- Built-in POC switches, when both POC switches of TX and RX are turned on, the Extender supports bidirectional 24V POC function, that is, either TX or RX is powered by 24V1A power supply, the another does not need power supply from the DC jack.
- Transmit bidirectional Infrared control signal
- IR IN is a 5V power supply level
- Transmit bidirectional RS-232 control signal
- The Receiver supports USB 2.0 signal transmission
- Standard 86mm×86mm wall box

3. Package Contents

- 1x 4K60 HDMI/USB-C 2x1 HDBT Wall-plate Transmitter
- 1x HDBT Receiver
- 2x 2pin-3.81mm Phoenix connector (male)
- 4x 3pin-3.81mm Phoenix connector (male)
- 1x Wideband IR Receiver cable (1.5 meters)
- 1x IR Blaster cable (1.5 meters)
- 2x Mounting Ears
- 4x Machine Screws-M3*4
- 1x 24V/1A Locking Power Supply
- 1x User Manual

4. Warranty Information

Aberman warrants all units to be free from defects in workmanship and materials, under normal use and service, for a period of one (1) year from the date of purchasing from authorized reseller. If a product does not work as it warranted during this period, Aberman will repair or replace the defective product or its part. Replacement products may be new or reconditioned.

Warranty ends if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or servicing other than by Aberman or its authorized centers, causes other than from ordinary use or failure to properly use the Product in the application for which said Product is intended.

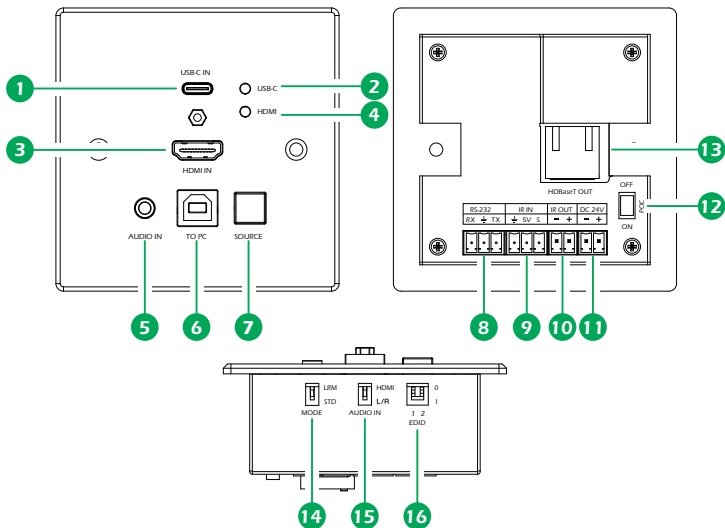
5. Best Practice

Aberman engineers design products at the highest quality standards. To get the best results from our products, please read this manual carefully. We recommend using the best quality connectors, cables, and adapters. Consider the points below when you choose accessories and position equipment.

For best results with HDMI/DVI, use good quality cables up to 5 meters long for 4K and up to 15 meters for 1080p, or shorter if you are using any connection adapters. If you need to place your equipment more than 15 meters apart, we recommend using a signal extender. See Aberman Smart Extension product line of signal extenders to find correct one. Use only graded Speed HDMI cables. In industrial environments, use shielded CAT cables (STP, FTP, F/UTP or S/FTP) with digital extenders. To achieve best performance and maximum distance use appropriate fiber optical types (Multi or Single Mode) and grades for optical extenders.

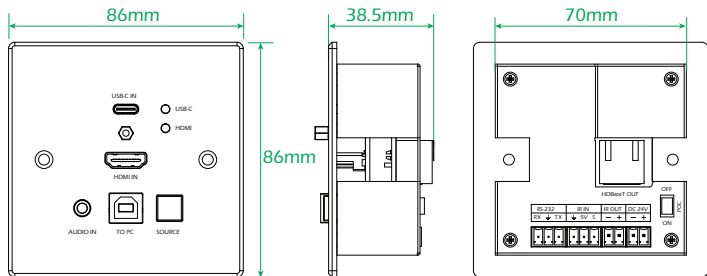
6. Unit's Interfaces

6.1 Transmitter panels

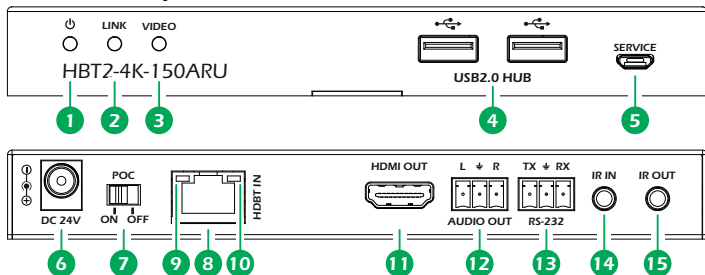


No.	Name	Function Description
1	USB-C IN port	USB-C signal input port, supporting video signal (up to 4K60) and USB2.0 signal, connected to USB-C signal source device.
2	USB-C LED	USB-C signal input indicator. When the USB-C signal is selected as the input source, the green indicator light on.
3	HDMI IN port	HDMI signal input port, connected to HDMI source device, such as Blu-ray or PS4.
4	HDMI LED	HDMI signal input indicator. When the HDMI signal is selected as the input source, the green indicator light on.
5	AUDIO IN port	Analog audio input port for audio embedding.
6	TO PC port	USB-B port, connected to PC. This port can be switched along with the HDMI IN port, that is, when switching to the HDMI signal source, the USB HOST can be selected simultaneously.
7	SOURCE button	Used to switch HDMI/USB-C input signal source.

No.	Name	Function Description
8	RS-232 port	Connected to PC or control system through 3-pin Phoenix connector for RS-232 serial command pass-through.
9	IR IN port	Connected to IR wideband receiver cable, receiving the remote control signal and then send it to the receiving end.
10	IR OUT port	Connected to IR blaster cable, sending the remote control signal from the receiving end.
11	DC 24V port	DC 24V/1A power input port. Note that the extender supports POC function, it means that either transmitter or receiver is powered on by 24V/1A power adapter, the other one doesn't need power supply.
12	POC switch	Use the switch to turn on/off POC function.
13	HDBaseT OUT port	HDBaseT signal output port, connected to the HDBT IN port of Receiver with a CAT6 cable.
14	MODE DIP switch	Used to select the working mode: LRM-long reach mode: Extend the signal up to 492ft/150m through a single CAT6 network cable. STD-HBT mode: Extend the signal up to 328ft/100m through a single CAT6 network cable.
15	AUDIO IN DIP switch	Used to select the signal source: HDMI: use audio from the digital stream of HDMI IN port L/R: use analog audio to embed from the AUDIO IN port
16	EDID DIP switch	Used to set the EDID information: 00- Copy RX display's EDID (as factory default) 01- 4K30 4:4:4 10- 1080p60 4:4:4 11- 1200p60 4:4:4



6.1 Receiver panels



No.	Name	Function Description
1	Power LED	Red LED indicates that the Receiver is powered on.
2	LINK LED (Green)	Light on: TX - RX link in good connection status. Light Flashing: TX - RX link in poor connection status. Light off: Transmitter and Receiver are not connected.
3	VIDEO LED (Green)	Signal indicator Light Flashing: There is valid signal input. Light off: There is no signal or the signal is invalid.
4	USB 2.0 port	USB Type A port for connecting USB 2.0 devices, such as USB Flash Drive, Mouse and Keyboard.
5	SERVICE port	Software update port. Send command "s switch uart 0!" to switch MCU; send command "s switch uart 1!" to switch VALENS.
6	DC 24V port	DC 24V/1A power input port. Note that the extender supports POC function, it means that either transmitter or receiver is powered on by 24V/1A power adapter, the other one doesn't need power supply.
7	POC switch	Use the switch to turn on/off POC function.
8	HDBT IN port	HDBaseT signal input port, connected to the HDBaseT OUT port of Transmitter with a CAT6 cable.
9	Link Signal Indicator (Green)	Light on: TX - RX link in good connection status. Light Flashing: TX - RX link in poor connection status. Light off: Transmitter and Receiver are not connected.
10	Data Signal Indicator (Yellow)	Light Flashing: There is data transmission. Light off: There is no data transmission.

No.	Name	Function Description
11	HDMI OUT port	HDMI signal output port, connected to HDMI display device such as TV or monitor.
12	AUDIO OUT port	Analog audio output port.
13	RS-232 port	Connected to PC or control system through 3-pin Phoenix connector for RS-232 serial command pass-through.
14	IR IN port	Connected to IR wideband receiver cable, receiving the remote control signal and then send it to the transmitting end.
15	IR OUT port	Connected to IR blaster cable, sending the remote control signal from the transmitting end.

7. Safety Instructions

WARNING: To reduce the risk of fire or electric shock, do not expose this device to rain or moisture. Do not use this device near water. Clean only with a dry cloth. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the device. This unit must be connected to an earthed mains socket outlet with the supplied cable. The AC wall outlet should be installed near to the unit and be easily accessible.

If using extenders which run a long distance, the protective earth circuit of the socket should be verified by a skilled person to ensure equipotential earth bonding. Do not use unit on objects or installations where power lines have grounding and/or different phase issues.

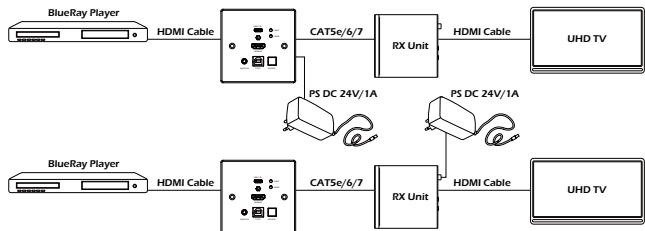
Unplug units during lightning storms or when unused for long periods of time. Do not install unit near any heat sources such as radiators, heat registers, stoves, or devices (including amplifiers) that produce heat. Do not block any ventilation openings. This unit uses active cooling with fans. Do not install unit in dusty and/or dirty places. Use professional equipment racks with air condition and filters.

8. Specifications

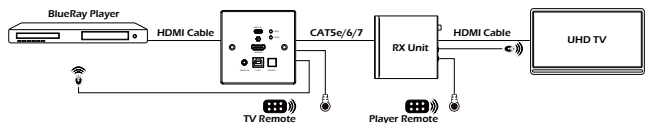
Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	HDMI: 18Gbps; USB-C : 5.4Gbps
HDMI Video Resolution	Up to 4K@60Hz 4:4:4
Color Space	RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12bit
HDMI Audio Formats	LPCM 7.1CH, Dolby True HD and DTS-HD Master (Full format)
Analog Audio Embedding	48KHz
Transmission Distance	LRM mode: 150m (4K30/1080P) STD-HBT mode: 100m (4K60/4K30/1080P)
ESD Protection	Human body model—±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connections	
Transmitter	Input: 1 x HDMI IN [Type A, 19-pin female] 1 x USB-C IN [USB Type C] 1 x AUDIO IN [3.5mm Stereo Mini-jack] Output: 1 x HDBaseT OUT [RJ45] Control: 1 x TO PC [USB Type B] 1 x RS-232 [3pin-3.81mm Phoenix connector] 1 x IR IN [3pin-3.81mm Phoenix connector] 1 x IR OUT [2pin-3.81mm Phoenix connector]
Receiver	Input: 1 x HDBT IN [RJ45] Output: 1 x HDMI OUT [Type A, 19-pin female] 1 x AUDIO OUT [3pin-3.81mm Phoenix connector] Control: 2 x USB 2.0 [USB Type A] 1 x RS-232 [3pin-3.81mm Phoenix connector] 1 x IR IN [3pin-3.81mm Phoenix connector] 1 x IR OUT [2pin-3.81mm Phoenix connector] 1 x SERVICE [Micro USB]
Mechanical	
Housing	Metal Enclosure
Color	Front panel: White; Rear case: Black
Dimensions	Transmitter: 86mm [W] x 86mm [D] x 38.5mm [H] Receiver: 157.2mm [W] x 88mm [D] x 20mm [H]
Weight	Transmitter: 234g; Receiver: 377g
Power Supply	24V/1A (supporting bidirectional POC power supply)
Power Consumption	12.5W (Max)
Operating Temperature	0 - 40°C
Storage Temperature	-20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

9. Connection Examples

Using the Bidirectional POC Feature



Bidirectional Infrared control



Bidirectional RS-232 & USB control Options

