



HDMI Extender over Single CAT.X with Auto EDID Learning



P/N: AV-GM02T3-S1



Safety and Notice

The AV-GM02T3-S1 HDMI extender over single cat.X with Auto EDID Learning has been tested for conformity to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the AV-GM02T3-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-GM02T3-S1 HDMI extender over single cat.X with Auto EDID Learning boosts up your video/audio transmission distance up to 60m (200ft) in HDTV 1080i format and 40m (130ft) in HDTV 1080p format. AV-GM02T3-S1 also supports the most advanced 3D video format complaint with HDMI 1.4 specification and therefore guarantees the highest 3D video compatibility on the market. With only one cost effective Cat-5/5e/6 UTP cable, users can readily extend HDTV sources from DVD players, Blu-ray Disc player, PS3, PC, and any other kinds of sources compliant with TMDS standard to distant display monitors including HDMI/DVI supported TV sets or LCD PC monitors. With the state-of-the-art Silicon Image chipsets embedded, Deep Color video, DTS-HD or Dolby TrueHD audio, HDCP and HDMI compatibility are all further insured. This flexibility makes HDCP compliant DVD players or PS3 transmit utmost high quality video and audio over a great distance at the minimal cost.

The AV-GM02T3-S1 includes two units: transmitting (AV-GM02T3-S1[Tx]) and receiving (AV-GM02T3-S1[Rx]) units. The transmitting unit is used to capture the input HDMI/DVI signals and carry the signals over one cost effective Cat-5/5e/6 cable. The receiving unit is responsible for equalizing the HDMI multimedia data. The transmission range between the sending and receiving units can be up to 60m (200ft) under HD (720p/1080i) or 40m (130ft) under Full HD (1080p). With an 8-level equalization rotary control switch for adjusting the strength of the HDMI signal level on the receiving unit, users can get the optimal audio/video quality accordingly, and therefore optimize the transmission range between HDMI source and display. With the built-in auto EDID learning feature, the AV-GM02T3-S1 can automatically learn the EDID from the HDMI or DVI display connected to the receiving unit even with only one UTP/STP cable for HDMI transmission. The display's EDID then will be learned to the transmitting unit to let AV-GM02T3-S1 to request the source device to output HDMI signal at proper setting automatically according to the capability of the display.

Features

- HDMI 1.3 [3D] compliant
- Extend the transmission length up to 60m (200ft) from the HDMI sources under HD resolution (1080i or 720p at 24-bit color depth)
- Extend the transmission length up to 40m (130ft) from the HDMI sources under Full HD resolution (1080p at 24-bit color depth)
- Extend the transmission length up to 20m (65ft) from the HDMI sources under Full HD resolution (1080p at 36-bit color depth)
- HDCP 1.1 compliant
- Minimize the cable skew by adjustable 8-level equalization control
- Pure unaltered uncompressed 7.1ch digital HDMI over CAT5/6 cable transmission
- DTS-HD and Dolby True HD high bit rate audio support
- Allows cascading
- Wall mounting housing design for easy and robust installation
- Perfectly integrated with other HDMI over CAT5 series products

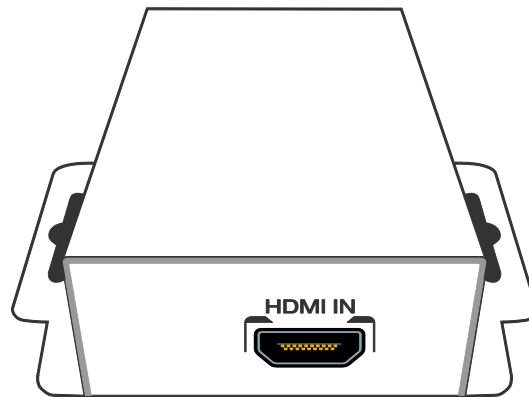


The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/100m) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.

Specifications & Package Contents

Model Name		AV-GM02T3-S1	
Technical		AV-GM02T3-S1[Tx]	AV-GM02T3-S1[Rx] aka CV-735
Role of usage		Transmitter [TX]	Receiver [RX]
HDMI compliance		High Speed HDMI-Deep Color&Full 3D support	
HDCP compliance		Yes	
Video bandwidth		Single-link 225MHz [6.75Gbps]	
Video support		480i / 480p / 720p / 1080i / 1080p60 up to 36-bit color	
HDMI transmission over LAN cable [24-bit]		Full HD [1080p] - 40m (130ft) [Cat-5e] / 50m (165ft) [Cat-6] HD [720p/1080i] - 50m (165ft) [Cat-5e] / 60m (200ft) [Cat-6]	
Audio support		Surround sound [up to 7.1ch] or stereo digital audio	
Signal level equalization		8-level digital control at Rx	
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		1x RJ-45	1x HDMI
HDMI output		Up to HDMI 1.3	
HDMI connector		Type A [19-pin female]	
RJ-45 connector		WE/SS 8P8C with 2 LED indicators	
Rotary control switch		None	Signal level
Mechanical		AV-GM02T3-S1	
		TX	RX
Housing		Metal enclosure	
Dimensions [L x W x H]	Model	[TX/RX] 93 x 60 x 25mm [3.7"x2.4"x1"]	
	Package	270 x 175 x 80mm [10.6" x 6.9" x 3.1"]	
	Carton	450 x 370 x 300mm [1'6" x 1'3" x 11.8"]	
Weight	Model	405g[14 oz]	
	Package	815g[1.8 lbs]	
Fixedness		Wall-mounting case with screws	
Power supply		5V 2A DC	
Power consumption		1 Watt [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-GM02T3-S1 [TX & RX] 2x 5V power supply unit 1x User Manual	

Front View — Transmitting Unit AV-GM02T3-S1[Tx]



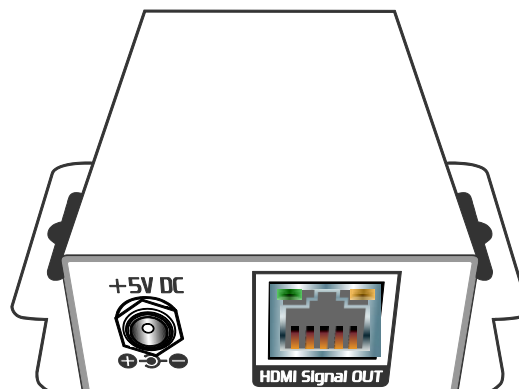
HDMI IN: Connects to a HDMI source with a HDMI male-male cable here



Note for Auto EDID (Extended Display Identification Data) learning

- 1. The first time you connect the AV-GM02T3-S1 to a HDMI display. The LED of RJ-45 connect will blink for up to 20 seconds to automatically learn the EDID of the HDMI display and dim when the learning procedure is done.*
- 2. The next time when you turn on the AV-GM02T3-S1 connected with the same HDMI display, the auto EDID learning process should be done within 5 seconds.*
- 3. Whenever you use the AV-GM02T3-S1 to connect to any other HDMI display different from previously connected one. The auto EDID learning procedure will take up to 20 seconds.*

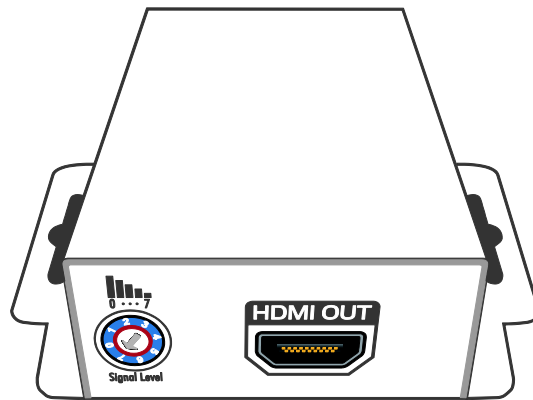
Rear View — Transmitting Unit AV-GM02T3-S1[Tx]



+5V DC: connect to 5V DC power supply unit.

HDMI Signal OUT: plug in a Cat-5/5e/6 cable that needs to be linked to the RJ-45 connector of the receiving unit AV-GM02T3-S1[Rx].

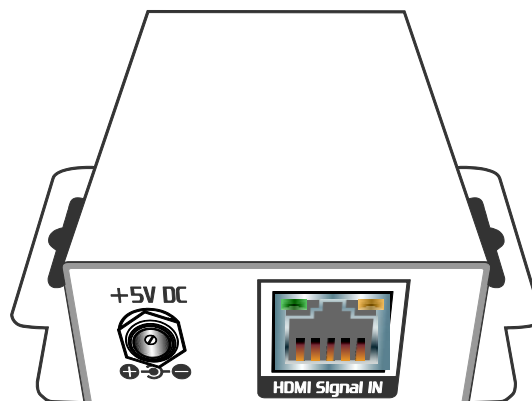
Front View — Receiving Unit AV-GM02T3-S1[Rx]



HDMI OUT: connect to a HDMI display with a HDMI male-male cable here.

Signal Level: 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!

Rear View — Receiving Unit AV-GM02T3-S1[Rx]



HDMI Signal IN: plug in a Cat-5/5e/6 cable that needs to be linked to the RJ-45 connector of the transmitting unit AV-GM02T3-S1[Tx].

+5V DC: connect to 5V DC power supply unit.

1. Connect the HDMI/DVI source (such as a Blu-ray Disc player) to the transmitting unit AV-GM02T3-S1[Tx].
2. Connect the HDMI/DVI display (such as a LCD TV) to the receiving unit AV-GM02T3-S1[Rx].
3. Connect one Cat-5/5e/6 cable between the transmitting and receiving units.
4. Make sure this Cat-5/5e/6 cable is tightly connected and not loose.
5. Plug in 5V DC power supply unit to the power jack of the receiving unit AV-GM02T3-S1[Rx].
6. Plug in 5V DC power supply unit to the power jack of the transmitting unit AV-GM02T3-S1[Tx].
7. Wait for up to 20 seconds for auto EDID learning procedure to be done. System setup is complete.
8. **If you see flickering or blinking image on the display, please adjust the rotary control switch to improve the cable skew. 0 stands for the strongest HDMI signal level for longest possible transmission length while 7 stands for the weakest HDMI signal level for short transmission length. 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!**

1. All HDMI over CAT5 transmission distances are measured using Belden 1583A Cat-5e 125MHz UTP cable and ASTRODESIGN Video Signal Generator VG-859C. The transmission distance is defined as the distance between the transmitting unit (TX) and the receiving unit (RX).
2. 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.
3. EIA/TIA-568-B termination (T568B) for Cat-5/5e/6 cables is recommended for better performance.
4. 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.
5. Because the quality of the Cat-5/5e/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.
6. 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.



Limited Warranty

The SELLER warrants the **AV-GM02T3-S1 HDMI extender over single cat.X with Auto EDID Learning** 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 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-GM02T3-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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