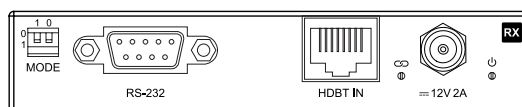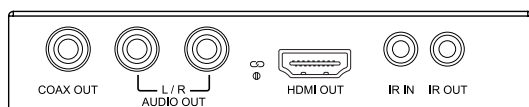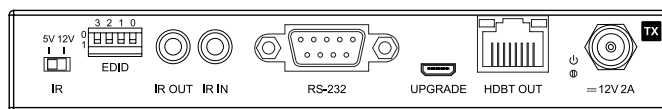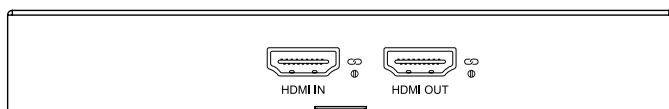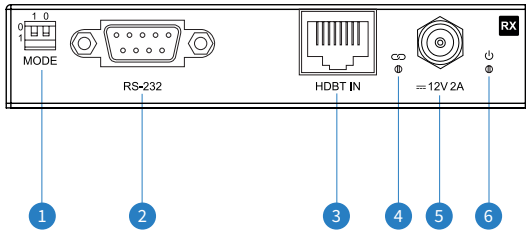# HEX70CS-KIT
Quick Reference Guide

Introduction

Our HEX70CS-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 (Power over Cable) up to lengths of 70m (4K to 40m). The Transmitter includes a HDMI loop-out for integrating local displays or cascading onto multiple devices. The Receiver features simultaneous analogue stereo and digital coax audio breakout.
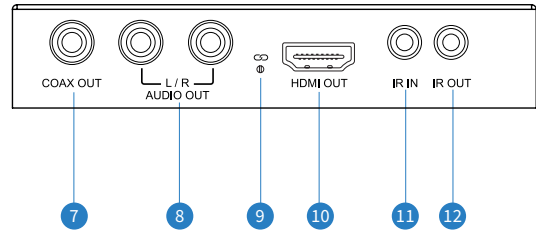
FEATURES:

- 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 support
- Supports 4K 60Hz 4:4:4 UHD video up to 40m
- Extends HDMI 1080p video up to 70m
- Features 1 x HDMI loop-out on HEX70CS-TX for integrating local displays or cascading to multiple devices
- Supports all industry standard video resolutions including VGA-WUXGA and 480i-4K
- Supports all known HDMI audio formats including Dolby TrueHD, Atmos and DTS-HD Master Audio transmission
- 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 coaxial digital outputs concurrently
- Supports bi-directional RS-232 pass through
- Supports bi-directional IR pass through
- Supplied with Blustream 5V IR receiver and emitter
- Advanced EDID management
- HDCP 2.2 support
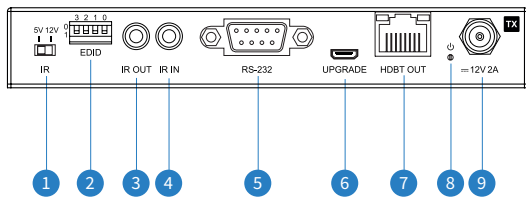
Panel Description HEX70CS-RX

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

2 RS-232 / serial connector

3 HDBaseT™ input

4 HDBaseT™ signal link indicator

5 DC 12V/2A screw type connector

6 Power status indicator

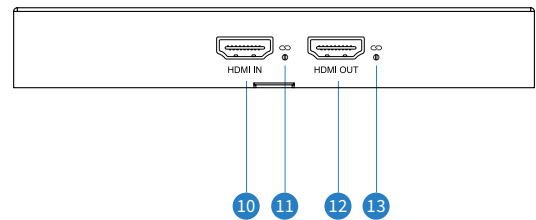*Side of unit:* IR switch - toggle between 5V and 12V IR

7 Coaxial digital output - de-embedded from HDMI input

8 Analogue audio left / right output (3.5mm stereo jack) de-embedded from HDMI input. Supports stereo 2ch PCM audio only

9 HDMI signal link indicator

10 HDMI Output

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

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

Panel Description HEX70CS-TX

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

2 EDID DIP switch (UP = 0, DOWN = 1)

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

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

5 RS-232 / Serial connector

6 USB Upgrade port - For future use

7 HDBaseT™ output

8 Power status indicator

9 DC 12V/2A screw type connector

10 HDMI input - connect to source device

11 HDMI input link indicator

12 HDMI loop output - connect to display / sink device

13 HDMI loop output link indicator

Understanding the Transmitter / Receiver Status Lights

The Blustream HEX70CS-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 / Matrix
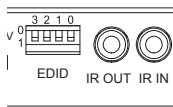
EDID Control

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 HEX70CS-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 (default)
[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

HEX70CS-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)

HEX70CS-RX

- **Video Input:** 1 x HDBaseT™ RJ45 connector
- **Video Output:** 1 x HDMI Type A, female
- **Audio Output:** 1 x 3.5mm L/R analogue audio & 1 x digital coaxial (RCA)
- **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

HEX70CS-KIT

- 1 x HEX70CS-TX and 1 x HEX70CS-RX
- 1 x 12V/2A DC Power Supply
- 1 x IR Emitter (IRE1)
- 1 x IR Receiver (IRR)
- 2 x Mounting Kits
- 1 x Quick Reference Guide

HEX70CS-RX (when sold individually)

- 1 x HEX70CS-RX
- 1 x Mounting Kit

HEX70CS-TX (when sold individually)

- 1 x HEX70CS-TX
- 1 x Mounting Kit

Maintenance

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

For the full HEX70CS-KIT User Manual please visit the Blustream website.