

Globalmediapro SMR-A4/7C/54/2C

16 by 4 / 12 by 4 / 8 by 4 / 4 by 4 3G-SDI Matrix

Operation Manual

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1. INTRODUCTION

The 3G-SDI Matrix series allows SD-SDI, HD-SDI and 3G-SDI signals to be shown on SDI displays while ensuring high bit-rates of 2.970 Gbps to give you fast signal transmission without signal loss. For professionals, this means that it is now easier to switch multiple 3G-SDI signals and split display of them on up to four SDI-equipped displays simultaneously. Additionally, these units can be controlled with the supplied IR remote, the front panel keys or RS-232 control functions.

2. APPLICATIONS

- Video broadcasting switching display
- Professional video program display
- Film studios program monitoring
- Video program switching display

3. PACKAGE CONTENTS

- 16 by 4/12 by 4/8 by 4/4 by 4 3G-SDI Matrix
- Remote Control (CR-101)
- 5 V/2.6 A DC Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

Source devices with SDI (SD/HD/3G) output, display devices with SDI Input and connected with SDI cables.

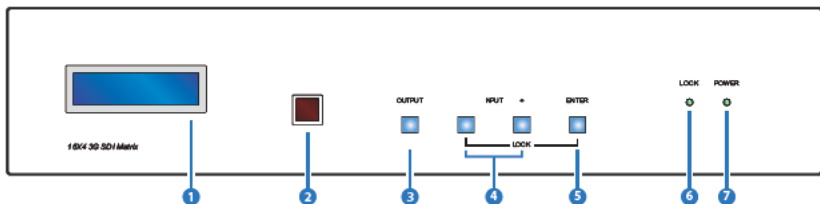
5. FEATURES

- 3G-SDI input sources can be selected and split or switched to four 3G-SDI displays simultaneously
- Operation at 2.970 Gbps, 2.970/1.001 Gbps, 1.485 Gbps, 1.485/1.001 Gbps and 270 Mbps
- Supports SMPTE 425M (Level A and Level B), SMPTE 424M, SMPTE 292M, SMPTE 259M-C
- Connect using other units to extend your signal over long distances
- Signal is equalized and re-clocked
- Supports signal input and output distances of up to 300 meters for SD signals, 200 meters for HD signals and 100 meters for 3G signals

Note: *Tested with Belden 1694A cable. Operating distances may vary if used with another type of cable.*

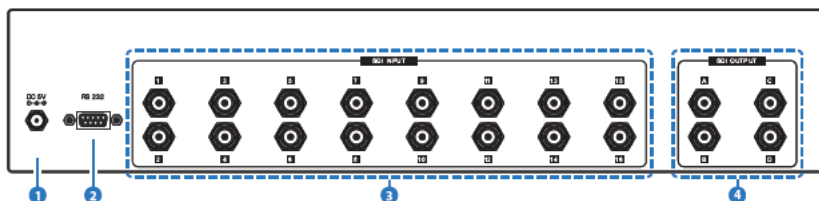
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



- 1 LCD Monitor:** This LCD monitor displays the configuration of the input and output selections. The upper line displays the outputs A, B, C, & D. The lower line displays each output's selected input.
- 2 IR Receiver:** Receives the IR signal from the remote control included in the package.
- 3 OUTPUT Button:** Press this button to select the output A~D the cursor will skip to the lower line of the LCD monitor then, select an input for highlighted output.
- 4 INPUT -/+ Button:** Press - or + button to select the input sources from 1~16, press ENTER to confirm the selection.
Note: Depending on different models, the selectable input will be displayed on the LCD monitor.
- 5 Lock Button:** Press both the '-' and 'ENTER' buttons together to lock all the function keys on the panel. To unlock, press both buttons again.
- 6 ENTER Button:** Press this button to confirm the selection. Press both the 'ENTER' key and '-' key together to lock all the keys on panel. To unlock, press both the 'ENTER' key and '-' key together again to release the locking system.
- 7 LOCK LED:** This LED will illuminate in green when the key lock is active.
- 8 POWER LED:** This LED will illuminate green when the device is switched ON. When in standby mode (Press the power key on the remote control) the LED will turn red.

6.2 Rear Panel

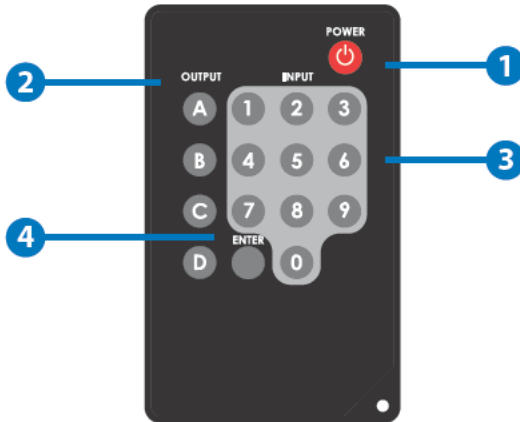


- 1 DC 5V:** Plug the 5V DC power supply into the unit and connect the adaptor to AC wall outlet.
- 2 RS-232:** Connect to a PC or laptop (with D-Sub 9 pin female cable) to control the device via RS-232 commands..
- 3 SDI INPUT:** Connect to the SDI source equipment such as video camera or SDI player. The amount of input slots will depend on the model.

MODEL	INPUTS	OUTPUTS
SMR-A4	16	4
SMR-7C	12	4
SMR-54	8	4
SMR-2C	4	4

- 4 SDI OUTPUT:** Connect to the SDI displays with an SDI cables for displaying the output. It can also be connected to another SDI converter/extender to extend the signal.

6.3 Remote Control



- 1 POWER:** Press the button to power the unit on/off.
- 2 OUTPUT:** Press an output port from A~D first then select an input number and press enter to confirm the selection.
- 3 INPUT:** Press the number keys to select the desired input source from 01~16 after selecting the output then press enter to confirm the selection.

Note: selectable inputs are dependant on the controlling device.

- 4 ENTER:** Press this button to confirm each input/output selection.

6.4 RS-232 Pin Assignment

Pins definition of modem cable

SMR-A4/7C/54/2C			Remote Controller	
PIN	Definition		PIN	Definition
1	NC		1	NC
2	TxD		2	RxD
3	RxD		3	TxD
4	NC	→	4	NC
5	GND	←	5	GND
6	NC		6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Baud Rate: 19200bps

Data bit: 8-bit

Parity: None

Stop bit: 1-bit

Flow Control: None

6.5 RS-232 Commands

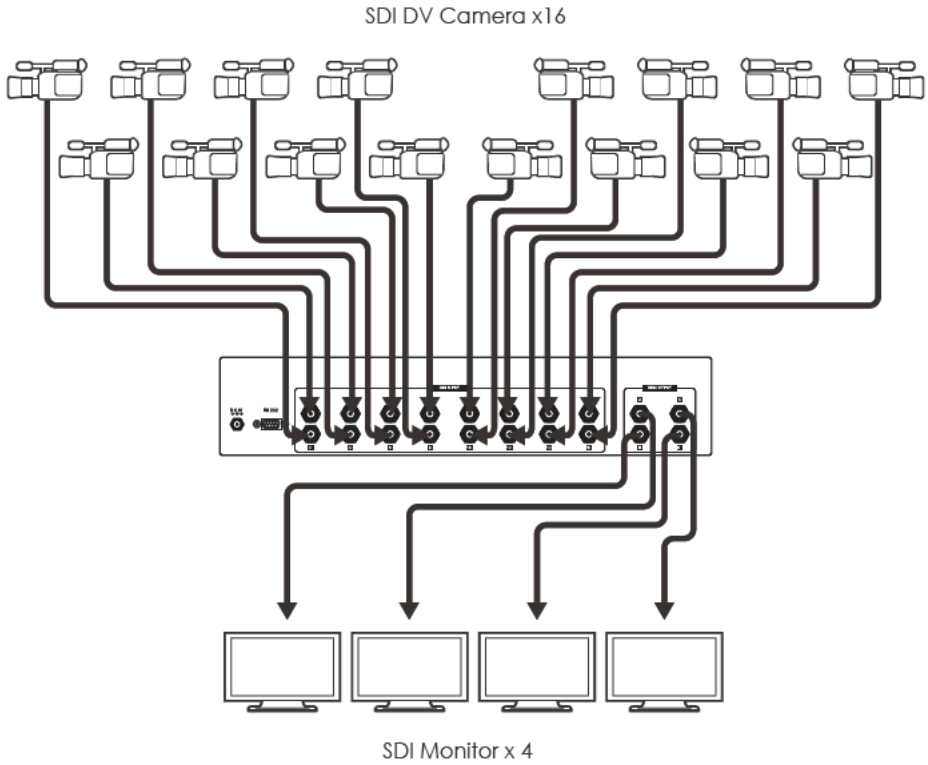
Command	Description
poweron	Power ON
poweroff	Power OFF
portx xx	x= a~d output, xx=01~16 input

For example, when SDI output A needs to be SDI input 2, the command would be porta 02.

Note: All the RS-232 command will be not executed unless followed with a carriage return.

Commands are not case-sensitive.

7. CONNECTION DIAGRAM



Note: The above diagram shows the 16 by 4 SDI matrix (SMR-A4).

8. SPECIFICATIONS

SMPTE Standard	425M Level A & B, 424M, 292M, 259M-C
SDI Transmission Rates	2.970 Gbps and 2.970/1.001 Gbps, 1.485Gbps, 1.485/1.001 Gbps and 270 Mbps
Input Ports	16/12/8/4×BNC (SD/HD/3G-SDI)
Output Ports	4×BNC (SD/HD/3G-SDI)
SDI Timing Support	SD-SDI: SMPTE 259M-C, 270 Mbit/s HD-SDI: SMPTE 292M, 1.485 & 1.485/1.001 Gbit/s 3G-SDI: SMPTE 424M/425M-AB, 2.970 & 2.970/1.001 Gbit/s
ESD Protection	Human-body Model: ± 8 kV (air-gap discharge) ± 4 kV (contact discharge)
SDI Cable Distance	3G-SDI up to 100m (BELDEN 1694A) HD-SDI up to 200m (BELDEN 1694A) SD-SDI up to 300m (BELDEN 1694A)
Power Supply	5 V DC/2.6 A (US/EU standards, CE/FCC/ UL certified)
Dimensions	436 mm (W)×132 mm (D)×93mm (H)
Weight	2476g (164), 2420g (124), 2380g (84), 2340g (44)
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	0 °C~40 °C/32 °F~104 °F
Storage Temperature	-20 °C~60 °C/-4 °F~104 °F
Relative Humidity	20~90 % RH (non-condensing)
Power Consumption	8.5 W (164), 7.5 W (124), 6.5 W(84), 5.5 W (44)

9. ACRONYMS

ACRONYM	COMPLETE TERM
3G	Bandwidth 2.97Gbit/s \approx 3G
BNC	Bayonet Neill-Concelman
SDI	Serial Digital Interface