



1x4 HDMI 2.0a Splitter with Built-in& User Adjustable EDID Management



P/N: AV-GM05R3-S1



Safety and Notice

The **AV-GM05R3-S1 1x4 HDMI 2.0a Splitter with Built-in& User Adjustable EDID Management** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **AV-GM05R3-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-GM05R3-S1 1x4 HDMI 2.0a Splitter with Built-in& User Adjustable EDID Management** provides the most cost effective and advanced HDMI splitter solution in the market, by which the high definition video and high quality audio can be transmitted to 4 different locations without losing any quality. AV-GM05R3-S1 also supports HDR and the true 4K2K video!

With built-in USB firmware update mechanism, the compatibility among countless HDMI sources and receivers can be further guaranteed. With the upmost HDR/4K2K@60 4:4:4 8bits and high definition audio support, AV-GM05R3-S1 is suitable for high quality HDMI broadcasting, digital signage and education applications!

FEATURES

- HDMI2.0a compliant
- Supports 4K2K@60 4:4:4 8bits
- Supports HDR¹, which is 4K2K@60 4:2:0 10bits²
- HDCP 2.2 and 1.4 compliant
- Wide frequency range: 25MHz~600MHz
- Video bandwidth: 18Gbps
- Supports resolution downscaling from 4K2K to 1080P[!]
- Supports default EDID and EDID learning from display
- Supports xvYCC, x.v.Color& Deep Color
- Micro-USB firmware update for expanding compatibility
- Supports Dolby Digital, DTS-HD and Dolby TrueHD audio
- Easy installation



1. HDR = High Dynamic Range.

2. The video bandwidth of 4K2K@60 4:2:0 10bits (HDR) is 384 MHz, and the 4K2K@60 4:4:4 8bits is 594MHz.



1. NOT supports

- (1) Resolution downscaling from 4K2K@60 4:2:2 to 1080P
- (2) Frame rate conversion
- (3) 4K2K@60 4:2:2 to 4K2K@60 4:2:0

2. AV-GM05R3-S1 can bypass 4K HDR data content, but can NOT process it and make HDR content 100%

fit into 1080p

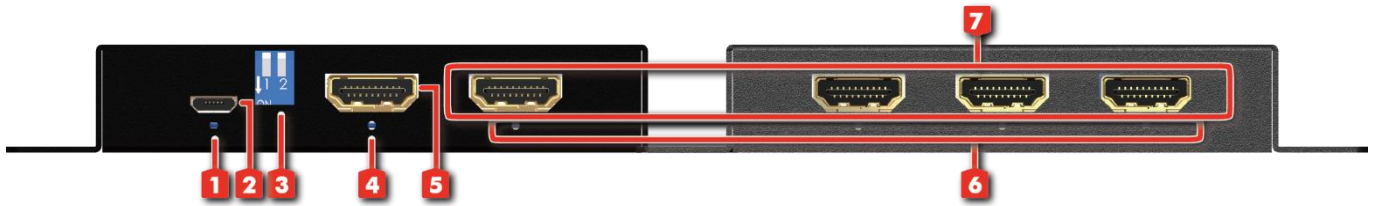
PACKAGE CONTENTS

- 1x AV-GM05R3-S1
- 1x DC 5V wall wart
- 1x User Manual

SPECIFICATIONS

| Model Name | AV-GM05R3-S1 | |
|---------------------------|---|--|
| Technical | | |
| Role of usage | 1x4 Distribution Amplifier (Splitter) | |
| HDMI compliance | HDMI 2.0a | |
| HDCP compliance | HDCP 2.2 / 1.4 | |
| Video bandwidth | Single-link 600MHz [18Gbps] | |
| Video support | HDR 4K2K@60(4:2:0 10bits) / 4K2K@60 (4:4:4 8bits) | |
| Audio support | DTS-HD Master Audio, Dolby TrueHD Dolby Digital, DTS, LPCM | |
| ESD protection | Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge] | |
| Firmware update | Feasible via Micro-USB port | |
| Input | 1x HDMI | |
| Output | 4x HDMI | |
| HDMI connector | Type A [19-pin female] | |
| Dip switch | EDID Mode selection | |
| Mechanical | | |
| Housing | Metal enclosure | |
| Dimensions [L x W x H] | Model | |
| | Package | |
| | Carton | |
| Weight | Model | |
| | Package | |
| Fixedness | Wall-mounting case | |
| Power supply | 5V 1A DC | |
| Power consumption | 4 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



1. **Power LED:** Lights on when device is ready
2. **Micro-USB Port:** Connect to 5V DC power supply unit
3. **EDID MODE:**

| DIP Switch Position | | Description |
|------------------------------|------------------------------|---|
| Off <input type="checkbox"/> | Off <input type="checkbox"/> | Ultra HD(4K2K@60) – 8/10/12bit 3D HDR video & 7.1ch audio |
| On <input type="checkbox"/> | Off <input type="checkbox"/> | Full HD(1080p@60) – 12bit 3D video & 7.1ch audio |
| Off <input type="checkbox"/> | On <input type="checkbox"/> | Learning EDID from output 1 |
| On <input type="checkbox"/> | On <input type="checkbox"/> | Auto EDID analysis learning mode |

4. **Signal LED:** Input signal LED indicator
5. **HDMI IN:** Connect to a HDMI input source
6. **Signal LED:** Output 1-4 signal LED indicator
7. **HDMI OUT 1-4:** HDMI outputs to HDMI displays [HDMI OUT1: EDID Learn Default]



Signal LED light on when device is connect to source and display.



*Automatic EDID learning will detect all the connected HDMI equipped monitors and analyze all the content of EDID. The EDID with maximal resolution support will be the reference EDID for incoming HDMI source players.

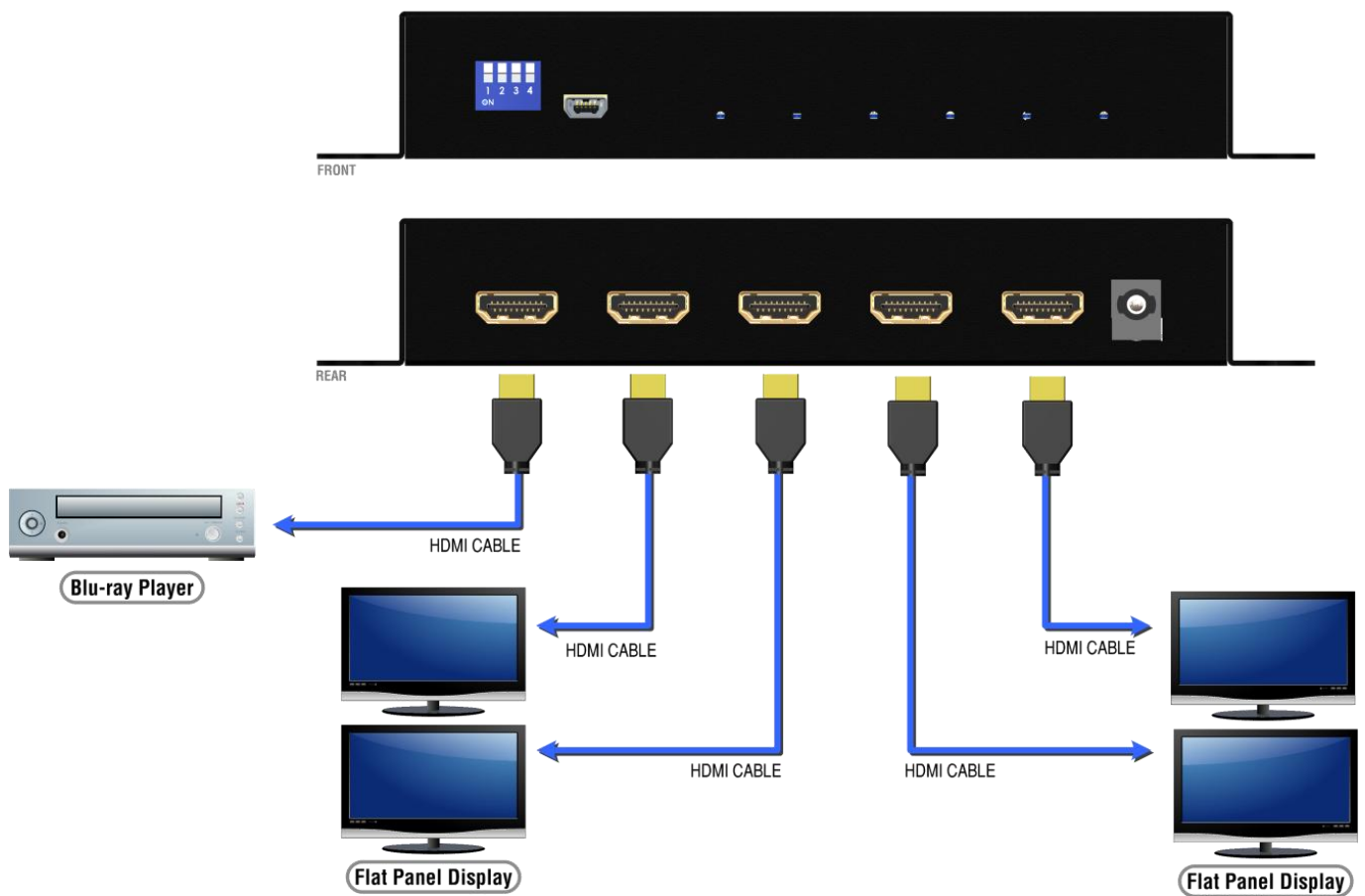
HARDWARE INSTALLATION

Broadcasts HDMI signal to 4 HDMI displays!

1. Switch off all devices, including monitors.
2. Connect to the displays.
3. Connect an HDMI source (such as a Blu-ray Disc player) to the HDMI In.
4. Plug in 5V DC power supply.
5. Power on the HDMI monitors.
6. Power on the HDMI source.

CONNECTION DIAGRAM

→ HDMI



NOTICE

1. If somehow user cannot get video output, please try to adjust EDID dip switch to “[pin1, pin2]=[↓-↑]” or “[pin1, pin2]=[↑-↓]” for trouble shooting. Under “[pin1, pin2]=[↓-↑]”, there will be video output. The only requirement is that the display has to support at least Full HD. If default Full-HD EDID still cannot work, user can switch to “[pin1, pin2]=[↑-↓]” to learn the EDID from output 1 to customize the EDID information. **(Please note that the display with lowest resolution must be connected to output 1)**

Select to [pin1, pin2]=[↓-↑] - Full-HD(1080p@60) – 12bit 3D video & 7.1ch audio

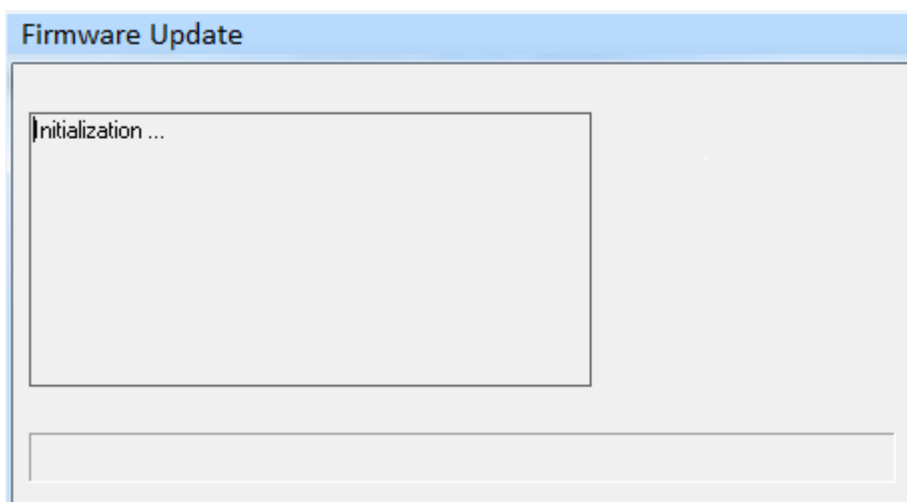
- 1) Set the rotary switch to “[pin1, pin2]=[↓-↑]”
- 2) Power on the device

Select to [pin1, pin2]=[↑-↓] – Learning EDID from output 1

- 1) Set the dip switch to “[pin1, pin2]=[↑-↓]”
- 2) Power on the device
- 3) It will automatically learn EDID from output 1

[NOTE]

- a. If the user wants to change EDID mode, please power cycle the device after setting dip switch.
2. While connecting a new monitor to the splitter under “[pin1, pin2]=[↓-↓]”(under auto EDID analysis learning mode), experiencing a short period of time without displaying might be expected. The splitter will do Automatic EDID learning and generate the best EDID among all connected monitors
 3. Firmware update is proceeded through Micro-USB.
 - 1) Save the firmware file (.bin) & software in the same folder.
 - 2) Connect the Micro-USB cable between PC and device
 - 3) Open firmware update software and then device will start to update firmware automatically.
 - 4) After update process is done, software will show “Success” message and then be closed automatically.
 - 5) Power cycle the device



WARRANTY

The SELLER warrants the **AV-GM05R3-S1 1x4 HDMI 2.0a Splitter with Built-in & User Adjustable EDID Management** 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-GM05R3-S1 features and specifications is subject to change without further notice.**

Support

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