

Binary 540 Series Slim 4K Ultra HD HDBaseT
Extender with IR & RS-232

BINARY

B-540-EXT-70-SLIM

INSTALLATION MANUAL



FC CE

IMPORTANT SAFETY INSTRUCTIONS

To reduce the risk of fire or electric shock, read and follow all instructions and warnings in this manual. Keep this manual for future reference.

1. Do not expose this apparatus to rain or moisture. Do not expose this equipment to dripping or splashing, and ensure that no objects filled with liquids, such as vases, are placed on the equipment. Do not use this apparatus near water.
2. Do not remove cover. No user serviceable parts inside.
3. Clean only with a dry cloth.
4. Do not block any ventilation openings. Install according to manufacturer's instructions.
5. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
6. Do not override the safety purpose of the polarized or grounding plug. A polarized plug has two blades, one of which is wider than the other. A grounding plug has two matching blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
7. Protect the power cord from being walked on or pinched, particularly at the plug end and where the power cord is attached to the apparatus.
8. Only use attachments and accessories specified by the manufacturer.
9. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power supply cord or plug is damaged, liquid has been spilled on or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, the apparatus does not operate normally, or it has been dropped.
10. To completely disconnect this equipment from power, disconnect the power supply cord from the power outlet.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



FCC WARNINGS

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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1. PRODUCT OVERVIEW

Thank you for purchasing this product. For proper installation and optimum performance, please read the instructions in this manual carefully.

B-540-EXT-70-SLIM is a slim transmitter receiver pair, which can extend HDMI 1080P@60Hz signal up to 70m/230ft and 4K@60Hz (chroma sub-sampling 4:2:0 8-bit only) signal up to 40m/130ft via a single Cat 6a/7 cable. It features bi-directional PoC. It also supports bi-directional IR and RS-232 pass-through.

2. FEATURES

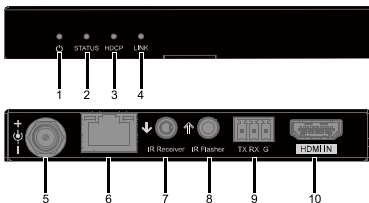
- Supports resolutions up to 4K@60Hz 4:2:0 8bit and HDCP 2.2.
- Over a Cat 6a/7 cable, extends 4K@60Hz 4:2:0 8bit up to 40m/130ft and 1080P up to 70m/230ft.
- Over a Cat 5e/6 cable, extends 4K@60Hz 4:2:0 8bit up to 35m/115ft and 1080P up to 60m/200ft.
- Bi-directional PoC, one power adapter at either transmitter or receiver side can power both units.
- Supports bi-directional IR and RS-232 pass-through.

3. PACKAGE CONTENT

- 1 x B-540-EXT-70-SLIM Extender Set
- 1 x DC 18V Power Adapter with US Pins
- 2 x 3.5mm 3-Pin Phoenix Connectors
- 4 x Mounting Brackets (with Screws)
- 4 x Drywall Screws
- 8 x Rubber Feet
- 2 x HDBaseT Cable Labels
- 2 x Power Cord Labels
- 1 x Installation Manual

4. DEVICE LAYOUT

4.1. B-540-EXT-70-SLIM Transmitter



1. Power LED

On/Off: The device is powered on/off.

2. Status LED

On: 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.

Blinking/Off: No HDBT link or link error.

5. DC 18V

Connect to the power adapter.

6. HDBT OUT

Connect to the receiver via a Cat 5e/6/7 cable.

7. IR Receiver

Connect to an IR receiver.

8. IR Flasher

Connect to an IR emitter.

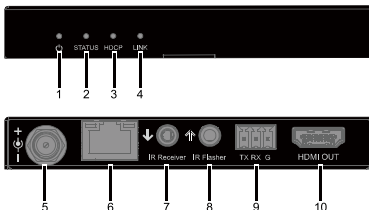
9. RS-232

For RS-232 pass-through.

10. HDMI IN

Connect to an HDMI source device.

4.2. B-540-EXT-70-SLIM Receiver



1. Power LED

On/Off: The device is powered on/off.

2. Status LED

On: 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.

Blinking/Off: No HDBT link or link error.

5. DC 18V

Connect to the power adapter.

6. HDBT IN

Connect to the transmitter via a Cat 5e/6/7 cable.

7. IR Receiver

Connect to an IR receiver.

8. IR Flasher

Connect to an IR emitter.

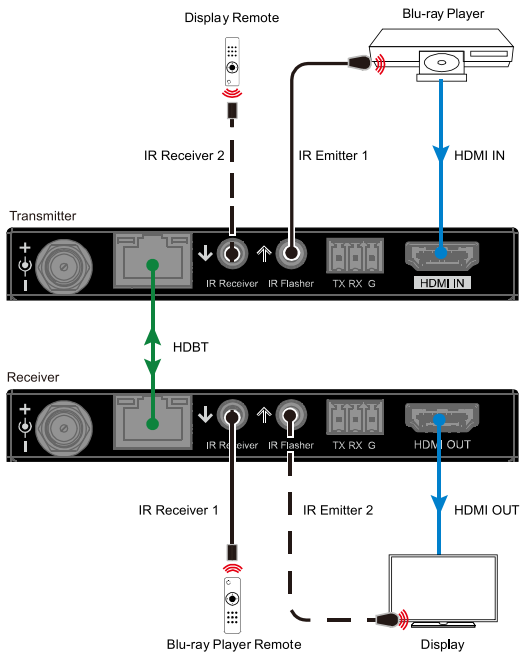
9. RS-232

For RS-232 pass-through.

10. HDMI OUT

Connect to an HDMI display device.

5. APPLICATION DIAGRAM

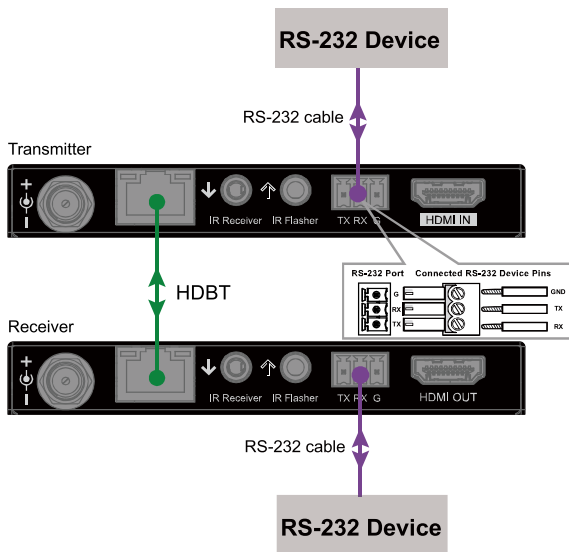


Note: Connect a broadband IR receiver to "IR Receiver" and an IR emitter to "IR Flasher".

6. RS-232 PASS-THROUGH

RS-232 ports can be used for bi-directional RS-232 signal pass-through between the transmitter and receiver.

See below picture:



7. SPECIFICATIONS

Video	
Input/Output Signal Type	HDMI with 4K@60Hz 4:2:0, HDCP 2.2
Input/Output Resolution Supported	Up to 4096x2160@60Hz, including 4K@60Hz/4K@30Hz/1080P/1080i/720P Note: 4096x2160/3840x2160@50/60Hz is based on chroma sub-sampling 4:2:0 8-bit only.
Deep color	4K: 8/10/12 bit 1080P: up to 12 bit
Maximum Data Rate	10.2 Gbps
Maximum Pixel Clock	340MHz

Audio	
Audio Format Supported	Supports multichannel audio up to PCM 7.1, Dolby True HD, DTS HD Master Audio, Dolby Atmos and DTS:X

General	
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±15kV (Air-gap discharge)
Power Supply	DC 18V 1.3A
Power Consumption (Max)	8.88W (Pair, PoC)
Device Dimension (W x H x D)	108.8mm x 15.4mm x 64.2mm/ 4.28" x 0.61" x 2.53" each for TX/RX
Product Weight	0.18kg/0.4lb each for TX/RX

7.1. Transmission Distance

Note: T568B straight-through Category cable is recommended.

Cable Type	Range	Supported Video
Cat 5e/6	60m/200ft	1080P@60Hz
	35m/115ft	4K@60Hz
Cat 6a/7	70m/230ft	1080P@60Hz
	40m/130ft	4K@60Hz
HDMI	recommended max length of 3m/10ft	all supported resolutions

8. WARRANTY

2-Year Limited Warranty

This Binary product has a 2-Year limited warranty. This warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products that have been abused, modified or disassembled. Products to be repaired under this warranty must be returned to SnapAV or a designated service center with prior notification and an assigned return authorization number (RA).

9. SUPPORT

Need Help? Contact Tech Support!

If you need further clarification, please call tech support at **800.838.5052**, or email **support@snapav.com**. For other information, instructional videos, support documentation, or ideas, visit our website and view your item's product page at **www.snapav.com**.

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