

Paugge

ENT-SP218A

8K HDMI™ 1x8 Splitter



User Manual

VER 1.0

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, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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1. Introduction

Paugge ENT-SP218A 1x8 splitter is an advanced solution for splitting single HDMI™ signal to 8 HDMI™ outputs synchronously. It supports video resolution up to 8K@60 4:2:0 12bit and data rate up to 48Gbps, compliant with HDMI™ 2.1 and HDCP 2.3. The product has several features for ease of integration, including EDID management, cable equalization. In addition, it provides an easy solution for de-embedding the audio signal from HDMI™ source to send to any 5.1/2.0CH sound system.

This multi-functional product can work well with xbox or PS5 to achieve 4K@120Hz on your TVs or relative monitors.

2. Features

- ☆ HDCP 2.3 compliant
- ☆ Support 48Gbps FRL and 18Gbps TMDS video bandwidth
- ☆ Support resolution up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit, as specified in HDMI™ 2.1
- ☆ HDMI™ 2.1 protocols: VRR, ALLM, QMS, QFT, SBTM are supported
- ☆ HDR, HDR10, HDR10+, Dolby Vision, HLG pass-through
- ☆ HDMI™ audio formats: LPCM 7.1CH, Dolby TrueHD, Atmos, DTS-HD Master Audio
- ☆ Support audio de-embedding from HDMI™ input to S/PDIF and L/R audio output
- ☆ Auto downscaling on each output (8K->4K, 8K/4K->1080p)
- ☆ Auto converting of HDR to SDR on each output
- ☆ Advanced EDID management

3. Package Contents

- ① 1× 48Gbps 1x8 HDMI™ Splitter
- ② 1× 12V/2.5A Locking Power Supply
- ③ 2× Mounting Ear
- ④ 4× Machine Screw
- ⑤ 1× User Manual

4. Specifications

Technical	
HDMI™ Compliance	HDMI™ 2.1
HDCP Compliance	HDCP 2.3, HDCP 1.4
Video Bandwidth	48Gbps FRL and 18Gbps TMDS
Video Resolution	Up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit, 8K@30Hz 4:4:4 12bit
Color Depth	8/10/12-bit
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	HDMI™ input/output: LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD Audio de-embedding output: Optical: LPCM/Dolby/DTS 5.1CH Analog: LPCM 2CH
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input	1× IN [HDMI™ Type A, 19-pin female]
Output	8× OUT [HDMI™ Type A, 19-pin female] 1× OPTICAL [S/PDIF] 1× L/R [3.5mm stereo mini-jack]
Control	1× SERVICE [USB type C, update port]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	250mm [W] × 104mm [D] × 30mm [H]
Weight	743g
Power Supply	DC 12V/2.5A
Power Consumption	12.2W (Max)
Operation Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Operating Humidity	20%~80% relative humidity, non-condensing
Storage Humidity	10%~90% relative humidity, non-condensing

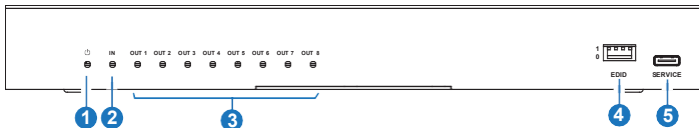
Recommended HDMI™ Cable				
Video Resolution	8K	4K60	4K24	1080P
HDMI™ Cable Length (IN/ OUT)	3m/10ft (Ultra HDMI™ 2.1)	8m/26ft	12m/39ft	15m/49ft
The use of "Premium High Speed HDMI™" cable is highly recommended.				

*** All available input/output resolutions:**

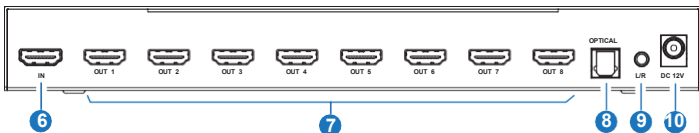
640x480p60Hz, 800x600p60Hz, 1024x768p60Hz, 1280x1024p60Hz,
 1360x768p60Hz, 1440x900p60Hz, 1440x1050p60Hz, 1600x1200p60Hz,
 720x480i59.94Hz(480i59), 720x480p59.94Hz(480p59), 720x576i50Hz(576i50),
 720x576p50Hz(576p50), 1280x720p50Hz(720p50), 1280x720p59.94Hz(720p59),
 1280x720p60Hz(720p60), 1920x1080i50Hz(1080i50), 1920x1080i59.94Hz(1080i59),
 1920x1080i60Hz(1080i60), 1920x1080p23.98Hz(1080p23),
 1920x1080p24Hz(1080p24), 1920x1080p25Hz(1080p25),
 1920x1080p29.97Hz(1080p29), 1920x1080p30Hz(1080p30),
 1920x1080p50Hz(1080p50), 1920x1080p59.94Hz(1080p59),
 1920x1080p60Hz(1080p60), 3840x2160p23.98Hz(2160p23),
 3840x2160p24Hz(2160p24), 3840x2160p25Hz(2160p25),
 3840x2160p29.97Hz(2160p29), 3840x2160p30Hz(2160p30),
 3840x2160p50Hz(2160p50), 3840x2160p59.94Hz(2160p59),
 3840x2160p60Hz(2160p60), 3840x2160p100Hz(2160p100),
 3840x2160p120Hz(2160p120), 4096x2160p23.98Hz, 4096x2160p24Hz,
 4096x2160p25Hz, 4096x2160p29.97Hz, 4096x2160p30Hz, 4096x2160p50Hz,
 4096x2160p59.94Hz, 4096x2160p60Hz, 4096x2160p100Hz, 4096x2160p120Hz,
 5120x2160p50Hz, 5120x2160p60Hz, 7680x4320p23.98Hz, 7680x4320p24Hz,
 7680x4320p25Hz, 7680x4320p29.97Hz, 7680x4320p30Hz, 7680x4320p50Hz,
 7680x4320p60Hz(4:2:0)

5. Operation Controls and Functions

Front Panel



Rear Panel



No.	Name	Function Description
1	POWER LED	When the device is powered on, the red LED will be on.
2	IN LED	When the HDMI IN port connects to an active source device, the green LED will be on.
3	OUT LED (1~8)	When the HDMI OUT 1/2/3/4/5/6/7/8 port connects to a display device and outputs signal, the corresponding green LED will be on.
4	EDID DIP switch	Use the DIP switch to set EDID. *EDID list is as follow.
5	SERVICE	Firmware update port.
6	IN port	HDMI signal input port, connecting to an HDMI source device such as DVD or PS5 with HDMI cable.
7	OUT port (1~8)	HDMI signal output port, connecting to HDMI display device such as TV or Monitor with an HDMI cable.
8	OPTICAL	Optical fiber audio output port.
9	L/R	Analog audio output port.
10	DC 12V	12V/2.5A power input port.

***EDID setting list:**

[DIP] = 1111: Copy OUT1 port sink EDID

[DIP] = 1110: FRL12G_8K_HDR, 2.0CH

[DIP] = 1101: FRL12G_8K_HDR, 5.1CH

[DIP] = 1100: FRL12G_8K_HDR, 7.1CH

[DIP] = 1011: FRL10G_8K_HDR, 2.0CH

[DIP] = 1010: FRL10G_8K_HDR, 5.1CH

[DIP] = 1001: FRL10G_8K_HDR, 7.1CH

[DIP] = 1000: 4K120(420)_HDR, 2.0CH

[DIP] = 0111: 4K120(420)_HDR, 5.1CH

[DIP] = 0110: 4K120(420)_HDR, 7.1CH

[DIP] = 0101: 4K60(444)_HDR, 2.0CH

[DIP] = 0100: 4K60(444)_HDR, 5.1CH

[DIP] = 0011: 4K60(444)_HDR, 7.1CH

[DIP] = 0010: 1080P120(444)_HDR, 2.0CH

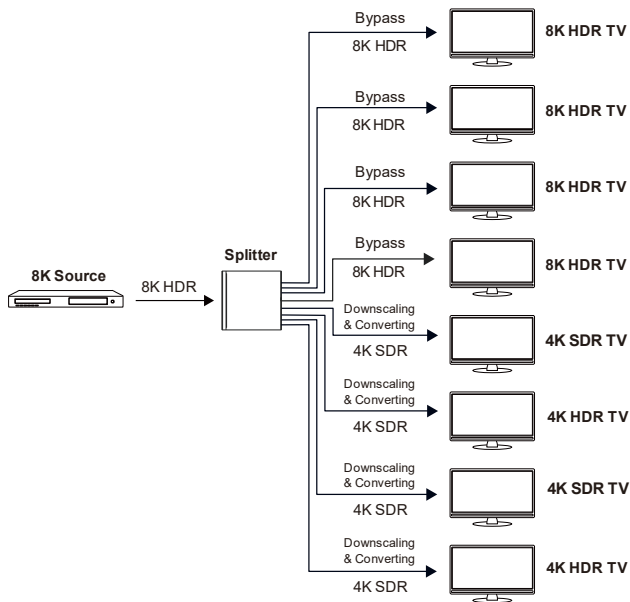
[DIP] = 0001: 1080P60(444), 2.0CH

[DIP] = 0000: Custom EDID Upload (Default : 1080P60(4:4:4), 2.0CH)

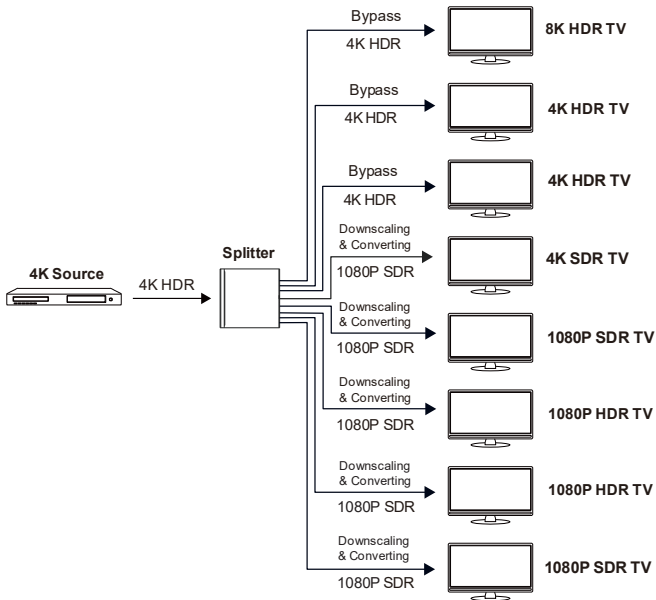
6. Auto Downscaling & Auto Converting

This 48Gbps 1x8 HDMI Splitter supports auto downscaling and auto converting on all outputs. It will automatically output the proper HDMI signal according to the EDID of the display device.

Before downscaling it will compare all the EDID of the connected display devices and select the minimum resolution to downscale and output. For example:



In the example above, 4K is lower than the resolution of input source, so it will downscale and output according to the the minimum resolution of 4K SDR.



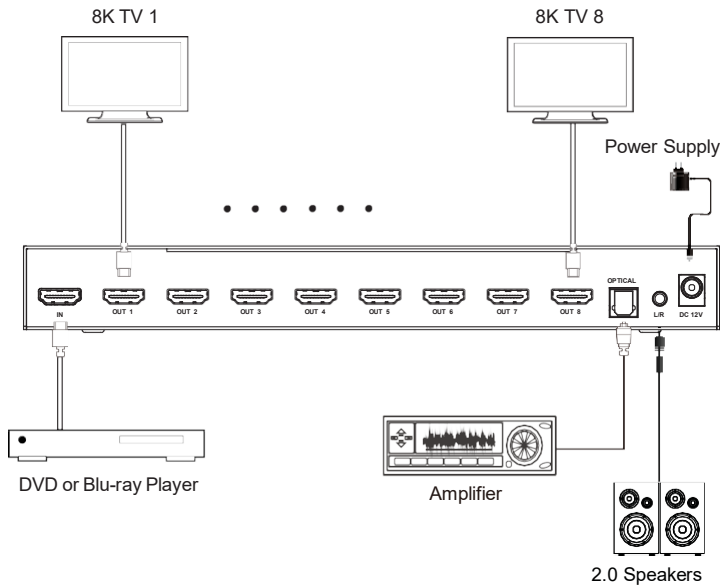
In the example above, 1080P is lower than the resolution of input source, so it will downscale and output according to the the minimum resolution of 1080P SDR.

Note: If the source resolution is downscaled and converted to **1080P DVI** according to the EDID of display devices, it will be output without sound on TV.

Downscaling will not work in the following conditions:

1. The input source is 8K DSC format.
2. The resolution of input source is not supported by the splitter.

7. Application Example



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HIGH DEFINITION MULTIMEDIA INTERFACE

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