

gofanco[®]

PRO-HD2SDI

HDMI 2.0 to 12G/6G/3G/HD-SDI Converter
with HDMI loopout & Audio Embedder

User's Guide



Congratulations for owning a gofanco product. Our products aim to meet all your connectivity needs wherever you go.

Have fun with our products!

Please read this manual carefully before first use.

If you need more information about our products, please visit www.gofanco.com.

For technical support, please email us at support@gofanco.com.

For drivers/manuals download, please go to <http://www.gofanco.com/download>.

1. Introduction

The PRO-HD2SDI HDMI 2.0 to 12G/6G/3G/HD-SDI Converter with HDMI loopout & Audio Embedder provides a professional way to convert HDMI 2.0 to 12G/6G/3G/HD-SDI in real time. The conversion between SDI and HDMI is pure digital and guarantees no loss transformation for both audio and video. Plus, with up to 8 channels audio support, 7.1 channel or 5.1 channel audio becomes available. The PRO-HD2SDI provides two low jitter SDI outputs & one HDMI loop-out for flexible application possibilities. The PRO-HD2SDI is also equipped with high quality analog stereo embedder. With the use of PRO-HD2SDI, the most popular uncompressed video interface in the consumer world is readily available for professional SDI equipment!

2. Features

- Supported high-definition (HD) formats :
720p@50, 720p@59.94, 720p@60, 1080i@50, 1080i@59.94,
1080i@60, 1080p@23.97, 1080p@24, 1080p@25,
1080p@29.97, 1080p@30, 1080p@50, 1080p@59.94,
1080p@60, 3840x2160@23.98, 3840x2160@24,
3840x2160@25, 3840x2160@29.97, 3840x2160@30,
3840x2160@50, 3840x2160@59.94, 3840x2160@60,
4096x2160@23.98, 4096x2160@24, 4096x2160@25,
4096x2160@29.97, 4096x2160@30, 4096x2160@50,
4096x2160@59.94, 4096x2160@60

Bit Rate: 11.88 Gbps, 11.88/1.001 Gbps, 5.94 Gbps, 5.94/1.001 Gbps, 2.97 Gbps, 2.97/1.001 Gbps, 1.485 Gbps, 1.485/1.001 Gbps, 270 Mbps

- Support HDMI 2.0 & below
- Supports analog stereo embedder
- Two SDI & one HDMI compliant output and one HDMI compliant input

- 
1. ONLY supports format conversion. Does NOT support scaling or frame rate conversion.
 2. ONLY supports two-sample interleave sampling scheme. Does NOT support Square Division method.
 3. Does NOT support SD-SDI.
 4. Does NOT support 3G-SDI level B.
 5. 4K2K@24/25/30Hz RGB or YCbCr 4:4:4 deep color signal can NOT be converted to YCbCr 4:2:2, only bypass to display.

3. Package Contents

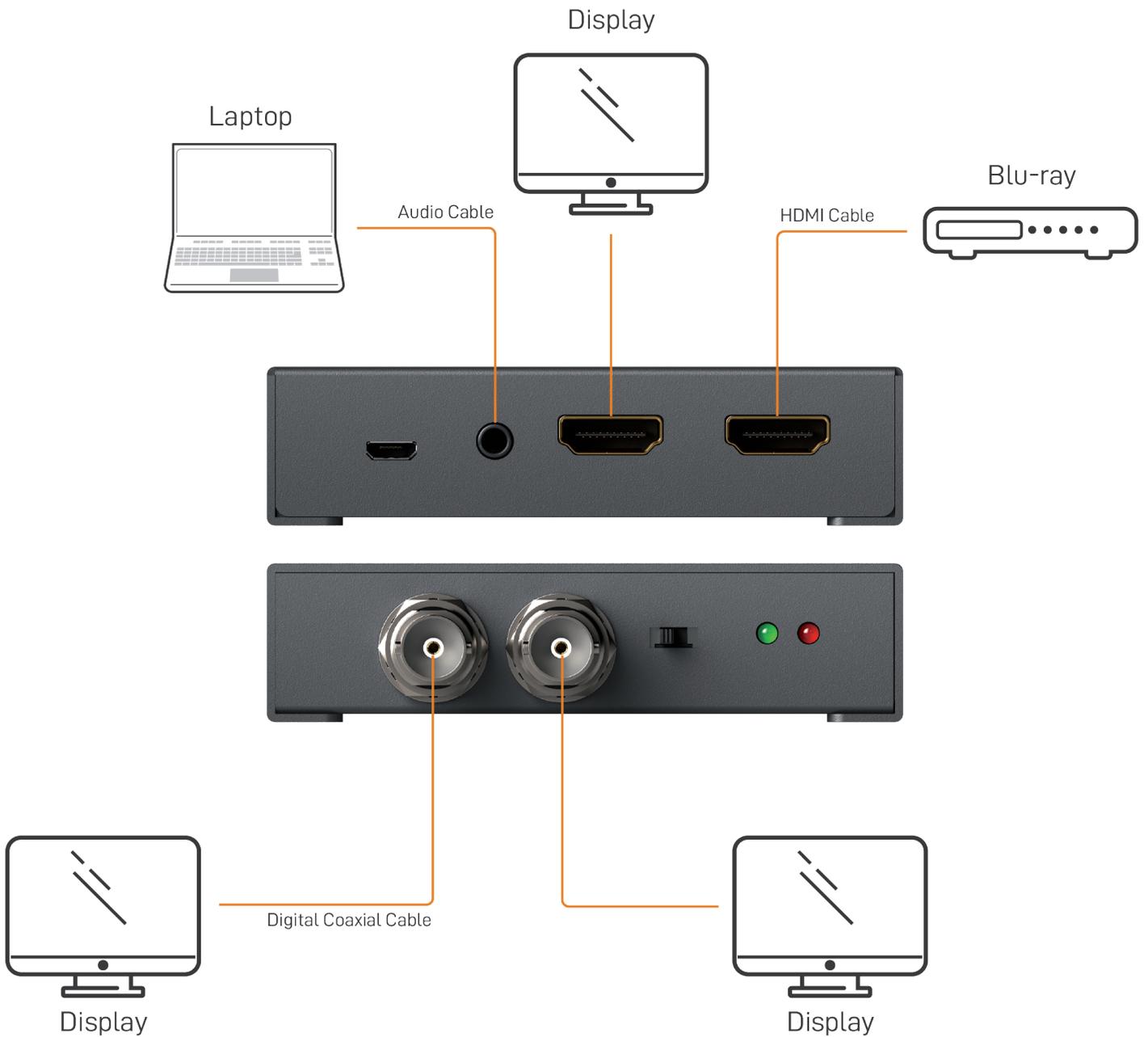
- 1x PRO-HD2SDI
- 1x 5V power adapter
- 1x Rack-mounting ears set
- 1x User Manual

4. Specifications

Item	Description
SDI standards	12G/6G/3G/HD-SDI
HDMI standards	HDMI 2.0
Auto 3G/HD/SD-SDI detection	Yes
Video bandwidth	[SDI][11.88 Gbps, 11.88/1.001 Gbps] [HDMI] [up to 18Gbps]
Video support	[12G] 4K2K @50/59.94/60Hz [6G] 4K2K @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
Input signal	1x HDMI + 1x 3.5mm(Audio)
Output signal	2x SDI + 1x HDMI
Output impedance(SDI)	75Ω
Synchronization mode	Internal synchronization or external synchronization
Eye pattern characteristics	[12G-SDI] Timing jitter: 0.81 UI, Alignment jitter: 0.18 UI [6G-SDI] Timing jitter: 0.35 UI, Alignment jitter: 0.08 UI [3G-SDI] Timing jitter: 0.15 UI, Alignment jitter: 0.04 UI [HD-SDI] Timing jitter: 0.08 UI, Alignment jitter: 0.05 UI
Cable equalization	[12G-SDI] up to 70m [6G-SDI] up to 100m [3G-SDI] up to 190m [HD-SDI] up to 290m
Audio	[Analog] Supports 2ch [HDMI] Surround sound (up to 8ch)
PCB stack-up	6-layer board [impedance control — differential 100Ω; single 50Ω]
Input	1x HDMI + 1 x 3.5mm
Output	2x BNC [SDI] + 1x HDMI
BNC connector	75Ω inter-locked socket
HDMI connector	Type A [19-pin female]

Mechanical		
Housing		Metal enclosure
Dimensions [L x D x H]	Model	128 x 92 x 23mm [5" x 3.6" x 0.9"]
	Package	198 x 137 x 74mm [7.8" x 5.4" x 2.9"]
	Carton	420 x 400 x 300mm [1'4"x 1'3" x 11.8"]
Weight	Model	192g[6.7 oz]
	Package	461g[1 lbs]
Power supply		5V DC
Power consumption		7 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]

5. Connection Diagram

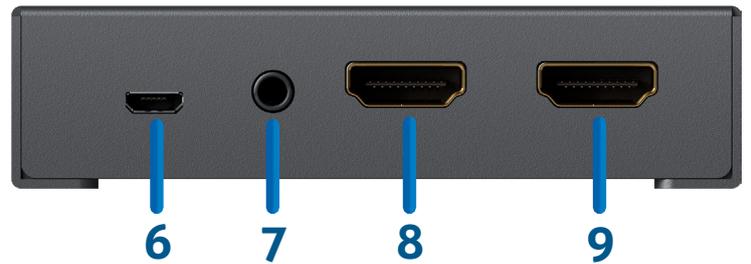


6. Panel Description

Front Panel



Rear Panel



1. **SDI OUT:** 12G/6G/3G/HD-SDI output
2. **SDI OUT:** 12G/6G/3G/HD-SDI output
3. **Slide Switch**
 - [Left] Stereo Audio Embedder Function(2ch)
 - [Middle] HDMI Audio Bypass(up to 7.1ch)
 - [Right] F/W update
4. **LED:** Signal LED indicator
5. **LED:** Power LED indicator
6. **Micro USB Port:** Connect to a 5V DC power unit.
7. **Stereo Audio Input**
8. **HDMI loop-out:** Connects to a HDMI display with a HDMI male-male cable
9. **HDMI IN:** Connects to a HDMI source with a HDMI male-male cable

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. Limited Warranty

The SELLER warrants the PRO-HD2SDI **HDMI 2.0 to 12G/6G/3G/HD-SDI Converter with HDMI loopout & Audio Embedder** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surges.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables are limited to a 30 day warranty and cable must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. Also, the technical information contained herein regarding the PRO-HD2SDI features and specifications is subject to change without further notice.

Disclaimer

The product name and brand name may be registered trademarks of related manufacturers. TM and ® may be omitted on the user's guide. The pictures on the user's guide are just for reference, and there may be some slight differences with the actual products.

We reserve the rights to make changes without prior notice to a product or system described herein to improve reliability, function, or design.



Thank you for choosing gofanco

www.gofanco.com