



ATLONA
HDMI TO 3G/HD/SD-SDI CONVERTER
AT-HD-3GSDI

USER MANUAL



TABLE OF CONTENTS

1. Introduction	1
2. Features	1
3. Package Contents	1
4. Specification	2
5. Supported Resolutions	3
6. Connection Diagram	3
7. Panel Descriptions	4
8. Notice	4
9. Safety Information	5
10. Warranty	6

INTRODUCTION

The AT-HD-3GSDI provides a professional way to convert HDMI to 3G/HD/SD 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 AT-HD-3GSDI also provides 2 low jitter SDI outputs for daisy chain or multiple monitors. With the use of AT-HD-3GSDI, the most popular uncompressed video interface in the consumer world is readily available for professional SDI equipments!

FEATURES:

- Supported 3G formats(SMPTE 425M, Level A):
1080p @50/59.94/60Hz (4:2:2), 1080p @24/25/30Hz (4:4:4), 1080i @50/59.94/60Hz (4:4:4), 720p @24/25/50/59.94/60Hz (4:4:4)
- Supported high-definition (HD) formats:
1080i @50/59.94/60Hz, 1035i @50/59.94/60Hz, 720p @50/59.94/60Hz
- Supported standard-definition (SD) formats: NTSC @59.94Hz, PAL @50Hz
- Auto 3G/HD/SD-SDI detection
- Two SDI compliant outputs
- External DIP Switch Configuration

PACKAGE CONTENTS:

1. 1x AT-HD-3GSDI
2. 1x 5V power adapter
3. 1x HDMI-to-HDMI adapter
4. 1x User Manual

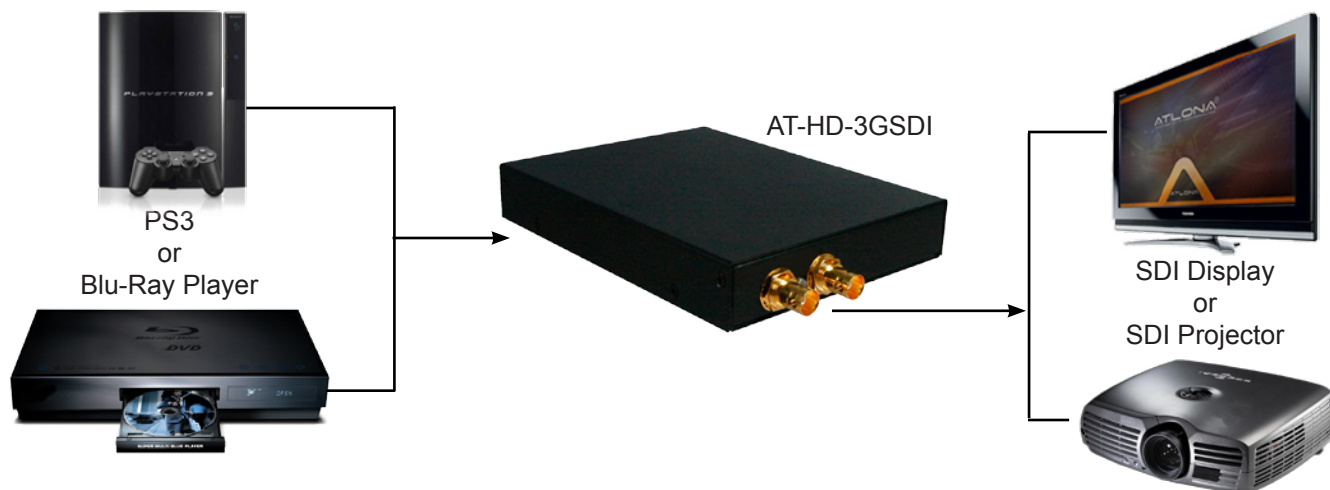
SPECIFICATIONS

Technical		
SDI standards		SD-SDI, HD-SDI & 3G-SDI
Auto 3G/HD/SD-SDI detection		Yes
Video bandwidth		2.970Gpbs, 2.970/1.001Gbps
Video support		[3G] – 1080p @50/59.94/60Hz (4:2:2), 1080p @24/25/30Hz (4:4:4), 1080i @50/59.94/60Hz (4:4:4), 720p @24/25/50/59.94/60Hz (4:4:4) [HD] – 720p @50/59.94/60Hz, 1035i @50/59.94/60Hz, 1080i @50/59.94/60Hz, 1080p @24/30Hz [SD] – NTSC @59.94Hz, PAL @50Hz
Input signal		[SD-SDI] SMPTE 259M [HD-SDI] SMPTE 292M, 296M [3G-SDI] SMPTE 425M
Output signal		SDI
Output impedance		75Ω
Synchronization mode		Internal synchronization or external synchronization
Eye pattern characteristics		Extra low alignment jitter 0.05UI at HD
Cable equalization		[3G-SDI] up to 60m (200ft) [HD-SDI] up to 150m (500ft) [SD-SDI] up to 300m (1000ft)
Audio support		Yes
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω]
Input		1x HDMI
Output		2x BNC [SDI]
BNC connector		3G 75Ω inter-locked socket
HDMI connector		Type A [19-pin female]
DIP switch		4-pin [video format / audio format / audio group / reserved]
Mechanical		
Housing		Metal case
Dimensions (L x W x H)	Model	160 x 110 x 25mm [6.3"x4.3"x1"]
	Package	270 x 175 x 80mm [10.6"x6.9"x3.2"]
	Carton	450 x 370 x 300mm [1'5.7"x1'2.6"x11.8"]
Weight	Model	420g [15oz]
	Package	1030g [2.3 lbs]
Fixedness		Inter-locked power supply
Power supply		5V 4A DC
Power consumption		3 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]

SUPPORTED RESOLUTIONS

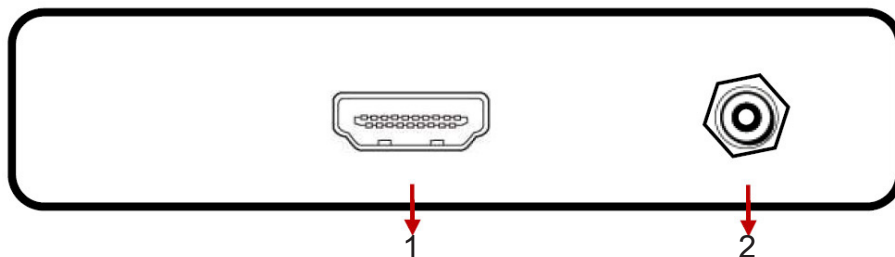
3G OUTPUT	
1080p @ 60/59.94/50Hz	SMPTE 425M (4:2:2)
1080p @ 30/25/24Hz	SMPTE 425M (4:4:4)
1080i @ 60/59.94/50Hz	SMPTE 425M (4:4:4)
720p @ 60/59.94/50Hz	SMPTE 425M (4:4:4)
HD OUTPUT	
525p @ 59.94Hz	SMPTE 293M, ITU-BT.1358
625p @ 50Hz	ITU-BT.1358
720p @ 50Hz	SMPTE 296M -3
720p @ 60 / 59.94Hz	SMPTE 296M -1, -2
1080i @ 25Hz	SMPTE 274M -6
1080i @ 30 / 29.97Hz	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
SD OUTPUT	
NTSC	
PAL B,D,G,H,I	

CONNECTION DIAGRAM



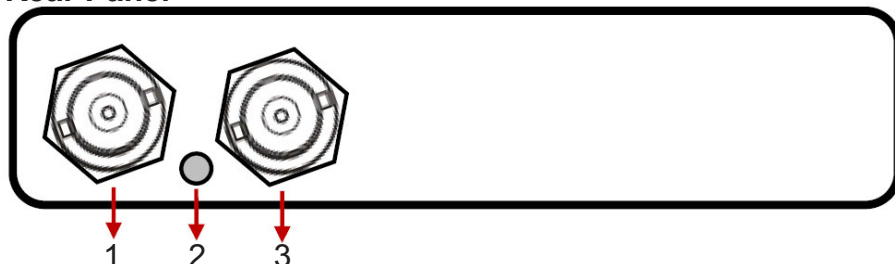
PANEL DESCRIPTIONS

Front Panel



1. HDMI input
2. Interlocked +5V power jack

Rear Panel



1. 3G/HD/SD-SDI output #1
2. Lock LED
3. 3G/HD/SD-SDI output #2

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 OFF (↑):

Pin ON (↓):



Pin #	1	2	3	4
OFF (↑)	DVI Mode	7.1ch	Audio group 3&4	Reserved
ON (↓)	HDMI	Stereo	Audio group 1&2	Reserved

NOTICE

1. AT-HD-3GSDI mainly embeds the audio channels in audio group 1&2 or 3&4. Please adjust DIP switch pin 3 for setup.
2. AT-HD-3GSDI supports only audio sample frequency 48kHz.
3. While stereo audio is chosen, only the first pair of HDMI audio will be placed into CH 1 & 2 of Group 1 or 3, dependent upon pin 3.

Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture.

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug. Doing so will void the warranty and safety features.

This equipment should be installed near the socket outlet and the device should be easily accessible in case it requires disconnection.

Precautions

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product or cause fires.

In the event of an electrostatic discharge, this device may automatically turn off. If this occurs, unplug the device, and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins, or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements and swimming pools.

Use only accessories recommended by ATLONA to avoid fire, shock or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning. Do not use cleaning fluid or aerosols, which could enter the unit and cause damage, fire or electrical shock. Some substances may also mar the finish of the product.

Never open or remove unit panels or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-HD-3GSDI. Opening the product will void the warranty.

Do not attempt to service the unit. Instead disconnect it and contact your Authorized ATLONA reseller or contact ATLONA directly.

1. LIMITED WARRANTY

Atlona Technologies warrants that (a) its products (the "Product") will perform substantially in accordance with the accompanying written materials for a period of 3 YEARS from the date of receipt and (b) that the Product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to Customer.

2. CUSTOMER REMEDIES

Atlona Technologies and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' option, either return of the price paid for the Product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of Customer's receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period or 3 year, whichever is longer.

3. NO OTHER WARRANTIES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ATLONA TECHNOLOGIES AND ITS SUPPLIERS DISCLAIM ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCT AND ANY RELATED WRITTEN MATERIALS. THIS LIMITED WARRANTY GIVES CUSTOMER SPECIFIC LEGAL RIGHTS. CUSTOMER MAY HAVE OTHER RIGHTS DEPENDING ON THE JURISDICTION.

4. NO LIABILITY FOR DAMAGES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL ATLONA TECHNOLOGIES OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES FOR PERSONAL INJURY, LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF ATLONA TECHNOLOGIES HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY CASE, ATLONA TECHNOLOGIES' AND ITS SUPPLIERS' ENTIRE LIABILITY UNDER ANY PROVISION OF THIS AGREEMENT SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU FOR THE PRODUCT. BECAUSE SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.



ATLONA
2151 O'toole Ave, Ste D
San Jose CA 95131
Toll Free: 1-877-536-3976
International: 408-954-8782
FAX: 408-954-8792
Website: www.atlona.com
E-MAIL: info@atlona.com