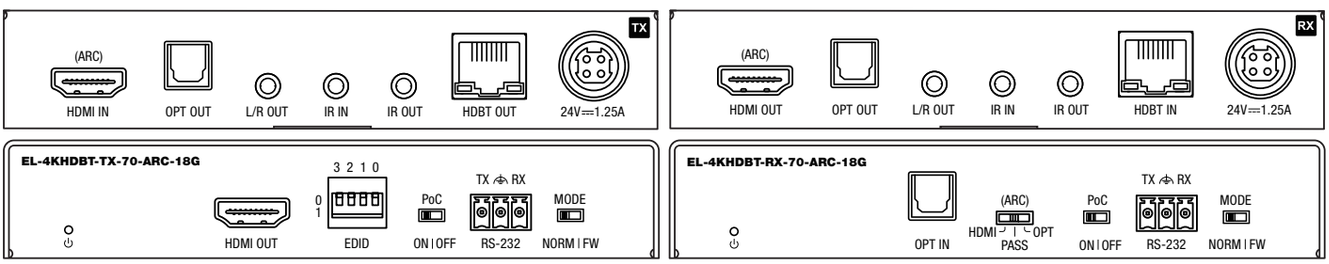
EL-4KHDBT-KIT-70-ARC-18G

Quick Reference Guide



Introduction

The ELAN® 4K HDBaseT ARC extender set offers market leading features for the custom installation industry. The product delivers HDMI, ARC, Optical Audio Return, Bi-directional IR and RS-232 and Bi-directional PoC up to lengths of 70m (100m @ 1080p).

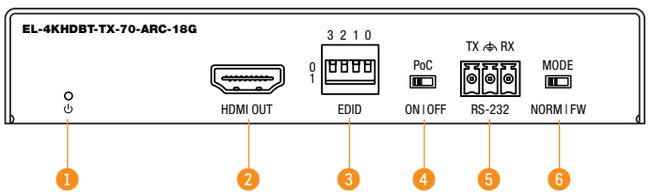
Features

- Advanced HDBaseT technology offering uncompressed video and audio with zero latency
- Extends HDMI 1080p up to a distance of 100m over a single CAT cable
- Supports 4K UHD video up to 70m (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
- Features 1 x HDMI loop-out on EL-4KHDBT-TX-70-ARC-18G for integrating local displays or cascading to multiple devices
- Supports ARC (Audio Return Channel) from connected display via HDMI ARC or optical digital input*
- Supports all known HDMI audio formats including Dolby TrueHD, Dolby Atmos, Dolby Digital Plus and DTS-HD Master Audio transmission
- Bi-directional IR pass-through
- Bi-directional RS-232 pass-through
- Supplied with ELAN IR receiver and emitter
- Supports bi-directional PoC (Power over Cable) to power extenders from either transmitter or receiver end
- HDCP 2.2 compliant with smart EDID management

*Please note: When using an eARC display, only 2 channel PCM audio is supported.

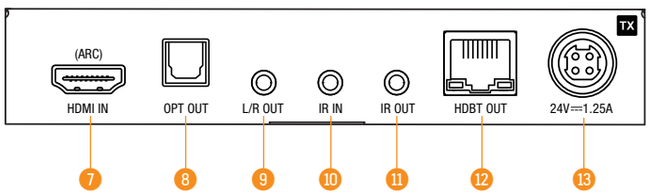
TX Panel Descriptions

Front



1. Power status indicator
2. HDMI Output (loop) - connect to local HDMI display
3. EDID switch - select between 4K30Hz 4:4:4 or 4K 60Hz 4:2:0
4. Power over Cable (PoC) switch (ON / OFF) - to enable / disable PoC being sent from the Transmitter
5. RS-232 3-pin Phoenix Connector
6. Upgrade - micro-USB port for firmware upgrade of product
7. HDMI (ARC) Input - connect to source device, or HDMI audio processor (AVR)

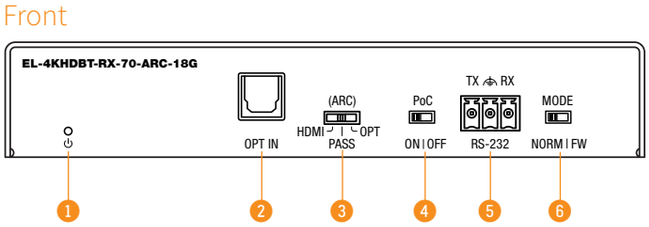
Rear



8. Optical Output - connect to audio amplification or distribution device
9. L/R Output - audio breakout from receiver ARC signal
10. IR Input - connect to ELAN® 5V 3.5mm IR receiver or from control processor
11. IR Output - connect to ELAN 5V 3.5mm IR emitter
12. HDBaseT output
13. 24V/1.25A DC power input 4-pin DIN connector

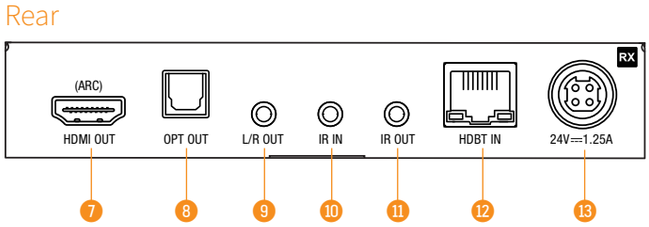
RX Panel Descriptions

Front



1. Power status indicator
2. Optical Input - connect to optical output of display
3. ARC switch - select how audio return is to be managed
4. Power over Cable (PoC) switch (ON / OFF) - to enable or disable PoC being sent from the Receiver
5. RS-232 3-pin Phoenix Connector
6. Upgrade - micro-USB port for firmware upgrade of product
7. HDMI (ARC) output - connect to HDMI display

Rear



8. Optical Input - connect to optical output of display
9. L/R Output - audio breakout from source signal
10. IR Input - connect to Elan 5V 3.5mm IR receiver
11. IR Output - connect to Elan 5V 3.5mm IR emitter
12. HDBaseT input
13. 24V/1.25A DC power input 4-pin DIN connector

Terminating the Interconnecting HDBaseT CAT Cable

It is important that the interconnecting CAT cable between the ELAN 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. We recommend using a CAT6 (or better) cable for your installations, especially when running over longer distances, in areas of high EMI, or for 4K signal distribution.

Understanding the HDBaseT Signal Status Lights

The ELAN® HDBaseT 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.

Understanding the RJ45 connector status lights on both TX and RX units

- The orange HDBaseT link light will be off when there is no CAT cable / active HDBaseT signal on the RJ45 HDBaseT connection
- The orange HDBaseT link light will blink if there is an unstable connection between the Transmitter and Receiver
- The orange 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 input of the Receiver
- The green HDBaseT HDCP light will be off when no video signal is being transmitted between Transmitter and Receiver
- The green HDBaseT HDCP light will flash when there is video signal without HDCP being transmitted
- The green HDBaseT HDCP light will be on when there is video signal with HDCP being transmitted
- The power link light will be off when no power is connected to either the Transmitter or Receiver unit
- The power link light will be on when power is connected directly to either of the units and fed remotely to the other side of the link

EDID Control

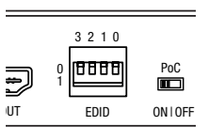
EDID (Extended Display Identification Data) is a data structure that is used between a display and a source. This data is used by the source to find out what audio and video resolutions are supported by the display. EDID dip-switch settings are shown below:

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: EDID pass-through

Global EDID settings

Dip-switch position '0' = Off
Dip-switch position '1' = On



Using ARC / Optical Audio Return

Depending on the position of the switch on the front of the HDBaseT Receiver unit, the EL-4KHDBT-KIT-70-ARC-18G allows for audio from either HDMI (ARC) or Optical (S/PDIF) to be returned from RX to TX when watching a device input locally to the display, or when using the display as a source device.

Switch Position: See below the combinations of input and output connections on both Transmitter and Receiver units and how audio return is managed through the EL-4KHDBT-RX-70-ARC-18G:

Switch Position	HDBaseT Receiver	HDBase Transmitter	CEC Pass-through
HDMI	HDMI ARC In	HDMI ARC, Optical & Analog Out	Blocked
PASS	HDMI ARC In	HDMI ARC, Optical & Analog Out	Enabled
OPT	Optical In	Optical & Analog Out	Blocked

Please Note: Video and audio from Transmitter to Receiver is not affected by the switch position. Analog out only supports 2ch PCM audio signals. When using an eARC display, only 2 channel PCM audio is supported.

Specifications

EL-4KHDBT-TX-70-ARC-18G

Video Input Connectors: 1 x HDMI Type A, female
Video Output Connectors: 1 x HDBaseT RJ45 connector, 1 x HDMI Type A, female
Audio Output Ports: 1 x Optical (S/PDIF), 1 x 3.5mm L/R analog audio
RS-232 Port: 1 x 3-pin Phoenix connector
IR Input Port: 1 x 3.5mm stereo jack
IR Output Port: 1 x 3.5mm mono jack
Product Upgrade: 1 x Micro-USB, female
Casing Dimensions (W x D x H): 135 x 105 x 25mm

EL-4KHDBT-KIT-70-ARC-18G

Power Supply: 1 x 24V/1.25A DC, 4-pin DIN connector
Box Dimensions (W x D x H): 248 x 151 x 103mm
Shipping Weight: 1kg
Operating Temperature: 32°F to 104°F (-5°C to +55°C)
Storage Temperature: -4°F to 140°F (-25°C to +70°C)

EL-4KHDBT-RX-70-ARC-18G

Video Input Connectors: 1 x HDBaseT RJ45 connector
Video Output Connectors: 1 x HDMI Type A, female
Audio Input Ports: 1 x Optical (S/PDIF)
Audio Output Ports: 1 x Optical (S/PDIF), 1 x 3.5mm L/R analog audio
RS-232 Port: 1 x 3-pin Phoenix connector
IR Input Port: 1 x 3.5mm stereo jack
IR Output Port: 1 x 3.5mm mono jack
Product Upgrade: 1 x Micro-USB, female
Casing Dimensions (W x D x H): 135 x 105 x 25mm

Package Contents

1 x EL-4KHDBT-TX-70-ARC-18G
1 x EL-4KHDBT-RX-70-ARC-18G
1 x 24V/1.25A DC Power Supply
1 x IR Emitter
1 x IR Receiver
2 x Mounting Bracket Sets
1 x Quick Reference Guide

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.

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