



HDMI & Full 3D support over CAT5 Receiver with IR Pass-through



P/N: AV-GM07H3-S1



Safety and Notice

The AV-GM07H3-S1 HDMI & Full 3D support over CAT5 Receiver with IR Pass-through has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the AV-GM07H3-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.

The AV-GM07H3-S1 HDMI & Full 3D support over CAT5 Receiver with IR Pass-through provides the most ideal solution by which the high definition video and high quality audio can be transmitted over a distance via Cat-5/5e/6 cable. The AV-GM07H3-S1 can work with MA-5144/88KC matrix in the HDMI over CAT5 products and allow you to extend HDMI compliant displays almost anywhere.

Features

- Support HDMI Deep Color & 3D
- HDCP compliant
- Extends video signal up to 35m (115 feet) over CAT5e at 1080p and likely longer with better HDMI source device, better grade HDMI display, and better quality solid CAT6 cable
- Supports 7.1 channel digital audio
- Allows to control main matrix center through control line at remote receiver
- Perfectly integrated with other HDMI over CAT5 series products
- Wall mountable



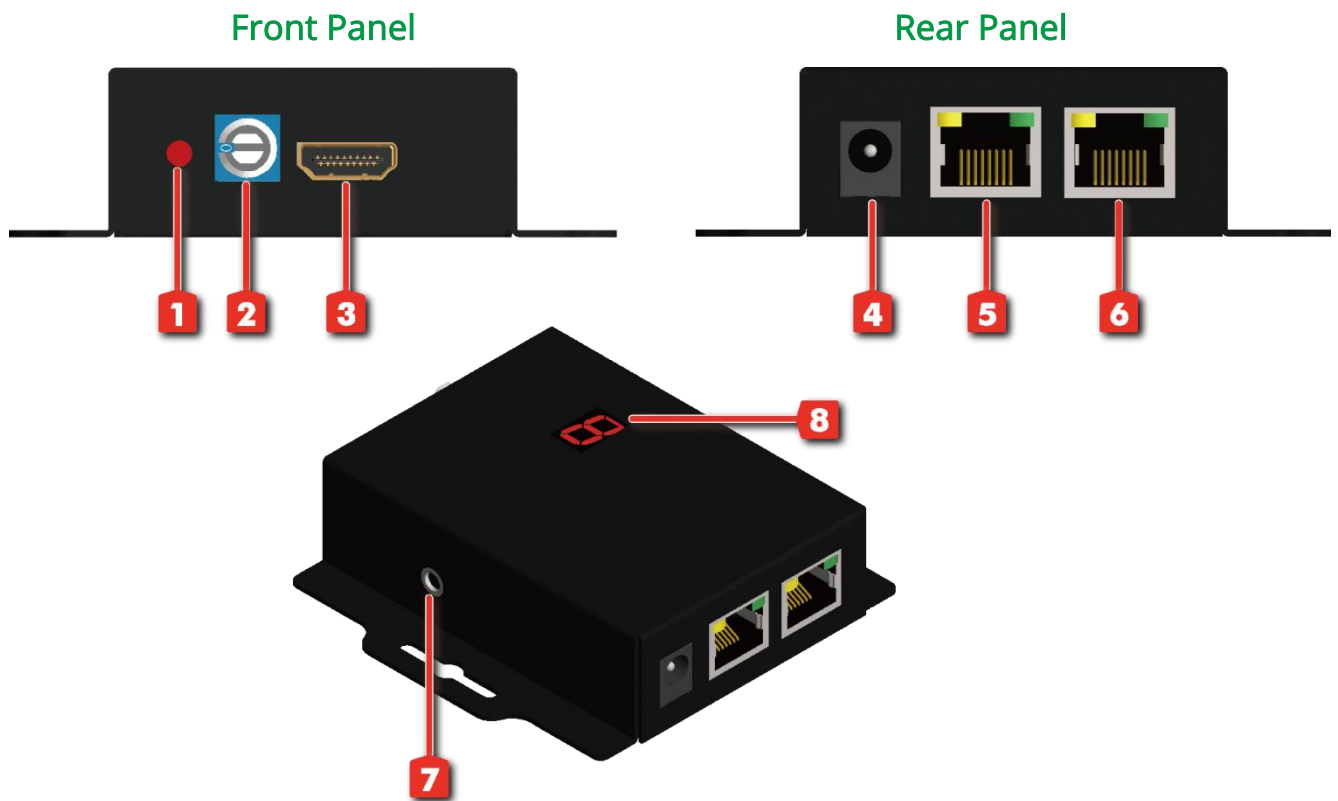
The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/100m) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.

Specifications & Package Contents

Model Name		AV-GM07H3-S1
Technical		
Role of usage	Receiver [RX]	
HDMI compliance	HDMI Deep Color & full 3D	
HDCP compliance	Yes	
Video bandwidth	Single-link 225MHz [6.75Gpbs]	
Video support	480i / 480p / 720p / 1080i / 1080p60	
Audio support	Surround sound (up to 7.1ch) or stereo digital audio	
HDMI over CAT5 transmission range	Full HD (1080p) – 35m (115ft) [CAT5e] / 40m (130ft) [CAT6] HD (720p/1080i) – 50m (165ft) [CAT5e] / 55m (180ft) [CAT6]	
HDMI equalization	8-level digital rotary control	
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 RJ-45 [HDMI signal] / 1x RJ-45 [Channel control] / 1x IR socket for IR receiver	
Output	1x HDMI	
HDMI Input selection	Push-in button / IR remote control	
HDMI source control	Controllable via IR pass-through from IR receiver at RX to IR blaster at TX	
IR remote control	Electro-optical characteristics: $\theta = 25^\circ$ / Carrier frequency: 20~60kHz	
HDMI connector	Type A [19-pin female]	
RJ-45 connector	WE/SS 8P8C with 2 LED indicators [TMDS & DDC channels]	
3.5mm connector	Earphone jack for IR receiver [IR RECEIVER] Receives IR commands from remote control	
Mechanical		AV-GM07H3-S1
Enclosure		Metal case
Dimensions (L x W x H)	Model	84 x 61 x 24mm [3.3" x 2.4" x 1"]
	Package	168 x 112 x 42mm [6.6" x 4.4" x 1.7"]
	Carton	585 x 242 x 565mm [1'11" x 10" x 1'10"]
Weight	Model	185g [6.5 oz]
	Package	7000g [15.5 lbs]
Fixedness		Wall-mount with screws
Power supply		Not necessarily required*
Power consumption		1.5 Watt [max] (provided by MA-5188)
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. **INPUT SELECT:** Push button for switching input source channel in sequential order
2. **Signal Level 0-7:** Adjust the 8-level 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. Please adjust 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 issue that would shorten the product life significantly!
3. **HDMI Output:** Connect to HDTV with a HDMI cable
4. **+5V DC:** Spare power jack for over 60m transmission when the RX may need external power to work*.
5. **A/V SIGNAL:** Plug in the CAT5 connected to the respective A/V SIGNAL port on the MA-5188
6. **CHANNEL CONTROL:** Plug in the CAT5 connected to the respective CHANNEL CONTROL port on the MA-5188
7. **IR RECEIVER:** Plug in IR receiver
8. **INPUT CHANNEL:** Display the current showing HDMI source channel



* The MA-5188RX has been tested extensively and found that it doesn't require external power supply. If in rare situation you find it cannot work with the MA-5188, please use any +5V power adapter to plug in the power jack and see if it can work. If not, please contact your technical support for further service.

IR PASS-THROUGH

IR Extenders

IR Blaster



IR Receiver



IR Sockets

MA-5188

IR Main: The default location for IR blaster to transmit all IR command signals received from any of the four remote receivers to all of the HDMI sources.

IR PASS-THROUGH 1-8: IR blaster connected here can only transmit IR command signals from the remote receivers that are setting at respective input channel from 1 to 8.

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IR RECEIVER: IR receiver connected here can receive all IR command signals from the IR remote controls of MA-5188 and all other HDMI source devices.

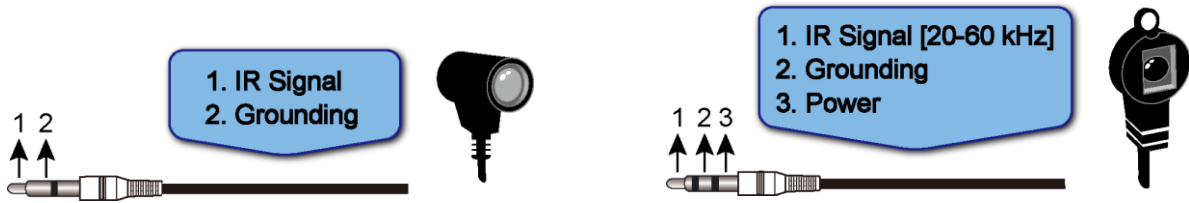
CAUTION!

Incorrect placement of IR Blaster and Receiver may result in the failure of the IR extenders. Please check carefully before plugging in the IR extender to the respective IR sockets. Warranty will not cover the damage.

Definition of IR Earphone Jack

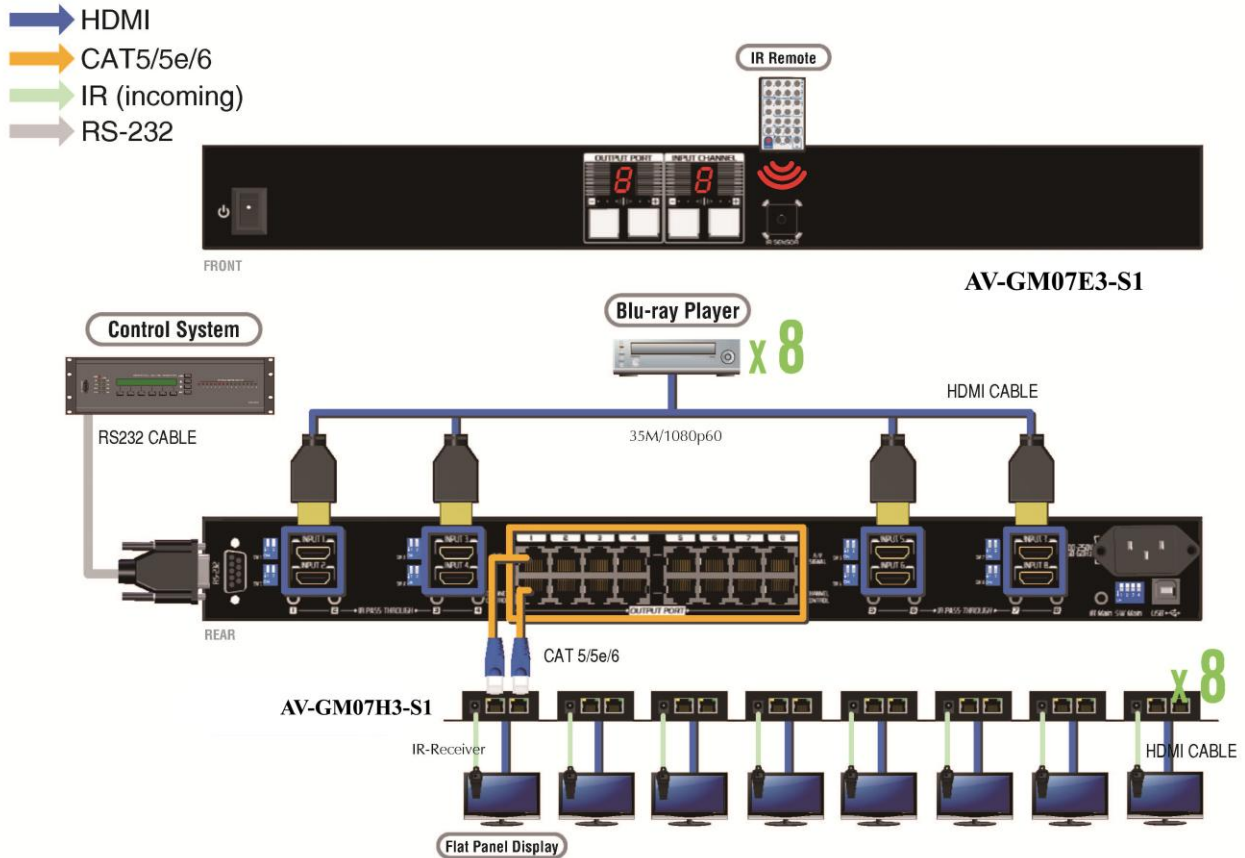
IR Blaster

IR Receiver



You can buy any IR extension cables in the market that are compatible to the definition of the IR sockets for the matrix if necessary for replacement use. However, IR cables longer than 2m (6-ft) may not work.

CONNECTION DIAGRAM



NOTICE

1. When adjusting the signal level on the receiver unit, please dial the rotary control switch from 7 to 0 and stop turning the rotary switch whenever the audio/video is playing normally. Inappropriate signal level setting may cause overpowering issue that would shorten the product life significantly!
2. If the DVI or HDMI device requires the EDID information, please use EDID Reader/Writer to retrieve and provide DVI or HDMI display EDID information.
3. All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz UTP cable and ASTRODESIGN Video Signal Generator VG-859C & VG-870B.
4. 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.
5. EIA/TIA-568-B termination (T568B) for Cat-5/5e/6 cables is recommended for better performance.
6. To reduce the interference among the unshielded twisted pairs of wires in Cat-5/5e/6 cable, one can use shielded STP cables to improve EMI problems, which is worsen in long transmission.
7. Because the quality of the CAT5/6 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.
8. 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.
9. The AV-GM07H3-S1 has been tested extensively and found that it doesn't require external power supply. If in rare situation you find it cannot work with the MA-5188, please use any +5V power adapter to plug in the power jack and see if it can work. If not, please contact your technical support for further service.
10. Additional IR remote controls and IR blaster cables can be purchased as optional accessories to control the HDMI sources located separately.

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-GM07H3-S1 HDMI & Full 3D support over CAT5 Receiver with IR Pass-through** 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-GM07H3-S1** features and specifications is subject to change without further notice.

Support

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