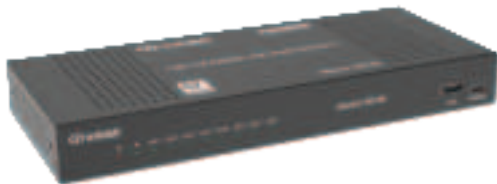




**iSwitch 8K108**

**48Gbps 1x8 HDMI 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

This 1x8 splitter is an advanced solution for splitting single HDMI signal to 8 HDMI outputs synchronously, with video resolution up to 8K@60 4:2:0 12bit. It supports data rates up to 48Gbps, complying with HDMI 2.1 and HDCP 2.3 requirements. It includes several features for ease of integration, including EDID management, cable equalization. What's more, it can de-embed the audio signal from HDMI source to transmit to 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
- ☆ Support VRR, ALLM, QMS, QFT, SBTM
- ☆ Support HDR, HDR10, HDR10+, Dolby Vision, HLG pass-through
- ☆ Support HDMI audio formats: LPCM 7.1CH, Dolby TrueHD, Atmos, DTS-HD Master Audio
- ☆ Support resolution auto downscaling on each output
- ☆ Support auto converting of HDR to SDR on each output
- ☆ Advanced EDID management

## 3. Package Contents

- ① 1 × 48Gbps 1x8 Splitter
- ② 1 × 12V/2.5A Multinational Locking Power Supply
- ③ 2 × Mounting Ear
- ④ 4 × Machine Screw (KM3\*6)
- 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         | <b>HDMI input/output:</b><br>LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD<br><b>Audio de-embedding output:</b><br>Optical: LPCM/Dolby/DTS 5.1CH<br>Analog: LPCM 2CH |
| ESD Protection        | IEC 61000-4-2:<br>±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]<br>1 × OPTICAL [S/PDIF]<br>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                                                                                                                                                                                                                    |
| Relative Humidity     | 20~90% RH (Non-condensing)                                                                                                                                                                                                                     |

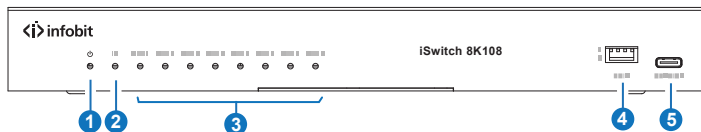
### Recommended HDMI Cable

| Video Resolution                     | 8K                          | 4K60    | 4K24     | 1080P    |
|--------------------------------------|-----------------------------|---------|----------|----------|
| HDMI Cable Length<br>(HDMI IN / OUT) | 3m/10ft<br>(Ultra HDMI 2.1) | 8m/26ft | 12m/39ft | 15m/49ft |

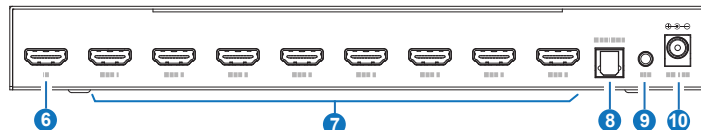
The use of "Premium High Speed HDMI" cable is highly recommended.

## 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. Up is 1 and down is 0.<br>*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.                                 |

| No. | Name           | Function Description                                                                                 |
|-----|----------------|------------------------------------------------------------------------------------------------------|
| 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

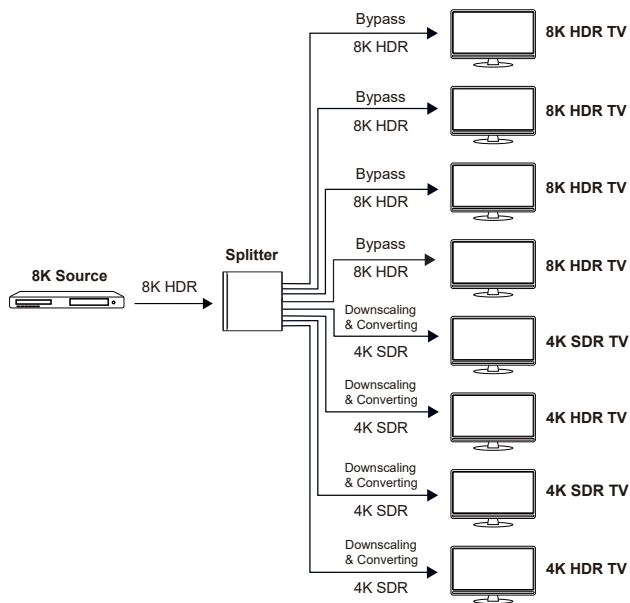
[DIP] = 0001: 1080P60(444), 2.0CH

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

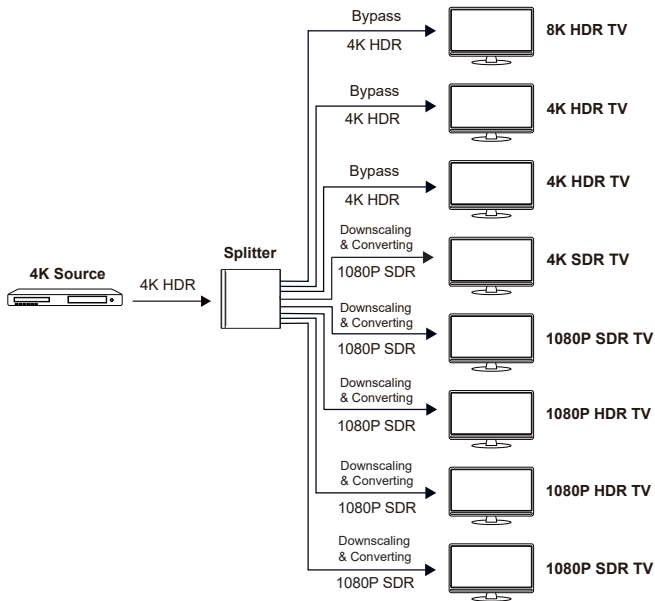
## 6. Auto Downscaling & Auto Converting

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.

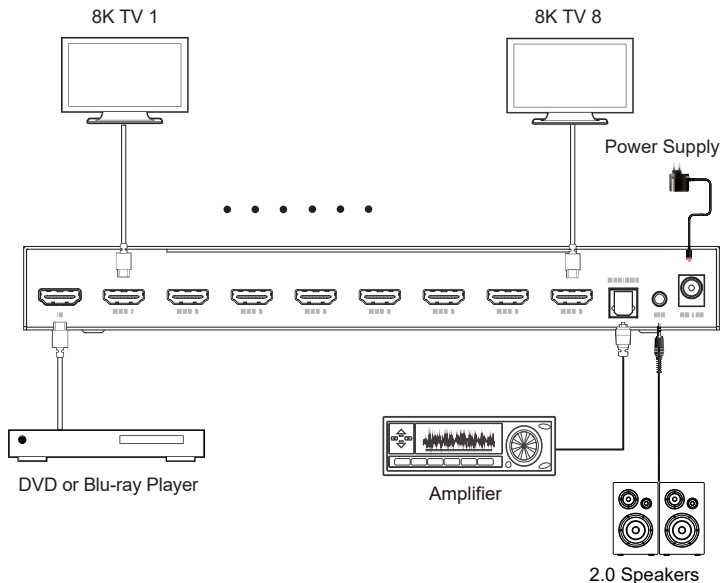
**Note:** If the source resolution is downscaled and converted to **1080P DVI** according to the EDID of display devices, it will be output without sound on TV.

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



**HDMI™**  
HIGH-DEFINITION MULTIMEDIA INTERFACE

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