▶ SC12SP

User Manual

BLUSTRE/\/\/\→

Thank you for purchasing this product.

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Safety And Performance Notice

Do not substitute or use any other power supply other than the enclosed unit, or a Blustream approved replacement.

Do not disassemble Blustream hardware for any reason. Doing so will void the manufacturer's warranty.

Contents

Introduction

The Blustream SC12SP is a HDMI 4K splitter with an 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 allows those displays only capable of supporting lower video resolutions to receive scaled 4K content while still showing maximum original 4K UHD resolution on the higher-definition display.

The SC12SP supports down-scaling of 4K video to various lower resolution video formats. The SC12SP will also up-scale lower video resolutions up to 1080P and 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 replicate the native HDMI video input signal
- HDMI output 2 supports 4K UHD video pass-through (3840 x 2160 @30Hz 4:4:4, 4096 x 2160 @24Hz 4:4:4, and 4K @60Hz 4:2:0)
- HDMI output 1 will both up-scale or down-scale the video input to the following formats:
  - 1080p @ 50Hz
  - 1080p @ 60Hz
  - 720p @ 50Hz
  - 720p @ 60Hz
  - 1280 x 1024 @ 60Hz
  - 1024 x 768 @ 60Hz
  - 1360 x 768 @ 60Hz
  - 1440 x 900 @ 60Hz
  - 1680 x 1050 @ 60Hz
- HDMI output 1 supports down-scaling of 4K UHD 3840 x 2160 @ 30Hz (or lower) video only
- 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
- Advanced EDID management
- HDCP 2.2 support

Front Panel
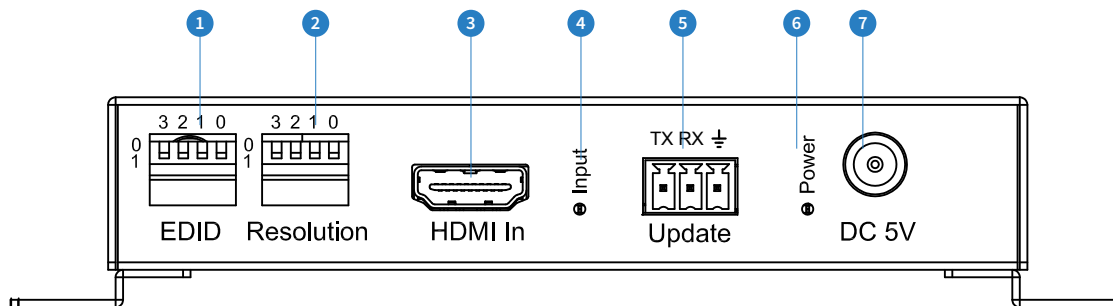
Connections:

1 EDID dip-switches - Adjust the EDID setting for the source input - see page 5 for further details

2 Resolution dip-switches - Adjust the HDMI output resolution - see page 5 for further details

3 HDMI input - Connect to a HDMI source device

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

5 RS-232 Update port - 3-pin Phoenix connector used for firmware upgrade

6 Power LED indicator - Lit when detecting unit is powered

7 Power port – Use supplied 5V 2A DC adaptor

Rear Panel
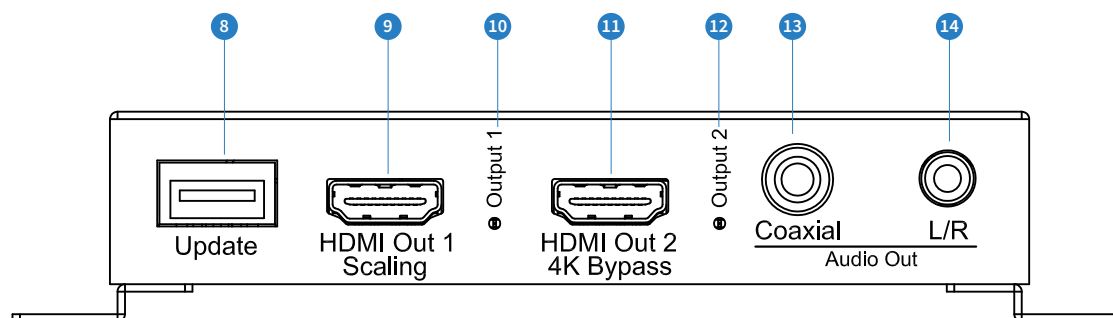
Connections:

8 USB Update port - USB connector used for firmware upgrade

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

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

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

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

13 Coaxial digital audio output – Extracted audio from HDMI input

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

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 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 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 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	Copy EDID from output
0	0	0	1	1080p 2.0ch
0	0	1	0	1080p 5.1ch
0	0	1	1	1080p 7.1ch
0	1	0	0	1080i 2.0ch
0	1	0	1	1080i 5.1ch
0	1	1	0	1080i 7.1ch
0	1	1	1	1080p 3D 2.0ch
1	0	0	0	1080p 3D 5.1ch
1	0	0	1	1080p 3D 7.1ch
1	0	1	0	4K 2.0ch
1	0	1	1	4K 5.1ch
1	1	0	0	4K 7.1ch
1	1	0	1	DVI 1280x1024
1	1	1	0	DVI 1920x1080
1	1	1	1	DVI 1920x1200

HDMI Output Resolution

The SC12SP is ideal for installations that have two displays capable of supporting different video formats. Installing the SC12SP 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 30Hz signal (or lower format if required). The SC12SP will scale the HDMI input signal to a selected output resolution on HDMI output 1 using the RESOLUTION dip-switches on the front panel. The SC12SP will continue to pass-through the original 4K 30Hz video signal onto HDMI output 2 without any scaling. Please see adjacent table for settings.
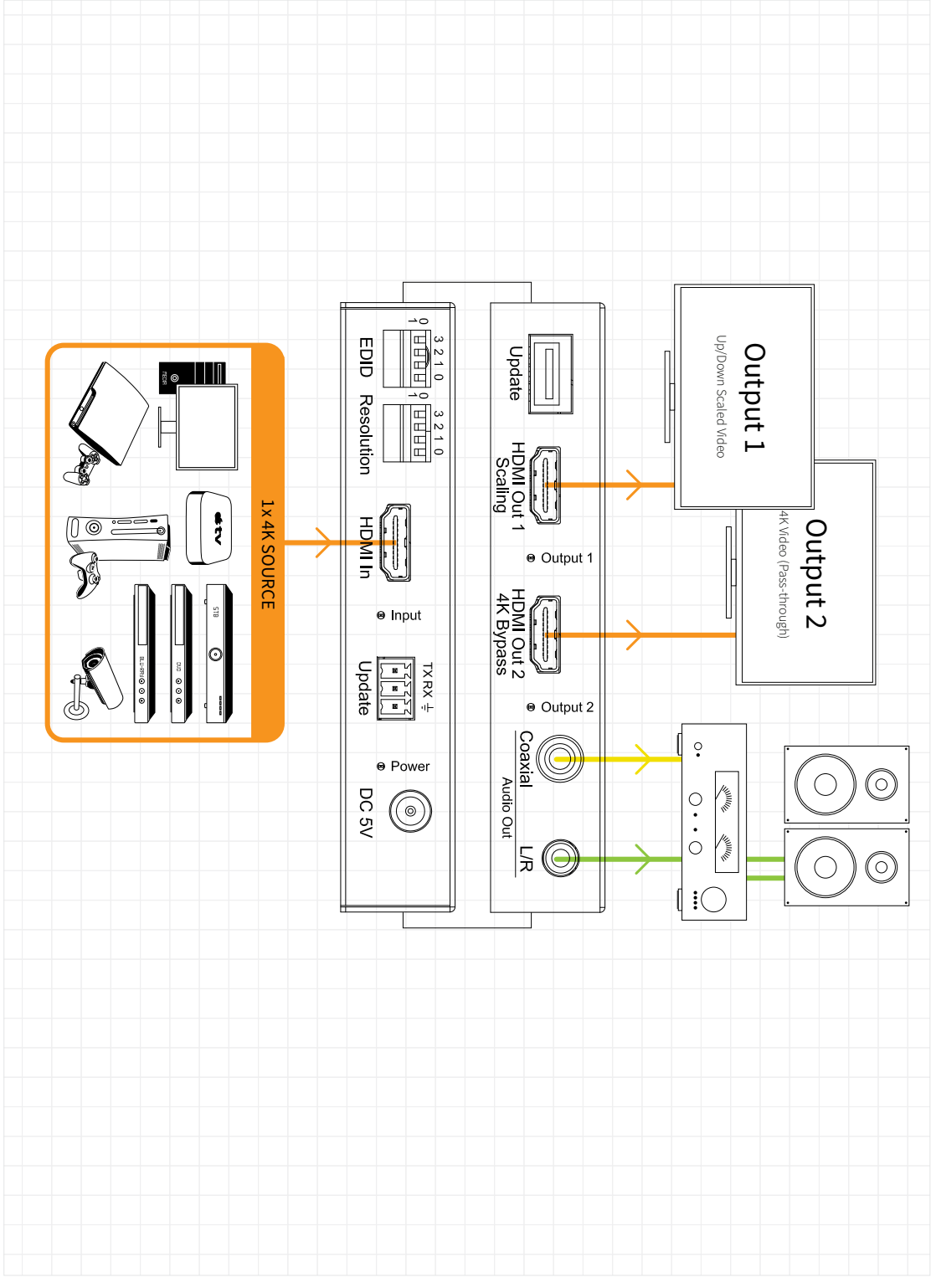
The SC12SP can also up-scale a lower resolution video HDMI input signal to a higher output video resolution. The same procedure is used as above for setting the input signal type using the EDID dip-switches, and then changing the output video resolution using the RESOLUTION dip-switches. HDMI output 2 will still bypass the HDMI input signal.

Note: *You must power-cycle the SC12SP after changes have been made in order for the Resolution settings to update.*
The SC12SP cannot up-scale to 4K video formats. Output resolution options are fixed to those shown in the adjacent table.

3	2	1	0	Output Resolution
Combination of DIP positions				
0	0	0	0	1080p 50Hz
0	0	0	1	1080p 60Hz
0	0	1	0	720p 50Hz
0	0	1	1	720p 60Hz
0	1	0	0	1280 x 1024 60Hz
0	1	0	1	1024 x 768 60Hz
0	1	1	0	1360 x 768 60Hz
0	1	1	1	1440 x 900 60Hz
1	0	0	0	1680 x 1050 60Hz

BLUSTREAM

Example Schematic
SC12SP

Stereo Audio
HDMI
Coaxial Digital

1x 4K SOURCE

EDID   Resolution

3 2 1 0
0
1

3 2 1 0
0
1

HDMI In

⊖ Input

Update   TX RX ⊥

⊖ Power

DC 5V

Update

HDMI Out 1
Scaling

⊖ Output 1

HDMI Out 2
4K Bypass

⊖ Output 2

Coaxial

Audio Out   L/R

Output 1
Up/Down Scaled Video

Output 2
4K Video (Pass-through)

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

Resolution: 4-Pin DIP Switch

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

Dimensions (W x D x H): 122 x 135 x 23mm

Shipping Weight: 0.8kg

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/2A DC

Package Contents:

- 1x SC12SP

- 1x 5V/2A DC power supply

- 1x Mounting kit

- 1 x User manual

Maintenance

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