

▶ HSP14AB-V2

User Manual

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, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Safety And Performance Notice

The transmission distances of HDMI over UTP cables are measured using TE CONNECTIVITY 1427071-6

EIA/TIA-568-B termination (T568B) of cables is recommended for optimal performance.

To minimise interference of the unshielded twisted pairs in the CAT5e/6 cable do not run the HDBaseT™/Cat5e/6/6a cabling with or in close parallel proximity to mains power cables.

Do not substitute or use any other power supply other than the enclosed unit, or a Blustream approved replacement.

Do not disassemble either the Transmission or Receiver units for any reason. Doing so will void the manufacturer's warranty.

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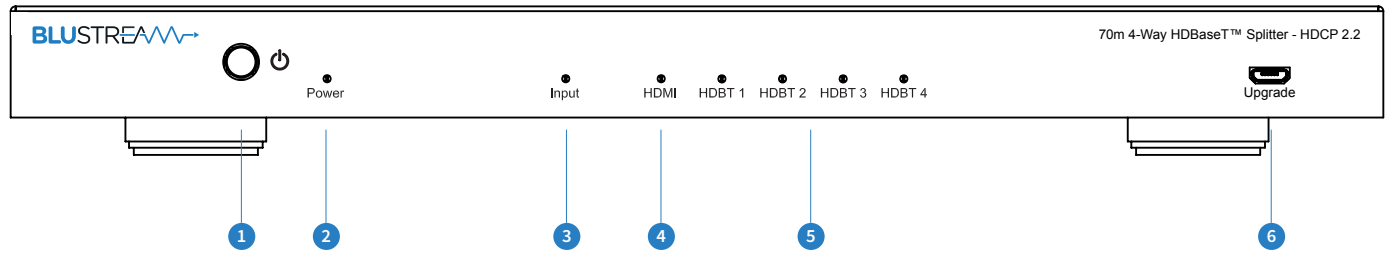
Introduction

Our 2nd generation range of HDBaseT™ products offer the very best in performance and flexibility. The HSP14AB-V2 4K UHD HDBaseT™ splitter distributes a single HDMI source to four simultaneous HDBaseT™ outputs with HDCP2.2 support. It transmits HDMI, bi-directional IR and PoH (PoE) up to lengths of 70m over a single CAT cable to compatible Blustream receivers. The 4-way splitter also features a HDMI loop-out, audio breakout and EDID management.

FEATURES:

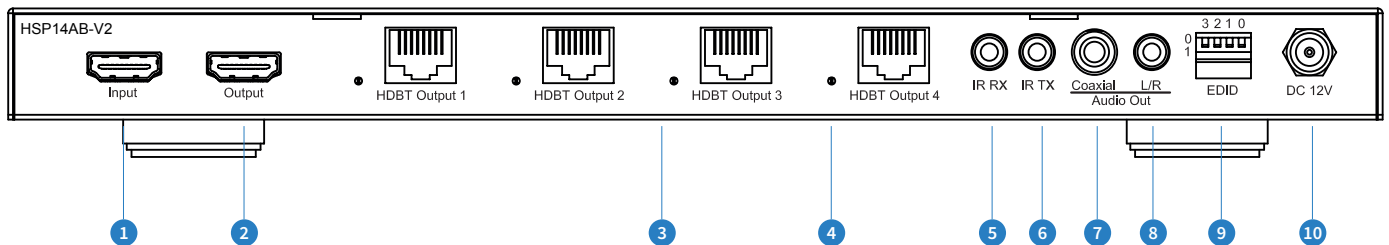
- Advanced HDBaseT™ technology offering uncompressed video and audio with zero latency
- Features 1x HDMI input that is replicated to 4x HDBaseT™ outputs concurrently
- Features 1x HDMI loop output for integrating local displays or cascading to further signal distribution devices
- Extends HDMI up to a distance of 70m over a single CAT cable
- Supports 4K UHD video up to 40m (3840 x 2160 @30Hz 4:4:4, 4096 x 2160 @24Hz 4:4:4, and 4K @60Hz 4:2:0)
- Supports all industry standard video resolutions including VGA-WUXGA and 480i-4K
- Supports 3D signal display
- Supports all known HDMI audio formats including Dolby TrueHD, Dolby Atmos, Dolby Digital Plus and DTS-HD Master Audio transmission
- HDMI audio breakout to analogue L/R audio and Coaxial digital outputs concurrently
- Advanced EDID management
- Bi-directional IR from all input and output locations
- Supplied with Blustream IR receiver and emitter
- Supports bi-directional PoH (Power over HDBaseT™) to power compatible HDBaseT™ Receivers
- HDCP2.2 compliant

Front Panel



- 1 Power button - press to power on / off the splitter
- 2 Power LED indicator - indicates if the unit is on or off
- 3 Input LED indicator - indicates if a source is attached and is active
- 4 HDMI output indicator - indicates if a HDMI output is attached and is active
- 5 HDBaseT™ output indicator - indicates if a HDBaseT™ receiver is attached and an active link is available on the output
- 6 Upgrade port

Rear Panel



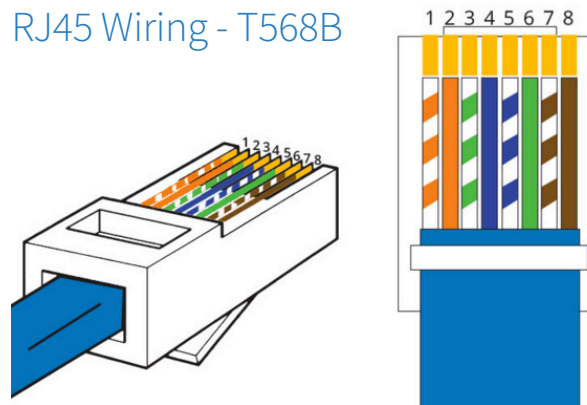
- 1 HDMI input - connect to a HDMI source
- 2 HDMI output - connect to a HDMI display or additional HDMI distribution equipment
- 3 HDBaseT™ outputs - connect to HDBaseT™ receivers
- 4 HDBaseT™ link lights
- 5 IR input - 3.5mm stereo jack. Transmits IR to the zone HDBaseT™ receivers (displays)
- 6 IR output - 3.5mm mono jack. Connect to Blustream 5V IR emitter for source control from remote areas
- 7 Coaxial audio out - RCA connector, de-embedded audio from the HDMI input
- 8 L/R audio out - 3.5mm stereo jack, de-embedded audio from the HDMI input. Source input must be PCM 2ch audio for the analogue audio output to work. The HSP14AB-V2 does not down-mix 5.1ch audio signals.
- 9 EDID DIP switch - used for global EDID settings, see page 6
- 10 Power port - use supplied Blustream 12V adaptor to power the splitter

Terminating the interconnecting HDBaseT™ CAT cable

It is important that the interconnecting CAT cable between the Blustream HDBaseT™ products is terminated using the correct RJ45 pin configuration. The link CAT cable **MUST** be a 'straight' (pin-to-pin) CAT cable and it is advised that this is wired to the T568B wiring standard as this format is less prone to EMI (Electro-Magnetic Interference).

When installing CAT cables it is advised that you use the best possible CAT cable quality possible. HDMI distribution products will only work if used with CAT5e standard cable or above. Blustream recommends using a CAT6 cable for your installations, especially when running over longer distances, in areas of high EMI, or for 4K signal distribution.

RJ45 Wiring - T568B



Understanding the HSP14AB-V2 signal status lights

The Blustream HSP14AB-V2 HDBaseT™ splitter includes status LED indicators to show all connections are active and to help diagnose possible problems.

Understanding the status lights:

- The Input HDMI signal link light will be off when there is no connection with a source device
- The Output HDMI signal link light will be off when there is no connection with a display/sink
- The Input HDMI link light will be on when there is an active connection with a source device
- The Output HDMI link light will be on when there is an active connection with a display/sink
- The HDBaseT™ link lights will be off when there are no CAT cable/active HDBaseT™ connections on the RJ45 HDBaseT™ outputs
- The HDBaseT™ link light will blink if there is an unstable connection between the Splitter and Receiver/s or if the RJ45 connectors have been wired incorrectly
- The HDBaseT™ link light will be lit when a CAT cable is connected to the HDBaseT™ RJ45 output on the Splitter and an active connection is achieved with the Receiver

EDID Control

EDID (Extended Display Identification Data) is a data structure that is used between a display and a source. This data is used by the source to find out what audio and video resolutions are supported by the display, from this information the source will discover what the best audio and video resolutions need to be outputted.

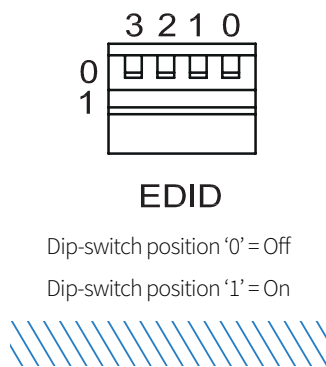
While the objective of EDID is to make connecting a digital display to a source a simple plug and play procedure, issues do arise when multiple displays or video matrix switching is introduced because of the increased number of variables.

By pre-determining the video resolution and audio format of the source and display device you can reduce the time needed for EDID hand shaking.

Configuration of EDID settings can be achieved using the product dip-switches on the end of the HSP14AB-V2. EDID dip-switch settings are shown below.

Note: You must power cycle the product after making EDID changes. For some sources it may be necessary to power cycle the source after EDID changes have been made for the source to update its video & audio output settings.

Global EDID Settings



DIP ON ▼/OFF▲ SWITCHING POSITIONS				EDID TYPE
3	2	1	0	
OFF	OFF	OFF	ON	1080p / 2ch
OFF	OFF	ON	OFF	1080p / 5.1ch
OFF	OFF	ON	ON	1080p / 7.1ch
OFF	ON	OFF	OFF	1080i / 2ch
OFF	ON	OFF	ON	1080i / 5.1ch
OFF	ON	ON	OFF	1080i / 7.1ch
OFF	ON	ON	ON	4K@60Hz 4:2:0 / 2ch
ON	OFF	OFF	OFF	4K@60Hz 4:2:0 / 5.1ch
ON	OFF	OFF	ON	4K@60Hz 4:2:0 / 7.1ch
ON	OFF	ON	OFF	4K / 2ch
ON	OFF	ON	ON	4K / 5.1ch
ON	ON	OFF	OFF	4K / 7.1ch
ON	ON	OFF	ON	DVI 1280x1024
ON	ON	ON	OFF	DVI 1920x1080
ON	ON	ON	ON	DVI 1920x1200
OFF	OFF	OFF	OFF	Copy sink EDID

Infrared (IR) Distribution

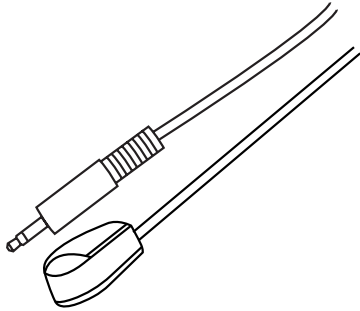
The Blustream range of HDBaseT™ products include multiple options for control and routing of IR.

IMPORTANT: Blustream Infrared products are all 5V and NOT compatible with alternative manufacturers Infrared solutions. When using third party 12V IR control solutions please use supplied Blustream IRCAB cable for IR conversion (sold separately).

Each Blustream HDBaseT™ product is supplied with all necessary IR hardware required and includes:

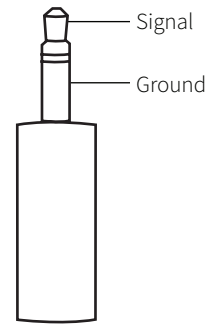
IR Emitter - IR1 & IR2 (IR2 sold separately)

Blustream 5V IR Emitter designed for discrete IR control of hardware



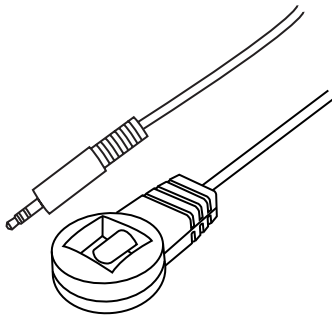
Infrared 3.5mm Pin-Out

IR Emitter - Mono 3.5mm

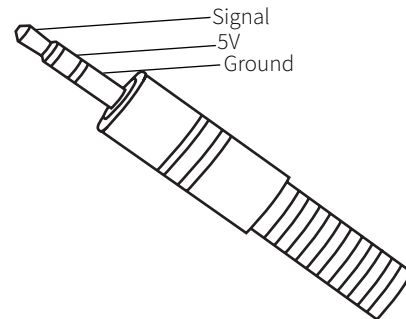


IR Receiver - IRR

Blustream 5V IR receiver to receive IR signal and distribute through Blustream products



IR Receiver - Stereo 3.5mm

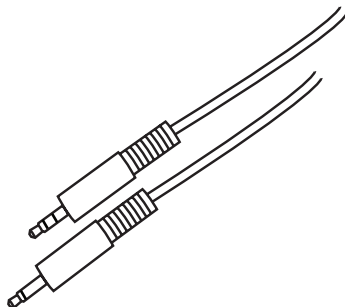


IR Control Cable - IRCAB

Blustream IR Control cable 3.5mm Mono to 3.5mm Stereo for linking third party control solutions to Blustream products.

Compatible with 12v IR third party products.

Note: Cable is directional as indicated - not supplied



Specifications

- Video input: 1x HDMI Type A, female
- Video output: 4x HDBaseT™ RJ45 connector, 1x HDMI Type A, female
- Audio output: 1x 3.5mm L/R analogue audio & 1x digital coaxial (RCA)
- PoH (Power over HDBaseT™) supplied to compatible Blustream HDBaseT™ receivers from the splitter
- IR input: 1x 3.5mm stereo jack
- IR output: 1x 3.5mm mono jack
- EDID: 4 pin dip-switch
- Mounting kit included
- Dimensions excl. connections (W x D x H): 287x145x23mm, without feet
- Shipping weight (Kit): 0.8 kg
- Power: 12V/5A DC, screw type connector
- Operating temperature: 32°F to 104°F (0°C to 40°C)
- Storage temperature: -4°F to 140°F (-20°C to 60°C)
- Compatible with (HDBaseT™ Receivers): HEX70B-RX, HEX70ED-RX-V2, HEX100ARC-RX-V2

NOTE: Specifications are subject to change without notice. Weights and dimensions are approximate.

Package Contents

- 1 x HSP14AB-V2
- 1 x 12V/5A DC power supply
- 1 x IR emitter (IRE)
- 1 x IR receiver (IRR)
- 1 x Mounting kit
- 1 x User manual

Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

Components inside this unit are not user serviceable. Do not remove the protective cover from the unit.

Removing any panel from this product will invalidate the manufacturers warranty.



www.blustream.co.uk
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