



PRO-3GSDI44

3G-SDI 4 to 4 Switching

Distribution Amplifier

OPERATION MANUAL



• **Safety Precautions**

Please read all instructions before attempting to unpack or install or operate this equipment, and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through module openings or empty slots, as you may damage parts.
- Do not attach the power supply cabling to building surfaces.
- Do not allow anything to rest on the power cabling or allow it to be abused by persons walking on it.
- To protect the equipment from overheating, do not block the slots and openings in the module housing that provide ventilation.

• **Revision History**

<i>Version No</i>	<i>Date</i>	<i>Summary of Change</i>
<i>VR0</i>	<i>20110103</i>	<i>Preliminary Release</i>

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1. Introduction

The 3G-SDI 4 by 4 Switcher allows SD-SDI, HD-SDI and 3G-SDI signals to be shown on SDI display while ensuring high bit rates of 2.970 Gbit/s to give you fast signal transmission without signal loss. For professionals this means that it is now easier to switch four 3G-SDI signals and split it up to four SDI signal outputs.

2. Applications

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

3. Package Contents

- 3G-SDI 4 by 4 Switcher
- Remote Control (CR-23)
- 5V/2.6A DC power adaptor
- Operation Manual

4. System Requirements

Input connects with SDI sources and output connects with SDI displays, all input/output with SDI cables.

5. Features

- Four 3G-SDI input sources can selected as the source and split to four 3G-SDI displays simultaneously
- Operation at 2.970Gb/s, 2.970/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s
- Supports SMPTE 425M (Level A and Level B), SMPTE 424M, SMPTE 292M, SMPTE 259M-C
- Provides the Equalized and re-clocked transmission
- Control by RS-232, IR Remote and on panel buttons
- Supports signal input and output distance of up to 300M for SD signals, 200M for HD signals and 100M for 3G signals.

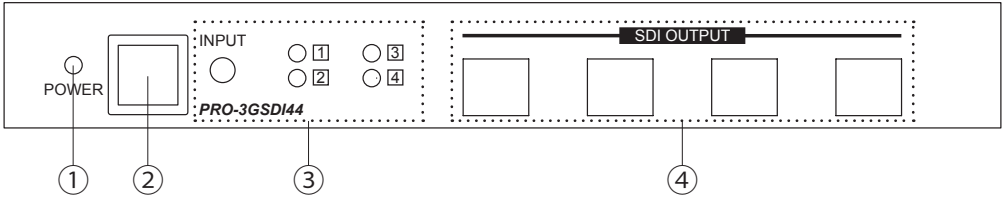
Note: Cable tested with Belden 1694A. Operating distances may vary if used with another type of cable.

6. Specifications

SMPT E Standard	425M Level A & B, 424M, 292M, 259M-C
SDI Transm it ion Rates	2.970 Gbit/s and 2.970/1.001 Gbit/s
Input/Output Ports	4/4 BNC (SD-SDI/HD-SDI/3G-SDI)
Support Timing	SD-SDI: 480i / 576i HD-SDI: 720p@50/60, 1080i@50/60, 1080p@24/50/60 3G-SDI: 1080p@50/60
Power Supply	5V DC/ 2.6A (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human body model: $\pm 8\text{kV}$ (air-gap discharge) $\pm 4\text{kV}$ (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)
Dimension (mm)	200 (W) x 138 (D) x 30 (H)
Weight (g)	900
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20 ~ 90% RH (Non-condensing)
Power Consumption (W)	5W

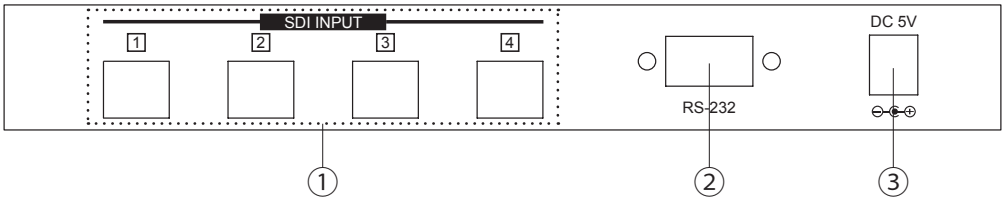
7. Operation Controls and Functions

7.1 Front Panel



- ① Power LED: This green LED will illuminate when the device is connected with power supply.
- ② IR receiver: This IR window receives IR signal from the remote control included in the package.
- ③ 3G-SDI Input select/Indicator 1~4: Press the input button sequentially to switch to your desired SDI input source, the LED will illuminate to indicate which input source is selected.
- ④ SDI OUTPUT: These slots are to connect to the SDI displays with an SDI cables for displaying images. Or it can be connect with another SDI converter/extender to extend the signal.

7.2 Rear Panel



- ① SDI INPUT: These slots are to connect to the SDI source equipments such as video camcorder or SDI player.
- ② RS-232: Connect with D-Sub 9pin cable from the PC/NB for RS-232 control.
- ③ DC 5V: Plug the 5V DC power supply into the unit and connect the adaptor to AC wall outlet. Green LED will illuminate when the power is connected.

8. RS-232 Protocols

8.1 Pin Assignment

Pins definition of modem cable

			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 bits

Parity: None

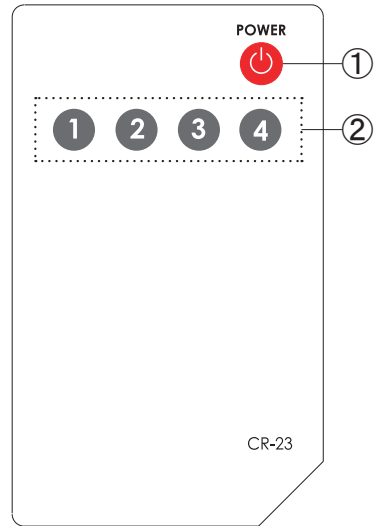
Stop bit: 1 bit

8.2 Commands

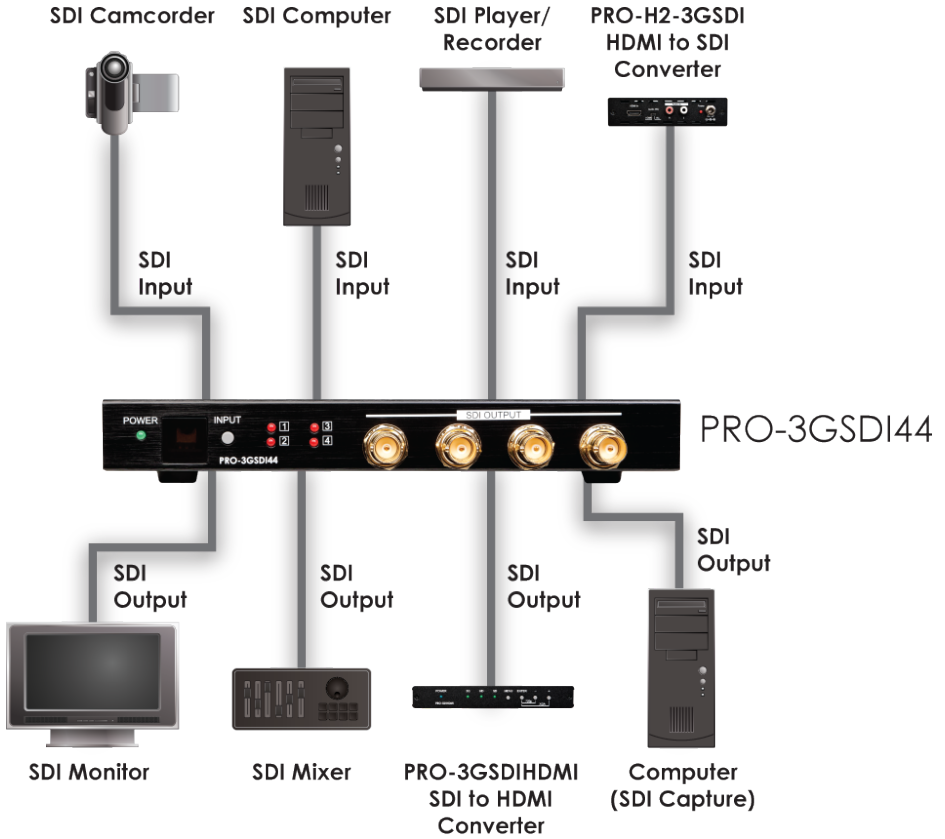
Command	Action
PC	Enter into /exit PC Command
power00	Power OFF
power01	Power ON
input01	Input selction 1
input02	Input selection 2
input03	Input selection3
input04	Input selection4

9. Remote Control

- ① Power: Press the button to turn on/off the unit.
- ② Direct input selector: Press 1, 2, 3 or 4 to select the desired input source.



10. Connection and Installation





Acronyms

Acronym

Complete Term

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