ADERTECH

H2BT-U4H-70U

18Gbps 70M HDBaseT 2.0 Extender



User Manual

VER 1.0

Thank you for purchasing this product

We have done everything possible to ensure that our equipment pleases our consumers. When solving any problems in the operation and connection ADERTECH equipment, it is best to contact authorized companies and specialists who work with our equipment. Our equipment is intended for professional use, so you have professional skills in using such equipment. ADERTECH is a manufacturer of a wide range of multimedia solutions.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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1. Introduction

This 18Gbps 70M HDBaseT 2.0 Extender can extend HDMI signal, bi-directional IR control signal, USB signal and RS-232 control signal to a distance up to 70m via a single CAT6/6a cable. It can realize long distance transmission with zero delay and no compression between signal source and display devices. Video resolution up to 4K2K@60Hz YUV 4:4:4. Transmitter supports de-embeded audio for digital optical and stereo analog audio output. The extender supports bi-directional IR signal pass-through function, which can control the signal source devices or display devices from the remote end. It also supports USB KVM and POC function.

The extender can be widely used in other fields such as video conference system, multimedia signal broadcasting, HDMI signal extension, etc.

2. Features

- ☆ HDMI2.0b, USB 2.0, HDCP 2.2 / 1.x and DVI 1.0 compliant
- ☆ Support 18Gbps video bandwidth
- ☆ Support video resolution up to 4k2k@60Hz YUV 4:4:4
- ☆ High bit rate audio transmission via HDMI
- ☆ The transmission distance can be extended up to 70m / 230ft at the resoution of 1080P@60Hz, or 40m / 164ft at 4K2K@60Hz 4:4:4 via a single CAT6/6a cable
- ☆ Support USB signal, bi-directional IR and RS-232 control signal pass-through
- ☆ Transmitter supports de-embeded audio for digital optical and analog audio output.
- ☆ Support USB KVM function
- ☆ Support POC (Power over Cable) function
- ☆ Compact design for easy and flexible installation

3. Package Contents

① 1 x 18Gbps HDBaseT Extender (Transmitter)
② 1 x 18Gbps HDBaseT Extender (Receiver)
③ 1 x IR Blaster cable (1.5 meters)
④ 1 x IR Receiver cable (1.5 meters)
⑤ 2 x 3-pin 3.81mm Phoenix Connector
⑥ 4 x Mounting Ear
⑦ 8 x Machine Screw
⑧ 1 x 24V/1A Locking Power Adapter
⑨ 1x User Manual

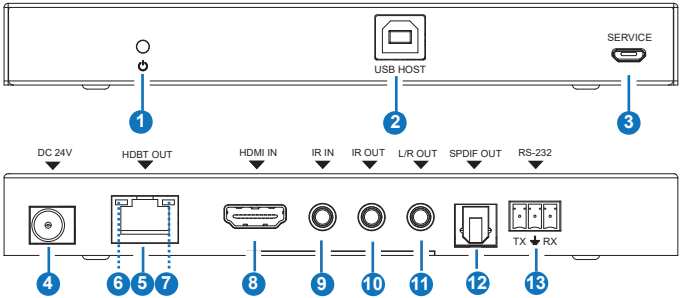
4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 / 1.x
Video Bandwidth	18Gbps
Video Resolution	Up to 4K2K@60Hz YUV 4:4:4
USB Compliance	USB 2.0
USB Transfer Rate	Transmission rate up to 480mb/s, USB1.1 compliant
Transmission Distance	70m via a single CAT6 cable
Color Space	RGB, YCbCr4:4:4, YCbCr4:2:2, YCbCr 4:2:0
Color Depth	8-bit, 10-bit, 12-bit (1080P@60Hz) 8-bit (4K2K@60Hz YUV4:4:4) 8-bit, 10-bit, 12-bit (4K2K@60Hz YCbCr 4:2:2/4:2:0)
HDR	HDR10, HDR10+, HLG

Audio Format	HDMI: LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X Optical: Dolby Digital, DTS 5.1, PCM 2CH Analog Signal: LPCM 2CH
Connection	
Transmitter	Input: 1×HDMI IN [TypeA, 19-pin female] 1×IR IN [3.5mm Stereo Mini-jack] 1×Service [Micro-USB jack] 1×USB [USB-B, 4-pin female] Output: 1×HDBaseT OUT [RJ45] 1×IR OUT [3.5mm Stereo Mini-jack] 1×L/R OUT [3.5mm Stereo Mini-jack] 1×SPDIF OUT 1×RS-232 [Phoenix jack]
Receiver	Input: 1×HDBaseT IN [RJ45 with light] 1×IR IN [3.5mm Stereo Mini-jack] 1×Service [Micro-USB jack] Output: 1×HDMI OUT [TypeA, 19-pin female] 1×RS-232 [Phoenix jack] 1×IR OUT [3.5mm Stereo Mini-jack] 2×USB [USB-A, 4-pin female]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver:165mm (W)×88.3mm (D)×20mm (H)
Power Supply	DC 24V/1A; Support POC function
Power Consumption	13W (max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)

5. Operation Controls and Functions

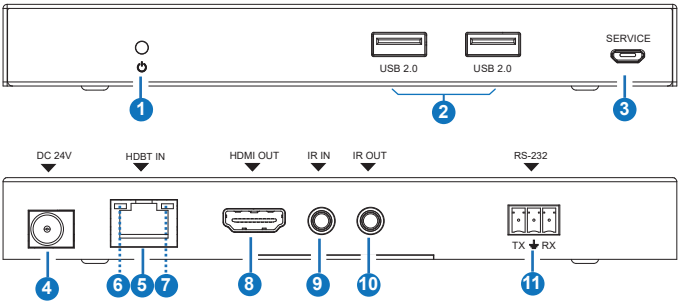
5.1 Transmitter Panel



No.	Name	Function Description
1	Power LED	The red LED is on when the Transmitter is powered on.
2	USB HOST	USB type B port. Connect to PC.
3	SERVICE	Firmware update port.
4	DC 24V	DC 24V power input port. *Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 24V/1A power supply, the other doesn't need power supply.*
5	HDBT OUT	RJ45 connector for connecting the HDBT IN port of the Receiver with CAT6/6a cable.
6	Connection Signal Indicator (Green)	▪ Illuminating: Transmitter and Receiver are in good connection status. ▪ Flashing: Transmitter and Receiver are in poor connection status. ▪ Dark: Transmitter and Receiver are not connected.
7	Data Signal Indicator (Orange)	▪ Illuminating: HDMI signal with HDCP. ▪ Flashing: HDMI signal without HDCP. ▪ Dark: No HDMI signal.

No.	Name	Function Description
8	HDMI IN	HDMI signal input port. Connect to HDMI source device with HDMI cable.
9	IR IN	Connect to IR receiver cable, the IR receive signal will emit to the IR OUT port of the Receiver.
10	IR OUT	Connect to IR blaster cable, the IR emit signal is from the IR IN port of the Receiver.
11	L/R OUT	3.5mm stereo audio signal output port.
12	SPDIF OUT	Optical fiber audio signal output port.
13	RS-232	3-pin Phoenix connector for RS-232 command transmission. The RS-232 command will pass-through between the Transmitter and Receiver.

5.2 Receiver Panel



No.	Name	Function Description
1	Power LED	The power LED is on when the Receiver is powered on.
2	USB 2.0	Two USB 2.0 ports. Connect to USB devices.
3	SERVICE	Firmware update port.
4	DC 24V	DC 24V power input port. *Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 24V/1A power supply, the other doesn't need power supply.*
5	HDBT IN	RJ45 connector for connecting the HDBT OUT port of Transmitter with CAT6/6a cable.
6	Connection Signal Indicator (Green)	▪ Illuminating: Transmitter and Receiver are in good connection status. ▪ Flashing: Transmitter and Receiver are in poor connection status. ▪ Dark: Transmitter and Receiver are not connected.
7	Data Signal Indicator (Orange)	▪ Illuminate: HDMI signal with HDCP. ▪ Flash: HDMI signal without HDCP. ▪ Dark: No HDMI signal.
8	HDMI OUT	HDMI signal output port. Connect to HDMI display devices with HDMI cable.
9	IR IN	Connect to the IR receiver cable. The IR signal will send to the IR OUT port of the Transmitter.
10	IR OUT	Connect to the IR blaster cable, the IR signal is from IR IN port of the Transmitter.
11	RS-232	3-pin Phoenix connector for RS-232 command transmission. The RS-232 command will pass-through between the Transmitter and Receiver.

5.3 IR Pin Definition

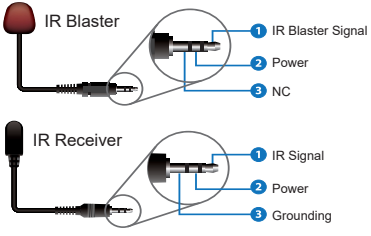
IR Receiver and Blaster pin's definition is as below:



IR RECEIVER



IR BLASTER

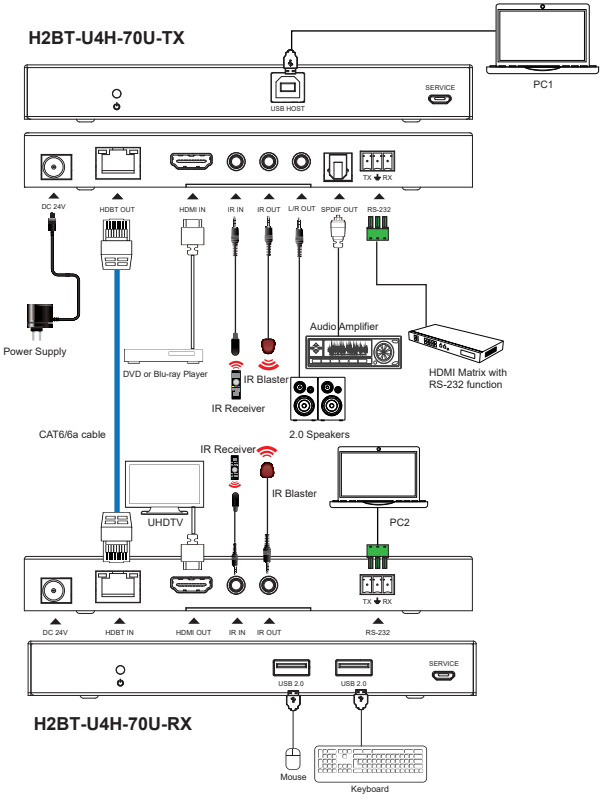


Note:

When the angle between the IR receiver and the remote control is ± 45 °, the transmission distance is 0-5 meters;

When the angle between the IR receiver and the remote control is ± 90 °, the transmission distance is 0-8 meters.

6. Application Example



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