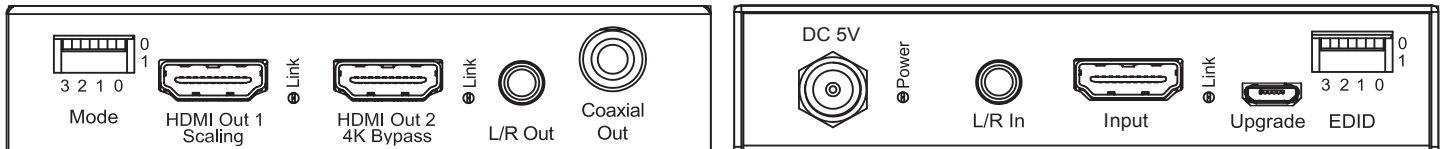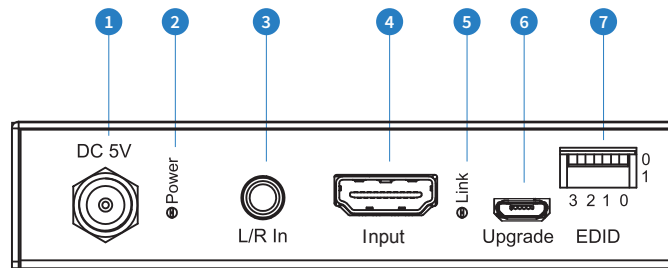# SC12SP-V2

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

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 pass-through of all known HDMI audio formats including Dolby TrueHD, Dolby Atmos, Dolby Digital Plus and DTS-HD Master audio transmission
- HDMI audio breakout to analogue L/R audio and Coaxial digital outputs concurrently
- Support for HDR (High Dynamic Range)
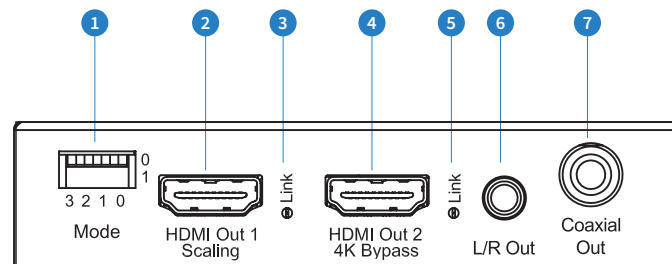- Advanced EDID management
- HDCP 2.2 support

Front Panel

DC 5V ⏻ Power | L/R In | Input | 🔗 Link | Upgrade | EDID | 0 1 | 3 2 1 0

Connections:

❶ Power port – Use supplied 5V/1A DC adaptor

❷ Power LED indicator - Lit when detecting unit is powered

❸ L/R analogue audio input – 3.5mm stereo jack. To embed audio onto the HDMI output

❹ HDMI input - Connect to a HDMI source device

❺ HDMI LED indicator - Lit when there is an active HDMI connection to a source device

❻ USB Update port - USB connector used for firmware upgrade

❼ EDID dip-switches - Adjust the EDID setting for the source input - see following page for further details

Rear Panel

0 1 | 3 2 1 0 | Mode | HDMI Out 1 Scaling | 🔗 Link | HDMI Out 2 4K Bypass | 🔗 Link | L/R Out | Coaxial Out

Connections:

❶ Mode dip-switches - Adjust the HDMI output resolution - see following page for further details

❷ HDMI output 1 - Scaled video output. Connect to a HDMI display/end point

❸ HDMI output 1 LED indicator - Lit when detecting an active HDMI connection to a display/end point

❹ HDMI output 2 - Bypass video output. Connect to a HDMI display/end point

❺ HDMI output 2 LED indicator - Lit when detecting an active HDMI connection to a display/end point

❻ L/R analogue audio output – 3.5mm stereo jack. Please note: input must be PCM 2ch audio

❼ 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)
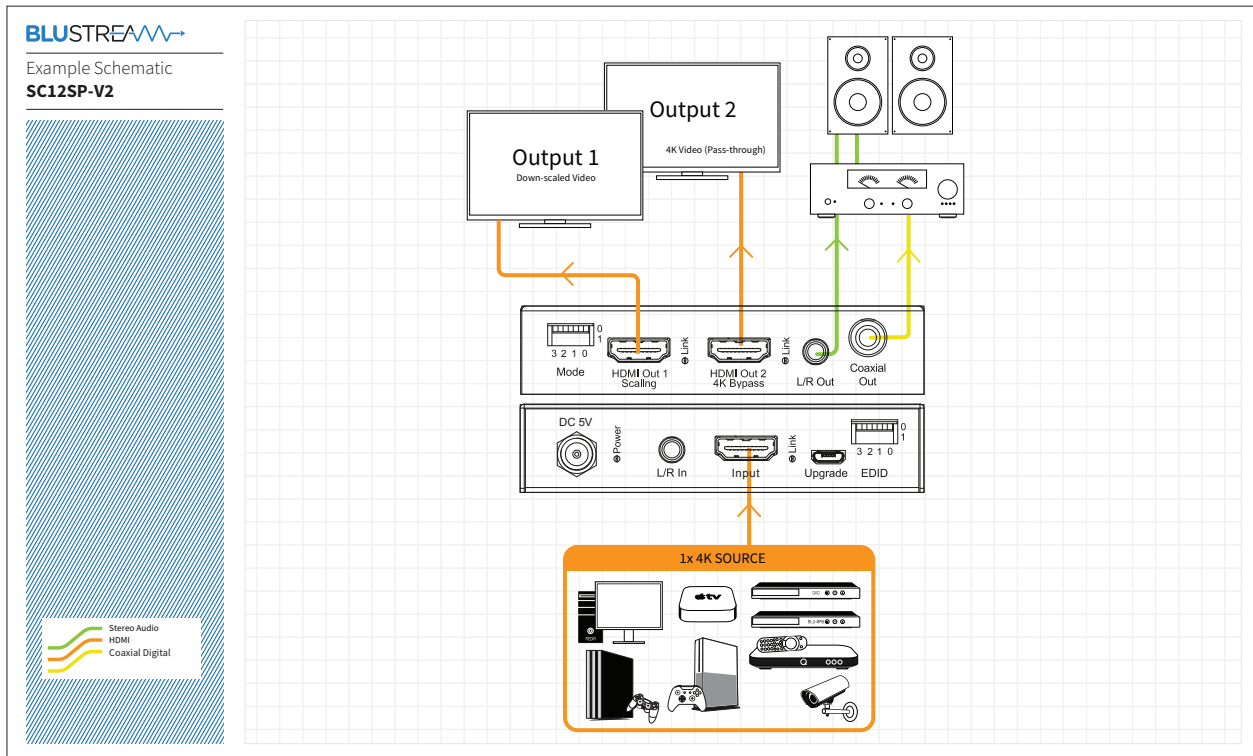
Using the EDID settings (as above) the source can be instructed to output a 4K 60Hz signal (or lower format if required). The SC12SP-V2 will scale the HDMI input signal to a selected output resolution on HDMI output 1 using the MODE dip-switches on the front panel. The SC12SP-V2 will continue to pass-through 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

BLUSTREAM⌁
Example Schematic
SC12SP-V2

Output 2
4K Video (Pass-through)

Output 1
Down-scaled Video

Mode | HDMI Out 1 Scaling | HDMI Out 2 4K Bypass | L/R Out | Coaxial Out

DC 5V | Power | L/R In | Input | Upgrade | EDID

1x 4K SOURCE

Stereo Audio
HDMI
Coaxial Digital

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.