



HDMI 2.1 48Gbps 1x8 Splitter

User Manual

500512



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1. Safety Precautions

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

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2. Introduction

The HDMI 2.1 48Gbps 1x8 Splitter (model: 500512) is a versatile device with various applications, offering advanced features for splitting HDMI signals.

The HDMI 2.1 48Gbps 1x8 Splitter's ability to handle high data rates, support 8K resolution, and provide features like EDID management and cable equalization makes it suitable for a wide range of applications in both residential and commercial settings.

3. Features

- HDCP 2.3 compliant
- Supports 48Gbps FRL and 18Gbps TMDS video bandwidth
- Supports video resolution up to 8K/60Hz 4:2:0 12bit, 4K/120Hz 4:4:4 12bit
- HDMI 2.1 protocols: VRR, ALLM, QMS, QFT, SBTM
- Support HDR, HDR 10, HDR 10+, Dolby Vision, HLG pass-through
- LPCM 7.1CH, Dolby True HD, Atmos and DTS-HD Master Audio
- 8K to 4K or 8K/4K to 1080P auto downscaling on all outputs
- Support resolution auto downscaling on each output
- Support auto converting of HDR to SDR on each output
- Advanced EDID management

4. Package Contents

- One (1) HDMI 2.1 48Gbps 1x8 Splitter
- One (1) 12VDC/2.5A Multinational Locking Power Supply
- Two (2) Mounting Ear
- Four (4) Machine Screw (KM3*6)
- One (1) User manual (available via download)

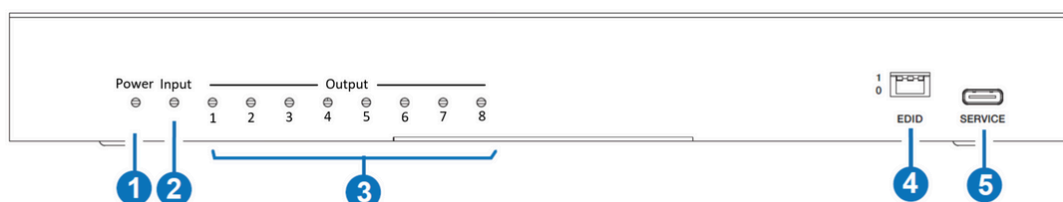
Notes: Confirm that the product and accessories are all included. If not, please contact the supplier from which you purchased the unit.

5. Specifications

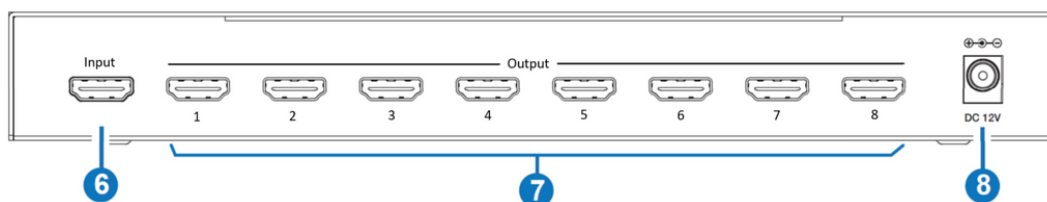
Technical	
HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	48Gbps FRL and 18Gbps TMDS
Video Resolution	Up to 8K/60Hz 4:2:0 12bit, 4K/120Hz 4:4:4 12bit
Color Depth	8/10/12-bit
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2, YCbCr_4:2:0
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	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
ESD Protection	Human body model — $\pm 8\text{kV}$ (Air-gap discharge) & $\pm 4\text{kV}$ (Contact discharge)
Connection	
Input	1 × HDMI IN [Type A, 19-pin female]
Output	8 × HDMI OUT [Type A, 19-pin female]
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	Input: 100-240VAC 50/60Hz, Output: 12VDC/2.5A (US/EU standards, CE/FCC/UL certified)
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
Relative Humidity	20~90% RH (non-condensing)
Generic Specification	
Compliance	Regulatory: FCC, CE, RoHS
Warranty	2 years
Order Information	500512 HDMI 2.1 48Gbps 1x8 Splitter (UPC:627699005125)

6. Operation Controls and Functions

Front Panel



Rear Panel

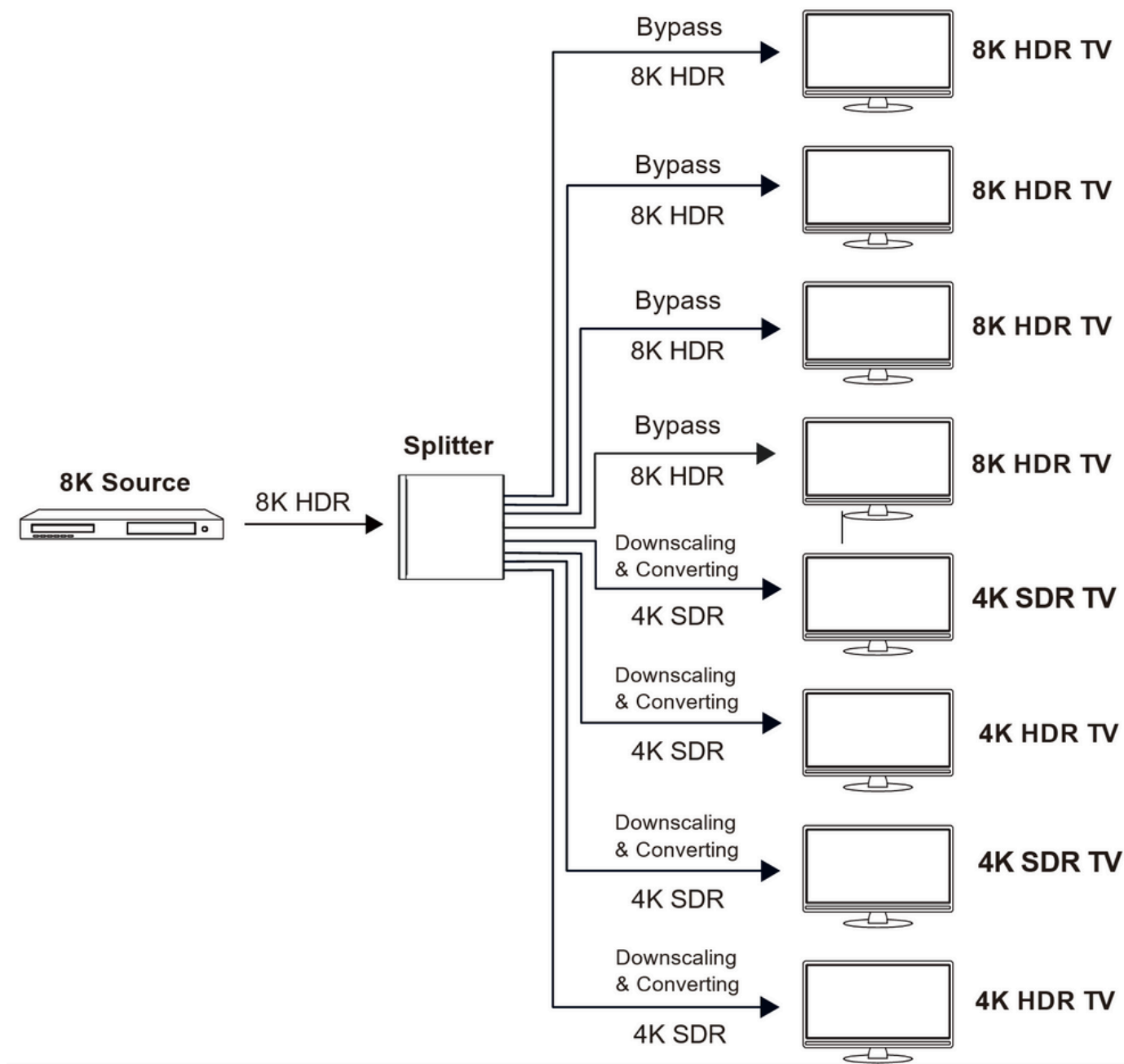


No	Name	Function Description
1	Power LED	When the device is powered on, the red LED will be on.
2	IN LED	When the HDMI IN port connects to an active source device, the green LED will be on.
3	OUT LED (1~8)	When the HDMI OUT 1/2/3/4/5/6/7/8 port connects to a display device and outputs signal, the corresponding green LED will be on.
4	EDID DIP switch	Use the DIP switch to set EDID. [DIP]=111: Copy OUT 1 port sink EDID (as factory default) [DIP]=110: 4K60 (4:4:4), 2.0CH [DIP]=101: FRL12G_8K_HDR, 2.0CH [DIP]=100: FRL12G_8K_HDR, 5.1CH [DIP]=011: FRL12G_8K_HDR, 7.1CH [DIP]=010: FRL10G_8K_HDR, 2.0CH [DIP]=001: FRL10G_8K_HDR, 5.1CH [DIP]=000: FRL10G_8K_HDR, 7.1CH
5	SERVICE	Firmware update port.
6	IN port	HDMI signal input port, connected to HDMI source device such as DVD or PS5 with an HDMI cable.
7	OUT port (1~8)	HDMI signal output port, connected to HDMI display device such as TV or Monitor with an HDMI cable.
8	DC 12VDC	12VDC/2.5A power input port.

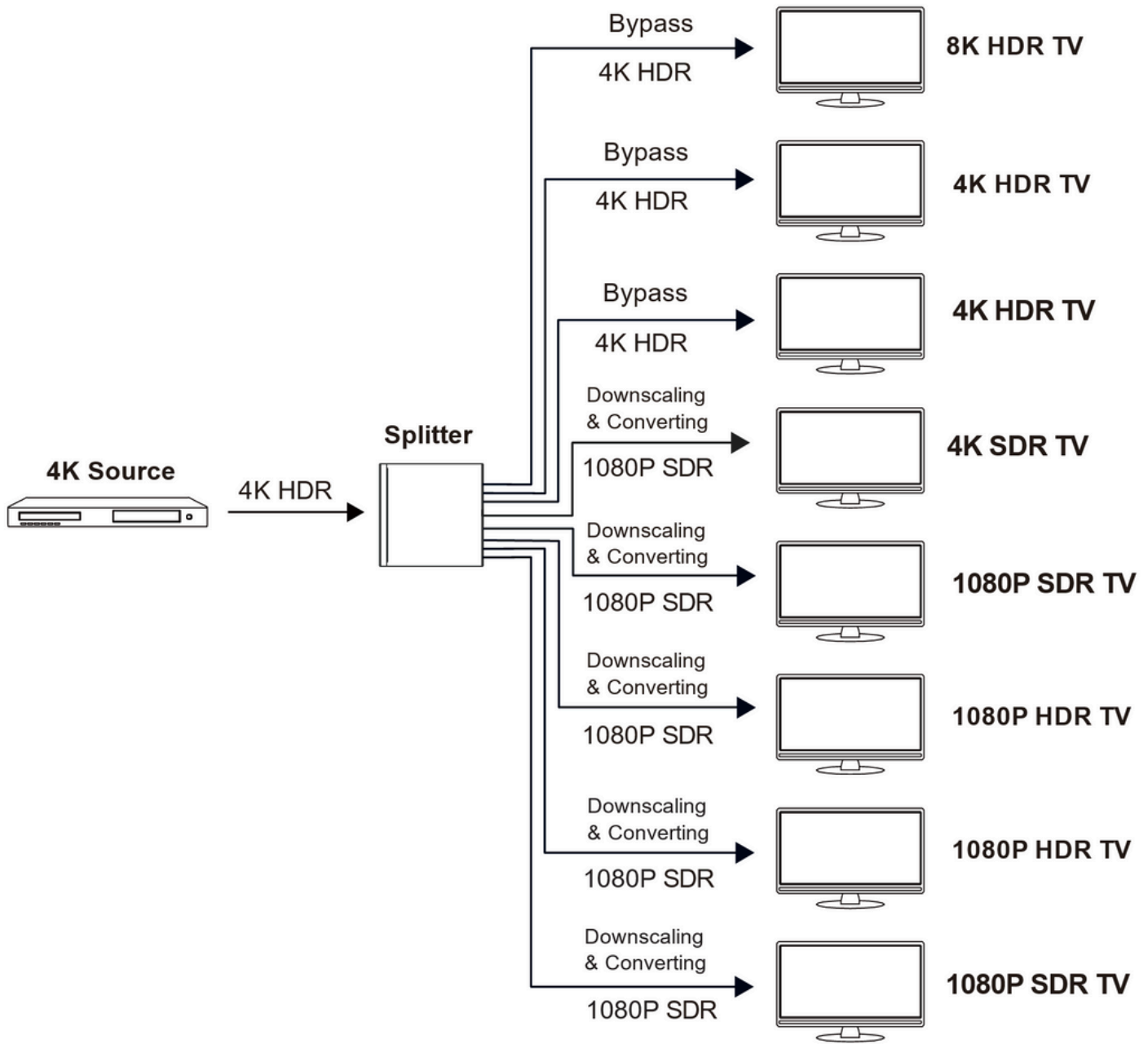
7. Auto Downscaling & Auto Converting

This 8K HDMI splitter product supports independent auto downscaling and auto converting on all outputs. It will automatically output the correct HDMI signal according to the EDID of the display device.

As for this splitter, 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.

8. Connection Diagram

