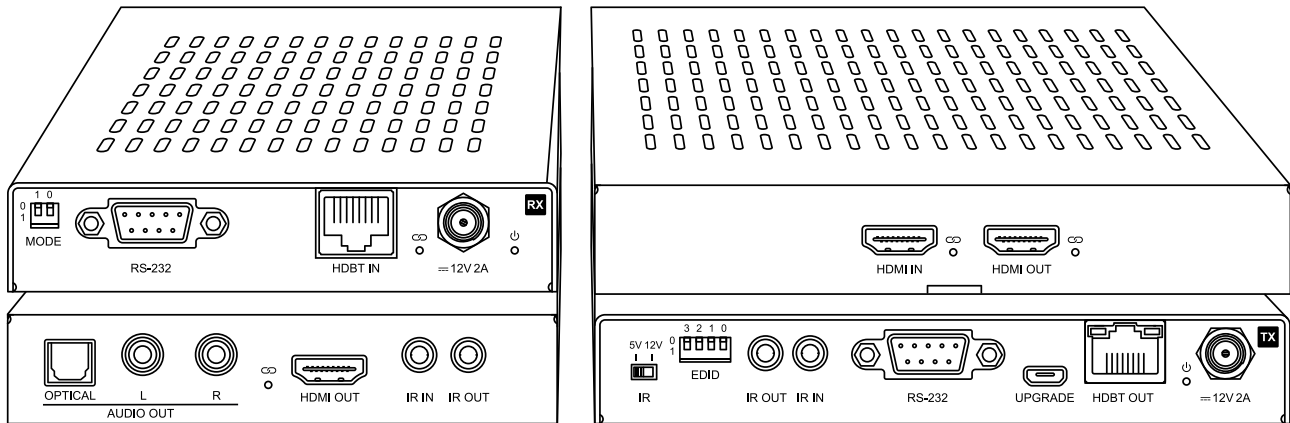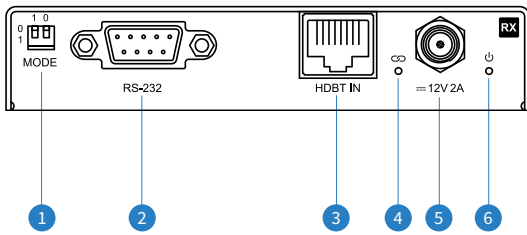# HEX100CS-KIT
Quick Reference Guide

Introduction

Our HEX100CS-KIT HDMI 2.0 4K 60Hz 4:4:4 (18Gbps) HDCP 2.2 HDBaseT™ extender set offers market leading features and outstanding value utilising CSC technology. The product extends HDMI, Bi-directional IR & RS-232 and Bi-directional PoC up to lengths of 100m (4K 70m). The Transmitter includes a HDMI loop-out for integrating local displays or cascading to multiple devices. The Receiver features simultaneous analogue stereo and digital optical (S/PDIF) audio breakout.
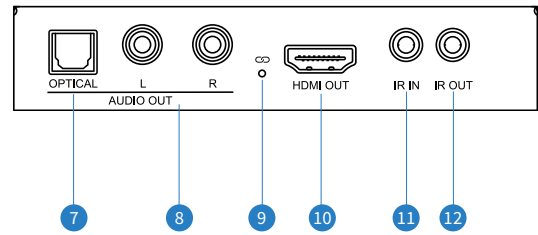
FEATURES:

- Advanced HDBaseT™ technology offering distribution of video and audio over a single CAT cable
- Advanced Colour Space Conversion (CSC)
- Supports HDMI 2.0 18Gbps specification including HDR
- Supports 4K 60Hz 4:4:4 UHD video up to 70m
- Extends HDMI 1080p video up to 100m
- Features 1 x HDMI loop-out on HEX100CS-TX for integrating local displays or cascading to multiple devices
- Supports all industry standard video resolutions including VGA-WUXGA and 480i-4K
- Supports bitstream passthrough of multichannel surround sound including object-based audio formats in line with HDMI specifications
- HDMI re-clocking on the HDBaseT™ receiver to help solve HDMI HDCP, compatibility and handshaking issues
- HDMI audio breakout to analogue L/R audio and optical S/PDIF outputs concurrently
- Supports bi-directional IR pass through with switchable 5V/12V IR hardware support
- Supplied with Blustream 5V IR receiver and emitter
- Advanced EDID management
- Supports bi-directional PoC to power extenders from either transmitter or receiver end
- HDCP 2.2 support
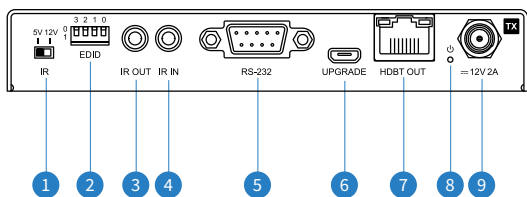
Panel Description HEX100CS-RX

❶ Mode dip-switch - to switch RS-232 serial port between pass-through and firmware update mode

❷ RS-232 / serial connector

❸ HDBaseT™ input

❹ HDBaseT™ signal link indicator

❺ DC 12V/2A screw type connector

❻ Power status indicator
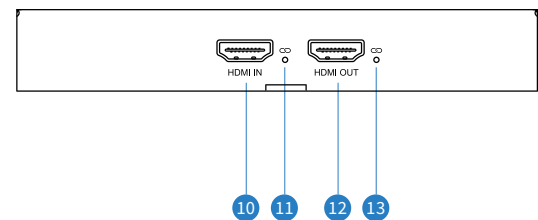
Side of unit: IR switch - toggle between 5V and 12V IR

❼ Optical digital output - de-embedded from HDMI input

❽ Analogue audio left / right output de-embedded from HDMI input. Supports stereo 2ch PCM audio only

❾ HDMI signal link indicator

❿ HDMI Output

⓫ IR IN (from Blustream 5V 3.5mm IR receiver)

⓬ IR OUT (to Blustream 5V 3.5mm IR emitter)

Panel Description HEX100CS-TX

❶ IR switch - toggle between 5V and 12V IR

❷ EDID DIP switch (UP = 0, DOWN = 1)

❸ IR OUT (to Blustream 5V 3.5mm IR emitter)

❹ IR IN (from Blustream 5V 3.5mm IR receiver)

❺ RS-232 / Serial connector

❻ USB Upgrade port - For future use

❼ HDBaseT™ output

❽ Power status indicator

❾ DC 12V/2A screw type connector

❿ HDMI input - connect to source device

⓫ HDMI input link indicator

⓬ HDMI loop-out - connect to display / sink device

⓭ HDMI loop-out link indicator

Understanding the Transmitter / Receiver status lights

The Blustream HEX100CS-KIT extender solutions include status LED indicators on both the Transmitter and Receiver products to show all connections are active and to help diagnose possible problems.

Receiver:

- The HDMI signal link light will be off when there is no connection with a display / sink
- The HDMI link light will be on when there is an active connection with a display
- The HDBaseT™ link light will be off when there is no CAT cable / active HDBaseT™ connection on the RJ45 HDBaseT™ input
- The HDBaseT™ link light will blink if there is an unstable connection between the Transmitter and Receiver
- The HDBaseT™ link light will be lit when a CAT cable is connected to the HDBaseT™ RJ45 output on the Transmitter and an active connection is achieved with the Receiver

Transmitter:

- 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 light will be off when there is no CAT cable / active HDBaseT™ connection on the RJ45 HDBaseT™ output
- The HDBaseT™ link light will blink if there is an unstable connection between the Transmitter and Receiver
- The HDBaseT™ link light will be lit when a CAT cable is connected to the HDBaseT™ RJ45 output on the Transmitter and an active connection is achieved with the Receiver
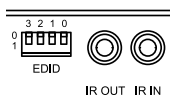
EDID Control

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. 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 thus making switching quicker and more reliable.

Configuration of extender EDID settings can be achieved using the product dip-switches on the end of the HEX100CS-TX. EDID dip-switch settings are shown below.

Global EDID settings

Dip-switch position '0' = Off

Dip-switch position '1' = On

EDID Dip-switches

[DIP]=0000: HDMI 1080p@60Hz, Audio 2ch PCM
[DIP]=0001: HDMI 1080p@60Hz, Audio 5.1ch PCM/DTS/DOLBY
[DIP]=0010: HDMI 1080p@60Hz, Audio 7.1ch PCM/DTS/DOLBY/HD
[DIP]=0011: HDMI 1080i@60Hz, Audio 2ch PCM
[DIP]=0100: HDMI 1080i@60Hz, Audio 5.1ch PCM/DTS/DOLBY
[DIP]=0101: HDMI 1080i@60Hz, Audio 7.1ch PCM/DTS/DOLBY/HD
[DIP]=0110: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 2ch PCM
[DIP]=0111: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
[DIP]=1000: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
[DIP]=1001: HDMI 4K@60Hz 4:4:4, Audio 2ch PCM
[DIP]=1010: HDMI 4K@60Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
[DIP]=1011: HDMI 4K@60Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
[DIP]=1100: DVI 1280x1024@60Hz, Audio None
[DIP]=1101: DVI 1920x1080@60Hz, Audio None
[DIP]=1110: DVI 1920x1200@60Hz, Audio None
[DIP]=1111: Copy EDID of output

Specifications

HEX100CS-TX

- **Video Input:** 1 x HDMI Type A, female
- **Video Output:** 1 x HDBaseT™ RJ45 connector
  1 x HDMI Type A, female
- **RS-232 Serial Port:** 1 x DB9 female connector
- **IR Input:** 1 x 3.5mm stereo jack
- **IR Output:** 1 x 3.5mm mono jack
- **EDID DIP Switch:** 4-pin
- **Mounting Kit:** Included
- **Dimensions excl. Connections (W x D x H):**
  143mm x 134mm x 22mm
- **Shipping Weight (Kit):** 0.5 kg
- **Power:** 12V/2A 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)

HEX100CS-RX

- **Video Input:** 1 x HDBaseT™ RJ45 connector
- **Video Output:** 1 x HDMI Type A, female
- **Audio Output:** 1 x Analogue audio RCA (L/R)
  1 x Optical digital (S/PDIF)
- **RS-232 Serial Port:** 1 x DB9 female connector
- **IR Input:** 1 x 3.5mm stereo jack
- **IR Output:** 1 x 3.5mm mono jack
- **Mounting Kit:** Included
- **Dimensions excl. Connections (W x D x H):**
  113mm x 124mm x 22mm
- **Shipping Weight (Kit):** 0.4 kg
- **Power:** 12V/2A 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)

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

Package Contents

HEX100CS-KIT
- 1 x HEX100CS-TX and 1 x HEX100CS-RX
- 1 x 12V/2A DC power supply
- 1 x IR emitter (IRE)
- 1 x IR receiver (IRR)
- 2 x Mounting bracket sets
- 1 x Quick reference guide

For the full Blustream HEX100CS-KIT User Manual please visit the dealer resource area of our website www.blustream.co.uk

HEX100CS-RX   (when sold individually)
- 1 x HEX100CS-RX
- 1 x Mounting bracket set

Maintenance

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

Certifications

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC

Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions,

may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a

particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by

turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

CAUTION - changes or modifications not expressly approved

by the party responsible for compliance could void the user's authority to operate the equipment.

CANADA, INDUSTRY CANADA (IC) NOTICES

This Class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CORRECT DISPOSAL OF THIS PRODUCT

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the

environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material

resources. To return your used device, please use the return and collection systems or contact the retailer where the product was

purchased. They can take this product for environmentally safe recycling.