

# 3G SDI Splitter/Switch

## 4 Input – 2 Output ID# 696



**Operation Manual**

## Introduction

The 3G-SDI 4 by 2 Switcher/Splitter allows SD-SDI, HD-SDI and 3G-SDI signals to be switched from up to four SDI sources and split to two SDI outputs while ensuring high bit rates of 2.970 Gbit/s to give you high bandwidth signal transmission without signal loss over long distances and can be controlled via IR or RS-232.

## System Requirements

SDI source inputs (such as broadcast video cameras or recording device) and SDI output displays (such as TVs or monitors).

## Applications

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

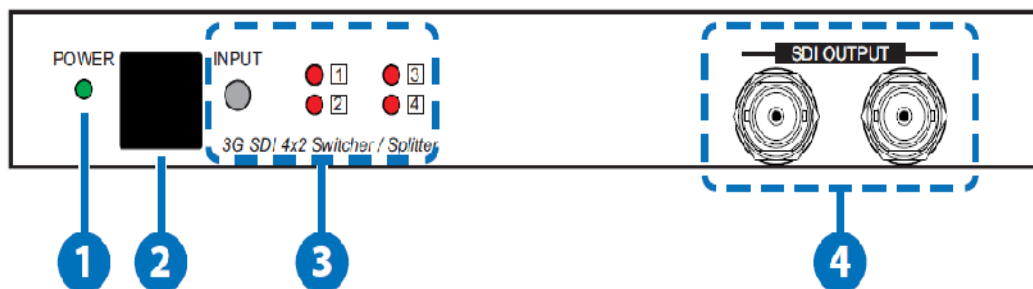
## Features

- Switch between four 3G-SDI input sources and split the output to two 3G-SDI displays simultaneously
- Operation at 2.970 Gb/s, 2.970/1.001 Gb/s, 1.485 Gb/s, 1.485/1.001 Gb/s and 270 Mb/s
- Supports SMPTE 425M (Level A and Level B), SMPTE 424M, SMPTE 292M, SMPTE 259M-C
- Provides equalized and re-clocked transmission
- Control via RS-232, IR remote control (supplied) and on-panel buttons
- Supports signal input and output distances of up to 300 m for SD signals, 200 m for HD signals and 100 m for 3G signals.

**Note:** Tested with Belden 1694A Cable. Operating distances may vary if used with cables of different specifications.

## Operation Controls and Functions

### Front panel



#### 1. Power LED

The LED will illuminate green when the device is connected to a power supply.

#### 2. IR receiver

IR receiver window receives IR commands from the supplied remote control.

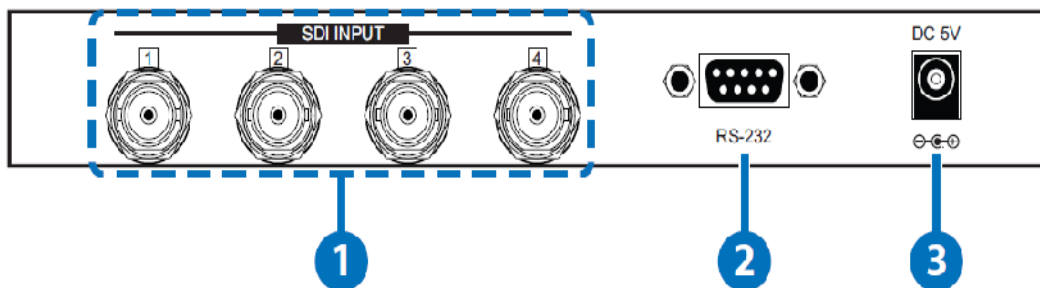
#### 3. SDI Input select/Indicator LEDs 1~4

Press the input button repeatedly to cycle through the SDI input sources, the red LED will illuminate to indicate which input source is currently selected. When the device is in 'Standby' mode, press this button to power on the device.

#### 4. SDI OUTPUT

Connect to up to two SDI TVs or monitors for mirrored display or to second splitter to cascade the SDI signal to multiple displays or devices.

### Rear Panel



#### 1. SDI INPUT

Connect up to four SDI source devices such as a video camcorders or SDI players. Accepts SD,HD or 3G SDI signals.

#### 2. RS-232

Connect to a PC/laptop or RS-232 enabled device with a D-Sub 9-pin cable to control the unit with RS-232 commands (refer to Section 6.3 'RS-232 Protocols') .

#### 3. DC 5V

Plug the 5V DC power supply into the unit and connect the adapter to AC wall outlet.

**Pin Assignment**

Pins definition of modem cable

| 3G-SDI 4 by 4 Switcher/Splitter |            |   | 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:** 19200 bps

**Data bit:** 8-bits

**Parity:** None

**Stop bit:** 1-bit

**Flow Control:** None

**Commands**

| Command  | Action                          |
|----------|---------------------------------|
| poweroff | Power OFF                       |
| poweron  | Power ON                        |
| input01  | Input selection 1               |
| input02  | Input selection 2               |
| input03  | Input selection 3               |
| input04  | Input selection 4               |
| ?input   | Inquire Current Input selection |

**Note:** All the RS-232 command will be not executed unless followed with a carriage return. Commands are Case-Sensitive.

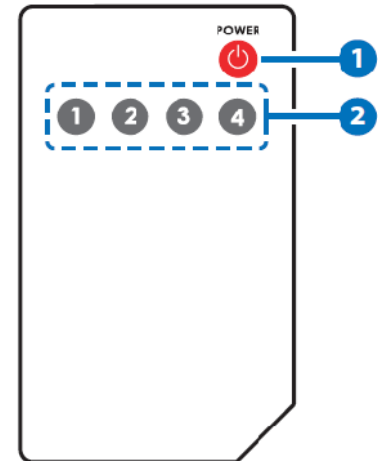
## Remote Control

### 1. Power

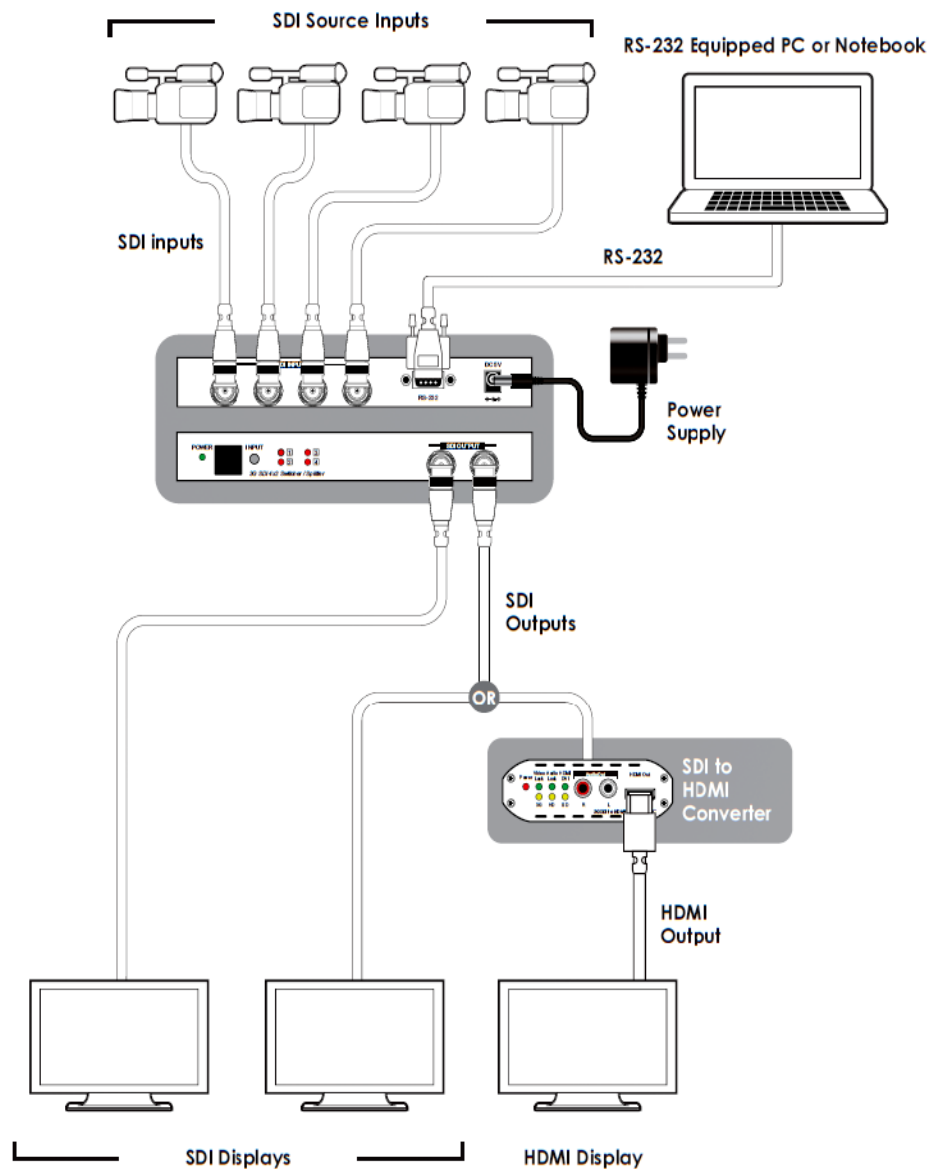
Press the button to turn the unit ON or to standby mode.

### 2. Direct Input Selector

Press 1, 2, 3 or 4 to select the required input source. When the device is in 'Standby', press any button to turn the device on.



## Installation



## Specifications

|                               |   |
|-------------------------------|---|
| <b>SMPTE Standard</b>         | 425M Level A & B, 424M, 292M, 259M-C  |
| <b>SDI Transmission Rates</b> | 2.970 Gbit/s and 2.970/1.001 Gbit/s   |
| <b>Input</b>                  | 4×BNC (SD/HD/3G-SDI)  |
| <b>Output</b>                 | 2×BNC (SD/HD/3G-SDI)  |
| <b>SDI Timing Support</b>     | <b>SD-SDI:</b><br>SMPTE 259M-C, 270 Mbit/s<br><b>HD-SDI:</b><br>SMPTE 292M, 1.485 & 1.485/1.001 Gbit/s<br><b>3G-SDI:</b><br>SMPTE 424M/425M-AB, 2.970 &<br>2.970/1.001 Gbit/s |
| <b>Power Supply</b>           | 5 V DC/2.6 A (US/EU standards, CE/FCC/UL certified)   |
| <b>ESD Protection</b>         | Human body model:<br>±8 kV (air-gap discharge)<br>±4 kV (contact discharge)   |
| <b>SDI Cable Distance</b>     | 3G-SDI up to 100 m (BELDEN 1694A)<br>HD-SDI up to 200 m (BELDEN 1694A)<br>SD-SDI up to 300 m (BELDEN 1694A)   |
| <b>Dimensions</b>             | 200 mm (W)×138 mm (D)×30 mm (H)   |
| <b>Weight</b>                 | 900 g   |
| <b>Chassis Material</b>       | Metal   |
| <b>Silkscreen Color</b>       | Black   |
| <b>Operating Temperature</b>  | 0 °C~40 °C/32 °F~104 °F   |
| <b>Storage Temperature</b>    | -20 °C~60 °C/-4 °F~140 °F   |
| <b>Relative Humidity</b>      | 20~90 % RH (Non-condensing)   |
| <b>Power Consumption</b>      | 5 W   |