

## HDMI to 3G/HD/SD-SDI CONVERTER AT-HD-3GSDI



### User Manual

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## 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 high-definition (HD) formats:  
NTSC 525@59.94, PAL 625@50, 720p@23.98, 720p@24, 720p@25, 720@29.94, 720p@30, 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  
Bit Rate: 2.97 Gbps, 2.967 Gbps, 1.485 Gbps, 1.4835 Gbps, 270 Mbps
- Auto 3G/HD/SD-SDI detection
- HDMI 1.2 supported
- Two SDI compliant outputs
- External DIP Switch Configuration

## PACKAGE CONTENT

- 1x AT-HD-3GSDI
- 1x 5V power supply
- 1x user's manual



## SPECIFICATIONS

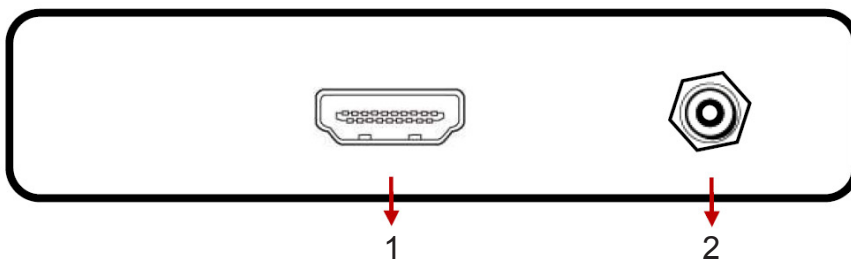
<b>Technical</b>		
SDI standards	3G-SDI & HD-SDI & SDI	
Auto 3G/HD/SD detection	Yes	
Video bandwidth	2.97Gpbs & 2.975/1.001Gbps	
Video support	[3G] 1080p50/59.94/60 (4:2:2) [HD] – 720p@50/59.94/60Hz, 1035i@50/59.94/60Hz, 1080i@50/59.94/60Hz, 1080p@24/30Hz [SD] – NTSC @59.94Hz, PAL @50Hz	
Input signal	[SD-SDI] SMPTE 259M [HD-SDI] SMPTE 292M, 296M [3G-SDI] SMPTE-424M	
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 90m (300ft) [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	75Ω inter-locked socket	
HDMI connector	Type A [19-pin female]	
DIP switch	4-pin [video format / audio format / audio group / reserved]	
<b>Mechanical</b>		
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-SDI OUTPUT	
1080p @ 50/ 59.94 / 60Hz	SMPTE 424M / 425M (4:2:2)
HD-SDI 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-SDI OUTPUT	
NTSC	
PAL B,D,G,H,I	

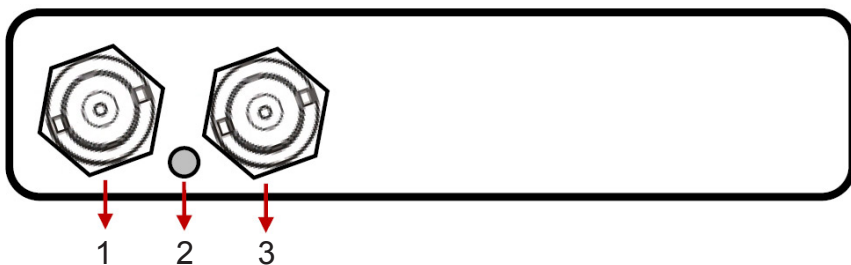
## PANEL DESCRIPTION

### 1. Front Panel



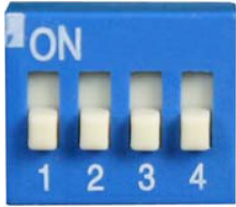
1. **HDMI input:** Plug in a HDMI cable to be linked to an HDMI source
2. **+5V power jack:** Connect to 5V DC power supply.

### 2. Rear Panel



1. **3G/HD/SD-SDI output #1:** Plug in a co-axial cable to be linked to the SDI display 1
2. **Lock LED:** showing if the audio/video signal existed or not
3. **3G/HD/SD-SDI output #2:** Plug in a co-axial cable to be linked to the SDI display 2

## DIP SWITCH



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
OFF (↑)	Used for SMPTE352M	3G level B	Audio group 3&4	Update EDID
ON (↓)		3G level A	Audio group 1&2	Default EDID

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## NOTICE

1. Factory default for 4-pin DIP: ON-ON-ON-ON
2. AT-HD-3GSDI mainly embeds the audio channels in audio group 1&2 or 3&4. Please adjust DIP switch pin 3 for setup.
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.
4. In order to keep the compatibility of HDMI to most monitors, AT-HD-3GSDI features EDID learning ability. The operation is shown in the EDID learning section.

## EDID LEARNING

1. Turn off AT-HD-3GSDI and set the pin 4 of DIP switch of AT-HD-3GSDI to OFF.
2. Connect the TV monitor thru HDMI port to AT-HD-3GSDI, and then turn on AT-HD-3GSDI.
3. The LED of AT-HD-3GSDI will dim and light again, which indicates the EDID learning process is finished.
4. Connect AT-HD-3GSDI to the HDMI source through a HDMI cable and enjoy the experience.

## SAFETY INFORMATION

### Safeguards



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



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



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



This equipment should be installed near the socket outlet and the device should be easily accessible in the 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, fish tanks, 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 and not cleaning fluid or aerosols.

Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, 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. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.

## WARRANTY

### Limited Warranty

Atlona Technologies warrants that (a) its products (the AT-HD-3GSDI) 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 customers that fall within those areas.

### Customer Remedies

Atlona Technologies' and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' decision, either return of the price paid for the product, repair, or replacement of the product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of the Customer's receipt. This Limited Warranty is void if failure of the product has resulted from accident, abuse, misapplication, or natural occurrence. In example but not limited to: power surges (electrical storms, local power outage), dropping the product (or items on the product), contact with fluids, and physical misconduct (i.e. kicking or punching). Any replacement product will be warranted for the remainder of the original warranty period.

### No other warranties

To the maximum extent permitted by applicable law, Atlona Technologies and its suppliers disclaim all other warranties, either expressed 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. Customers may have other rights depending on the jurisdiction.

### 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 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. Such damages include but are not limited to: special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss.

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. Some Jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damage. The above limitations may not apply to you in such jurisdictional cases.

## ATLONA PRODUCT REGISTRATION

Thank you for purchasing this Atlona product. - We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

To register go to: **<http://www.atlona.com/registration>**