HDBaseT Extender 150M with Loopout

User Manual

VER 1.0

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

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 HDBaseT Extender is capable to extend HDMI signals from signal sources to display devices via CAT 5e/6 cable with a distance up to 150m/ 492ft and video resolution up to 1080P@60Hz YUV4:4:4. It supports bidirectional IR control, RS-232 control, EDID management, audio embed-ment (TX) and audio disembedment (RX). The transmitter supports HDMI signal loop out. Equipped with a powerful chip, the extender can deliver a stable work for 24-hour continuously with low power consumption. It is easy to use, plug and play, which is widely applied in scenarios such as video conference, out-doors big-screen demonstration, and home theater.

2. Features

- ☆ HDMI 1.3 and HDCP 1.4 compliant
- ☆ Video resolution is up to 1080P@60Hz
- ☆ The transmission distance via a single CAT 5e/6 cable is up to 150m/492ft
- ☆ Support bi-directional IR control, RS-232 control and EDID mangement
- ☆ Support audio embedment and dis-embedment
- ☆ Support bi-directional PoC (Power over Cable) function
- ☆ Compact design for easy and flexible installation

3. Package Contents

- 1 x 1080P HDBaseT Extender (Transmitter)
- 2 1 x 1080P 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 Phoenix Connector
- 6 4 x Mounting Ear
- ⑦ 8 x Machine Screw (KM3*4)
- ⑧ 1 x 24V/1A Locking Power Adapter
- 1 x User Manual

4. Specifications

Technical			
HDMI Compliance	HDMI 1.3		
HDCP Compliance	HDCP 1.4		
Video Bandwidth	6.75Gbps		
Video Resolution	480i ~1080p50/60Hz; Up to1200P@60Hz		
Color Depth	8-bit (1080P60Hz)		
Color Space	RGB, YCbCr 4:4:4 / 4:2:2		
HDMI Audio Formats	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X		
Extension Distance	150m/492ft at 1080P@60		
Connection			
Transmitter	Input: 1×HDMI IN [TypeA 19-pin female] 1×LINE IN [3.5mm Stereo Mini-jack] Output: 1×HDBT OUT [RJ45 8-pin female] 1×HDMI OUT [TypeA 19-pin female] Control: 1×AUDIO DIP Switch [1 pin] 1×EDID DIP Switch [2-pin] 1×IR IN [3.5mm Stereo Mini-jack] 1×IR OUT [3.5mm Stereo Mini-jack] 1×RS-232 [Phoenix jack] 1×Service [Micro-USB jack]		
Receiver	Input: 1×HDBT IN [RJ45 8-pin female] Output: 1×HDMI OUT [TypeA 19-pin female] 1×AUDIO OUT [3.5mm Stereo Mini-jack] Control: 1×RS-232 [Phoenix jack] 1×SERVICE [Micro-USB jack] 1×IR IN [3.5mm Stereo Mini-jack] 1×IR OUT [3.5mm Stereo Mini-jack]		

Mechanical			
Housing Metal Enclosure			
Color	Black		
Dimensions	TX/ RX:146.7mm (W)×71.5mm (D)×21mm (H)		
Weight	Transmitter: 287g, Receiver: 294g		
Power Supply	Input: AC100~240V 50/60Hz Output: DC 24V/1A (Locking connector)		
Power Consumption	8.4W (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	When the transmitter is powered on, the red light will be on.			
2	IN LED	When the transmitter is connecting with a source signal, the green light will be on.			
3	LOOP LED	When the transmitter is connecting with a display, the green light will be on.			
4	AUDID DIP SWITCH	1-PIN AUDIO DIP switch, used for setting the audio mode. HDMI: By turning to HDMI, the output audio on both trans- mitter and Receiver will be the one from the HDMI IN port. LINE IN: By turning to LINE, the output audio on both trans- mitter and Receiver will be the one from the LINE IN port.			
5	EDID DIP SWITCH	2-PIN EDID DIP switch, used for setting the output video/ audio, which is set as follows. 00: 1920*1080P60 LPCM 2.0 01: 1920*1200P60 LPCM 2.0 10: COPY TX LOOP OUT 11: COPY RX HDMI OUT			
6	SERVICE	Firmware update port.			
7	DC 24V	DC 24V/1A power input port. Note that the extender supports bi-directional POC function, which means either the transmitter or the receiver is connecting to a 24V/1A power supply, the other doesn't need to be plugged into a powered socket and can be powered via the CAT 5e/6 cable.			
8	HDBT OUT	RJ45 connector, connecting to the HDBT IN port of the receiver with a CAT5e/6 cable.			
9	Connection Signal Indicator Iamp (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. 			
10	Data Signal Indicator lamp (Orange)	 Illuminating: HDMI signal with HDCP. Flashing: HDMI signal without HDCP. Dark: No HDMI signal. 			
11	HDMI IN	HDMI signal input port, used for connecting a source device, such as TV box or DVD player.			
12	HDMI OUT	HDMI signal loop out port, connecting to a display device, such as TV.			

No.	Name	Function Description		
13	LINE IN	Analog audio signal input port.		
14	IR IN	IR input port for receiving the signal of IR remote.		
15	IR OUT	IR output port to control the source device. This IR output signal is from the IR IN port of receiver.		
16	RS-232	3-pin Phoenix connector for RS-232 command transmission The RS-232 command will pass-through from transmitter to receiver or receiver to transmitter.		

5.2 Receiver Panel



No.	Name	Function Description		
1	Power LED	When the receiver is powered on, the red light will be on.		
2	HDMI OUT LED	When the receiver is connecting to a display, the green light will be on.		
3	SERVICE	Firmware update port.		

No.	Name	Function Description		
4	DC 24V	DC 24V/1A power input port. Note that the extender supports bi-directional POC function, which means either the transmitter or the receiver is connecting to a 24V/1A power supply, the other doesn't need to be plugged into a power socket and can be powered via the CAT 5e/6 cable.		
5	HDBT IN	RJ45 connector used for connecting the HDBT OUT port of transmitter with a CAT 5e/6 cable.		
6	Connection Signal Indicator Iamp (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 lamp (Orange)	Illuminating: HDMI signal with HDCP. Flashing: HDMI signal without HDCP. Dark: No HDMI signal.		
8	HDMI OUT	HDMI signal output port, connecting to a display device.		
9	AUDIO OUT	Audio signal output port, connecting to Speaker or Amplifier.		
10	IR IN	IR input port for receiving the signal of IR remote.		
11	IR OUT	UT IR output port to control the display device. This IR output signal is from IR IN port of transmitter.		
12	RS-232	3-pin Phoenix connector for RS-232 command transmission. The RS-232 command will pass-through from transmitter to receiver or receiver to transmitter.		

5.3 IR Pin Definition

IR Receiver and Blaster pin's definition as below:



IR RECEIVER



IR BLASTER



Note: When the angle between the IR receiver and the remote control is \pm 45 °, the transmission distance is 0-5 meters; when the angle between the IR receiver and the remote control is \pm 90 °, the transmission distance is 0-8 meters.

6. Audio Processing Logics

The extender provides two audio input modes, the digital (HDMI IN) and the analog (LINE IN). The processing logics are set as follows:

	When the	TX's HDMI IN port connects n the to a source LINE IN device,	TX's HDMI LOOPOUT port connects to a display device,	then, the display device outputs video from the source device and audio from the LINE IN port.
			RX's HDMI OUT port	then, the display device outputs
			connects to a display	video from the source device and
	TY's LINE IN		device,	audio from the LINE IN port.
	NE connects to		RX's AUDIO OUT port	then, the speaker outputs audio
LINE			connects to a Speaker,	from the LINE IN port.
IN	an audio		TX's HDMI LOOPOUT	then, the display device outputs a
	source	TX's HDMI	port connects to a	black screen with audio from the
	device	IN port	display device,	LINE IN port.
	active,	does not	RX's HDMI OUT port	then, the display device outputs a
		connect to	connects to a display	black screen with audio from the
		any source	device,	LINE IN port.
		devices,	RX's AUDIO OUT port	then, the speaker outputs the audio
			connects to a Speaker,	from the LINE IN port.

LINE IN	When the TX's LINE IN port does not connect to any audio source devices,	TX's HDMI IN port connects to a source device,	TX's HDMI LOOPOUT port connects to a display device,	then, the display device only outputs video from the source device without any sounds.
			RX's HDMI OUT port connects to a display device,	then, the display device only outputs video from the source device without any sounds.
			RX's AUDIO OUT port connects to a Speaker,	then, the Speaker does not play any sounds.
		TX's HDMI IN port does not connect to any source devices,	TX's HDMI LOOPOUT port connects to a display device,	then, the display device shows a black screen with no sounds.
			RX's HDMI OUT port connects to a display device,	then, the display device shows a black screen with no sounds.
			RX's AUDIO OUT port connects to a Speaker,	then, the Speaker does not play any sounds.
	When the TX's LINE IN port connects to an audio source device,	TX'S HDMI IN port connects to a source device, TX'S HDMI IN port does not connect to any source devices,	TX's HDMI LOOPOUT port connects to a display device,	then, the display device outputs video and audio both from the source device.
			RX's HDMI OUT port connects to a display device,	then, the display device outputs video and audio both from the source device.
			RX's AUDIO OUT port connects to a Speaker,	then, the Speaker outputs audio from the HDMI IN port.
			TX's HDMI LOOPOUT port connects to a display device,	then, the display device shows no signal input.
			RX's HDMI OUT port connects to a display device,	then, the display device shows no signal input.
HDMI			RX's AUDIO OUT port connects to a Speaker,	then, the Speaker does not play any sounds.
IN	When the TX's LINE IN port does not connect to any audio source devices,	TX's HDMI IN port connects to a source device,	TX's HDMI LOOPOUT port connects to a display device,	then, the display device outputs video and audio both from the source device.
			RX's HDMI OUT port connects to a display device,	then, the display device outputs both video and audio both from the source device.
			RX's AUDIO OUT port connects to a Speaker,	then, the Speaker outputs audio from the HDMI IN port.
		ny TX's HDMI o IN port ce does not ces, connect to any source devices,	TX's HDMI LOOPOUT port connects to a display device,	then, the display device shows no signal input.
			RX's HDMI OUT port connects to a display device,	then, the display device shows no signal input.
			RX's AUDIO OUT port connects to a Speaker,	then, the Speaker does not play any sounds.

7. Application Example

Transmitter





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