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DATA SHEET

HDMI HDBaseT + 3.5mm, USB-B to A, and RS232 over Cat Extender Box Transmitter to Box Receiver - 4K 60Hz

Allows a 4K HDMI source to be extended up to 130ft to a 4K display using a single Cat6a Ethernet cable.

OVERVIEW

The HDMI HDBaseT + 3.5mm, USB-B to A, and RS232 over Cat Extender Box Transmitter to Box Receiver - 4k 60hz allows a 4K HDMI source to be extended up to 130ft to a 4K display using a single Cat6a Ethernet cable. This is an ideal solution where USB must be extended alongside HDMI video and audio to interactive whiteboards and displays in conference rooms, classrooms, lecture halls, and many other installation needs that are far beyond the length limitations of standard HDMI cabling.

The transmitter extends HDMI and high speed USB 2.0 signals over a single Cat5e, Cat6 or Cat6a network patch cable. Extend 4K HDMI up to 115 feet and 1080p up to 230 feet using a Cat5e or Cat6 cable. For longer 4K distances, extend 4K HDMI or up to 130 feet using a Cat6a cable.

This HDMI HDBaseT Extender is HDCP 2.2 compliant, making sure that the connection between the source and display is secure. One-way analog audio pass through is supported from the transmitter to the receiver. High speed USB 2.0 pass through is supported over HDBaseT up to 230ft for KVM control of devices such as USB cameras, keyboards, mice, etc. With PoH support, the transmitter sends power to both, the transmitter and the receiver, so no additional power adapter is required, allowing for greater flexibility in installations. Support this HDBaseT system that is already deployed in the field by upgrading firmware through the RS232 port.

Note: Ensure a solid reliable connection between the 4K HDMI HDBaseT Extender and critical equipment. We suggest using HDMI Cables with gripping connectors that provide greater port retention than standard HDMI connectors.

ITEM	DESCRIPTION
C2G31013	HDMI HDBaseT + 3.5mm, USB-B to A, and RS232 over Cat Extender Box Transmitter to Box Receiver - 4K 60Hz

FEATURES

- Extend 4K at 60Hz (4:2:0) up to 130ft and 1080p at 60Hz up to 230ft with Cat 6a cable
- Extend 4K at 60Hz (4:2:0) up to 115ft and 1080p at 60Hz up to 200ft with Cat 5e/6 cable
- HDCP 2.2 compliant, to create a secure connection between the source and display
- One-way analog audio pass through from wall-plate transmitter to receiver
- Supports USB 2.0 pass through over HDBT up to 230ft, connecting up to 4 USB devices to the receiver
- Supports CEC switch command sent by wall-plate
- One-way Power over HDBaseT (PoH), so that the wall plate can be powered by receiver
- HDBaseT Chipset VS210, for simpler HDBaseT installations

SIGNAL SPECIFICATIONS

- Chipset: VS210TX-A1 LFBGA-356, VS210RX-A1 HSBGA-484
- Firmware Version: VS210: V7.4.34

Transmitter

- Input/Output Ports: 1 x HDMI IN: 1 x HDBT OUT; 1 x RS232; 1 x AUDIO IN; 1 x AUDIO OUT; 1 x USB HOST (Type-B); 1 x DC 12V IN
- Input Signal Type: HDMI 1.4 with 4K @ 60Hz 4:2:0 8bit, HDCP 2.2
- Output Signal Type: HDBT 2.0
- Audio Format: HDMI IN: Supports multi-channel audio formats, including PCM 2.0/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio and DTS:X
- Audio In: Stereo
- USB Pass-through: USB 2.0
- USB Port Type: USB-B
- Maximum Pixel Clock: 340Mhz
- Maximum Data Rate: 10.2Gbps

Receiver

- Input / Output Ports: 1 x HDBT IN; 1 x HDMI OUT; 1 x RS232; 2 x AUDIO OUT (One for De-embed and another one for Pass-through); 4 x USB DEVICE (Type-A), 1 x DC 12V IN
- Input Signal Type: HDBT 2.0
- Output Signal Type: HDMI 1.4 with 4K @ 60Hz 4:2:0 8bit, HDCP 2.2
- Input Video Level: 0.5~1.0V p-p
- Maximum Pixel Clock: 340MHz
- Audio Format: HDMI Out: Supports multi-channel audio formats, including PCM 2.0/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio and DTS:X
- Audio Out: Stereo

TRANSMISSION DISTANCE

- Cat 6a/7 cable, extends 4Kx2K@60Hz (4:2:0) signal up to 40m/130ft and 1080P@60Hz signal up to 70m/230ft
- Cat 5e cable, extends 4Kx2K@60Hz (4:2:0) signal up to 35m/115ft and 1080P@60Hz signal up to 60m/200ft

ELECTRICAL SPECIFICATIONS

- Power Supply: One-way POH, only one power adapter is needed to connect to TX to power both TX and RX
- Power Supply: DC 12V 3A
- Power Consumption (Max): 19W

PHYSICAL SPECIFICATIONS

- Operating Temperature: 0°C to 45°C (32°F to 113°F)
- Storage Temperature: -20°C to 70°C (-4°F to 158°F)
- Humidity: 10% to 90%, Non-Condensing
- ESD Protection: Human-body Model: ±8kV (Air-gap discharge) / ±4kV (Contact discharge)

PHYSICAL CHARACTERISTICS

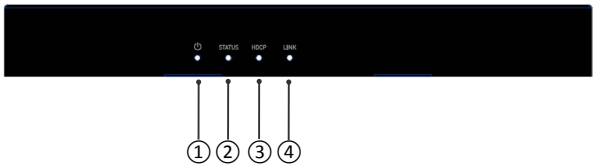
Transmitter

- Device Dimension (W x H x D): 210mm x 25mm x 90.2mm / 8.27" x 0.98" x 3.55""
- Product Weight: 0.44kg / 0.97lb

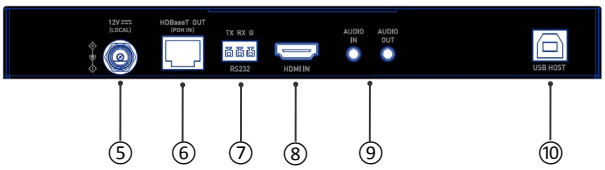
Receiver

- Device Dimension (W x H x D): 210mm x 25mm x 90.2mm / 8.27" x 0.98" x 3.55"
- Product Weight: 0.48kg / 1.06lbs

Transmitter



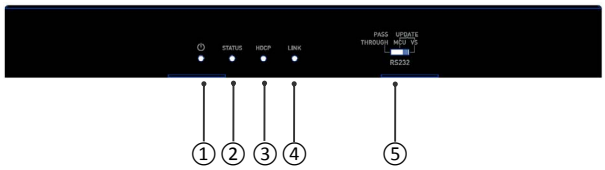
Transmitter



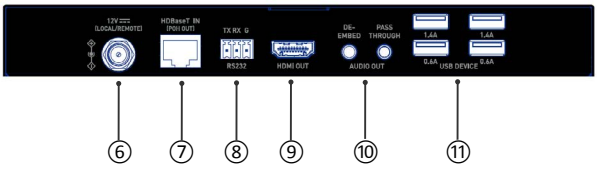
	Front Panel	Description
1	Power LED	**On:** Power is applied to the device. **Off:** No power is applied to the device.
2	Status LED	**Blinking:** The device is working properly. **Off:** The device is not working properly.
3	HDCP LED	**On:** HDCP protected content is being transmitted. **Blinking:** Non-HDCP protected content is being transmitted. **Off:** No content is being transmitted.
4	Link LED	**On:** HDBT link is normal. **Off/Blinking:** No HDBT link or link error.

	Rear Panel	Description
5	DC 12V	Connect to the power adapter provided. With PoH function, the transmitter can be powered by the receiver.
6	HDBT OUT	Connect to HDBT IN port of receiver.
7	RS232	For RS232 pass-through.
8	HDMI IN	Connect to an HDMI source using an HDMI cable.
9	AUDIO IN / OUT	**Audio In:** Connect to an audio source. **Audio Out:** Reserved.
10	USB-B Host Port	Connect to a USB-HOST device, such as a PC

Receiver



Receiver



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4	Link LED	**On:** HDBT link is normal. **Off/Blinking:** No HDBT link or link error.
5	RS232 DIP Switch	Set the function of RS232 port. **PASS-THROUGH (Default):** RS232 port is used to RS232 commands pass-through over HDBT. **MCU:** RS232 port is used to update its MCU firmware. **VS:** RS232 port is used to update Valens firmware of transmitter and receiver.

	Rear Panel	Description
6	DC 12V	Connect to the provided DC 12V power adapter. With PoH function, one power adapter is needed to connect to the receiver to power both units.
7	HDBT IN	Connect to HDBT OUT port of transmitter
8	RS232	For RS232 pass-through.
9	HDMI OUT	Connect to an HDMI display using an HDMI cable.
10	AUDIO OUT	**Unbalanced stereo audio output.** **PASS THROUGH:** For audio pass-through from Audio IN port on the transmitter to this port. **DE-EMBED:** For audio de-embedding from the HDMI output.
11	4x USB-A	Connect to USB devices such as keyboard, mouse, USB camera, etc. **Note:** USB ports support USB 2.0 standards with a maximum of 1.4A for the top two ports and 0.6A on the bottom two ports. USB cameras are recommended to be connected into one of the top two 1.4A ports.

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