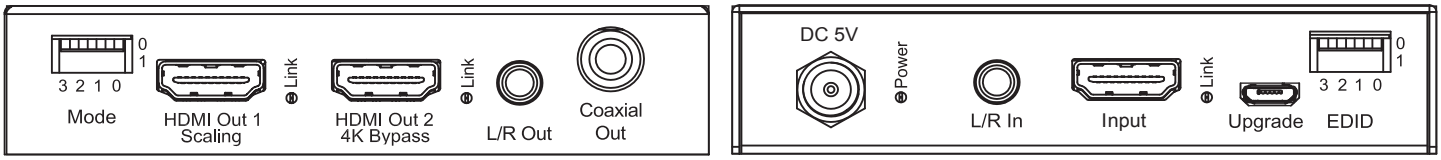
SC12SP-V2

Quick Reference Guide



Introduction

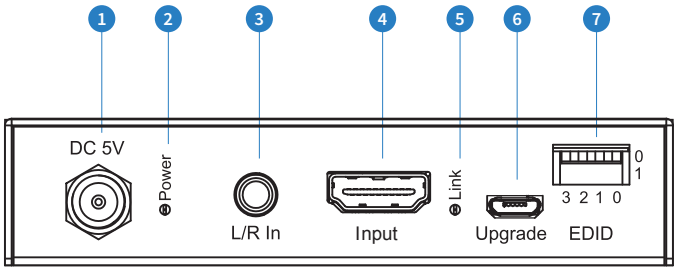
The Blustream SC12SP-V2 is a HDMI 4K splitter with in-built scaler, designed for installations in which a single 4K video source needs to be distributed to multiple displays that support different maximum video resolutions. The SC12SP-V2 allows those displays only capable of supporting lower video resolutions to receive scaled 4K (up to 60Hz 4:4:4) content while still showing the maximum original 4K UHD resolution on the higher-definition display.

The SC12SP-V2 supports down-scaling of 4K video to a fixed resolution of 1080p or to a lower colour gamut if the screen does not support 4K 4:4:4. The SC12SP-V2 also includes audio breakout, advanced EDID management and supports HDCP 2.2.

FEATURES:

- Features 1x HDMI input that is replicated to 2x HDMI outputs
- HDMI output 2 will bypass the native HDMI video input signal and supports full 4K UHD 4:4:4 60Hz video pass-through
- HDMI output 1 will down-scale the video input to the following formats:
  - 1080p output (for screens that do not support 4K) - output refresh rate equals the input refresh rate
  - 4K 50/60Hz 4:2:0 output (for screens that do not support full 4K 60Hz 4:4:4)
- HDMI output 1 supports down-scaling of a native 4K UHD 3840 x 2160 4:4:4 @ 50/60Hz (or lower resolution/ frame rate) video
- Supports bitstream passthrough of multichannel surround sound including object-based audio formats in line with HDMI specifications
- HDMI audio breakout to analogue L/R audio and Coaxial digital outputs concurrently
- Support for HDR (High Dynamic Range)
- Advanced EDID management
- HDCP 2.2 support

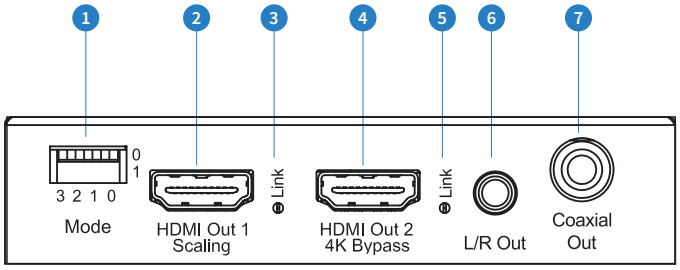
Front Panel



Connections:

1. Power port – Use supplied 5V/1A DC adaptor
2. Power LED indicator - Lit when detecting unit is powered
3. L/R analogue audio input – 3.5mm stereo jack. To embed audio onto the HDMI output
4. HDMI input - Connect to a HDMI source device
5. HDMI LED indicator - Lit when there is an active HDMI connection to a source device
6. USB Update port - USB connector used for firmware upgrade
7. EDID dip-switches - Adjust the EDID setting for the source input - see following page for further details

Rear Panel



Connections:

1. Mode dip-switches - Adjust the HDMI output resolution - see following page for further details
2. HDMI output 1 - Scaled video output. Connect to a HDMI display/end point
3. HDMI output 1 LED indicator - Lit when detecting an active HDMI connection to a display/end point
4. HDMI output 2 - Bypass video output. Connect to a HDMI display/end point
5. HDMI output 2 LED indicator - Lit when detecting an active HDMI connection to a display/end point
6. L/R analogue audio output – 3.5mm stereo jack. Please note: input must be PCM 2ch audio
7. Coaxial digital audio output – Extracted audio from HDMI input

EDID Management

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 SC12SP-V2 will act as an 'end point' in the HDMI signal path. Using the EDID dip-switches pre-determins the video resolution and audio format of the source regardless of the video output resolution that the SC12SP-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 SC12SP-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	1080i 60Hz 2.0CH
0	1	0	0	1080i 60Hz 5.1CH
0	1	0	1	1080i 60Hz 7.1CH
0	1	1	0	4K 60Hz 4:2:0 2.0CH
0	1	1	1	4K 60Hz 4:2:0 5.1CH
1	0	0	0	4K 60Hz 4:2:0 7.1CH
1	0	0	1	4K 60Hz 4:4:4 2.0CH
1	0	1	0	4K 60Hz 4:4:4 5.1CH
1	0	1	1	4K 60Hz 4:4:4 7.1CH
1	1	0	0	DVI 1280x1024
1	1	0	1	DVI 1920x1080
1	1	1	0	DVI 1920x1200
1	1	1	1	Copy EDID from output

HDMI 'MODE' Dip-switches

The SC12SP-V2 is ideal for installations that have two displays capable of supporting different video formats. Installing the SC12SP-V2 will allow those displays only capable of supporting lower video resolutions to receive scaled 4K video (via HDMI output 1) while still showing maximum original 4K resolution on the higher-definition displays (via HDMI output 2)

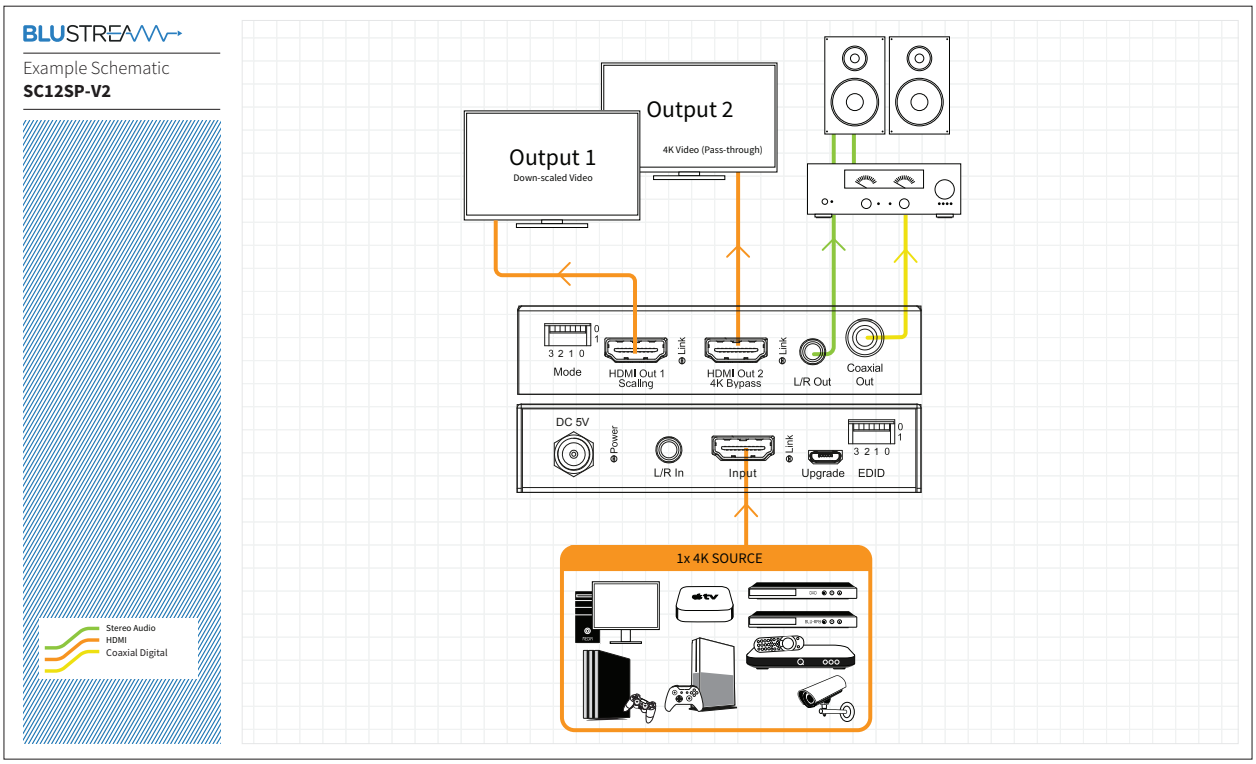
Using the EDID settings (as above) the source can be instructed to output a 4K 60Hz signal (or lower format if required). The SC12SP-V2 will scale the HDMI input signal to a selected output resolution on HDMI output 1 using the MODE dip-switches on the front panel. The SC12SP-V2 will continue to pass-through the original 4K 60Hz video signal onto HDMI output 2 without any scaling. Please see adjacent table for settings.

The MODE dip-switch are assigned to a feature or setting:-
Dip-switch 3 = HDMI scaling option
Dip-switch 2 = Debug mode
Dip-switch 1 = Analogue audio embed or original HDMI audio
Dip-switch 0 = Control mode

Note: You must power-cycle the SC12SP-V2 after changes have been made in order for the EDID and MODE settings to update.

3	2	1	0	Mode
Combination of DIP positions				
0	x	x	x	Autoscale output
1	x	x	x	Force downscale to 1080P
x	0	x	x	Debug mode 1
x	1	x	x	Debug mode 2
x	x	0	x	Original HDMI audio
x	x	1	x	Analogue audio embed
x	x	x	0	Dip control mode
x	x	x	1	GUI control mode

'X' indicates the dip-switch does not effect this setting



Specifications

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

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

EDID: 4-PIN DIP Switch

MODE: 4-PIN DIP Switch

Product upgrade: 1x 3-Pin Phoenix connector & 1x Type Micro USB female

Dimensions (W x H x D): 101mm x 103mm x 22mm

Shipping Weight: 0.7 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: 5V/1A DC

Package Contents

- 1x SC12SP-V2
- 1x 5V/1A DC power supply
- 1x Mounting kit
- 1x Quick reference guide

Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

Components inside this unit are not user serviceable. Do not remove the protective cover from the unit. Removing any panel from this product will invalidate the manufacturers warranty.

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.