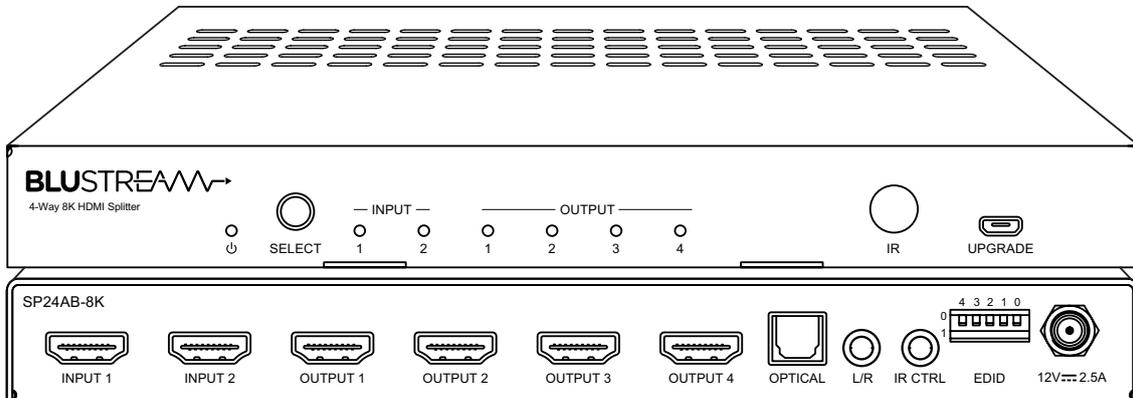


SP24AB-8K

Quick Reference Guide



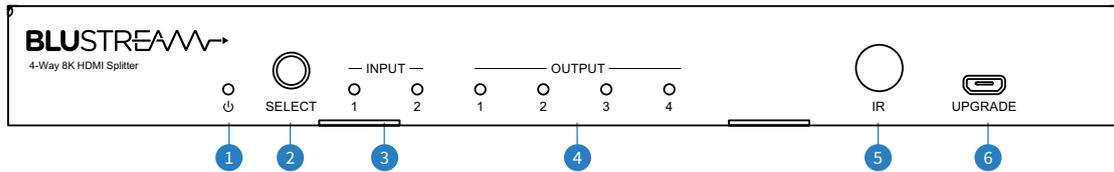
Introduction

The SP24AB-8K HDMI 2.1 splitter is designed to be used where HDMI 2.1 chipset are being utilised for signals up to 8K 60Hz and 4K 120Hz. With selection of 2 x HDMI 2.1 input sources, a single source can be distributed to up to 4 x outputs simultaneously, the SP24AB-8K can auto-switch based on detecting a 5V hot plug, a new TMDS signal; or manually using IR or the front panel. Analogue and coaxial digital (S/PDIF) audio breakout allows for audio integration, HDCP2.3 compliant, and advanced EDID management.

FEATURES:

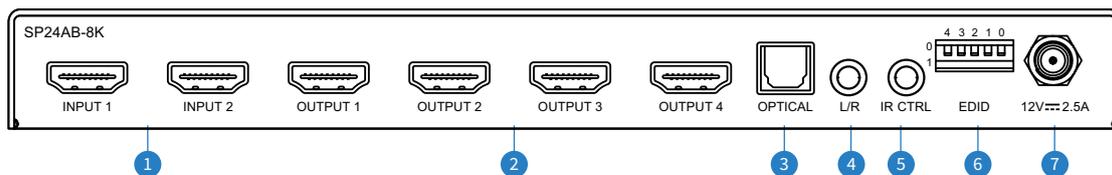
- Features 2x selectable HDMI 2.1 inputs that are split to 4x HDMI outputs
- Supports HDMI 2.1 specification including HDR (40Gbps maximum)
- Supports up to 8K 60Hz YCbCr 4:2:0 10bit, 8K 30Hz RGB/YCbCr 4:4:4 10bit, or 4K 120Hz RGB/YCbCr 4:4:4 10bit
- Supports ALLM (Auto Low Latency Mode) & VRR (Variable Refresh Rate)
- Supports bitstream passthrough of multichannel surround sound including object-based audio formats in line with HDMI specifications
- Auto HDMI source switching via 5v and / or TMDS signal sensing
- Manual HDMI source switching via front panel and IR
- Audio breakout to analogue L/R audio and optical (S/PDIF) digital outputs concurrently
- 5v / 12v IR Compatible
- HDCP 2.3 compliant with advanced EDID management

Front Panel Descriptions



- 1 Power Status Indicator
- 2 Input Selection Button - Press to toggle between HDMI inputs, press and hold for 10 seconds to enable/disable autoswitching mode
- 3 Input Status LED - Illuminates to identify which HDMI input source is selected
- 4 Output Status LED - Illuminates if corresponding HDMI output is active
- 5 IR Receiver Window - Point IR remote here to control the device
- 6 Micro USB Upgrade Port - Used for firmware upgrade purposes

Rear Panel Descriptions



- 1 HDMI Inputs - Connect to HDMI source devices
- 2 HDMI Outputs - Connect to HDMI displays
- 3 Optical Digital Output (S/PDIF) - de-embedded audio from selected HDMI input
- 4 Analogue Audio Left/Right Output (3.5mm stereo jack) - de-embedded audio from the selected HDMI input. Source input must be PCM 2 channel audio for the analogue output to work. The SP24AB-8K does not down-mix multi-channel audio signals
- 5 IR Control Port - connect supplied Blustream 5V IR receiver, or control processor to control the switcher
- 6 EDID DIP switches - see over page for EDID details
- 7 12V/2.5A DC Power Input screw terminal connector

Device Configuration

The upgrade port is also a serial UART port and can be used for configuration and control of the device by using a standard micro USB data cable (not included) from a PC using a terminal program. It allows configuration of items such as IR 5v/12v selection, auto switching, output source changing and EDID configuration for each input.

The default serial UART communication settings are:

Baud Rate: 57600

Data Bit: 8

Stop Bit: 1

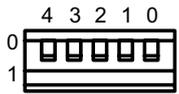
Parity Bit: none

The API is available to download from the Blustream website.

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/s. By pre-determining the video resolution and audio format of the source and display devices, you can reduce the time needed for EDID hand shaking thus making power cycles quicker and more reliable.

Configuration of the EDID settings for the input can be achieved either via the EDID DIP switches on the rear of the splitter, or by using the micro-USB connector and Blustream EDID API commands when in Software Control mode.



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



DIP ON ▼/OFF▲ SWITCHING POSITIONS					EDID TYPE
4	3	2	1	0	
Off	Off	Off	Off	Off	HDMI 1080p@60Hz, Audio 2ch PCM
Off	Off	Off	Off	On	HDMI 1080p@60Hz, Audio 5.1ch PCM/DTS/DOLBY
Off	Off	Off	On	Off	HDMI 1080p@60Hz, Audio 7.1ch PCM/DTS/DOLBY/HD
Off	Off	Off	On	On	HDMI 4K@30Hz 4:4:4, Audio 2ch PCM
Off	Off	On	Off	Off	HDMI 4K@30Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
Off	Off	On	Off	On	HDMI 4K@30Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
Off	Off	On	On	Off	HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 2ch PCM
Off	Off	On	On	On	HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
Off	On	Off	Off	Off	HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
Off	On	Off	Off	On	HDMI 4K@60Hz 4:4:4, 8-bit, Audio 2ch PCM
Off	On	Off	On	Off	HDMI 4K@60Hz 4:4:4, 8-bit, Audio 5.1ch PCM/DTS/DOLBY
Off	On	Off	On	On	HDMI 4K@60Hz 4:4:4, 8-bit, Audio 7.1ch PCM/DTS/DOLBY/HD
Off	On	On	Off	Off	HDMI 4K@60Hz 4:4:4, 10-bit HDR, Audio 2ch PCM
Off	On	On	Off	On	HDMI 4K@60Hz 4:4:4, 10-bit HDR, Audio 5.1ch PCM/DTS/DOLBY
Off	On	On	On	Off	HDMI 4K@60Hz 4:4:4, 12-bit HDR (Inc DV), Audio 7.1ch PCM/DTS/DOLBY/HD
Off	On	On	On	On	HDMI 4K@120Hz 4:4:4, 10-bit HDR, Audio 2ch PCM - Inc VRR
On	Off	Off	Off	Off	HDMI 4K@120Hz 4:4:4, 10-bit HDR, Audio 5.1ch PCM/DTS/DOLBY - Inc VRR
On	Off	Off	Off	On	HDMI 4K@120Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD - Inc VRR
On	Off	Off	On	Off	HDMI 8K@30Hz 4:4:4, 10-bit HDR, Audio 2ch PCM - Inc VRR
On	Off	Off	On	On	HDMI 8K@30Hz 4:4:4, 10-bit HDR, Audio 5.1ch PCM/DTS/DOLBY - Inc VRR
On	Off	On	Off	Off	HDMI 8K@30Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD - Inc VRR
On	Off	On	Off	On	HDMI 8K@60Hz 4:2:0+8K@30Hz 4:4:4, 10-bit HDR, Audio 2ch PCM - Inc VRR
On	Off	On	On	Off	HDMI 8K@60Hz 4:2:0+8K@30Hz 4:4:4, 10-bit HDR, Audio 5.1ch PCM/DTS/DOLBY - Inc VRR
On	Off	On	On	On	HDMI 8K@60Hz 4:2:0+8K@30Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD - Inc VRR
On	On	Off	Off	Off	HDMI 4K@120Hz 4:4:4, 12-bit HDR (Inc DV), Audio 2ch PCM - Inc VRR
On	On	Off	Off	On	HDMI 4K@120Hz 4:4:4, 12-bit HDR (Inc DV), Audio 7.1ch PCM/DTS/DOLBY/HD - Inc VRR
On	On	Off	On	Off	HDMI 8K@30Hz 4:4:4, 12-bit HDR (Inc DV), Audio 2ch PCM - Inc VRR
On	On	Off	On	On	HDMI 8K@30Hz 4:4:4, 12-bit HDR (Inc DV), Audio 7.1ch PCM/DTS/DOLBY/HD - Inc VRR
On	On	On	Off	Off	HDMI 8K@60Hz 4:2:0+8K@30Hz 4:4:4, 12-bit HDR (Inc DV), Audio 2ch PCM - Inc VRR
On	On	On	Off	On	HDMI 8K@60Hz 4:2:0+8K@30Hz 4:4:4, 12-bit HDR (Inc DV), Audio 7.1ch PCM/DTS/DOLBY/HD - Inc VRR
On	On	On	On	Off	EDID Pass-through (Copy EDID from Output 1)
On	On	On	On	On	EDID Software control

Specifications

- **Video Input Connectors:** 2 x HDMI Type A, female
- **Video Output Connectors:** 4 x HDMI Type A, Female RJ45 connector
- **Audio Output Connectors:** 1 x Analogue left / right audio (3.5mm stereo jack), 1x Optical S/PDIF socket
- **IR Input Port:** 1 x 3.5mm stereo jack
- **Upgrade Port:** 1 x Micro USB connector
- **Casing Dimensions (W x D x H):** 212mm x 94mm x 23mm
- **Power Supply:** 12v/2.5A DC connector
- **Box Dimensions (W x D x H):** 265 x 135 x 90mm
- **Shipping Weight:** 1kg
- **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

- 1 x SP24AB-8K
- 1 x 12v/2.5A DC power supply
- 1 x IR Remote Control & Receiver
- 1 x Mounting kit
- 4 x Rubber Feet
- 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.

Canada, avis d'Industry Canada (IC)

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003.

Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

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.