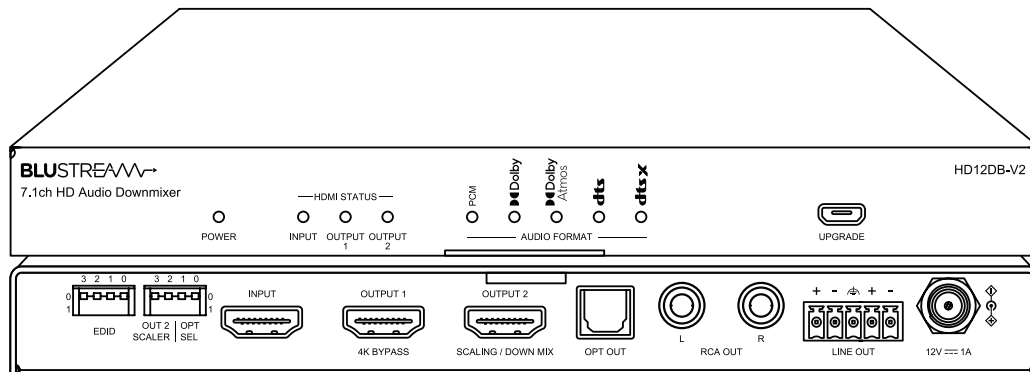


HD12DB-V2

Quick Reference Guide



Introduction

Dolby Atmos

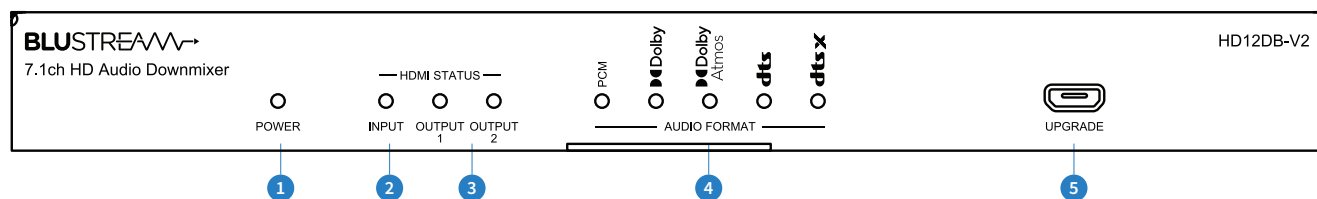
dts x

The Blustream HD12DB-V2 has been designed to convert and downmix embedded 7.1ch Dolby® Audio or DTS Audio within a HDMI signal, into a stereo 2ch signal available on HDMI, optical and analogue audio outputs. The HD12DB-V2 features a HDMI loop out to pass the original video and multi-channel embedded audio signal to compatible equipment, with a second HDMI output featuring video down-conversion of 4K 60Hz 4:4:4 video down to 1080p. This provides the perfect cost effective solution for ensuring that 4K UHD video and multi-channel audio can be distributed around a multi-room system where there are a mixture of 2ch and 7.1ch zones with multiple output resolution requirements.

FEATURES:

- Features an in-built DAC (Digital to Analogue audio converter) that converts 7.1ch Dolby Audio® or DTS Audio to a stereo 2ch signal available on HDMI, optical and analogue audio outputs concurrently
- Supporting Dolby Audio® Technology
- Supports multi channel audio input formats up to Dolby Atmos® and DTS:X
- Features 1 x HDMI input supporting 4K UHD video (4K 60Hz 4:4:4) that is replicated to 2x HDMI outputs
- HDMI loop out will replicate the HDMI input signal up to 4K 60Hz 4:4:4 and 7.1ch Dolby Audio® & DTS Audio
- HDMI output 2 features a video downconversion from 4K down to 1080p
- HDMI audio breakout to downmixed analogue L/R audio and downmixed optical digital outputs concurrently
- HDCP 2.2 compliant with advanced EDID management

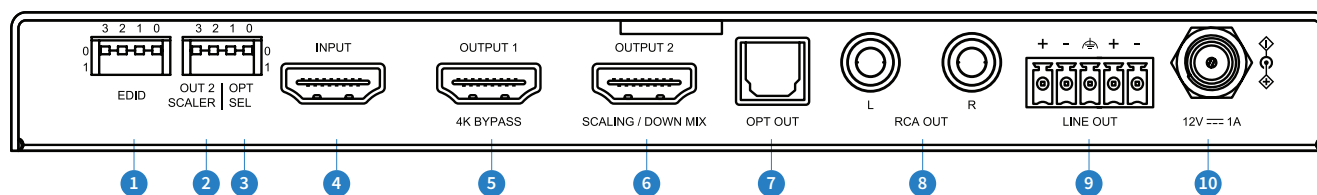
Front Panel



Connections:

- 1 Power LED Indicator - Illuminates when device is powered
- 2 HDMI Input LED Indicator - Illuminates when there is an active HDMI connection to a source device
- 3 HDMI Output LED Indicator - Illuminates when there is an active HDMI connection to a connected display
- 4 Audio Format LED Indicator - Illuminates when the corresponding audio format is being received from source device
- 5 USB Upgrade Port - Micro USB connector used for firmware upgrade

Rear Panel



Connections:

- 1 EDID DIP Switches - Adjust the EDID setting for the source input - see following page for further details
- 2 Output 2 Scaler DIP Switches - Adjust the Output 2 scaler setting - see following page for further details
- 3 Optical Output Selection DIP Switches - Adjust the Output 2 scaler setting - see following page for further details
- 4 HDMI Input - Connect to HDMI source device
- 5 HDMI Output 1 - Bypass video output maintains native video resolution and audio format. Connect to a HDMI display / end point
- 6 HDMI Output 2 - Scaled / down-mixed output. Connect to a HDMI display / end point
- 7 Optical Output - S/PDIF connection outputs 2 channel down-mixed audio
- 8 L/R Analogue Audio Output – RCA L/R outputs 2 channel down-mixed audio
- 9 Balanced/Unbalanced Analogue Audio Output – 5-Pin Phoenix connector outputs 2 channel down-mixed audio
- 10 DC Power Port – Use supplied 12V/1A DC adaptor to power the device

EDID Management Dip-switches

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 then from this information the source will determine what the best resolution is to output.

While the objective of EDID is to make connecting a digital display to a source a simple plug and play procedure issues do arise when multiple displays or video matrix switching is introduced because of the increased number of variables.

The HD12DB-V2 will act as an 'end point' in the HDMI signal path. Using the EDID dip-switches predetermines the video resolution and audio format of the source regardless of the video output resolution that the HD12DB-V2 scales to.

To change the EDID settings move the EDID dip-switches as required on the front panel of the unit. Please see adjacent table for settings.

Note: You must power-cycle the HD12DB-V2 after changes have been made in order for the EDID settings to update.

| 3 | 2 | 1 | 0 | EDID Type |
|------------------------------|---|---|---|---------------------------|
| Combination of DIP positions | | | | |
| 0 | 0 | 0 | 0 | 1080p 60Hz 2.0ch |
| 0 | 0 | 0 | 1 | 1080p 60Hz 5.1ch |
| 0 | 0 | 1 | 0 | 1080p 60Hz 7.1ch |
| 0 | 0 | 1 | 1 | 4K 60Hz 4:2:0 2.0ch |
| 0 | 1 | 0 | 0 | 4K 60Hz 4:2:0 5.1ch |
| 0 | 1 | 0 | 1 | 4K 60Hz 4:2:0 7.1ch |
| 0 | 1 | 1 | 0 | 4K 60Hz 4:4:4 8bit 2.0ch |
| 0 | 1 | 1 | 1 | 4K 60Hz 4:4:4 8bit 5.1ch |
| 1 | 0 | 0 | 0 | 4K 60Hz 4:4:4 8bit 7.1ch |
| 1 | 0 | 0 | 1 | 4K 60Hz 4:4:4 10bit 2.0ch |
| 1 | 0 | 1 | 0 | 4K 60Hz 4:4:4 10bit 5.1ch |
| 1 | 0 | 1 | 1 | 4K 60Hz 4:4:4 10bit 7.1ch |
| 1 | 1 | 0 | 0 | DVI 1920x1080 No Audio |
| 1 | 1 | 0 | 1 | DVI 1920x1200 No Audio |
| 1 | 1 | 1 | 0 | Copy from Output 1 |
| 1 | 1 | 1 | 1 | Software Control |

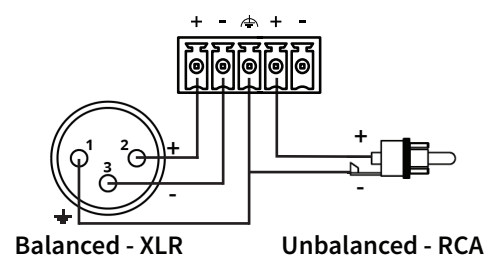
Output 2 Scaler / Optical Output Setting DIP-switches

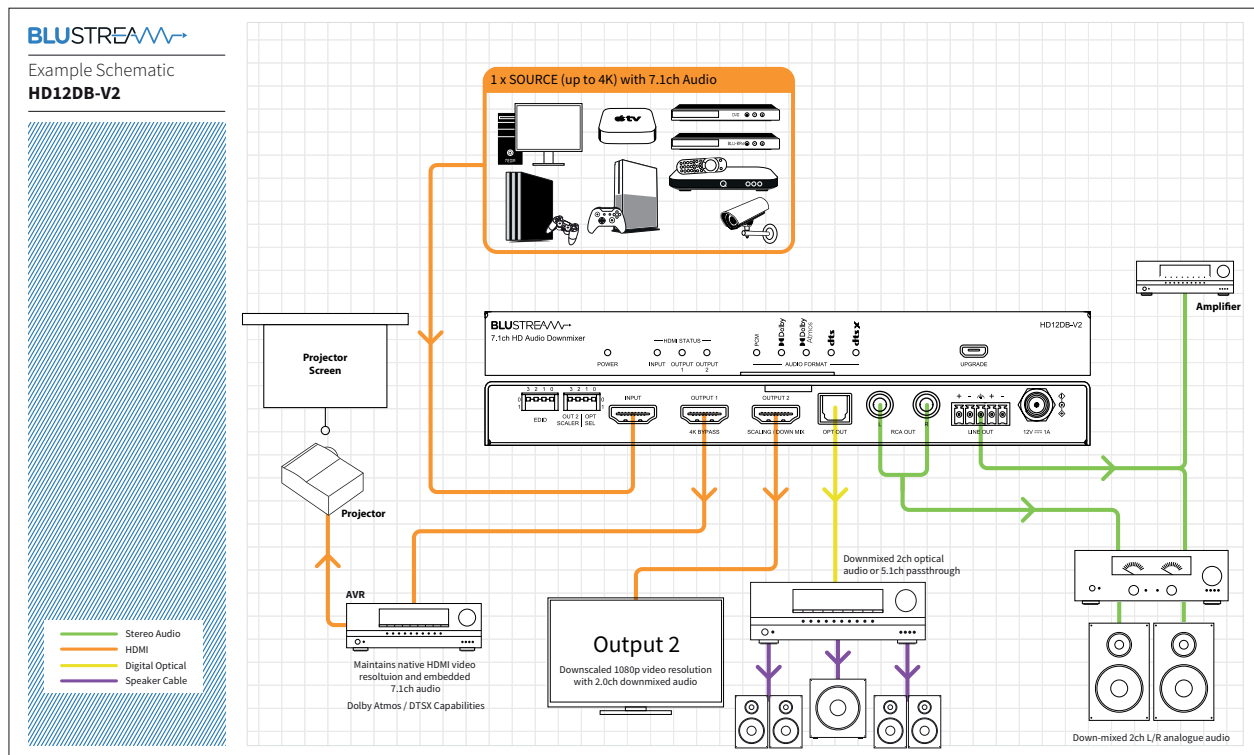
The Output 2 Scaler / Optical Output Setting Dip-switches allow configuration of the output 2 scaler resolution setting along with the optical output port audio down-mix settings. The chart below illustrates the DIP switch positions and their corresponding functions:

| 3 | 2 | 1 | 0 | Function |
|------------------------------|---|---|---|---|
| Combination of DIP positions | | | | |
| 0 | 0 | - | - | Output 2 Scaler Match TV - If display does not support 4K then output 2 will be 1080p |
| 0 | 1 | - | - | Output 2 Scaler Force 1080p |
| 1 | 0 | - | - | Output 2 Scaler Bypass |
| 1 | 1 | - | - | Output 2 Scaler Software Controlled (via upgrade port) |
| - | - | - | 0 | Optical Output Pass-through 5.1ch (note: will not output 7.1ch audio) |
| - | - | - | 1 | Optical Output Down-mix to 2ch |

2 Channel Line Output

The 2 channel line output will always output a downmixed audio signal and can be wired with balanced or unbalanced audio devices with the pin out as follows:





Specifications

Video Input Connectors: 1 x HDMI Type A, 19-pin, female

Video Output Connectors: 2 x HDMI Type A, 19-pin, female

Audio Output Connectors: 1 x Optical (Toslink), 2 x RCA analogue left/right, 1 x 5-Pin Phoenix balanced/unbalanced left/right

EDID Selection: 4-Pin DIP Switch

Output 2 Scaler Selection / Optical Output Selection: 4-Pin DIP Switch

Product upgrade: 1 x Micro USB female

Dimensions (W x H x D): 195mm x 21mm x 93mm

Shipping Weight: 1.0 Kg

Operating Temperature: 32°F to 104°F (0°C to 40°C)

Storage Temperature: - 4°F to 140°F (- 20°C to 60°C)

Power Supply: 12V/1A DC

Package Contents

- 1 x HD12DB-V2
- 1 x 12V/1A DC Power Supply
- 1 x Mounting Kit
- 4 x Rubber Feet
- 1 x Quick Reference Guide

Acknowledgements

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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.

Installer Notes

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Installer Notes

[illegible]



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