SIMPLIFIED
MFG

SP18S-8K

User Manual

VER 1.1

Thank you for purchasing this product

The Simplified MFG SP18S-8K is designed to provide years of reliable service. At Simplified MFG, we want the experience with this device to be the best possible and are committed to helping achieve that experience.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended to protect and extend the life of your equipment. Set top boxes (STB) that are connected to the outside world can introduce surges through the HDMI.   Simplified MFG's HDSURGE is recommended for use with these STB devices (cable and satellite)

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1. Introduction

The SP18S-8K is an 48Gbps HDMI2.1 splitter with scaling, and EDID management. It supports resolutions up to 8K4K@60Hz (4:4:4) and below. The SP18S-8K also supports HDCP 2.3/2.2/1.4. The EDID can be managed via DIP witch. Each output can automatically scale (8K/4/1080p).

2. Features

- HDMI 2.1, HDMI 2.0b HDCP2.3/HDCP 2.2/HDCP1.4 compliant.
- Supports HDMI 2.1 (48Gbps) up to 8K4K@50/60Hz (4:4:4) and all 4K/UHD formats up to 120Hz.
- Video signals can be spilt into eight identical signals, or can be manipulated via the scaling
- The EDID shown to the source can be selected via the switch on the panel
- Supports VRR, ALLM, QMS, QFT, and SBTM
- Supports HDR10+, DolbyVision™, & HLG pass-through
- HDR to SDR conversion by output

- Supports all HDMI audio formats including LPCM, Dolby Digital+, Dolby True HD, Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD, & DTS-X

3. Package Contents

- 1× HDMI 2.1 8K scaling splitter
- 1 x 12/2.5A Multi volatage power supply
- 2 x Mounting ears
- 4 x Machine screws for ears
- 1 x User manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3, HDCP 2.2 and HDCP 1.4
Video Bandwidth	48Gbps
Video Resolutions	8K4K@60Hz. (YUV4:4:4), 4K2K @120Hz. (4:4:4), 4K2K@60Hz. (YUV4:4:4)
Color Depth	8, 10, or 12bit
Color Space	RGB, YCbCr 4:4:4/4:2:2/4:2:0

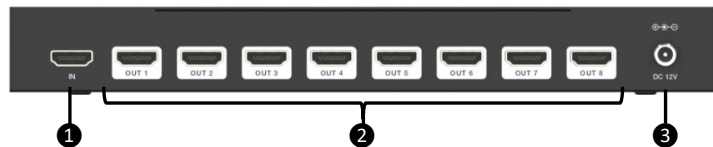| HDR	HDR10+, DolbyVision™, HLG
HDMI Audio Formats	LPCM, Dolby Digital/Plus/EX, Dolby True HD, Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD & DTS-X
ESD Protection	Human-body Model： ±8kV (Air-gap discharge), ±4kV (Contact discharge)
Connections	
Input ports	1×HDMI Type A [19-pin female]
Output ports	8×HDMI Type A [19-pin female]
Communication	1 x SERVICE [USB-C]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	250mm [9.84"] x 104mm [4.1"] x 30mm [1.1"]
Weight	743g [26.2 oz./1 lb., 10.2 oz.]
Power Supply	Input: AC100~240V 50/60Hz, Output: DC12V/2.5A (US/EU standards, CE/FCC/UL certified)
Power Consumption	12.2 W Max
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)

5.Operation Controls and Functions

5.1 Front Panel

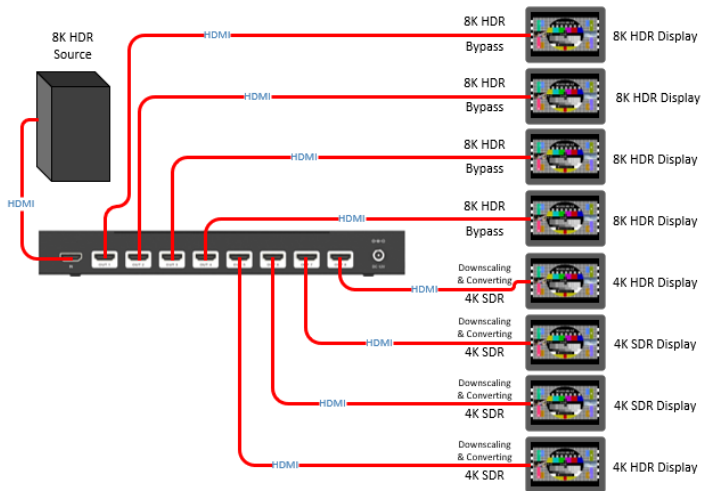| No.	Name	Function description
1	POWER LED	This LED will illuminate when the unit has connected power supply.
2	HDMI INPUT LED	This LED will illuminate when the HDMI IN has connected an active HDMI source device with a HDMI cable.
3	HDMI OUTPUT LED	These LEDs will illuminate when the HDMI OUT port has connected an active display device with a HDMI cable.
4	SERVICE port	Firmware update use.
5	EDID	111: Copies EDID of display in OUT1 110: 4K60 (4:4:4), 2.0 PCM 101: FRL 12G_8K_HDR, 2.0 PCM 100: FRL 12G_8K_HDR, 5.1 PCM 011: FRL 12G_8K_HDR, 7.1 PCM 010: FRL 10G_8K_HDR, 2.0 PCM 001: FRL 10G_8K_HDR, 5.1 PCM 000: FRL 10G_8K_HDR, 7.1 PCM

5.2 Rear Panel

No.	Name	Function description
1	HDMI INPUT	Connect to HDMI source
2	HDMI OUTPUT	Connects to displays
3	DC 12V	Plug the 12V/2.5A DC power supply into the unit and connected the adapter to an AC outlet.

6. HDMI Cable Length Recommendations

Recommended HDMI Cable				
Video Resolution	8K	4K/60Hz.	4K/24Hz.	1080p
HDMI Cable Length	3m/10Ft.	8m/25ft.	12m/39ft.	15m/49ft.
HDMI cables can vary in quality. They may need to be verified by troubleshooting.				

7. Downscaling and conversion function

The SP18S-8K supports downscaling and HDR to SDR conversion. The EDID if the display will determine the resolution. A couple of caveats are the scaling will only operate with 2 resolutions that are 1 step away from each other. Examples would be 8K to 4K or 4K to 1080p. The SP18S-8K cannot support 3 different resolutions or 8K to 1080p conversion. The HDR to SDR function operates in a manner that it is tied to the resolution, meaning if there is an SDR display in the resolution, that entire resolution will now be SDR (see example on the next page). The same would be true if the EDID were set to 4K and the downscaling were to 1080p displays. The EDID can be set via the DIP switches to override the display's request.

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8. Glossary of terms

HLG – Hybrid Log Gamma allows content to be broadcast in HDR and SDR simultaneaously

VRR – Variable Refresh Rate allows the source to match the refresh rate of the display

ALLM – Auto Low Latency Mode (sometimes referred to as "game mode") This is a request by the source for the display to adapt to a low latency mode.

QMS – Quick Media Switching allows an instantchange of frame rate meaning if the source changes from 60Hz to 30Hz. this would show an interrupted picture without QMS. QMS makes this transition seamless

QFT- Quick Frame Transport is designed to make virual reality smoother and affects the responsiveness of commands in video games

SBTM – Source-Based Tone Mapping allows the source to take advantage of all of the display's capabilities as they may vary. This means any combination of capabilities can be fully taken advantage of.

FRL – Fixed Rate Link is the replacement for TMDS but is backwards compatible. TMDS is not capable of the higher umcompressed resolutions above 4K @60Hz.

9. Warranty

Should you feel that this product does not function adequately due to defects in materials or workmanship, we (referred to as "the warrantor") will, for the length of the period indicated below (starting from the original date of the purchase) either a) repair the product with new or refurbished parts. Or b) Replace the product with new or refurbished product.   All Simplified MFG products are covered by a 3-year warranty.   During this period there will be no charge for unit repair, replacement of unit components or replacement of the product if deemed necessary.   The decision to repair or replace is made by the warrantor.   The purchaser must mail in the product during the warranty period.   This limited warranty only covers the product purchased as new and is extended to the original purchaser only.   It is non-transferrable to subsequent owners, even during the warranty period.   A purchase receipt or other proof of purchase date is required for the limited warranty service.

10. Contact

Sales and Tech Support

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