PRO-HD2HDMI

SDI/3G-HD-SD to HDMI Converter

User Manual

Full HD 1080

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE™

CE FC RoHS Compliance

Made in Taiwan   rev.1008

Safety and Notice

The **PRO-HD2HDMI SDI/3G-HD-SD to HDMI Converter** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the PRO-HD2HDMI should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.

- Do not attempt to service this unit yourself, except where explained in this manual.

- Provide proper ventilation and air circulation and do not use near water.

- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.

- Use only the power adapter and power cords and connection cables designed for this unit.

- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

Warranty Information

PESA Switching Systems, Inc., (PESA) warrants this equipment against defective workmanship or materials for a period of one (1) year from date of shipment. The sole warranty responsibility of PESA, shall be to replace or repair product proved to be defective. During the warranty period, defective parts will be replaced at no charge. Labor to repair or replace defective parts covered under the warranty will be performed at no charge at PESA. This warranty covers only products manufactured by PESA, and the components used in their manufacture. The warranty on assembled products sold by PESA., but manufactured by others shall be that of the original manufacturer. This warranty does not include shipping damage or damage caused by abuse, neglect, tampering by unauthorized personnel, damage inadvertently caused by the user, preventative maintenance, or any equipment or part thereof whose serial number has been removed or defaced. Neither the seller nor the manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the inability to use the product. Before using, user shall determine the suitability of the product for the intended use, and user assumes all risk and liability whatsoever in connection therewith. This warranty is effective only at the PESA factory in Huntsville, Alabama, USA. If possible, retain the original packing material for use in the unlikely event that your equipment must be returned to the PESA factory. When shipping your equipment, the shipping charges must be prepaid. The repaired unit will be returned to you, freight prepaid. This warranty is exclusive and in lieu of all other warranties, whether expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose.

INTRODUCTION

The **PRO-HD2HDMI SDI/3G-HD-SD to HDMI Converter** provides a cost effective way to convert 3G/HD/SD-SDI signal to HDMI compliant format. 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-HD2HDMI also provides 2 low jitter and re-clocked outputs for daisy chain or multiple monitors.
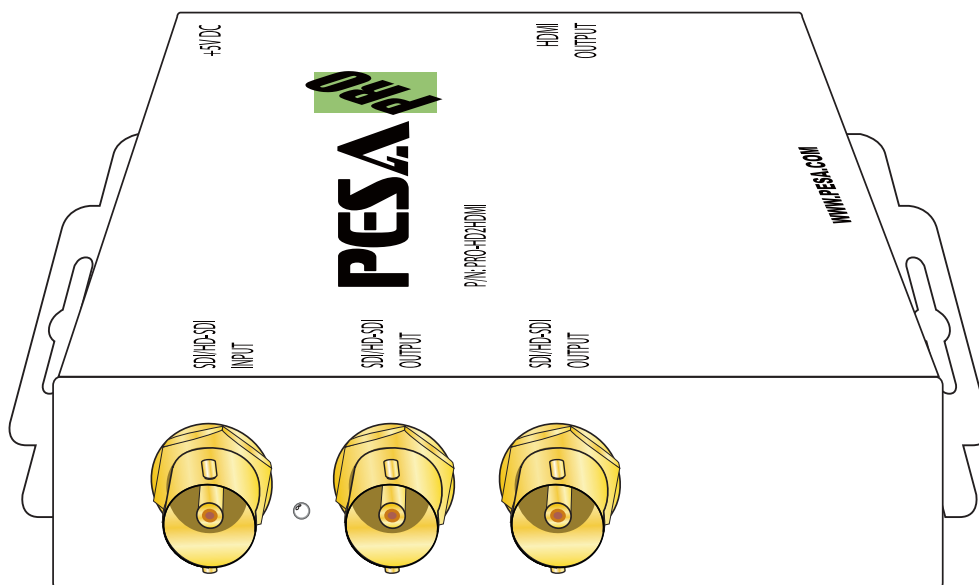
Features

- Supports 3G-SDI formats(SMPTE 425M, Level A): 1080p @50/59.94/60Hz (4:2:2)

- Supports high-definition (HD-SDI) formats: 1080i @50/59.94/60Hz, 720p @50/59.94/60Hz

- Supports standard-definition (SD-SDI) formats: NTSC @59.94Hz, PAL @50Hz

- Auto 3G/HD/SD-SDI detection

- HDMI founder Silicon Image chipsets embedded for superior compatibility and reliability

- Easy installation with wall mounting design

- External DIP switch configuration

Specifications & Package Contents

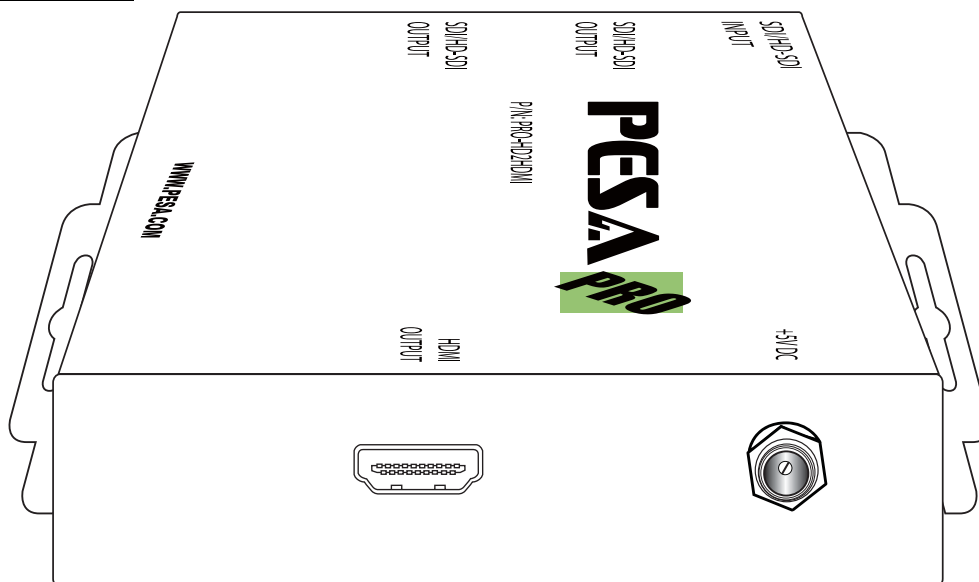| Model Name	PRO-HD2HDMI
Technical	
Role of usage	Format converter
SDI standards	3G-SDI, HD-SDI & SD-SDI
Auto 3G/HD/SD-SDI detection	Yes
Video bandwidth	2.970 Gbps & 2.970/1.001 Gbps
Video support	[3G] – 1080p50/59.94/60 (4:2:2) [HD] – 720p @50/59.94/60Hz, 1080i @50/59.94/60Hz, 1080p @24/30Hz [SD] – NTSC @59.94Hz, PAL @50Hz
Input signal	[SD] SMPTE 259M; [HD] SMPTE 292M & 296M; [3G-SDI] SMPTE 424M & 425M
Output signal	HDMI
Audio mode	7.1ch / 5.1ch / Stereo
Synchronization mode	Internal synchronization or external synchronization
Eye pattern characteristics	Extra low alignment jitter 0.05UI at HD
Cable equalization	[3G] up to 200ft; [HD] up to 500ft; [SD] up to 1000ft
Loop-out	2 equalized and reclocked SDI loop-outs
Audio support	Yes
PCB stack-up	4-layer board (impedance control − differential 100Ω; single 50Ω)
Input	1x SDI
Output	1x HDMI + 2x SDI
HDMI connector	Type A (19-pin female)
BNC connector	3G 75Ω inter-locked socket
DIP switch	4-pin mode selection
Mechanical	
Housing	Metal enclosure
Dimensions LxWxH — Model	6.9"x4.7"x1" / 175 x 120 x 25mm
Dimensions LxWxH — Package	6.9"x10.4"x3" / 174 x 264 x 77mm
Weight — Model	1.1 lbs / 515g
Fixedness	Wall mounting and latch-locking power jacks
Power supply	5V 2A DC
Power consumption	1 Watt (max)
Operation temperature	32-104°F / 0-40°C
Storage temperature	-4-140°F / -20-60°C
Relative humidity	20-90% RH (no condensation)
Package Contents	**1x PRO-HD2HDMI** **1x 5V power supply unit** **1x User manual**

Input Panel

SDI/HD-SD INPUT: Plug in a coaxial cable to be linked to one SDI source device.

Signal LED: Indication of the existence of SDI signal

SDI/HD-SD OUTPUT: Plug in a coaxial cable to be linked to one SDI local device

Output Panel

HDMI OUTPUT: Connect a HDMI male-male cable to be linked to one HDMI device.

+5V DC: Connect to a 5V DC latch-locking power supply unit.

Bottom Panel

A 4-pin DIP switch is used for user interface, and users can access this switch from the bottom of the unit.
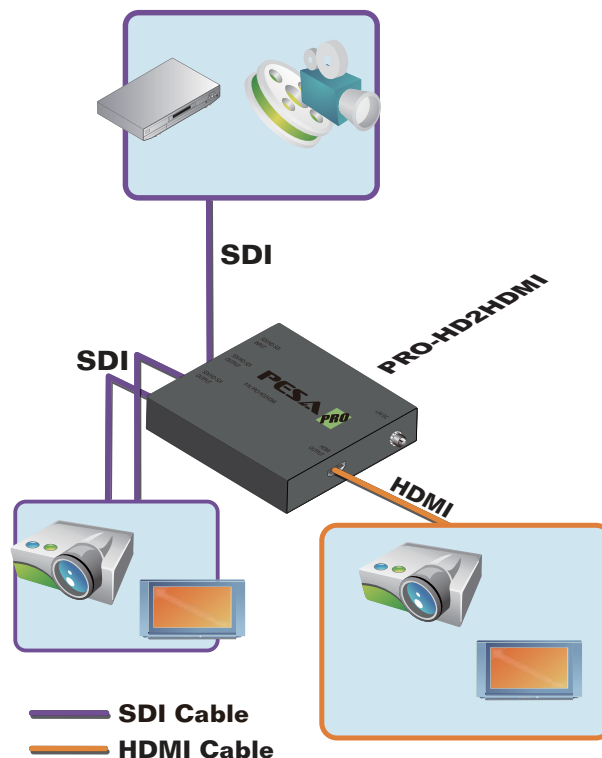
Pin No.	1	2	3	4
ON (↑)	DVI mode	Stereo	Audio group 3&4	Audio mute on
OFF (↓)	HDMI mode	7.1ch	Audio group 1&2	Audio mute off

Notice

1. Factory default for 4-pin DIP: OFF-OFF-OFF-OFF (↓↓↓↓)

2. The PRO-HD2HDMI mainly checks the audio channel in audio group 1&2 or 3&4. Please adjust DIP switch pin-3 beneath the device for setup.

3. Some HDMI enabled TV may not be able to decipher multiple channel audio. If so, please set the DIP switch pin no.1 to ON(↑) first to check if the audio output is normal then check if the multiple audio channel support is available.

4. The PRO-HD2HDMI supports audio sample frequency at 48kHz only.

5. When the stereo audio mode is chosen, either Channel 1 & Channel 2 of audio group 1 or audio group 3 are the audio output.

INSTALLATION

Connection Diagram

SDI

SDI

PRO-HD2HDMI

HDMI

—— SDI Cable
—— HDMI Cable

SUPPORTED RESOLUTIONS

3G-SDI INPUT	
1080p @ 50 / 59.94 / 60Hz	SMPTE 424M / 425M (4:2:2)
HD-SDI INPUT	
720p @ 50Hz	SMPTE 296M -3
720p @ 59.94 / 60Hz	SMPTE 296M -1, -2
1080i @ 25Hz	SMPTE 274M -6
1080i @ 29.97 / 30Hz	SMPTE 274M -4, -5
1080p @ 23.98 / 24Hz	SMPTE 274M -10, -11
1080p @ 25Hz	SMPTE 274M -9
1080p @ 29.97 / 30Hz	SMPTE 274M -7, -8
SD-SDI INPUT	
NTSC	PAL B, D, G, H, I

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