

# SW4 12G HD-SDI

FOUR INPUT 12G-SDI SWITCHER

4K UHD



The Extron SW4 12G HD-SDI is a four-input, two-output 12G-SDI switcher that supports video resolutions up to 4K/60 and data rates up to 11.88 Gbps. It switches multi-rate SDI video, embedded audio, and other ancillary data between four source devices and delivers simultaneous output signals to a pair of SDI displays or sink devices. The SW4 12G HD-SDI switcher is ideal for integration into a variety of applications and environments.

- ▶ Automatically adapts to SMPTE and ITU digital video standards for SDI signals up to a 12G-SDI data rate
- ▶ Supports data rates from 270 Mbps to 11.88 Gbps
- ▶ Supports video resolutions up to 4K/60
- ▶ Dual buffered output
- ▶ Automatic input cable equalization
- ▶ Automatic output reclocking
- ▶ Passes ancillary data including HDR, embedded audio, closed captioning, and time code
- ▶ Video output muting
- ▶ Input rate LEDs
- ▶ Multiple control options, including RS-232, front panel, and auto-input switching
- ▶ Front panel USB configuration port
- ▶ Rack mountable, 1U half rack width metal enclosure
- ▶ Internal Extron Everlast™ power supply

**Extron**

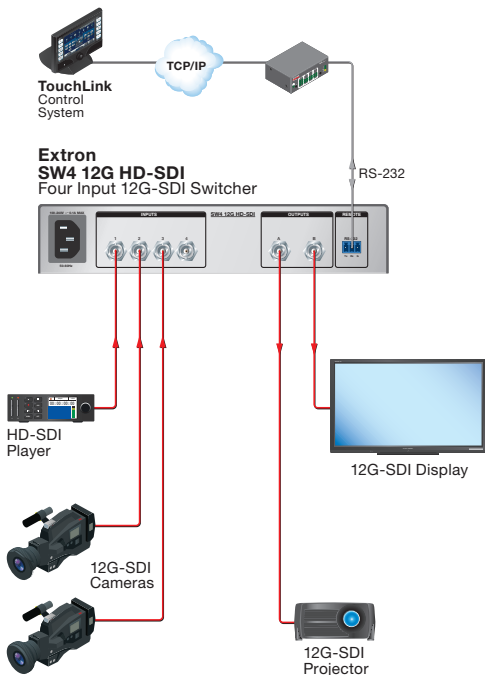
## DESCRIPTION

The Extron **SW4 12G HD-SDI** is a four-input, two-output 12G-SDI switcher. It switches multi-rate SDI video, embedded audio, and other ancillary data between four source devices and delivers simultaneous output signals to a pair of SDI displays or sink devices. The SW4 12G HD-SDI supports video resolutions up to 4K/60, HDR, and data rates up to 11.88 Gbps, including all common serial digital video data rates specified by SMPTE and ITU standards. To ensure signal integrity over long cable runs, the switcher features automatic input cable equalization and output reclocking. The SW4 12G HD-SDI offers RS-232, front panel, and auto-input switching control options, allowing integration into a variety of applications and environments.

The SW4 12G HD-SDI switcher provides automatic cable equalization on inputs to compensate for attenuation up to 230 feet (70 meters) for 12G-SDI transmissions, 787 feet (240 meters) for HD-SDI, and 984 feet (300 meters) for SDI. For quick identification of the selected digital video signal, LED indicators on the front panel provide visual confirmation of the detected data rate. Timing of the input video signal is reshaped and restored at each output, eliminating high frequency jitter. The switcher provides dual buffered outputs that simultaneously deliver the selected input video, along with up to 16 channels of embedded audio, closed captioning, and time code data to two displays. Switcher setup, configuration, and firmware updates are performed through the USB port that is conveniently located on the front panel.

The SW4 12G HD-SDI switcher is housed in a 1U, half rack width enclosure suitable for rack-mounted or mobile applications.

## APPLICATION DIAGRAM



## SPECIFICATIONS

### TRUE 4K SPECIFICATION

Max 4K Capabilities		
Resolution and Refresh Rate	Chroma Sampling	Max Bit Depth per Color
4096 x 2160 at 30 Hz	4:4:4	8 bit
3840 x 2160 at 30 Hz		
4096 x 2160 at 60 Hz	4:2:2	10 bit
3840 x 2160 at 60 Hz		
Frame rate <sup>1</sup>	24, 25, 30, 50, or 60 fps	
Chroma sampling <sup>1</sup>	4:4:4, 4:2:2, and 4:2:0	
Color bit depth <sup>1</sup>	8 or 10 bits per color	
Signal type	6G-SDI, 12G-SDI	
Max. video data rate	11.88 Gbps per 12G-SDI connection	
<b>NOTE:</b> <sup>1</sup> Subject to the maximum data rate limit. Use our calculator ( <a href="http://www.extron.com/product/videotools.aspx">http://www.extron.com/product/videotools.aspx</a> ) to determine video parameters supported by this data rate.		

### VIDEO

Signal type	SDI, HD-SDI, 3G-SDI, 6G-SDI, and 12G-SDI digital video
Resolution	480i, 576i, 720p, 1080i, 1080PsF, 1080p, 2K (2048x1080), 2840x2160, 4096x2160
Operation standards	SMPTE 259M, SMPTE 292M, SMPTE 424M, SMPTE ST-2081, SMPTE 2082, ITU-RBT.601, ITU-RBT.1120

### VIDEO INPUT

Number/signal type	4 single link SDI, HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI digital component video
Connectors	4 female BNC

### VIDEO OUTPUT

Number/signal type	2 single link SDI, HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI digital component video
Connectors	2 female BNC
Re-clocking	Automatic for 270 Mbps, 1.485 Gbps, 2.97 Gbps, 5.94 Gbps, and 11.88 Gbps; bypassed for other rates

### AUDIO

Audio channels	Supports up to 16 channels.
----------------	-----------------------------

### CONTROL/REMOTE — SWITCHER

Serial control port	1 RS-232, 3.5 mm, 5 pole captive screw connector
---------------------	--

### GENERAL

Power supply	Internal Input: 100 VAC to 240 VAC, 50-60 Hz
Enclosure dimensions	1.75" H x 8.75" W x 6.0" D (1U high, half rack wide) (44 mm H x 222 mm W x 152 mm D) (Depth excludes connectors.)
Product weight	1.6 lbs (0.7 kg)
Regulatory compliance	CE, C-tick, c-UL, UL, FCC Class A, ICES, KC-mark, RoHs, VCCI, and WEEE
Product warranty	3 years parts and labor
Everlast power supply warranty	7 years parts and labor

**NOTE:** All nominal levels are at  $\pm 10\%$ .

Model	Version Description	Part number
SW4 12G HD-SDI	Four Input 12G-SDI Switcher	60-1683-01

For complete specifications, please go to [www.extron.com](http://www.extron.com)  
Specifications are subject to change without notice.

### WORLDWIDE SALES OFFICES

Anaheim • Raleigh • Silicon Valley • Dallas • New York • Washington, DC • Toronto • Mexico City • Paris • London  
Frankfurt • Madrid • Stockholm • Amersfoort • Moscow • Dubai • Johannesburg • Tel Aviv • Sydney • Melbourne  
Bangalore • Mumbai • New Delhi • Singapore • Seoul • Shanghai • Beijing • Hong Kong • Tokyo

[www.extron.com](http://www.extron.com)