

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

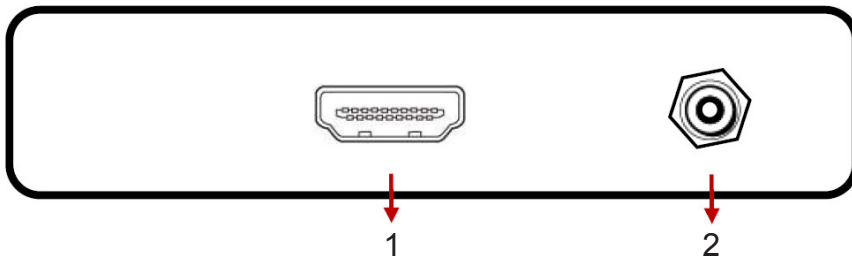
Technical		
SDI standards	3G-SDI & HD-SDI & SDI	
Auto 3G/HD/SD detection	Yes	
Video bandwidth	2.97Gbps & 2.975/1.001Gbps	
Video support	[3G] 1080p50/59.94/60 (4:2:2) [HD] – 720p@50/59.94/60Hz, 1035i@50/59.94/60Hz, 1080i@50/59.94/60Hz, 1080p@24/30Hz [SD] – NTSC @59.94Hz, PAL @50Hz	
Input signal	[SD-SDI] 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]	
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-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	

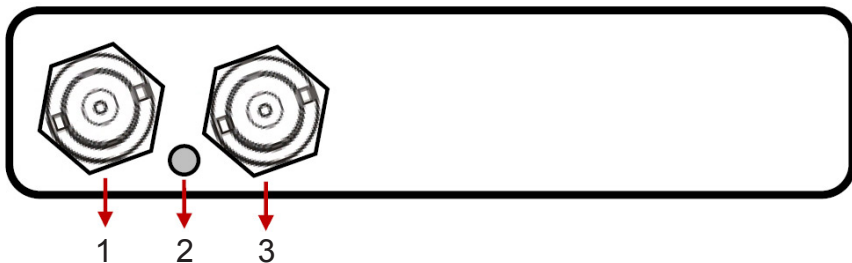
PANEL DESCRIPTION

1. Front Panel



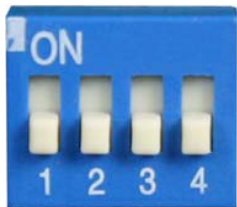
1. **HDMI input:** Plug in a HDMI cable to be linked to an HDMI source
2. **+5V power jack:** Connect to 5V DC power supply.

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.

Atlona, Inc. ("Atlona") Limited Product Warranty Policy

Coverage

Atlona warrants its products will substantially perform to their published specifications and will be free from defects in materials and workmanship under normal use, conditions and service.

Under its Limited Product Warranty, Atlona, at its sole discretion, will either:

- A) repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping
- OR**
- B) replace and return, free of charge, any defective products with direct replacement or with similar products deemed by Atlona to perform substantially the same function as the original products
- OR**
- C) refund the pro-rated value based on the remaining term of the warranty period, not to exceed MSRP, in cases where products are beyond repair and/or no direct or substantially similar replacement products exist.

Repair, replacement or refund of Atlona's products is the purchaser's exclusive remedy and Atlona's liability does not extend to any other damages, incidental, consequential or otherwise.

This Limited Product Warranty extends to the original end-user purchaser of Atlona's products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

Coverage Periods

Atlona's Limited Product Warranty Period begins on the date of purchase by the end-purchaser. The date contained on the end-purchaser's sales or delivery receipt is the proof purchase date.

Limited Product Warranty Terms – New Products

- 10 years from proof of purchase date for hardware/electronics products purchased on or after June 1, 2013
- 3 years from proof of purchase date for hardware/electronics products purchased before June 1, 2013
- Lifetime Limited Product Warranty for all cable products

Limited Product Warranty Terms – Refurbished (B-Stock) Products

- 3 years from proof of purchase date for all Refurbished (B-Stock) hardware and electronic products purchased on or after June 1, 2013

Remedy

Atlona recommends that end-purchasers contact their authorized Atlona dealer or reseller from whom they purchased their products. Atlona can also be contacted directly. Visit www.atlona.com for Atlona's contact information and hours of operation. Atlona requires that a dated sales or delivery receipt from an authorized dealer, reseller or end-purchaser is provided before Atlona extends its warranty services. Additionally, a return merchandise authorization (RMA) and/or case number, is required to be obtained from Atlona in advance of returns.

Atlona requires that products returned are properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization or case number will be refused. Atlona, at its sole discretion, reserves the right to reject any products received without advanced authorization. Authorizations can be requested by calling 1-877-536-3976 (US toll free) or 1-408-962-0515 (US/international) or via Atlona's website at www.atlona.com.

Exclusions

This Limited Product Warranty excludes:

- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packing or shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.
- Damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Atlona to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.
- Equipment enclosures, cables, power supplies, batteries, LCD displays, and any accessories used in conjunction with the product(s).
- Products purchased from unauthorized distributors, dealers, resellers, auction websites and similar unauthorized channels of distribution.

Disclaimers

This Limited Product Warranty does not imply that the electronic components contained within Atlona's products will not become obsolete nor does it imply Atlona products or their electronic components will remain compatible with any other current product, technology or any future products or technologies in which Atlona's products may be used in conjunction with. Atlona, at its sole discretion, reserves the right not to extend its warranty offering in instances arising outside its normal course of business including, but not limited to, damage inflicted to its products from acts of god.

Limitation on Liability

The maximum liability of Atlona under this limited product warranty shall not exceed the original Atlona MSRP for its products. To the maximum extent permitted by law, Atlona is not responsible for the direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

To the maximum extent permitted by law, this limited product warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, Atlona specifically disclaims all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Atlona cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering its products including warranties of merchantability and fitness for a particular purpose, shall provide to its products under applicable law. If any product to which this limited warranty applies is a "Consumer Product" under the Magnuson-Moss Warranty Act (15 U.S.C.A. §2301, ET SEQ.) or other applicable law, the foregoing disclaimer of implied warranties shall not apply, and all implied warranties on its products, including warranties of merchantability and fitness for the particular purpose, shall apply as provided under applicable law.

Other Conditions

Atlona's Limited Product Warranty offering gives legal rights, and other rights may apply and vary from country to country or state to state. This limited warranty is void if (i) the label bearing the serial number of products have been removed or defaced, (ii) products are not purchased from an authorized Atlona dealer or reseller. A comprehensive list of Atlona's authorized distributors, dealers and resellers can be found at www.atlona.com.

Atlona, Inc 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>