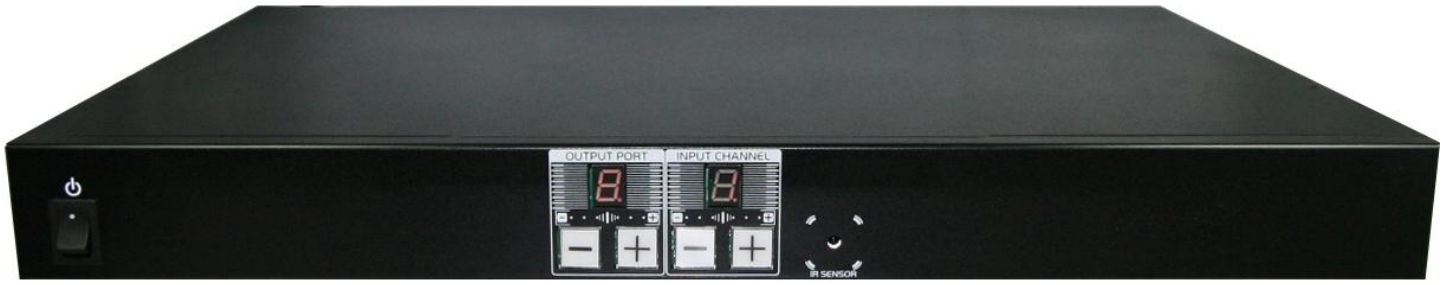
8x8 3Gbps HD/SDI Router



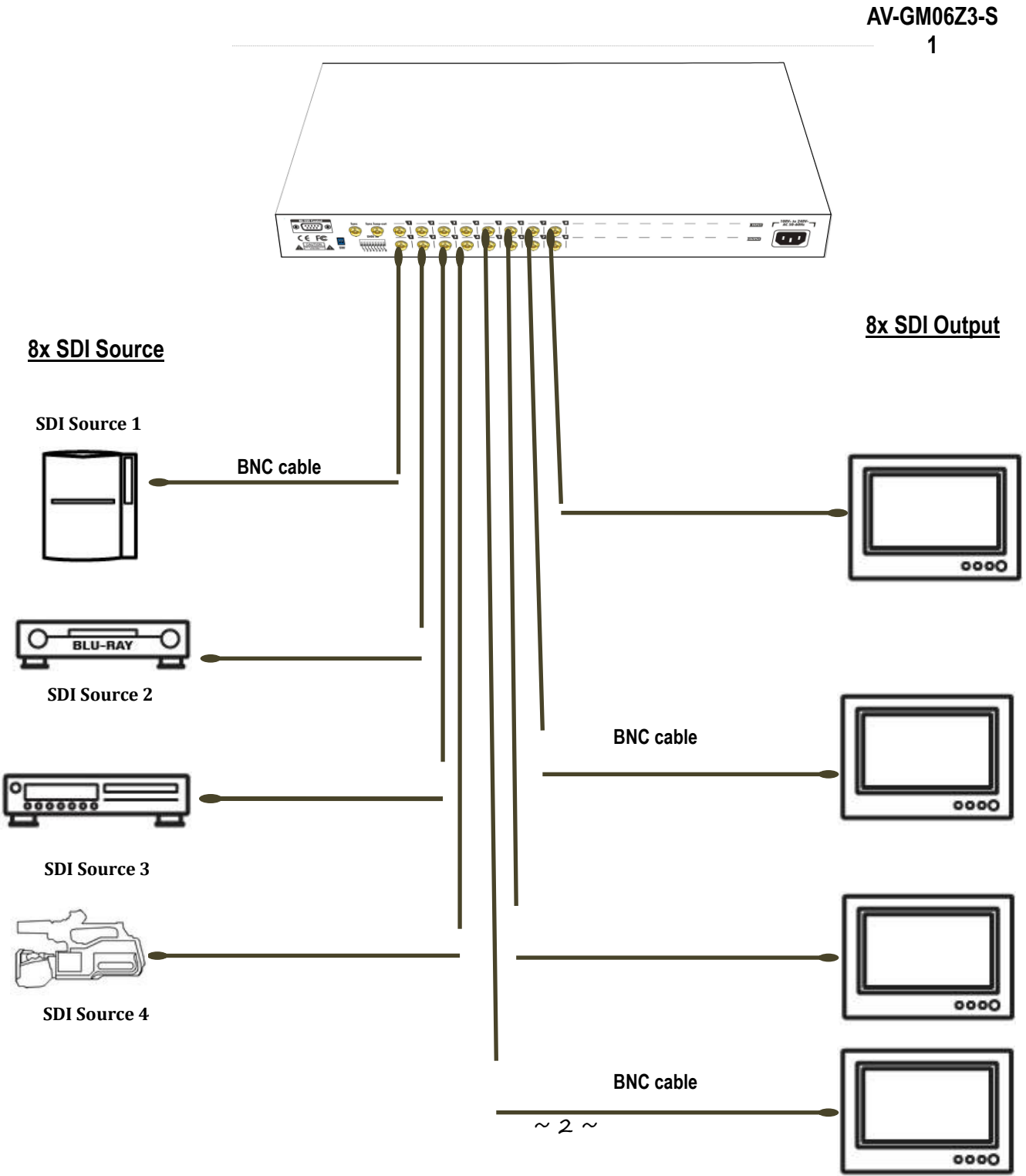
P/N: AV-GM06Z3-S1

Safety and Notice

The **AV-GM06Z3-S1 3Gbps HD/SDI Router** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the AV-GM06Z3-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-GM06Z3-S1 8x8 3Gbps HD/SDI Router provides the most flexible and cost effective solution in the market to route 3Gbps high definition video sources from any of the eight SDI sources to the any eight SDI receivers at the same time. This solution is well suited for use in home theater, conference room presentation systems, or other similar setting or application.



Features

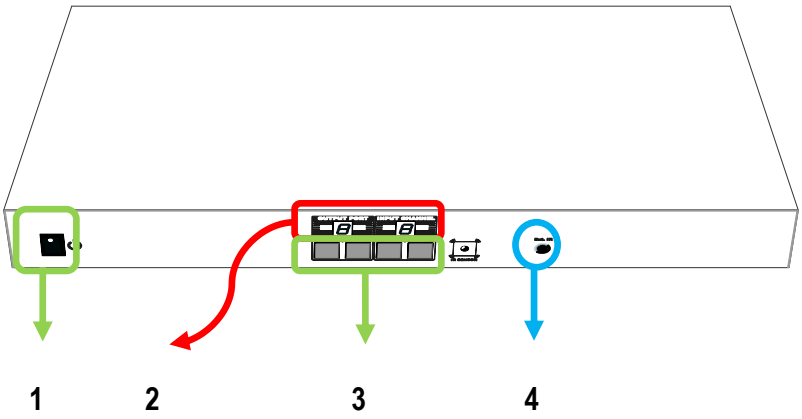
- SInputs meet SMPTE 259M, 292M, 424M,425M
- Synchronizes input/output (switch after vertical sync)
- Allows any SDI display to view any SDI source at any time
- Auto-Reclocking
- The router master can switch every output channels to any SDI inputs by push-in button, IR remote controller or RS-232 control
- Easy installation with rack-mounting and wall-mounting designs for master and receiver respectively

Specifications & Package Contents

Model Name		AV-GM06Z3-S1
Technical		AV-GM06Z3-S1
Role of usage		True 8x8 Router
Video bandwidth		2.97 & 2.97/1.001Gbps
Video support		[3G] 1080p@50/59.94/60 (4:2:2) [HD] 720p50/59.94/60, 1080p24/30, 1035i50/59.94/60, 1080i50/59.94/60 [SD] NTSC@59.94Hz, PAL@50Hz
Audio support		Yes
Cable equalization		[3G] up to 100m(300ft)/[HD-SDI] up to 150m (500ft) / [SD-SDI] up to 300m (1000ft)
Reclocking function		Yes
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω]
Input		8x SDI BNC 1x Synchronized BNC 1x RS-232
Output		8x SDI BNC 1x Synchronized BNC loop-out
SDI Input selection		Push button / IR remote / RS-232
IR remote control		Electro-optical characteristics: τ = 25° / Carrier frequency: 38kHz
RS-232 connector		DE-9 [9-pin D-sub female]
Mechanical		AV-GM06Z3-S1
Housing		Metal case
Dimensions (L x W x H)	Model	440 x 310 x 43mm [1'5" x 1' x 1.7"]
	Package	528 x 398x 130mm [1'9" x 1'4" x 5.1"]
	Carton	548x 422 x 282mm [1'10" x 1'5" x 11.1"]
Weight	Model	4051g [8.9 lbs]
	Package	4900g [10.8 lbs]
Fixedness		1U rack-mount with ears and wall hanging holes
Power supply		AC Power 100-240V
Power consumption		358888 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]
Package Contents		1x AV-GM06Z3-S1 2x Rack-mounting ears 1x IR remote

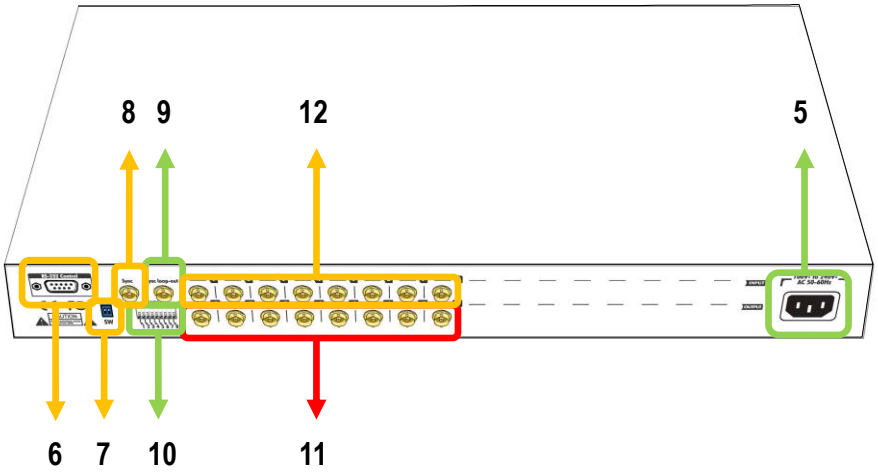
1. *USB or RS-232 control must be connected either one at a time. Connecting both types of cables may cause command confusion.*

Front Panel



1. **Power**: Power control
2. **Seven Segment LED Indicators**: Control display
3. **Front panel push buttons**: Used to input source and display channel number
4. **IR**: IR receiver

Rear Panel



5. **AC Power:** 100-240V
6. **RS-232**: RS-232 control port
7. **SW1**: firmware update
8. **Digital I/O**: Control Singal
9. **Sync In**: External sync input
10. **Sync Output** External sync loop out

11. **INPUT 1 –8**: SDI inputs
12. **OUPUT PORT 1–8**: SDI outputs

Main Firmware Update

DIP Switch Position		Description
Pin#1	Pin#2	
OFF [⬆]	OFF [⬆]	Normal Operation
ON [⬇]	ON [⬇]	For Firmware Update

Note

[6] *Factory default for* SW Main *is pin#1-*OFF[⬆]*, pin#2-*OFF[⬆]. PLEASE MAINTAIN THIS SETTING AT ANYTIME FOR REGULAR USE VIA RS-232 CONTROL!

[8] *Sequence for firmware update*

WARNING! [Firmware update only can be done via RS-232 port and connection to PC set at COM1)

1. *Power off the AV-GM06Z3-S1. Execute the firmware update program on your PC via COM1 port connection to the RS-232 port of the AV-GM06Z3-S1.*
2. *Set the pin#1 and pin#2 of* [SW Main] *at* ON[⬇] *for firmware update mode.*
4. *Power on the AV-GM06Z3-S1. The firmware update program should begin this update sequence automatically. If not, please check the RS-232 connection status between PC and MA-5188.*
5. *After the OK message shows up to indicate the firmware update sequence for designated Block is complete, please turn off the AV-GM06Z3-S1.*
7. *Set the* [SW Main] *switch position to Normal Operation Mode.*
8. *Power on the AV-GM06Z3-S1.*

AV-GM06Z3-S1

1. Connect all sources to SDI Inputs on the 8x8 SDI Router
2. Connect all outputs to SDI Receiver
3. Connect the AC power supply to the 8x8 SDI Router
4. Power on the 8x8 SDI Router AV-GM06Z3-S1

Source Side

Method A: Push-in Button

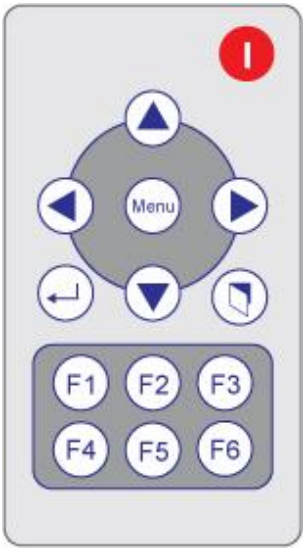
1. Use the switch button on output port to select which port to be changed.
   (+) increase (–) decrease
2. Push the switch button on Input channel. The source will be sequentially changed. After few seconds, the setting will be active.

Method B: IR Remote Control

a. Please press F1 to F6, Enter (↵), and Exit (⬔) button to enter IR control mode and decide which output port to be controlled (see the table below), and wait a few seconds for the output port LED to show the number of selected output port. Or you can use up (▲) and down (▼) button to enter IR control mode and select the output port in ascending and descending order respectively.

Note

F1	SDI output port #1
F2	SDI output port #2
F3	SDI output port #3
F4	SDI output port #4
F5	SDI output port #5
F6	SDI output port #6
Enter (↵)	SDI output port #7
Exit (⬔)	SDI output port #8
Up (▲)	Switch output port in ascending order
Down (▼)	Switch output port in descending order



b. Use left (◀) or right (▶) button to select input source as indicated by the LED display on the front panel for the input channel. The setting will be active once the channel switch command is set after a couple seconds.

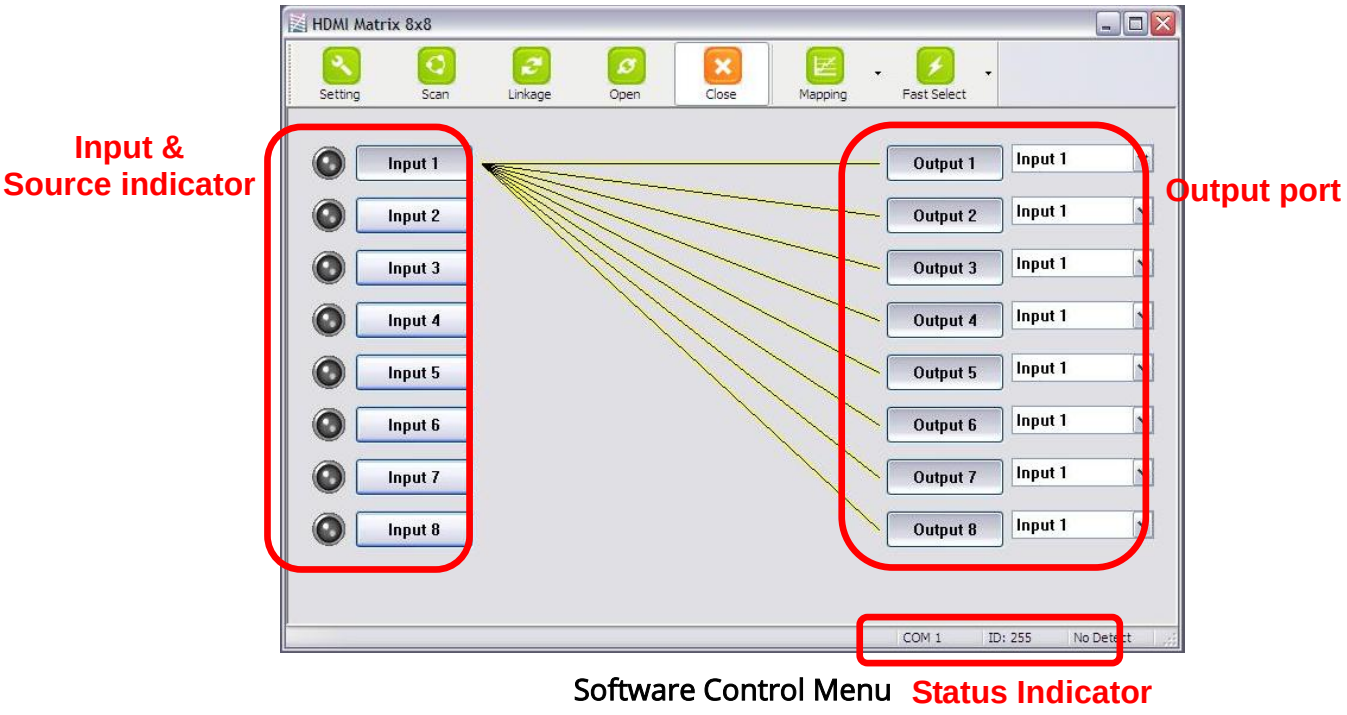
Note

Right (▶) button to switch input source in ascending order (1, 2, 3, 4, 5, 6, 7, 8, 1, ...)

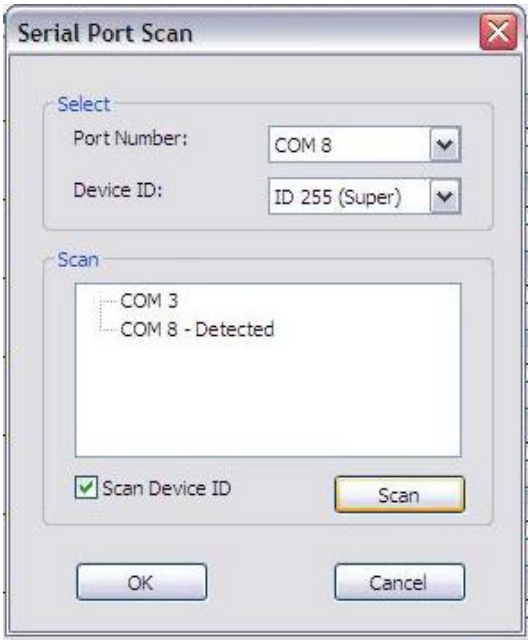
Left (◀) button to switch input source in descending order (1, 8, 7, 6, 5, 4, 3, 2, 1, ...)

Display Side

Method A: Software Control through RS-232



1.Scan button:



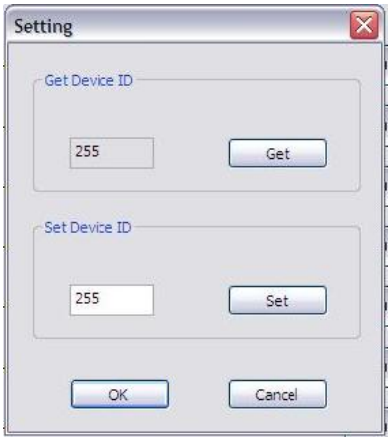
Serial Port Scan:

Press **Scan** button, the machine will scan the all com port and show them.

Select the RS232 serial port connected to the machine. And set device ID 255 is for all device.

Only the same device id or 255 can get the command you sent.
Press **OK**. Get the new status from the machine you select.

2. **Setting button:**



Press **Get** button to read back device ID.
Press **Set** button to write device ID.

3. **Linkage button:**

Press **Linkage** button to read back all status.

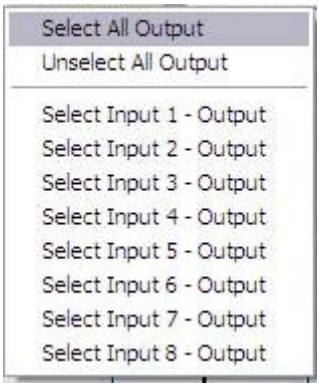
4. **Open/Close button:**

Press this button to close or open COM port.

5. **Mapping button:**

Select All Output:

Select "set all output", then select the source on main menu. You can quickly set all output to the same source.



Unselect All Output:

Release output selection.

Select Input1~8-Output:

Select Input Source. Then select the output port icon.

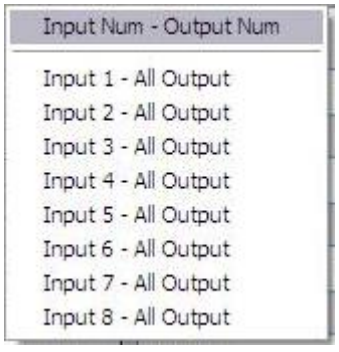
For example:

Select input source 1. Then select output port one and two.
The video and audio will be send to port one and two.

6. **Fast Select button:**

Press **Fast select** button. Quick setting.

Input one ➡ Output Port one
Input two ➡Output Port two
.....



Press Fast select pull down menu.
Select Input Num-Output Num

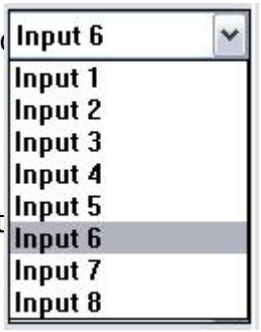
Input source #1 ➡ Output port #1
Input source #2 ➡ Output port #2
.....

Select Input* - All Output

Send the same source to all output.

7. Output Port:

Pull down menu and select which source to be sent to this output p



One by one setting

On main menu screen.

First select input source. Then select the output ports which you want to send the video and audio from this source. When you select the input source, the source will change to gray. When you select the output port one by one, the selected output port will change to gray. The linking line will change to yellow.

Group setting

First select output ports one by one. Then select the input source. The selected output ports change the setting at the same time.

By using Terminal:

Baud rate: 9600
Data length: 8bit
Parity check: No
Stop bit: 1

Command Set:

COMMAND	ACTION	COMMAND	ACTION	COMMAND	ACTION
ST	System Status*	C5	Output C select Input5	F3	Output F select Input3
VR	Firmware Version	C6	Output C select Input6	F4	Output F select Input4
A1	Output A select Input1	C7	Output C select Input7	F5	Output F select Input5
A2	Output A select Input2	C8	Output C select Input8	F6	Output F select Input6
A3	Output A select Input3	D1	Output D select Input1	F7	Output F select Input7
A4	Output A select Input4	D2	Output D select Input2	F8	Output F select Input8
A5	Output A select Input5	D3	Output D select Input3	G1	Output G select Input1
A6	Output A select Input6	D4	Output D select Input4	G2	Output G select Input2
A7	Output A select Input7	D5	Output D select Input5	G3	Output G select Input3
A8	Output A select Input8	D6	Output D select Input6	G4	Output G select Input4
B1	Output B select Input1	D7	Output D select Input7	G5	Output G select Input5
B2	Output B select Input2	D8	Output D select Input8	G6	Output G select Input6
B3	Output B select Input3	E1	Output E select Input1	G7	Output G select Input7
B4	Output B select Input4	E2	Output E select Input2	G8	Output G select Input8
B5	Output B select Input5	E3	Output E select Input3	H1	Output H select Input1
B6	Output B select Input6	E4	Output E select Input4	H2	Output H select Input2
B7	Output B select Input7	E5	Output E select Input5	H3	Output H select Input3
B8	Output B select Input8	E6	Output E select Input6	H4	Output H select Input4
C1	Output C select Input1	E7	Output E select Input7	H5	Output H select Input5
C2	Output C select Input2	E8	Output E select Input8	H6	Output H select Input6

C3	Output C select Input3	F1	Output F select Input1	H7	Output H select Input7
C4	Output C select Input4	F2	Output F select Input2	H8	Output H select Input8

Limited Warranty

The SELLER warrants the **AV-GM06Z3-S1 v1.2/v1.3 8x8 SDI Router** 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-GM06Z3-S1 v1.2/v1.3 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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