

HDMI to 12G-SDI Converter



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 HDMI to SDI Converter is designed to work under two modes: 4×3G-SDI and 12G-SDI. In 4×3G-SDI mode, an HDMI signal can be converted into 4ch 3G-SDI signals and the signals can be transmitted with a distance up to 100m/328ft; in 12G-SDI mode, an HDMI signal can be converted to a 12G-SDI signal directly and distributed to an SDI monitor 60m/197ft away. It supports video resolution up to 4K2K@60Hz and LPCM audio format.

2. Features

- ☆ Compatible with HDMI 2.0b, HDCP 2.2 and HDCP 1.4, video bandwidth up to 18Gbps
- ☆ Compatible with SDI standards: SMPTE ST-2082, SMPTE ST-2081, SMPTE 425M-AB, SMPTE 424M, SMPTE 292M, and SMPTE 259M-C, video bandwidth up to 12Gbps
- ☆ Maximum transmissin distance: 100m/328ft in 4×3G-SDI mode, 60m/197ft in 12G-SDI mode
- ☆ Support video resolution up to 4K2K@60Hz YCbCr 4:2:2
- ☆ Support DIP switch control
- ☆ Support audio embedment and LPCM audio format
- ☆ Compact design for easy and flexible installation

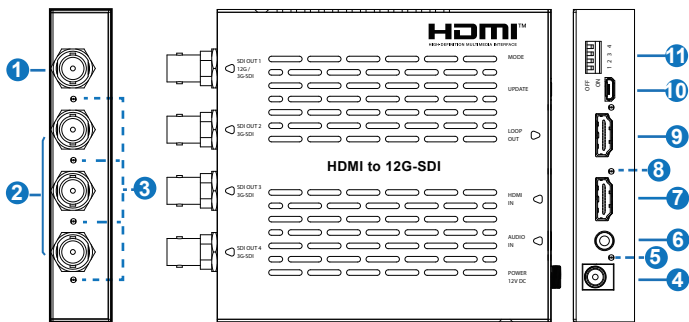
3. Package Contents

- ① 1 × HDMI to 12G-SDI Converter
- ② 2 × Mounting Ear
- ③ 4 × Machine Screw (KM3*4)
- ④ 1 × 12V 1A Locking Power Adaptor
- ⑤ 1 × User Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 and HDCP 1.4
SDI Compliance	SMPTE ST-2082, SMPTE ST-2081, SMPTE 425M-AB, SMPTE 424M, SMPTE 292M, SMPTE 259M-C
SDI Formats	SD/HD/3G/12G-SDI
Video Bandwidth	SDI: up to 12Gbps HDMI: up to 18Gbps
Video Resolution	480i ~1080p50/60Hz, 4Kx2K@24/30Hz, 4K60
Color Depth	8/10-bit
Color Space	YCbCr 4:2:2
Audio Format	LPCM
Connection	
Inputs	1 × HDMI IN [Type A 19-pin Female] 1 × AUDIO IN [3.5mm Stereo Mini-jack]
Outputs	1 × HDMI OUT [Type A 19-pin Female] 4 × SDI OUT [BNC]
Control	1 × Micro USB [for upgrade]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	210mm (W) × 69mm (D) × 20mm (H)
Weight	396g
Power Supply	Input: AC100 - 240V 50/60Hz Output: DC 12V/1A (US/EU standard, CE/FCC/UL certificated)
Power Consumption	10.8W
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)

5. Operation Controls and Functions




No.	Name	Function Description
1	SDI OUT1	Signal output port, used for outputting 3G/12G-SDI signals.
2	SDI OUT2/ OUT3/OUT4	Signal output ports, used for outputting 3G-SDI signals.
3	SDI LED (1~4)	When a signal port outputs SDI signal, its nearby green LED will light on correspondingly.
4	POWER 12V DC	DC 12V power input interface.
5	POWER LED	The red LED will light on when the device is powered on.
6	AUDIO IN	Analog audio input port. Connect to audio signal sources such as Amplifier or PC.
7	HDMI IN	HDMI video input port. Connect to video signal sources such as DVD or Blu-ray Player.
8	HDMI LED	The green LED will light on when the device connects with the HDMI signal.
9	LOOP OUT	HDMI video loop out port. Connect to display devices such as Monitor or TV.
10	UPDATE	Micro USB port, used for program debugging and firmware upgrading.

11	MODE	<p>4-pin DIP switch, used for setting up the device's working modes.</p> <p>DIP1: OFF-(1×12G-SDI) ON-(4×3G-SDI)</p> <p>DIP2: OFF-(HDMI AUDIO) ON-(L/R AUDIO)</p> <p>DIP3: OFF-(HDMI VIDEO) ON-(4K COLOR BAR)</p> <p>DIP4: OFF-(4K 2CH EDID) ON-(LOOPOUT EDID)</p>
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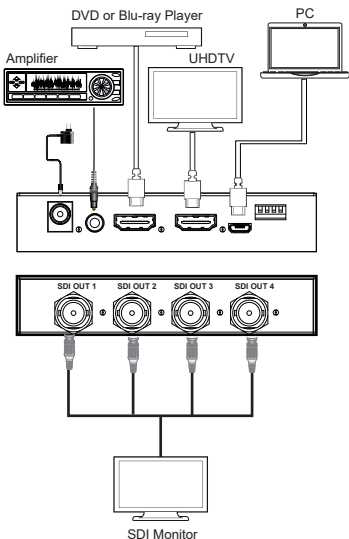
Notes:

1. By turning **ON/OFF** the **DIP2**, the audio signal (digital or analog) will be changed if it is output via SDI OUT ports; it won't have any change if looped out via the HDMI OUT port.
2. The DIP definition is printed by silkscreen on the rear panel as shown below.

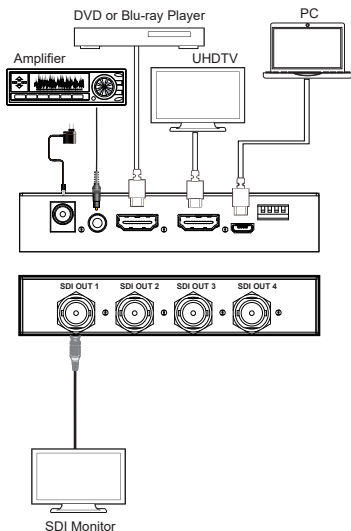
Default		
OFF ON		
	1 2 3 4	
DIP 1	OFF	1x 12G-SDI
	ON	4x 3G-SDI
DIP 2	OFF	HDMI AUDIO
	ON	L/R AUDIO
DIP 3	OFF	HDMI VIDEO
	ON	4K COLOR BAR
DIP 4	OFF	4K 2CH EDID
	ON	LOOPOUT EDID

6. Application Example

Mode 1: 4×3G-SDI



Mode 2: 12G-SDI



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