



# 1x4 HD/SD-SDI Distribution Amplifier with Reclocking



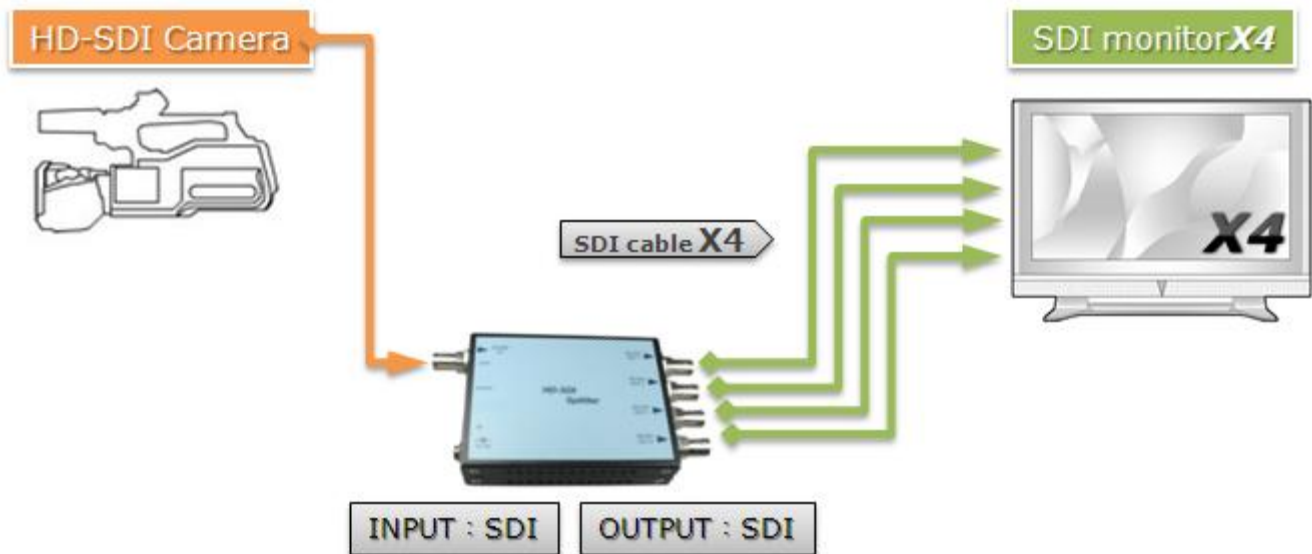


## Safety and Notice

The **AV-GM05A3-S1 1x4 HD/SD-SDI Distribution Amplifier with Reclocking** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **AV-GM05A3-S1** 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 away the objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter, 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.

This AV-GM05A3-S1 receives one SDI input, perfectly duplicates it, and re-transmits four SDI outputs for real time multi-viewing. It is a reliable video device splitting a SDI or HD-SDI video source to four HD-SDI or SD-SDI displays at the same time.



## Features

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- HD/SD dual-rate distribution
- Four separately buffered outputs
- HD cable equalization (Beldon 1694A)
- Dual color LED indication of input lock and rate
- Pass all ancillary data
- Provides automatic input cable equalization up to 300m (1000ft)
- Reclocking SDI signals for cascading and thus longer transmission
- Inter-locked power supply for better fixedness

# Specifications & Package Contents

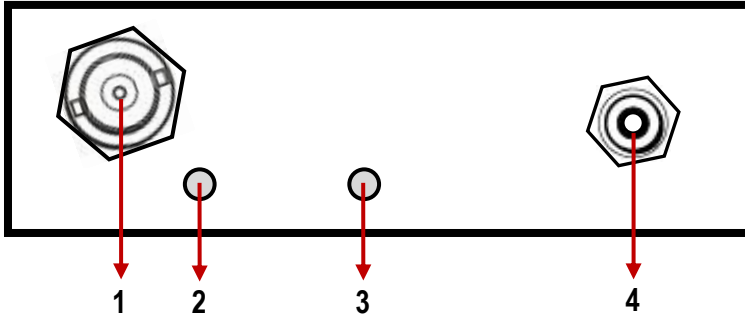
Model Name	AV-GM0593-S1	AV-GM05A3-S1	SP-3006	AV-GM05B3-S1	
<b>Technical</b>					
SDI standards	SD-SDI & HD-SDI				
Auto HD/SD-SDI detection	Yes				
Supported protocols	SMPTE 259M, SMPTE 292M / HDTV (1.485Gbps and 1.485/1.001Gbps)				
Video bandwidth	[1.485Gpbs & 1.485/1.001Gbps]				
Data rates	270 / 1483 / 1485 Mbps				
Video support	[HD] 720p50/59.94/60, 1035i50/59.94/60, 1080i50/59.94/60, 1080p24/30 [SD] NTSC@59.94Hz, PAL@50Hz				
SDI signal type	SMPTE-292M, SMPTE-259M				
Output impedance	75Ω				
Reclocking function	No	Yes	No	Yes	
Cable equalization	[HD-SDI] up to 150m (500ft) / [SD-SDI] up to 300m (1000ft)				
Audio support	Yes				
RP-918 pathological patterns	Immune				
PCB stack-up	4-layer board [impedance control — differential 100Ω; single 50Ω]				
Input	1x BNC [SDI]				
Output	4x BNC [SDI]	4x BNC [SDI]	6x BNC [SDI]	6x BNC [SDI]	
BNC connector	75Ω inter-locked socket				
Eye pattern characteristics	Amplitude: Within 800mV ±3% (<10%) Rise overshoot: Less than 2% (<10%) Fall overshoot: Less than 2% (<10%)		Long time jitter: 0.195 UI (<1.0 UI) Timing jitter: 0.195 UI (<1.0 UI) Alignment jitter: 0.127 UI (<0.2 UI)		
<b>Mechanical</b>					
Housing	Metal case				
Dimensions [L x W x H]	Model	145 x 80 x 25mm [5.7"x3.2"x1"]			
	Package	270 x 175 x 80mm [10.6"x6.9"x3.2"]			
	Carton	450 x 370x 300mm [1'5.7"x1'2.6"x11.8"]			
Weight	Model	300g [10.6oz]	305g [10.8 oz]	330g [11.6 oz]	335g [11.8 oz]
	Package	775g [1.7 lbs]	780g [1.7 lbs]	805g [1.8 lbs]	810g [1.8 lbs]
Fixedness	Inter-locked power supply				
Power supply	5V 4A DC				
Power consumption	10 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]
Package Contents	1x AV-GM0593-S1 / AV-GM05A3-S1 / SP-3006 / AV-GM05B3-S1 1x 5V power adapter 1x User Manual



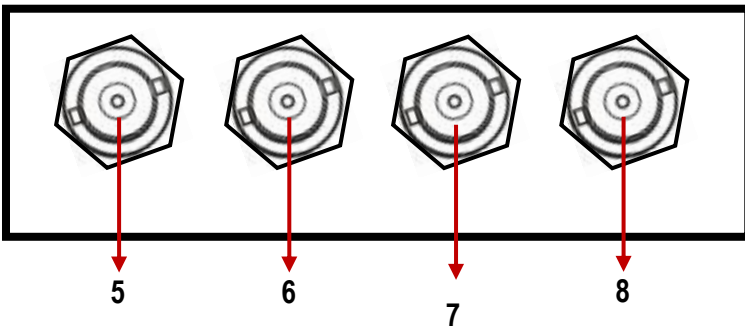
*The measurement results are from Tektronix WFM-7120 with SDI through 1m (3.3ft) long Belden 1694A.*

## Front Panel



1. HD/SD-SDI input
2. LED — reserved, no use.
3. LED — power indicator
4. 5V DC power jack

## Rear Panel



5. HD/SD-SDI output 1
6. HD/SD-SDI output 2
7. HD/SD-SDI output 3
8. HD/SD-SDI output 4

## Bottom Panel



Pin#1-OFF(↓) & Pin#2-OFF(↓) — auto rate detect (143 Mbps rate operation supported only in ARD mode)

Pin#1-OFF(↓) & Pin#2-ON(↑) — 270 Mbps (may be use to support DVB ASI operation)

Pin#1-ON(↑) & Pin#2-OFF(↓) — 1483 / 1485 Mbps

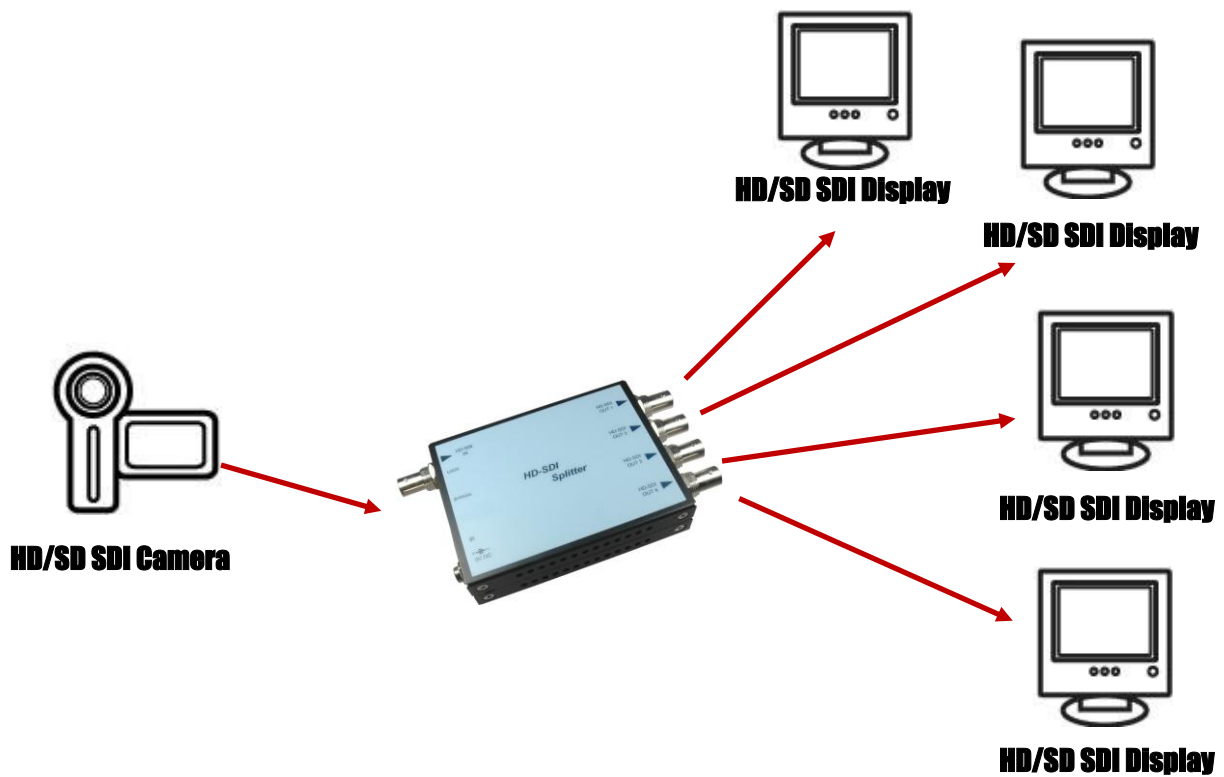
Pin#3-OFF(↓) — automatically reclocks bypassed SDI signals

Pin#3-ON(↑) — force to bypass SDI signals

Pin#4-OFF(↓) — default operation mode

# Hardware Installation

1. Connect a camera or other devices equipped with HD/SD-SDI outputs to AV-GM05A3-S1 HD/SD-SDI input.
2. Connect devices equipped with HD/SD-SDI inputs (e.g. monitors or video processors) to AV-GM05A3-S1 HD/SD-SDI outputs.
3. Plug power adapter cable into 5V DC power jack.





## Limited Warranty

The SELLER warrants the **AV-GM05A3-S1 1x4 HD/SD-SDI Distribution Amplifier with Reclocking** to be free from defects in the material and workmanship for 3 years from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 3 years 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 AV-GM05A3-S1 features and specifications is subject to change without further notice.

## Support

For more info or tech support

<http://www.siig.com/support>

April, 2018