

# SW HD 4K Series

HDMI SWITCHERS



- ▶ Switches HDMI video and embedded multi-channel digital audio signals
- ▶ Supports computer and video resolutions up to 4K
- ▶ Supported HDMI specification features include data rates up to 10.2 Gbps, Deep Color up to 12-bit, 3D, Lip Sync, and HD lossless audio formats
- ▶ EDID Minder® automatically manages EDID communication between connected devices
- ▶ Automatic input cable equalization to 50 feet (15 meters) when used with Extron HDMI Pro Series cable
- ▶ Multiple control options including front panel, RS-232, IR, contact closure, and auto-input switching
- ▶ Easy setup and commissioning with Extron's PCS – Product Configuration Software



SW4 HD 4K



SW8 HD 4K

The Extron SW HD 4K Series are two, four, six, and eight-input switchers designed for signal switching between multiple HDMI source devices to one display. The switchers support video signals at resolutions up to 4K, and offer integrator-friendly features that ensure reliable operation in professional AV applications.



**Extron Electronics**  
INTERFACING, SWITCHING AND CONTROL

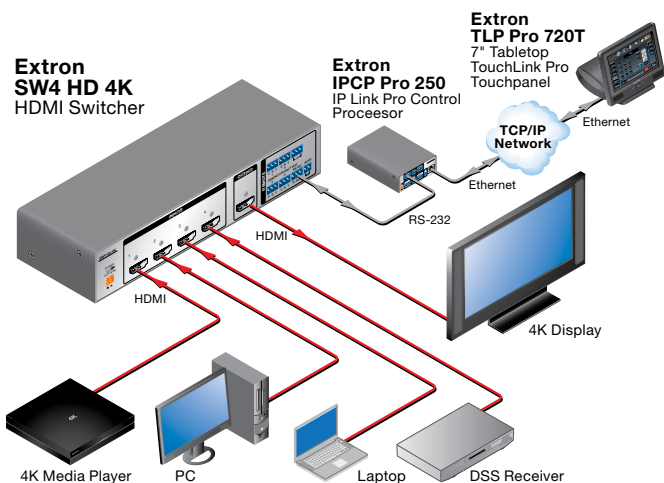
## DESCRIPTION

The Extron **SW HD 4K Series** are two, four, six, and eight-input switchers for HDMI signals. They are designed for video signal switching between multiple HDMI source devices to a single display. The switchers support video signals at resolutions up to 4K, as well as data rates up to 10.2 Gbps, 3D, Lip Sync, and HD lossless audio formats. All models feature EDID Minder®, which maintains continuous EDID communication with connected devices and ensures that the HDMI sources power up properly and maintain correct video output. The switchers provide automatic input cable equalization up to 50 feet (15 meters) on Extron HDMI Pro Series cable. The SW HD 4K Series offers front panel, RS-232, IR, contact closure, and auto-input switching control options for integration into various environments.

To enhance and simplify integration, the SW HD 4K Series provides integrator-friendly features, including automatic input cable equalization, automatic color bit depth management, indicators for monitoring and troubleshooting, as well as peripheral device power on each output. Automatic input cable equalization corrects for signal loss due to lengthy input cables, ensuring signal integrity up to 50 feet (15 meters), when used with Extron HDMI Pro Series cable. The SW HD 4K Series automatically adjusts color bit depth based on the display EDID, preventing color compatibility conflicts between source and display. Front panel LED indicators provide immediate visual confirmation of HDCP authentication and signal presence for each input and output. If HDCP-encrypted content is transmitted to a non-compliant display, a full-screen green signal provides immediate visual confirmation that protected content cannot be viewed on that display. The SW HD 4K Series also provides +5 VDC, 250 mA on the HDMI output for powering peripheral devices such as an Extron HD 4K 101 Plus cable equalizer.

The SW HD 4K Series two and four input models are housed in 1U, half rack width enclosures that are suitable for mounting in a rack or under a table. The six and eight input models are housed in 1U, full rack width enclosures and come standard with brackets for mounting in a rack.

## APPLICATION DIAGRAM



## KEY FEATURES

- ▶ **Supports computer and video resolutions up to 4K** – Resolutions up to 4096x2160/30 with 4:4:4 chroma sampling at 8 bits of color.
- ▶ **Supported HDMI specification features include data rates up to 10.2 Gbps, Deep Color up to 12-bit, 3D, Lip Sync, and HD lossless audio formats**
- ▶ **EDID Minder® automatically manages EDID communication between connected devices** – EDID Minder ensures that all sources power up properly and reliably output content for display.
- ▶ **Automatic input cable equalization to 50 feet (15 meters) when used with Extron HDMI Pro Series cable** – Actively conditions incoming HDMI signals to compensate for signal loss when using long HDMI cables, low quality HDMI cables, and source devices with poor HDMI signal output.
- ▶ **HDCP compliant** – Ensures display of content-protected media and interoperability with other HDCP-compliant devices.
- ▶ **User-selectable HDCP authorization** – Allows individual inputs to appear HDCP compliant or non-HDCP compliant to the connected source, which is beneficial if the source automatically encrypts all content when connected to an HDCP-compliant device. Protected material is not passed in non-HDCP mode.
- ▶ **HDCP Visual Confirmation provides a green signal when encrypted content is sent to a non-compliant display** – A full-screen green signal is sent when HDCP-encrypted content is transmitted to a non-HDCP compliant display, providing immediate visual confirmation that protected content cannot be viewed on the display.
- ▶ **HDCP authentication and signal presence LED indicators**
- ▶ **Automatic color bit depth management** – Automatically adjusts color bit depth based on the display EDID, preventing color compatibility conflicts between source and display.
- ▶ **HDMI to DVI Interface Format Correction** – Automatically reformats HDMI source signals for output to a DVI display.
- ▶ **Provides +5 VDC, 250 mA power on the output for external peripheral devices**
- ▶ **Front panel security lockout** – Prevents unauthorized use in non-secure environments. In lockout mode, a special button combination is required to operate the switcher from the panel.
- ▶ **Easy setup and commissioning with Extron's PCS – Product Configuration Software**
- ▶ **Multiple control options including front panel, RS-232, IR, contact closure, and auto-input switching**
- ▶ **Contact closure remote control with tally output** – Allows for remote selection of an input channel. +5 VDC is provided to light an LED to indicate the currently selected input.
- ▶ **Rack-mountable, 1U metal enclosure** – SW HD 4K Series two and four-input models feature a half rack width enclosure. The six and eight-input models feature a full rack width enclosure.
- ▶ **Worldwide power compatibility** – SW HD 4K Series two and four-input models include an energy-efficient external universal power supply. The six and eight-input models are equipped with a 100-240 VAC, 50/60 Hz, internal universal power supply.

# SPECIFICATIONS

## TRUE 4K SPECIFICATION

Max 4K Capabilities		
Resolution and Frame Rate	Chroma Sampling	Max Bit Depth per Color
4096 x 2160 at 30 Hz 3840 x 2160 at 30 Hz	4:4:4	8 bit
4096 x 2160 at 60 Hz 3840 x 2160 at 60 Hz	4:2:0	

<b>Frame Rate</b> <sup>1</sup>	24, 25, 30, 50, or 60 fps
<b>Chroma Sampling</b> <sup>1</sup>	4:4:4, 4:2:2, or 4:2:0
<b>Color Bit Depth</b> <sup>1</sup>	8 bits per color
<b>Signal Type</b>	HDMI / HDCP
<b>Max Video Data Rate</b>	10.2 Gbps (3.4 Gbps per color)
<b>NOTE:</b> Subject to the maximum data rate limit. Use our calculator at <a href="http://www.extron.com/4Kdatarate">www.extron.com/4Kdatarate</a> to determine video parameters supported by this data rate.	

VIDEO	
<b>Maximum data rate</b>	10.2 Gbps (3.4 Gbps per color)
<b>Maximum pixel clock</b>	300 MHz (600MHz for 4K with 4:2:0 chroma subsampling)
<b>Resolution</b>	Up to 1920 x 1200 or 1080p @ 60 Hz, 12-bit color 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling
<b>Formats</b>	RGB and YCbCr digital video
<b>Standards</b>	DVI 1.0, HDMI 1.4, HDCP 1.4

VIDEO INPUT	
<b>Number/signal type</b>	2, 4, 6, or 8 (depending on model) single link HDMI (or DVI-D*)
<b>Connectors</b>	2, 4, 6, or 8 female HDMI

VIDEO OUTPUT	
<b>Number/signal type</b>	1 single link HDMI (or DVI-D*)
<b>Connectors</b>	1 female HDMI
<b>NOTE:</b> *Appropriate HDMI to DVI-D cables or adapters are required for DVI signal input/output.	

COMMUNICATION – SWITCHER	
<b>Serial control port</b>	1 RS-232, 3.5 mm, 3 pole captive screw connector
Pin configuration	1 = Tx, 2 = Rx, 3 = GND
Baud rate and protocol	9600 baud, 8 data bits, 1 stop bit, no parity
<b>Auto-input switching</b>	(1) 3.5 mm, 2 pole captive screw connector
Pin configuration	Pins 1 and 2 of captive screw connector shorted together enable auto-input switching

<b>Contact closure</b>	
SW2 HD 4K	(2) 3.5 mm captive screw, 3 pole (shared with Tally output)
SW4 HD 4K	(4) 3.5 mm captive screw, 3 pole (shared with Tally output)
SW6 HD 4K	(6) 3.5 mm captive screw, 3 pole (shared with Tally output)
SW8 HD 4K	(8) 3.5 mm captive screw, 3 pole (shared with Tally output)

<b>Tally output</b>	
SW2 HD 4K	(2) 3.5 mm captive screw, 3 pole (shared with Contact closure)
SW4 HD 4K	(4) 3.5 mm captive screw, 3 pole (shared with Contact closure)
SW6 HD 4K	(6) 3.5 mm captive screw, 3 pole (shared with Contact closure)
SW8 HD 4K	(8) 3.5 mm captive screw, 3 pole (shared with Contact closure)

<b>Tally output power</b>	(1) 3.5 mm captive screw, 3 pole for +5 VDC, 0.2 A
---------------------------	--

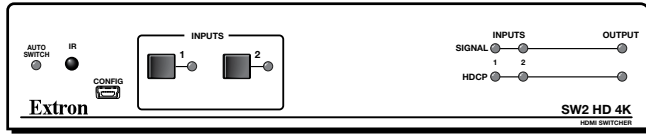
<b>IR controller module</b>	IR 102 remote control (optional) 30° maximum, 40 degrees off axis
-----------------------------	--

<b>Program control</b>	Extron Simple Instruction Set™ (SIS™)
------------------------	---------------------------------------

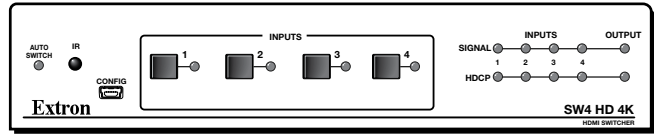
GENERAL		
<b>Power supply</b>		
SW2 HD 4K, SW4 HD 4K	External	
	Input: 100-240 VAC, 50-60 Hz	
	Output: 12 VDC, 1 A, 12 watts	
SW6 HD 4K, SW8 HD 4K	Internal	
	Input: 100-240 VAC, 50-60 Hz	
<b>Power consumption</b>		
SW2 HD 4K, SW4 HD 4K	Device	6 watts, 12 VDC
	Device and power supply	8 watts, 12 VDC
SW6 HD 4K, SW8 HD 4K		13.1 watts
<b>Temperature/humidity</b>		
	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing	
	Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing	
<b>Cooling</b>		
	Convection, no vents	
<b>Thermal dissipation</b>		
SW2 HD 4K, SW4 HD 4K	Device	19.8 BTU/hr
	Device and power supply	24.4 BTU/hr
SW6 HD 4K, SW8 HD 4K		43.6 BTU/hr
<b>Mounting</b>		
SW2 HD 4K, SW4 HD 4K	Rack mount	Yes, with optional 1U rack shelf
	Furniture mount	Yes, with optional under-desk mounting kit or through-desk mounting kit
SW6 HD 4K, SW8 HD 4K	Rack mount	Yes, with supplied mounting brackets
<b>Enclosure type</b>		
	Metal	
<b>Enclosure dimensions</b>		
SW2 HD 4K, SW4 HD 4K	1.75" H x 8.75" W x 3.0" D (1U high, half rack wide) (4.4 cm H x 22.2 cm W x 7.6 cm D) (Depth excludes connectors.)	
SW6 HD 4K, SW8 HD 4K	1.75" H x 17.5" W x 8.5" D (1U high, full rack wide) (4.4 cm H x 44.4 cm W x 21.6 cm D) (Depth excludes connectors.)	
<b>Product weight</b>		
SW2 HD 4K, SW4 HD 4K	0.5 lb (0.3 kg)	
SW6 HD 4K, SW8 HD 4K	2.5 lbs (1.1 kg)	
<b>Shipping weight</b>		
SW2 HD 4K, SW4 HD 4K	2 lbs (1 kg)	
SW6 HD 4K, SW8 HD 4K	5 lbs (3 kg)	
<b>Vibration</b>		
	ISTA 1A in carton (International Safe Transit Association)	
<b>Regulatory compliance</b>		
Safety	CE, c-UL, KC-mark, UL	
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI	
Environmental	Complies with appropriate requirements of RoHs and WEEE.	
<b>Warranty</b>		
	3 years parts and labor	
<b>NOTE:</b> All nominal levels are at ±10%.		
<b>Model</b>	<b>Version Description</b>	<b>Part number</b>
SW2 HD 4K	Two Input HDMI Switcher	60-1483-01
SW4 HD 4K	Four Input HDMI Switcher	60-1484-01
SW6 HD 4K	Six Input HDMI Switcher	60-1485-01
SW8 HD 4K	Eight Input HDMI Switcher	60-1486-01
<b>Optional Accessories</b>		
<b>Model</b>	<b>Version Description</b>	<b>Part number</b>
HD 4K 101 Plus	HDMI Cable Equalizer for 4K/60 Sources	60-1621-01
HDMI Pro Series	Premium High Speed, High Speed, and Standard HDMI Cables	26-650-xx
HDMI Ultra Series	Ultra Flexible Premium High Speed and High Speed HDMI Cables	26-663-xx
MBU 123	Low-Profile Mount Kit for 1/8, 1/4, and 1/2 Rack Width Products	70-212-01
MBU 149	Low-Profile Mount Kit for Full Rack Width, Four-Piece Enclosures	70-222-01

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

# PANEL DRAWINGS



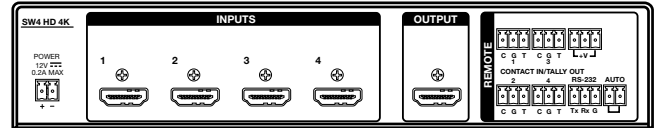
SW2 HD 4K - Front



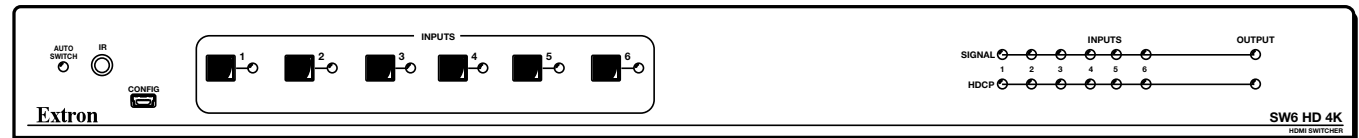
SW4 HD 4K - Front



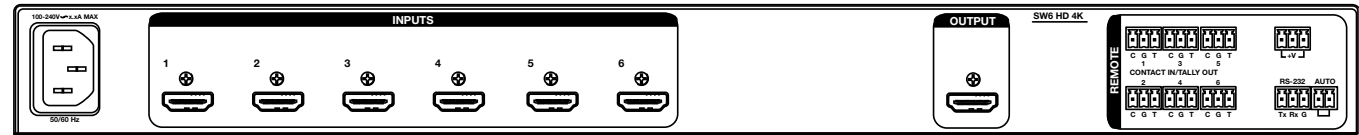
SW2 HD 4K - Back



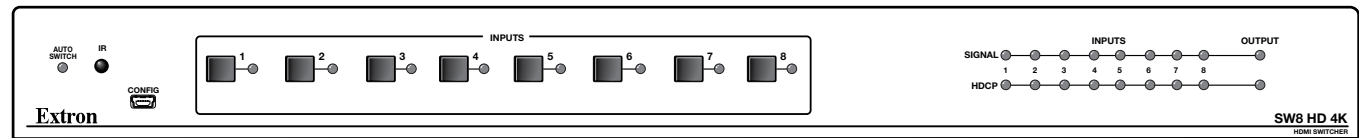
SW4 HD 4K - Back



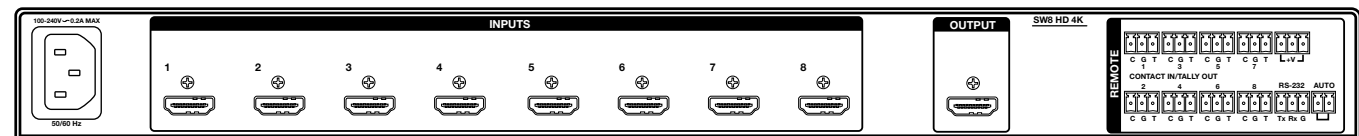
SW6 HD 4K - Front



SW6 HD 4K - Back



SW8 HD 4K - Front



SW8 HD 4K - Back

## WORLDWIDE SALES OFFICES

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

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