



RS-232 over CAT5 Extender



P/N: AV-GM03K3-S1



Safety and Notice

The **AV-GM03K3-S1** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the AV-GM03K3-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.

INTRODUCTION

With only one CAT-5e cable, the CV-87 series lets you extend RS-232 signal to cover the distance up to 1,000m (1,100 yards). The devices are composed of a transmitter and a receiver. The transmitter is installed near the serial signal source, and the receiver is placed near the destined device. For AV-GM03K3-S1, the RX and TX relationship between source and destination units are adjustable through the settings of DIP switches. After finishing the setup, the serial connection has a fixed communication channel between local and remote sites. For the receiver, the same source unit as transmitter, but on the receiving side, the receivers can be cascaded up to 32 units. This structure allows users to control tens of remote units through single Cat-5 cable. Typical applications include security alarm system, POS system, dumb terminal, etc.

FEATURES

- Sends RS-232 data up to 1,000m (1,100 yds)
- Real time pure hardware solution
- Extra RJ-45 for cascading
- Compact size
- Transmitter offers cascading ability; the remote units can be cascaded up to 32 devices

PACKAGE CONTENTS

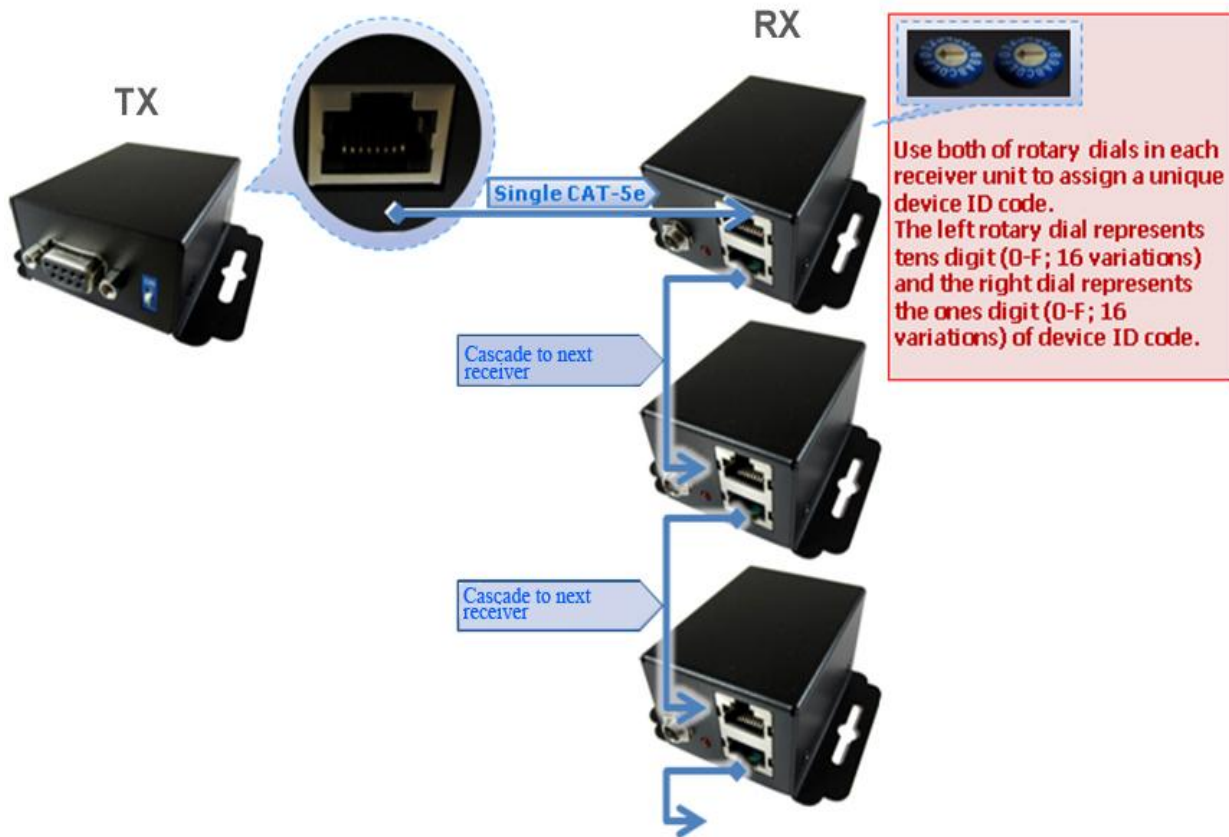
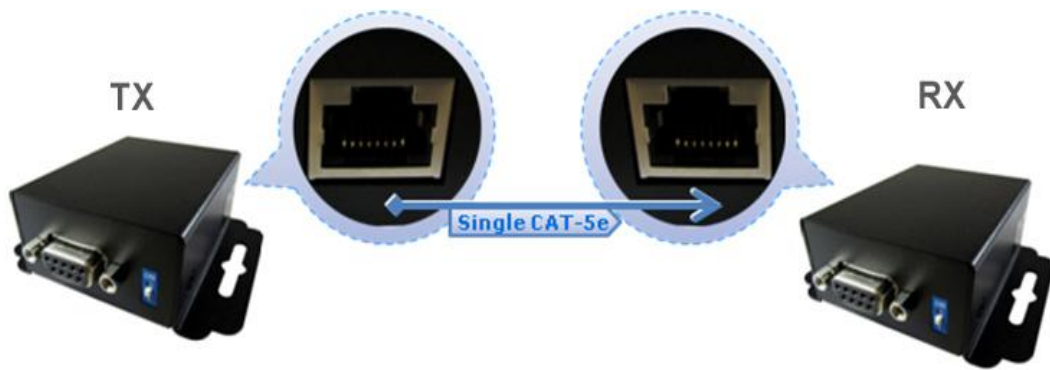
- 1x AV-GM03K3-S1 [TX & RX]
- 2x 5V power adapter
- 1x User Manual

SPECIFICATIONS

Model Name	AV-GM03K3-S1 (TX)		AV-GM03K3-S1 (RX)	
Technical	TX	RX	TX	RX
Role of usage	Transmitter [TX]	Receiver [RX]	Transmitter [TX]	Receiver [RX]
Transmission length	Up to 1,000m (1,100yds) [CAT5e]			
Baud rate	Up to 57.6kbps in cascade mode			
Input	1x RS-232	1x RJ-45	1x RS-232	1x RJ-45
Output	1x RJ-45	1x RS-232	1x RJ-45	1x RS-232 1x RJ-45
RS-232 connector	DE-9 [9-pin D-sub female]			
RJ-45 connector	WE/SS 8P8C with 2 LED indicators			
DIP switch	1-pin DIP switch for master/slave connection mode			
Rotary control switch	None		8-level rotary switch	
Mechanical	TX		RX	
Housing	Metal case			
Dimensions [L x W x H]	Model	64 x 48 x 26mm [2.5" x 1.9" x 1"]	64 x 48 x 35mm [2.5" x 1.9" x 1.4"]	
	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	174g [6.1oz]	174g [6.1oz]	
	Package	750g [26.4oz]	750g [26.4oz]	
Fixedness	Wall-mounting case upon request			
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]			

Hardware Installation

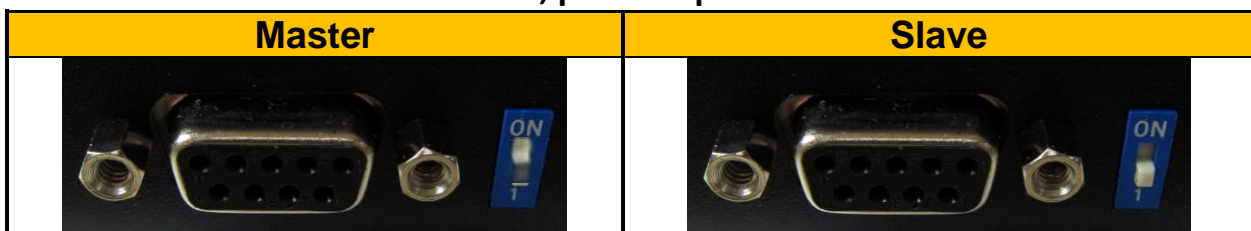
1. Connect your serial RS-232 source to the transmitting unit.
2. Connect your serial receiver to the receiving unit.
3. Connect your CAT-5/5e/6 cable between the transmitting and receiving units.
4. Make sure your CAT-5/5e/6 cable is tightly connected and not loose.
5. Plug in 5V DC power cord to the power jack of the receiving unit(s).
6. Plug in 5V DC power cord to the power jack of the transmitting unit.





DIP SWITCH

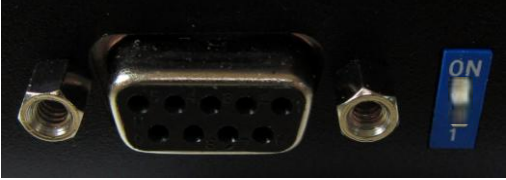
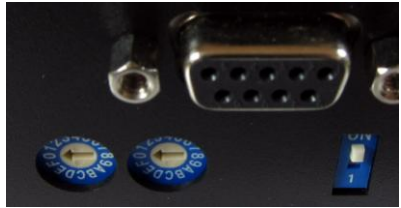

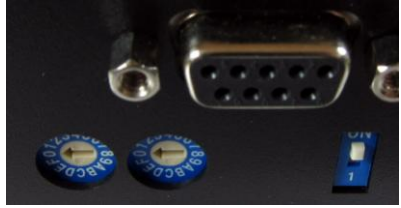
DIP SWITCH Position

AV-GM03K3-S1; point-to-point connection



1.) Move pin to "ON" position.	1.) Move pin to "OFF" position.
Master	MASTER
	
1.) Move pin to "ON" position.	1.) Move pin to "ON" position.

Point-to-multipoint connection

Master	Slave
	
1.) Move pin to "ON" position.	1.) Move pin to "OFF" position.
Slave	Slave
	
1.) Move pin to "OFF" position.	1.) Move pin to "OFF" position.

Serial Command

In order to control the remote units, AV-GM03K3-S1 offers a set of serial command to setup the baud rate, ID, and enable of the feedback from the remote units.

Table 1 — Serial Command Protocol

Byte #	Content	Description
Byte 0	0x7E	Header
Byte 1	0xB9	Header
Byte 2	0X5D	Header
Byte 3	“assigned ID shown as hex number”	Defined by rotary dial

NOTICE

1. AV-GM03K3-S1 is initially with the baud rate 9600 bps. Therefore, if users would like to establish a successful communication channel or change the baud rate correctly, **the initial communication rate should be 9600 bps**. Turning off and on receiving units will bring the baud rate back to 9600Kbps! While cascade bit is set to OFF, the baud rate of communication is solely dependent upon the capability of RS-232 sender and receiver on both sides.



Performance Guide for HDMI over LAN Cable Transmission

Performance rating		Type of LAN 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-GM03K3-S1 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 CV-87P/CV-87C features and specifications is subject to change without further notice.

Support

For more info or tech support

<http://www.siig.com/support>