8x1 HD/SD-SDI Switch

P/N:

⚠️ Safety and Notice

The **AV-GM09H3-S1** 8x1 HD/SD-SDI Switch has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **AV-GM09H3-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 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.
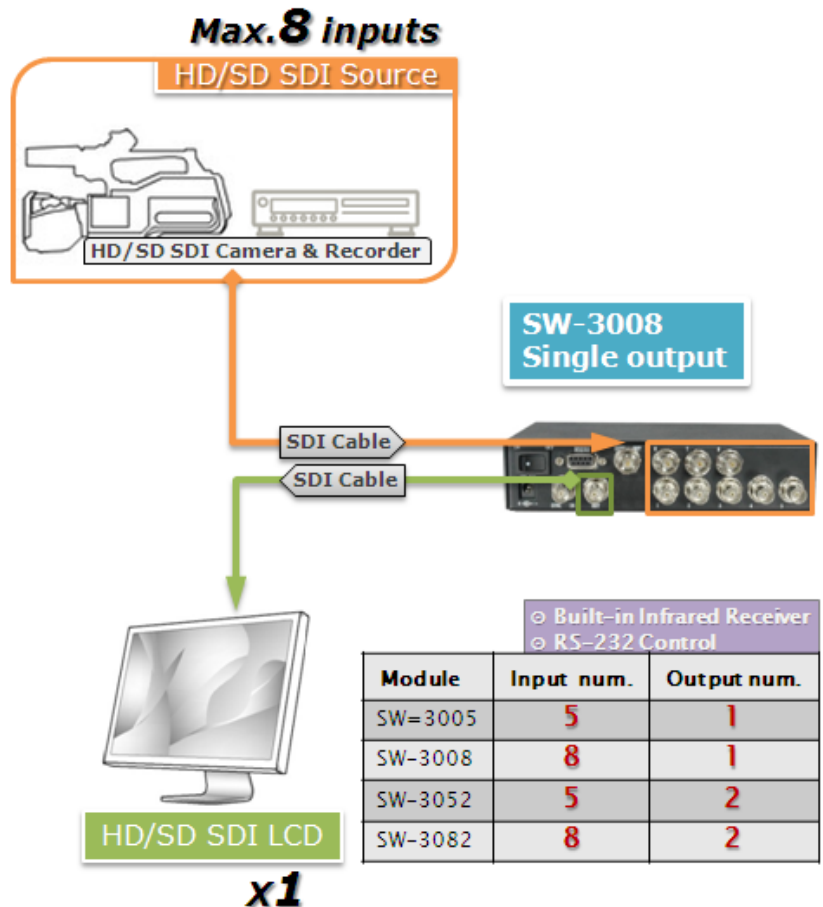
TABLE OF CONTENTS

INTRODUCTION

The **AV-GM09H3-S1** receives, equalizes, and reclocks* up to 8 SDI inputs, perfectly switches the desired input to SDI equipped monitors or receivers. The switch supports both HD/SD-SDI bit rates, and the re-transmitted quality is guaranteed. Through RS-232, IR remote, or front panel push button, the control of the SDI switch becomes versatile and easier. AV-GM09H3-S1 offers the most convenient and cost effective means for swift switch and duplication of high quality SDI in the market.

Max.8 inputs
HD/SD SDI Source
HD/SD SDI Camera & Recorder
SW-3008 Single output
SDI Cable
SDI Cable
HD/SD SDI LCD
x1

⊙ Built-in Infrared Receiver
⊙ RS-232 Control

Module	Input num.	Output num.
SW=3005	5	1
SW-3008	8	1
SW-3052	5	2
SW-3082	8	2

Optional upon request

FEATURES

- HD / SD-SDI switch
- Up to 8 input & re-timing SDI outputs*
- Dual color indication LED of HD / SD of the output SDI
- Automatic detection of the SDI Input
- Synchronizes input/output (switch after vertical sync)
- Provides the equalized and reclocked* transmission path up to 300m (1000ft) at SD-SDI or 150m (500ft) at HD-SDI
- Multiple control by RS-232, IR remote, and push button

Optional upon request

PACKAGE CONTENTS

- 1 x AV-GM09G3-S1 / AV-GM09J3-S1 / AV-GM09H3-S1 / AV-GM09K3-S1

- 1 x IR remote controller
- 1 x 5V power adapter
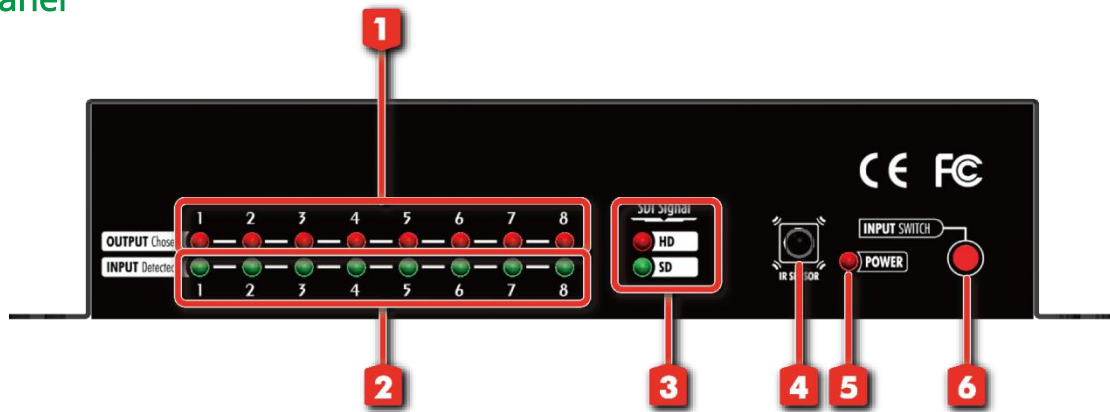- 1 x User Manual

SPECIFICATIONS

Model Name	AV-GM09G3-S1	AV-GM09J3-S1	AV-GM09H3-S1	AV-GM09K3-S1
Technical				
Role of usage	5x1 switch	5x2 matrix switch	8x1 switch	8x2 matrix switch
SDI standards	SD-SDI & HD-SDI			
Auto HD/SD-SDI detection	Yes			
Supported protocols	SMPTE 259M / SMPTE 292M			
Video bandwidth	Single-link [1.485Gpbs & 1.485/1.001Gbps]			
Data rates	143 / 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			
Output impedance	75Ω			
Reclocking function	Optional upon request			
Cable equalization	[HD-SDI] up to 150m (500ft) / [SD-SDI] up to 300m (1000ft)			
Loop-out	Synchronized BNC loop-out at input and output			
Audio support	Yes			
RP-918 pathological patterns	Immune			
PCB stack-up	4-layer board [impedance control — differential 100Ω; single 50Ω]			
Input	5x BNC [SDI]	5x BNC [SDI]	8x BNC [SDI]	8x BNC [SDI]
Output	1x BNC [SDI]	2x BNC [SDI]	1x BNC [SDI]	2x BNC [SDI]
BNC connector	75Ω inter-locked socket			
Eye pattern characteristics (HD-SDI)	Amplitude: Within 800mV ±3% (<10%) Rise overshoot: Less than 2% (<10%) Fall overshoot: Less than 2% (<10%)		Long time jitter: 0.195UI (<1.0UI) Timing jitter: 0.195UI (<1.0UI) Alignment jitter: 0.127UI (<0.2UI)	
Mechanical				
Housing	Metal case			
Dimensions [L x W x H] — Model	187 x 125 x 43mm [7.4"x4.9"x1.7"]			
Dimensions [L x W x H] — Package	330 x 200 x 95mm [1'1"x7.9"x3.7"]			
Dimensions [L x W x H] — Carton	495 x 440x 380mm [1'7.5"x1'5.3"x1'3"]			
Weight — Model	890g [2.0 lbs]	890g [2.0 lbs]	890g [2.0 lbs]	890g [2.0 lbs]
Weight — Package	g [lbs]	g [lbs]	g [lbs]	g [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]

> ℹ The measurement results are from Tektronix VFM-700 with SDI through 1m (3.3ft) long Belden 1694A.
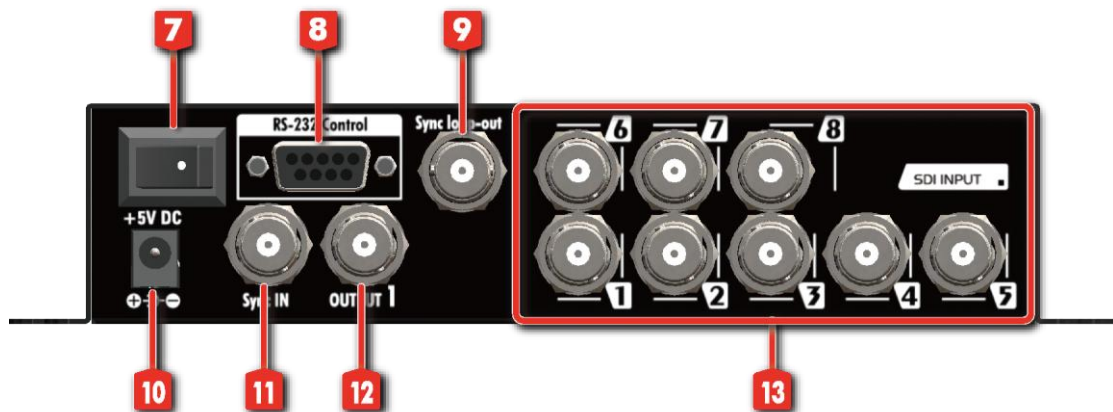
PANEL DESCRIPTIONS

Front Panel

1. Chosen input channel LED
2. Input channel auto detection LED
3. Output HD/SD detection LED
4. IR remote receiver
5. Power indicator LED
6. Push button for input channel switch

Rear Panel
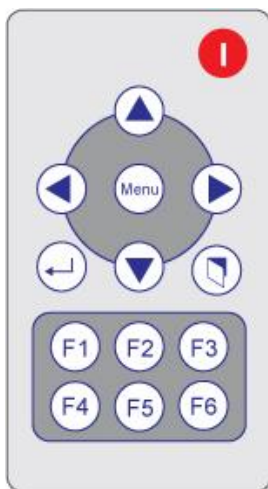

7. Power switch
8. RS-232 control port for PC control

9. Synchronized signal loop-out (add 75Ω terminator if not connect)
10. 5V DC power jack
11. Synchronized SDI signal input
12. SDI output
13. SDI input

HARDWARE INSTALLATION

1. Connect SDI enable equipments to the output of AV-GM09H3-S1.

2. Connect the SDI input sources to the inputs of AV-GM09H3-S1.

3. Plug power adapter cable into 5V DC power jack.

4. Use IR remote, RS-232, or front panel push button to switch between input channels.

\

IR REMOTE CONTROL

: Reserved	▶ : To the right	F3 : Channel 5
▲ : Reserved	↵ : Channel 1	F4 : Channel 6
Menu : Reserved	: Channel 2	F5 : Channel 7
▼ : Reserved	F1 : Channel 3	F6 : Channel 8
◀ : To the left	F2 : Channel 4	

WARRANTY

The SELLER warrants the **AV-GM09H3-S1** 8x1 HD/SD-SDI Switch 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-GM09H3-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