BINARY®

INSTALLATION
MANUAL

FC CE

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.

⚠ **CAUTION** ⚠

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK.

DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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.

CONTENTS

1. PRODUCT OVERVIEW

The B-260-4K-2AC is an HDMI2.0 audio downmix converter with eARC capability. The device supports flexible audio paths to select audio from the HDMI input de-embedded audio or eARC/ARC audio returned from the HDMI output connected to a TV. The B-260-4K-2AC also supports downmixing of Dolby and DTS HBR audio up to 7.1CH to PCM 2CH and output via both digital and analog audio ports.
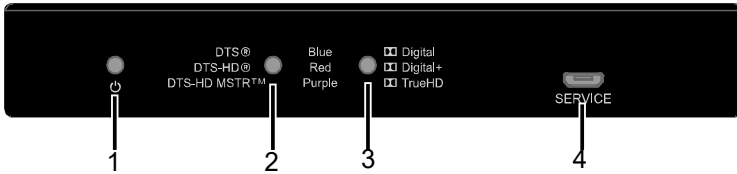
2. FEATURES

- Supports HDMI input and output resolutions up to 4K@60Hz 4:4:4 8bit.
- HDCP2.2 and backwards compatible.
- Flexible audio paths. The downmix converter supports selection of the audio source between HDMI de-embedded audio and eARC/ARC audio from connected TV.
- Built-in audio DSP to downmix Dolby and DTS HBR formats, which includes Dolby TrueHD, Dolby Digital Plus and DTS HD Master.
- Four pins DIP switch for the following uses:
  - > Choose audio source between HDMI de-embedded audio and eARC/ARC audio.
  - > Audio mute.
  - > Set audio delay for HDMI de-embedded audio.
- Built-in 4K-to-1080P downscaler with HDMI output port, to between video source and TV.
- Supports CEC pass-through.

3. PACKAGE CONTENT

- 1 x B-260-4K-2AC
- 1 x DC 12V 2A Power Adapter
- 1 x AC Power Cord with US Pins
- 2 x Mounting Brackets (with Screws)
- 2 x Drywall Screws
- 4 x Rubber Feet
- 2 x Power Cord Labels
- 1 x Installation Manual

4.1. B-260-4K-2AC Front Panel

1. **Power LED**

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

2. **DTS/DTS-HD/DTS-HD MASTR™ LED**

   - Blue: The device is transmitting audio with DTS surround format.
   - Red: The device is transmitting audio with DTS-HD format.
   - Purple: The device is transmitting audio with DTS-HD MASTR™ format.

   Note: When transmitted audio's format is PCM, the LED will be off.
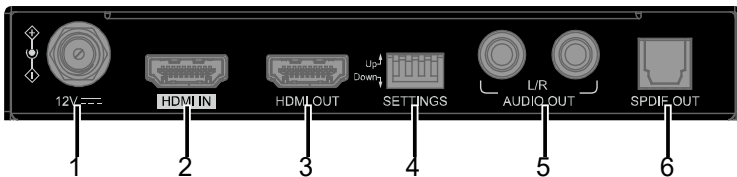
3. **Digital/Digital +/TrueHD LED**

   - Blue: The device is transmitting audio with Dobly Digital format.
   - Red: The device is transmitting audio with Dobly Digital plus format.
   - Purple: The device is transmitting audio Dobly Digital TrueHD format.

   Note: When transmitted audio's format is PCM, the LED will be off.

4. **SERVICE**

   Micro USB port. Connect to a PC for firmware upgrade.

4.2. B-260-4K-2AC Rear Panel

1. **DC 12V**

   Connect to the power adapter provided.

2. **HDMI In**

   Connect to an HDMI source.

3. **HDMI Out**

   Connect to an HDMI display. (In eARC/ARC audio mode, it needs to connect to TV's HDMI eARC/ARC input port.)

4. **CONTROL**

   4-pins PIANO style DIP switch to configure audio settings. See "DIP Switch Control" for more details.

5. **L/R Audio Out**

   Connect to an audio device's analog audio input.

6. **S/PDIF Out**

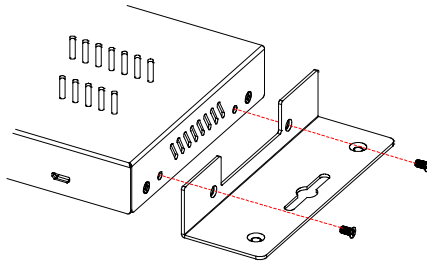   Connect to an audio device's SPDIF audio input.

5.   INSTALLATION AND WIRING

5.1.   Installation

Note: Before installation, please ensure the device is disconnected from the power source.

Steps to install the device in a suitable location:

1. Attach the installation bracket to the device's enclosure using the screws provided in the package separately. The bracket is attached to the enclosure as shown.

2. Repeat step 1 for the other side of the device.

3. Attach the brackets to the wall or other places you want to hold the unit against using the provided screws.

5.2.   Wiring

Warnings:

- Before wiring, disconnect the power from all devices.

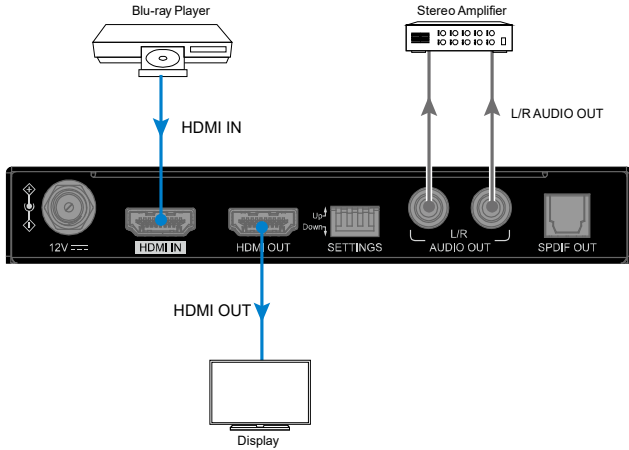- During wiring, connect and disconnect the cables gently.

Steps for device wiring:

1. Connect an HDMI source (such as PC, Blu-ray, games console, satellite/cable TV, media server etc.) to HDMI IN of this device.

2. Connect an HDMI display device (such as TV) to the HDMI OUT of this device.

Note: To ensure the device can select eARC/ARC audio output, please connect HDMI OUT port of the device to the TV's HDMI In port with eARC/ARC function supported, and ensure that the
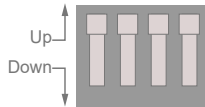
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TV's CEC function is set to on.

3. Connect audio receiver (such as amplifier) to the S/PDIF OUT and L/R AUDIO OUT port of this device.

4. Connect the power adapter provided. Power on all devices.

5. Use the DIP switch to control audio output. More detail information, please refer to "DIP Switch Control" section

6.   DIP SWITCH CONTROL

The four-pin DIP switch can be used to set auto audio source selection, audio mute, and audio delay controls.

Please refer to the following table to get the detail settings about the DIP Switch.

Function	4-Pin DIP Control			
	1	2	3	4
Auto (Audio path selection)	Up	Up	-	-
Audio Return (eARC/ARC)	Down	Up	-	-
HDMI De-embed (HDMI OUT Pass-thru)	Up	Down	-	-
HDMI De-embed (HDMI OUT Muted)	Down	Down	-	-
Audio delay 1 - Auto	-	-	Up	Up
Audio delay 2 - 80ms	-	-	Down	Up
Audio delay 3 - 100ms	-	-	Up	Down
Audio delay 4 - 120ms	-	-	Down	Down

Note:

• By default, audio source selection is set to Auto (Audio path selection) (Up, Up) and audio DSP delay is set to Audio delay 1-Auto (Up, Up).

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- Pin 3 and 4 only sets the audio delay in HDMI de-embedded audio mode. The eARC/ARC mode does not have any audio delay. See "Set Audio DSP Delay Time" part for details.

6.1. Audio Path Selection

1. Automatically select audio path (Audio path selection)

When pin 1 and pin 2 are set to the "Up, Up" position, the device is in Auto (Audio path selection) mode. In this mode, the B-260-4K-2AC will choose audio source automatically from HDMI de-embedded audio or eARC/ARC audio through automatically recognizing whether the connected TV supports eARC/ARC or not.

- If the device is connected to TV's HDMI eARC/ARC input, and the TV eARC function is enabled, eARC audio will be chosen as audio source.
- If the device is connected to TV's HDMI eARC/ARC input, and the TV doesn't support eARC or eARC is disabled, ARC audio will be chosen as audio source.
- If the device is connected to TV's non HDMI ARC input, HDMI de-embedded audio will be chosen as audio source, and source audio will be passed-through to HDMI OUT.

Note: If auto selection fails, by default, the device will work in Audio De-embed path, and the source audio will be passed-through to HDMI OUT.

2. Manually select audio path

HDMI de-embedded audio and eARC/ARC audio will be manually chosen as audio source respectively when set pin 1 and pin 2 to the position of "Up, Down" or "Down, Up".

Note: When set to "Up, Down" position, source audio will be passed-through to HDMI OUT.

3. HDMI OUT Muted

When pin 1 and pin 2 are set to the "Down, Down" position, the device will work in HDMI De-embed audio path, and HDMI OUT passed-through audio will be muted.

6.2. Set Audio DSP Delay Time

The Audio DSP delay time of the L/R audio output and S/PDIF audio output can be set through pin 3 and pin 4.

- When the selected audio source is eARC/ARC, there's no audio delay applied.
- Audio delay can be set through pin 3 and pin 4 when choosing HDMI de-embedded audio as source:
  - > When pin 3 and pin 4 are set to the Up, Up position : the device will handshake with TV to get audio delay information. Then the audio delay will be configured automatically. If TV can't handshake with TV to determine audio delay in this mode, audio delay will be defaulted at 100ms.
  - > When pin 3 and pin 4 are set to the Down, Up position: audio delay is set to 80ms.
  - > When pin 3 and pin 4 are set to the Up, Down position: audio delay is set to 100ms
  - > When pin 3 and pin 4 are set to theDown, Down position: audio delay is set to 120ms.

7. SPECIFICATIONS

Technical	
Input	1 x HDMI IN
Output	1 x HDMI OUT, 1 x L/R AUDIO OUT, 1 x S/PDIF OUT
Input/Output Video Signal Type	Input: HDMI up to 4K@60Hz (4:4:4 8-bit) with HDR, HDCP 2.2 Output: HDMI up to 4K@60Hz (4:4:4 8-bit) with HDR, HDMI OUT port's HDCP follows the connected display's HDCP
Input/Output Resolution Supported	**VESA:** 800×600^8, 1024×768^8, 1280×768^8, 1280×800^8, 1280×960^8, 1280×1024^8, 1360×768^8, 1366×768^8, 1440×1050^8, 1440×900^8, 1600×900^8, 1600×1200^8, 1680×1050^8, 1920×1200^8 **SMPTE:** $720\times480P^8$, $720\times576P^6$, $1280\times720P^{6,8}$, $1920\times1080P^{1,2,3,4,5,6,7,8}$, $3840\times2160P^{2,3,5,6,8}$, $4096\times2160P^{2,3,5,6,8}$ 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = at 60 Hz
Maximum Data Rate	18Gbps
HDR Format Supported	Dolby Vision, HDR10, HLG **Note:** Dolby Vision will not be supported when down-scaler is being used.
Audio Format	• **L/R / SPDIF Audio Output:** Stereo • **HDMI In:** Up to PCM 7.1CH 192KHz, Dolby Digital, Dolby Digital plus, Dolby TrueHD up to 7.1CH, DTS, DTS-HD, DTS-HD Master up to 7.1CH

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 12V 2A
Power Consumption (Max)	2.5W
Device Dimension (W x H x D)	140mm x 21mm x 100mm/5.51'' x 0.83'' x 3.94''
Product Weight	0.36kg/0.79lb

7.1. Transmission Distance

Cable Type	Range	Supported Video
HDMI	Input/Output: 15m/49ft	1080P@60Hz 24bpp
	Input/Output: 10m/33ft	4K@30Hz 4:4:4 24bpp
	Input/Output: 5m/16ft	4K@60Hz 4:4:4 24bpp

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 SnapOne 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 (**866) 838-5052**, or email **techsupport@snapone.com**. For other information, instructional videos, support documentation, or ideas, visit our website and view your item's product page at **www.snapone.com**.

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