

12G-SDI to HDMI 2.0 Converter with Audio Ext.

User Manual

500744



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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 12G-SDI to HDMI 2.0 converter with audio extension. (model: 500744) provides a cost-effective way to convert 12G/6G/3G/HD-SDI signals to HDMI 2.0 compatible format. The conversion between SDI and HDMI is purely digital and guarantees a lossless transformation for both audio and video. The device supports up to 8-channel audio and also provides a low-jitter SDI local loop and high-quality analog stereo output to provide flexibility to users.

3. Features

- Supported high-definition (HD) formats
- Auto 12G/6G/3G/HD-SDI detection
- Support HDMI 2.0 & below
- Supports stereo audio output
- Supports one SDI compliant input, one HDMI compliant output & one SDI loopout

4. Package Contents

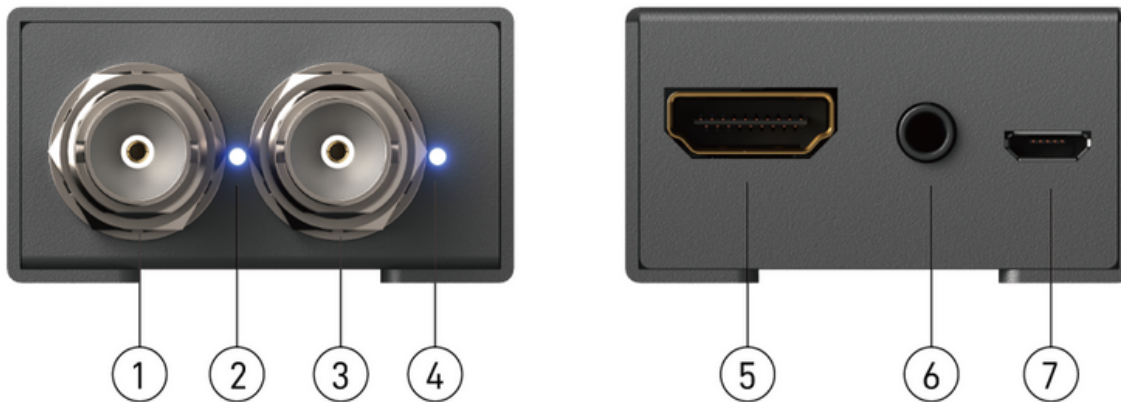
- One (1) 12G-SDI to HDMI 2.0 Converter with Audio Ext.
- One (1) 5VDC Power Adapter
- One (1) Rack-mounting ears set
- One (1) User manual (available via download)

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	
SDI standards	12G/6G/3G/HD-SDI
HDMI standards	HDMI 2.0
Auto 12G/6G/3G/HD-SDI detection	Yes
Video bandwidth	[SDI] 11.88 Gbps, 11.88/1.001 Gbps [HDMI] up to 18Gbps
Video support	[12G] 4K/50/59.94/60Hz
	[6G] 4K/23.98/24, 25, 29.97, 30Hz
	[3G] 1080p50/59.94/60
	[HD] 720p/50/59.94/60Hz, 1080i/50/59.94/60Hz, 1080p/23.98/24/25/29.97/30Hz
	[HDMI] up to 4K/60
Input signal	1 x SDI
Output signal	1 x HDMI + 1 x SDI + 1 x 3.5mm (Audio)
Output impedance (SDI)	75Ω
Synchronization mode	Internal synchronization or external synchronization
Eye pattern characteristics	[12G-SDI] Timing jitter: 0.29 UI, Alignment jitter: 0.13 UI
	[6G-SDI] Timing jitter: 0.18 UI, Alignment jitter: 0.06 UI
	[3G-SDI] Timing jitter: 0.09 UI, Alignment jitter: 0.03 UI
Cable equalization	[12G-SDI] up to 80m
	[6G-SDI] up to 100m
	[3G-SDI] up to 190m
	[HD-SDI] up to 300m
Audio support	[Analog] Supports 2ch
	[SDI] Surround sound (up to 7.1ch)
Input	1 x BNC [SDI]
Output	1 x HDMI + 1 x BNC [SDI] + 1 x 3.5mm Stereo Jack
BNC connector	75Ω inter-locked socket
HDMI connector	Type A [19-pin female]
Mechanical	
Housing	Metal enclosure
Dimensions [L x W x H]	92mm x 45mm x 23mm [3.7" x 1.8" x 0.9"]
Weight	175g [6.2oz]
Power supply	5VDC
Power consumption	4 Watts [max]
Operation temperature	0~40°C [32~104°F]
Storage temperature	-20~60°C [-4~140°F]
Relative humidity	20~90% RH [no condensation]
General	
Warranty	2 years
Order Information	500744 12G-SDI to HDMI 2.0 Converter with Audio Ext. (UPC: 627699007440)

6. Panel Description



1. **SDI IN:** 12G/6G/3G/HD-SDI Input
2. **LED:** Signal LED indicator
3. **SDI OUT:** 12G/6G/3G/HD-SDI loopout
4. **LED:** Power LED indicator
5. **HDMI OUT:** HDMI 2.0 Output.
6. **Stereo Audio:** Stereo Analog Output
7. **5V DC:** Connect to a 5VDC power supply.

7. Supported Resolutions

12G-SDI Output	
4K2K @50/59.94/60Hz	SMPTE ST-2082
6G-SDI Output	
4K2K @23.98/24, 25, 29.97, 30Hz	SMPTE ST-2081
3G-SDI Output	
1080p @ 50/ 59.94 / 60Hz	SMPTE 424M, SMPTE 425M
HD-SDI Output	
720p @ 50Hz	SMPTE 296M -3
720p @ 60 / 59.94Hz	SMPTE 296M -1, -2
1080i @ 50Hz	SMPTE 274M -6
1080i @ 60 / 59.94Hz	SMPTE 274M -4, -5
1080p @ 24 / 23.98Hz	SMPTE 274M -10, -11
1080p @ 25Hz	SMPTE 274M -9
1080p @ 30 / 29.97Hz	SMPTE 274M -7, -8

8. Application Diagram

