2x8 HDMI Splitter with EDID Manager

P/N: AV-GM06L3-S1

Safety and Notice

The AV-GM06L3-S1 2x8 HDMI Splitter with EDID Manager has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the AV-GM06L3-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.

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INTRODUCTION

The **AV-GM06L3-S1** 2x8 HDMI Splitter with EDID Manager allows you to distribute one of the two HDMI/DVI video sources up to 8 separate HDTV displays including one remotely cascade output via Cat-5/5e cost effective cable. This splitter offers the most flexible solution by which the high definition video and high quality audio can be transmitted to different local locations through HDMI cables and also to the next stage over a long distance without degrading the quality. The cascade ability allows pure digital video and audio broadcast station by station and therefore make extending HDMI compliant video and audio anywhere feasible.

FEATURES

- State-of-the-art Silicon Image (founder of HDMI) chipset embedded for upmost compatibility and reliability
- Support HDMI Deep Color & 3D
- HDCP compliant
- HDMI video distribution to up to 7 displays and one Cat.X Receiver or cascade to another AV-GM06L3-S1
- Acts as a 2x1 HDMI switch plus a 1x8 HDMI over Cat.X splitter
- Minimizes the cable skew by adjustable 8-level equalization control
- Regenerates the HDMI signal
- Supports default HDMI EDID and has the ability to learn the EDID of displays
- Up to 60m (200ft) at 1080i and 40m (130ft) at 1080p through Cat-5e cables
- Input up to 15m (50ft) using HDMI cables
- Outputs up to 15m (50ft) using HDMI cables
- Pure unaltered uncompressed 7.1ch digital HDMI over LAN cable transmission
- Allows cascading
- Perfectly integrated with other HDMI over Cat.X series products
- 1RU rack mountable with interlocking power adapter for fixedness

The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/100m) for best performance. Unshielded CAT6 with metal RJ45 connectors is recommended.

PACKAGE CONTENTS

- 1x AV-GM06L3-S1
- 1x DC 5V 4A in-line with C7 power cord
- 1x Rack-mounting ear set
- 1x User Manual

SPECIFICATIONS

Model Name		AV-GM06L3-S1
Technical		
Role of usage		2x8 Distribution Amplifier Transmitter [TX]
HDMI compliance		HDMI Deep Color & 3D
HDCP compliance		Yes
Video bandwidth		Single-link 225MHz [6.25Gbps]
Video support		480i / 480p / 720p / 1080i / 1080p60
Transmission over UTP cable (24-bit)		Full HD (1080p) - 40m (130ft) [CAT5e] / 50m (165ft) [CAT6] HD (720p/1080i) - 50m (165ft) [CAT5e] / 60m (200ft) [CAT6]
Audio support		Surround sound (up to 7.1ch) or stereo digital audi
Signal equalization		N/A
Input TMDS signal		1.2 Volts [peak-to-peak]
Input DDC signal		5 Volts [peak-to-peak, TTL]
ESD protection		[1] Human body model — ±19kV [air-gap discharge] & ±12kV [contact discharge] [2] Core chipset — ±8kV
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω
Input		1x HDMI + 1x RJ-45
Output		7x HDMI + 1x RJ-45
HDMI connector		Type A [19-pin female]
RJ-45 connector		WE/SS 8P8C with 2 LED indicators
Terminal block		2-pin DIP
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	321 x 110 x 27mm [1'6" x 4" x 1"]
	Package	510 x 230 x 70mm [1'8" x 9.1" x 2.8"]
	Carton	510 x 410 x 252mm [1'8" x 1'4" x 10"]
Weight	Model	888g [2 lbs]
	Package	1700g [3.7 lbs]
Fixedness		1RU rack-mount case
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]

PANEL DESCRIPTIONS

Front Panel

1. **Power / Signal:** Red LED Power indicator. Green Signal exist
2. **IN 1 / IN 2:** Input LED indicator [Green: HDMI input / Red: RJ45 input]

Rear Panel

3. **Remote Control:** Control signal
4. **Rotary Control:** Adjust the 8-level signal equalization control to the received HDMI signals. The HDMI signal level varies from 0 (strongest) to 7 (weakest) for respective transmission length from longest possible range to short distance. Dial the Signal Level from 7 to 0 and stop turning the rotary switch whenever the audio/video is playing normally. Inappropriate signal level setting may cause overpowering issues that would shorten the product's life significantly!
5. **HDMI Signal IN 1:** for cascading from another AV-GM06L3-S1 or SP-5022
6. **HDMI IN 2:** for connecting to video source, SP-5012, SP-5018, or another AV-GM06L3-S1
7. **HDMI Signal OUT:** for connecting to display through CV-715 or CV-715s; or for cascading to another SP-5022 or AV-GM06L3-S1

8. **HDMI OUT 1~7:** for connecting to display through HDMI cable or through Cat-5e cable with CV-715s attached; or for cascading to another SP-5012, SP-5018, or AV-GM06L3-S1.
9. **+5V DC power:** connect to 5V 4A DC interlocking power adapter

Top Panel

10. **SW1:** EDID SOURCE - Default EDID / learning EDID
11. **SW2:** EDID - INPUT 1 / INPUT 2
12. **SW3:** EDID - Full HD / HD Selection
13. **SW4:** EDID - Bitstream / 2CH Selection
14. **SW5:** EDID - 12 bit / 8 bit Selection

EDID MANAGEMENT

	Left Position	Right Position
SW3	EDID Full HD	EDID HD
SW4	EDID Multi Ch	EDID 2 Ch
SW5	12 bit	8 bit

	Left Position	Right Position
SW1	EDID default	EDID use HDMI Out 7
SW2	Input 1	Input 2

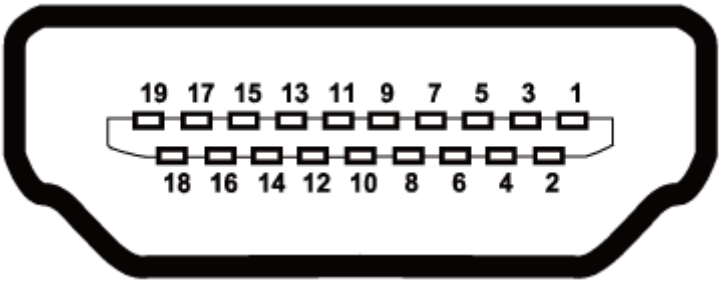
ROTARY CONTROL

In order to adapt the CAT5 cable, AV-GM06L3-S1 offers 8-level equalization control on the received HDMI signal level. 0-to-7 = strongest-to-weakest signal level for respective transmission length [long to short]. It is recommended to switch from 7 to 0 to find the optimal visual experience.

EDID LEARNING

1. Power up the AV-GM06L3-S1. Connect to **HDMI OUT 7** with the display you want the AV-GM06L3-S1 to learn its EDID.
2. The AV-GM06L3-S1 is only bound to learn the EDID from the display for the HDMI source device connected to **HDMI OUT 7**.
3. To learn the display's EDID for source device connected to **HDMI OUT 7**, Set **SW1** to Right Position. Power on and wait for about 5 seconds to complete the EDID learning process.

HDMI PIN DEFINITION



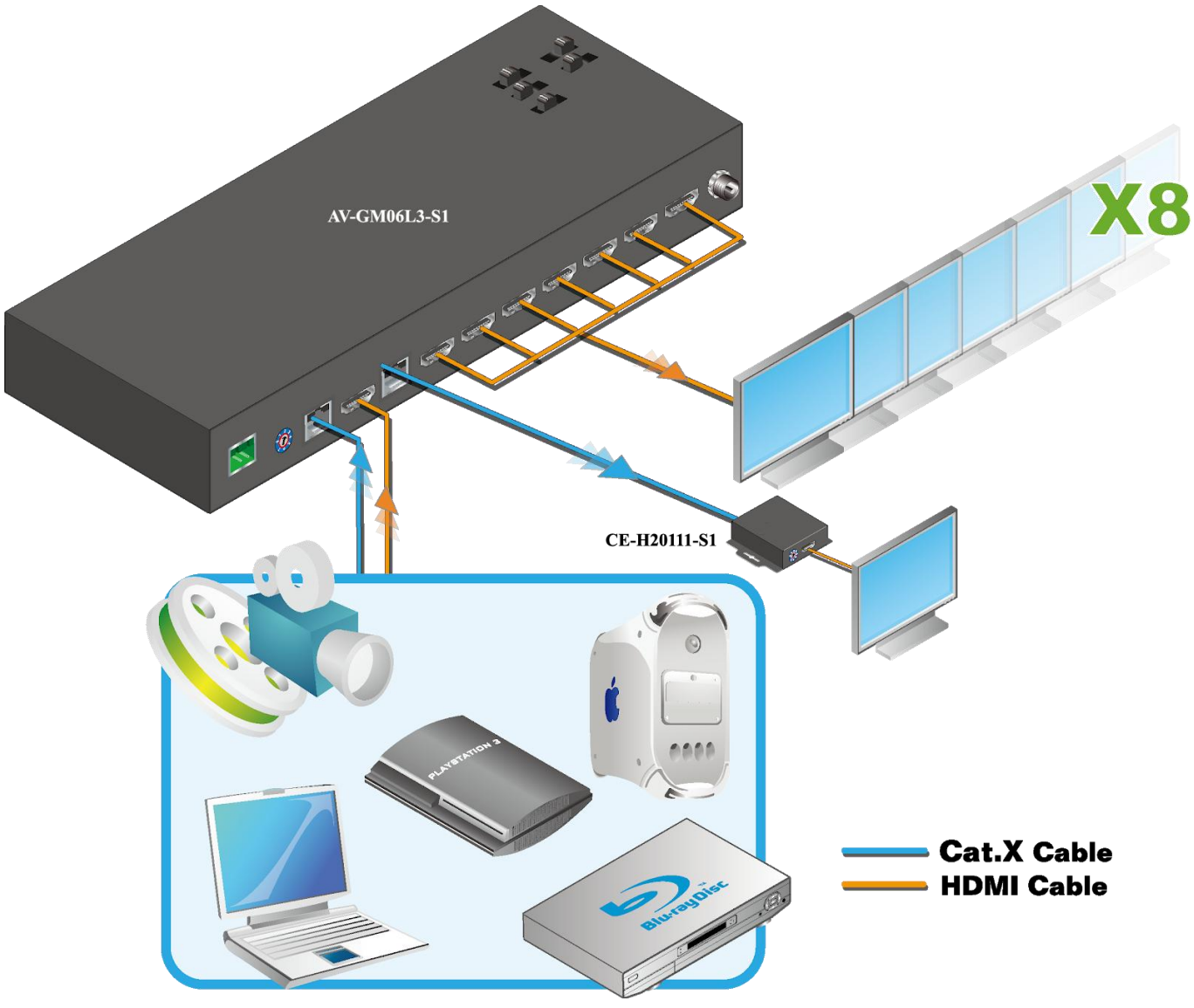
Type A (Receptacle) HDMI

Pin 1	TMDS Data2+	**Pin 8**	TMDS Data0 Shield	**Pin 14**	Reserved (N.C. on device)
Pin 2	TMDS Data2 Shield	**Pin 9**	TMDS Data0–	**Pin 15**	SCL
Pin 3	TMDS Data2–	**Pin 10**	TMDS Clock+	**Pin 16**	SDA
Pin 4	TMDS Data1+	**Pin 11**	TMDS Clock Shield	**Pin 17**	DDC/CEC Ground
Pin 5	TMDS Data1 Shield	**Pin 12**	TMDS Clock–	**Pin 18**	+5V Power
Pin 6	TMDS Data1–	**Pin 13**	NC	**Pin 19**	Hot Plug Detect
Pin 7	TMDS Data0+				

HARDWARE INSTALLATION

1. Connect Cat-5e cable if using any Cat-5e HDMI video transmitter as cascading source.
2. Connect HDMI input to HDMI compliant sources (such as a Blu-ray Disc player).
3. Connect all HDMI outputs to the HDMI displays.
4. Connect RJ45 output to HDMI over CAT5 receiver through Cat-5e cable.
5. Plug in 5V 4A DC power supply.
6. Power on the AV-GM06L3-S1.
7. Power on the HDMI displays.
8. Power on the HDMI source(s).

CONNECTION DIAGRAM



NOTICE

1. If the DVI or HDMI device requires the EDID information, please use CV-1001 or CV-5005H EDID Reader/Writer to retrieve and provide DVI or HDMI display EDID information.
2. All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz UTP cable and ASTRODESIGN Video Signal Generator VG-859C & VG-870B.
3. The transmission length is largely affected by the type of Cat-5/5e/6 cables, the type of HDMI sources, and the type of HDMI display. The testing result shows solid UTP cables (usually in the form of 300m [1,000ft] bulk cables) can transmit a lot longer signals than stranded UTP cables (usually in the form of fixed length patch cords). Shielded STP cables are better suited than unshielded UTP cables. A solid UTP Cat-5e cable shows longer transmission range than stranded STP Cat-6 cable. For long extension applications, solid UTP/STP cables are the only viable choice.
4. EIA/TIA-568-B termination (T568B) for Cat-5/5e/6 cables is recommended.
5. To reduce the interference among the unshielded twisted pairs of wires in Cat-5/5e/6 cable, one can use double shielded STP cables to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the category cables has the major effect on how long the transmission limit can achieve and how good is the received picture quality, the actual transmission range is subject to one's choice of Cat-5/5e/6 cables. For desired resolutions greater than 1080i or 1280x1024, a Cat-6 cable is recommended.
7. If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input 1] generally can produce better transmission performance among all HDMI inputs.

Performance Guide for HDMI over Category Cable Transmission

Performance rating		Type of category cable		
Wiring	Shielding	CAT5	CAT5e	CAT6
Solid	Unshielded (UTP)	★★★	★★★★	★★★★★
	Shielded (STP)	★★★	★★★	★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination		Please use **EIA/TIA-568-B** termination (**T568B**) at any time		

WARRANTY

The SELLER warrants the **AV-GM06L3-S1** 2x8 HDMI Splitter with EDID Manager 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 surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

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 and power adapters are limited to a 30 day warranty and 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-GM06L3-S1** features and specifications is subject to change without further notice.

Support
For more info or tech support
http://www.siig.com/support

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