



HDMI USB Extender over Cat5e/Cat6 (HDBaseT 2.0)

User Manual



Thank you for purchasing HDBaseT

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, lightning 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

The HDBaseT extender enables transmission of video resolutions up to 4K2K@60Hz (YUV 4:2:0), HDBaseT Transmitter provides one HDMI and one VGA signal input, which supports HDCP2.2 and can be switched freely. It transmits VGA or HDMI signal to Receiver over CAT5e/CAT6 cable up to 330ft/100m. Using the latest HDBaseT 2.0 technology can make your classroom set-up more efficient and easy to use.

2. Features

- HDMI 2.0b, HDCP 2.2 and HDCP 1.4 compliant.
- Video resolutions up to 4K2K@60Hz(4:2:0), 4K2K@30Hz, 1080p@120Hz.
- Audio up to 7.1 channels of High Definition audio pass through (LPCM, Dolby TrueHD, and DTS-HD Master Audio).
- HDBaseT 2.0 over a single CAT5e/6/7 cable up to 330ft/100m distance.
- Two-Way POC (Power over Cable) supports either TX or RX powered by 24V@1A, the other one doesn't need power supply.
- Supports USB2.0 control.

3. Package Contents

- 1 x HDMI Extender Transmitter
- 1 x HDMI Extender Receiver
- 1 x 24V1A DC Power Supply
- 2 x Mounting ears
- 1 x User Manual

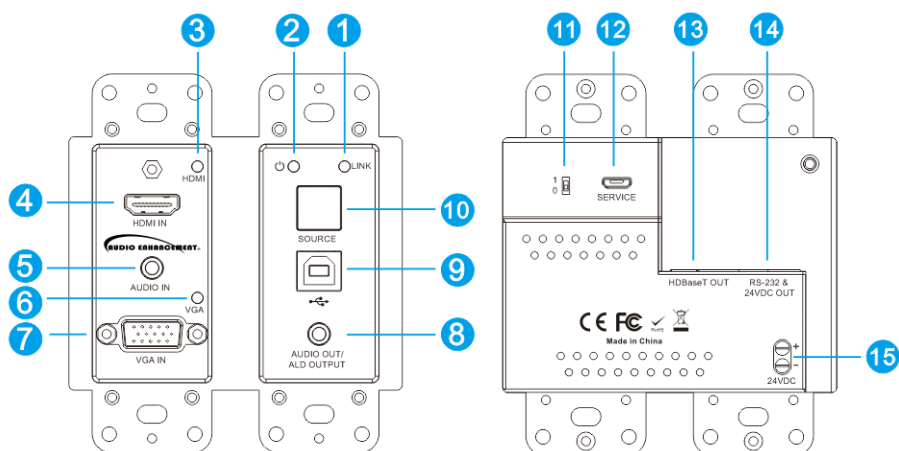


4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 and HDCP 1.4
Video Bandwidth	10.2 Gbps
Video Resolutions	Up to 4K2K@50/60Hz(4:2:0),4K2K@30Hz,1080P@120Hz, and 1080P 3D@60Hz
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	8-bit,10-bit, 12-bit
HDMI Audio Formats (Pass-through)	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
ESD Protection	Human body model — ±8kV (air-gap discharge) & ±4kV (contact discharge)
Connections	
Transmitter	
Inputs	1x HDMI Type A [19-pin female] 1x VGA [DB15 VGA female] 1x AUDIO IN [3.5mm Stereo Mini-jack]
Outputs	1x HDBaseT Out [RJ45] 1x RS-232 & 24VDC OUT [RJ45] 1x AUDIO OUT/ALD OUTPUT [3.5mm Stereo Mini-jack] 1x USB [USB-B]
Receiver	
Inputs	1x HDBaseT In [RJ45] 1x AUDIO IN & RS-232 & 24VDC IN [RJ45] 2x USB [USB-A]
Outputs	1 x HDMI Type A [19-pin female]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Tx:104mm [W] x 90mm [D] x 42mm [H] Rx:140mm [W] x 75mm [D] x 23mm [H]
Weight	Tx:200g, Rx:300g
Power Supply	Input: AC100 - 240V 50/60Hz Output: DC 24V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	11W (Max)
Operation Temperature	32 - 104°F / 0 - 40°C
Storage temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

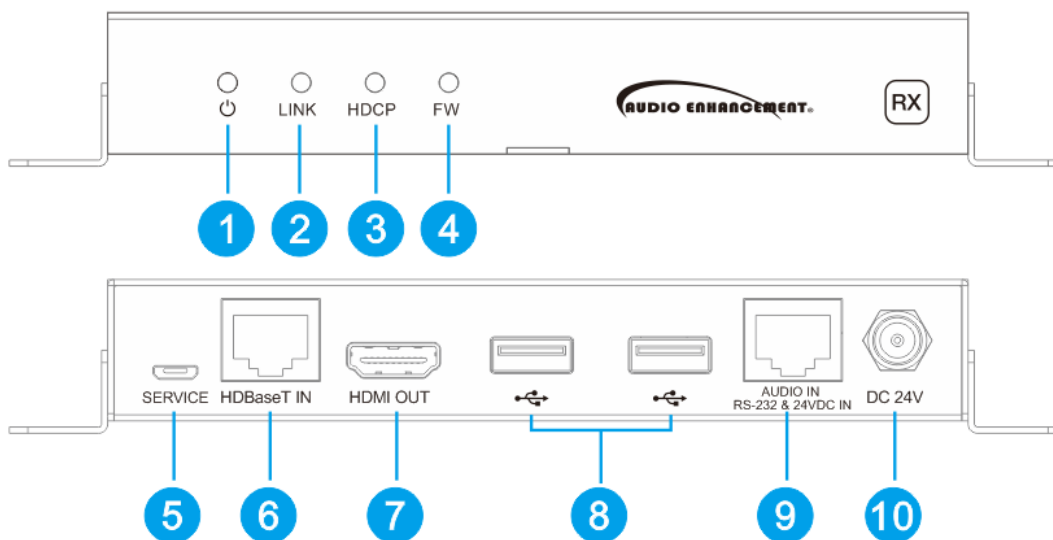
5. Operation Controls and Functions

5.1 Transmitter Front and Rear Panel



1. **LINK LED:** HDBaseT Link status indicator
2. **POWER LED:** System power indicator.
3. **HDMI LED:** HDMI indicator. ON: HDMI signal is chosen as input source.
4. **HDMI IN:** Connects to HDMI source device.
5. **AUDIO IN:** Connect with external audio source for VGA signal.
6. **VGA LED:** VGA indicator. ON: VGA signal is chosen as input source.
7. **VGA IN:** Connect with VGA source.
8. **AUDIO OUT/ALD OUTPUT:** Connect to speaker via 3.5mm audio cable.
9. **USB:** Connect from PC or Laptop for data transmit to or control from the Receiver's USB-D slots.
10. **SOURCE:** Press it to select one source.
11. **DIP SWITCH:** Select 'SERVICE'.
12. **SERVICE:** Used for firmware update.
13. **HDBaseT OUT:** Connects to HDBaseT Receiver with a Cat5e/6/7 cable.
14. **RS-232 & 24VDC OUT:** Connect the control panel equipment.
15. **24VDC (OPTIONAL):** Connects 24V/1A adaptor to AC wall outlet for power supply.

5.2 Receiver Front and Rear Panel



1. **POWER LED:** System power indicator.
2. **LINK LED:** The connection status indicating lamp.
 - Illuminated: Good connection between the transmitter and receiver
 - Flashing: Poor connection between the transmitter and receiver
 - Dark: No connection between the transmitter and receiver
3. **HDCP LED:** The HDCP status indicating lamp.
 - Illuminated: The HDMI signal with HDCP.
 - Flashing: The HDMI signal without HDCP.
 - Dark: No HDMI signal.
4. **FW LED:** When light is flashing, the unit is working normally.
5. **SERVICE:** Used for firmware updates.
6. **HDBaseT IN:** Connects to HDBaseT Transmitter with a Cat5e/6/7 cable.
7. **HDMI OUT:** Connects to a HDMI display device.
8. **USB:** Connects to interactive displays.
9. **AUDIO IN & RS-232 & 24VDC IN:** Connect to the RmtCtrl ports on amplifier.
10. **DC 24V:** Connects 24V/1A adaptor to AC wall outlet for power supply.

6. Connection Diagram

