

# SW VGA Series

TWO, FOUR, AND SIX INPUT COMPUTER-VIDEO  
AND STEREO AUDIO SWITCHERS

- Two, four, and six input VGA models with and without stereo audio
- 350 MHz (-3dB) RGB bandwidth
- Input autoswitching capabilities
- Video inputs and outputs on 15-pin HD female connectors
- Active PC audio interfacing
- 9-pin contact closure remote control
- RS-232 control
- Rugged metal enclosure
- Rack-mountable
- Internal international power supply



The SW VGA Series are high performance switchers for computer-video and stereo audio signals. These units will accept up to six sources, routing the selected source to an attached data display device such as a desktop data monitor, presentation display, or data projector.



**Extron® Electronics**

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

## DESCRIPTION

The Extron SW VGA Series are active switchers utilizing 15-pin HD connectors. There are six switchers in the series. The **SW2 VGAr**s, **SW4 VGAr**s, and **SW6 VGAr**s are two, four, and six input, one output switchers that allow multiple VGA—UXGA computer inputs to be switched to one compatible display. The **SW2 VGA Ar**s, **SW4 VGA Ar**s, and **SW6 VGA Ar**s are also two, four, and six input, one output VGA switchers, but also include several audio features such as active PC audio interfacing which accepts unbalanced computer-generated stereo audio on 3.5 mm stereo mini jacks and outputs balanced line-level stereo audio on 3.5 mm captive screw connectors.

By using an Extron Mac/VGA Adapter, the switchers can switch Mac and Quadra computer signals. Each switcher can be controlled through a 9-pin contact closure remote control port. The 9-pin female D connector enables RS-232 control, as well as compatibility with the optional Extron KP 6 Keypad Remote Control and the optional Extron IR 102 universal remote kit.



Optional KP 6 Keypad Remote control

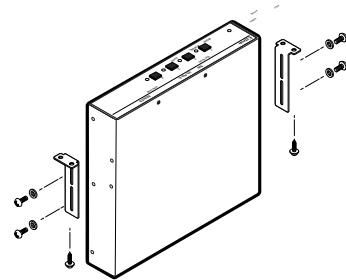
The SW VGA switchers are user-configurable for manual or autoswitching modes. Autoswitching allows any input of the switcher to be selected automatically when the switcher detects a sync signal. For example, a number of wall plate receptacles can be installed around a room, each routed to a different input of a switcher. As soon as an active VGA source is connected to the wall plate, the switcher automatically selects that input. The autoswitch function can be enabled or disabled via front panel buttons.



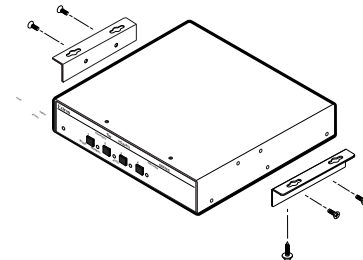
IR 102 Universal Remote Kit

## FEATURES

- **Inputs** – Two, four, and six input models are available.
- **Outputs** – All SW VGA switchers feature one buffered output on a female 15-pin HD for computer video. Audio versions have one 3.5 captive screw connector for either balanced or unbalanced stereo audio.
- **Autoswitching** – Allows any input to be selected automatically when the switcher detects a source, making it ideal for automatic routing and unattended operation.
- **15-pin connectivity** – All 15 pins on each input are passed through the switcher, including pins required for passing ID bit and DDC communications.
- **Active PC audio interfacing** – Unbalanced computer-generated stereo audio is input via 3.5 mm stereo mini jacks and output as balanced line-level stereo audio on 3.5 mm captive screw connectors.
- **RS-232 control** – A rear panel, RS-232 port enables control via a third party control system. Extron's Simple Instruction Set (SIS™) allows for quick and easy programming.
- **KP 6 Keypad Remote Control** – The optional KP 6 is a keypad remote control that switches the inputs on the SW VGA Series (four and six input models only). It comes with a 25-foot (8 meters) cable to connect the switcher's 9-pin remote control port to the KP 6.
- **IR control** – With the optional IR 102 kit, the SW VGA switchers can be easily controlled with an IR 102 handheld remote.
- **Rack-mountable** – Each model is housed in a 1U high, half rack width enclosure that will fit in an Extron 1U 19-inch Rack Shelf Kit.
- **Internal international power supply** – The 100-240VAC, 50/60Hz, autoswitchable, internal power supply of the SW VGA Series provides worldwide power compatibility.



Through-Desk Kit



Under-Desk Kit

Rack Mounting Options

## VIDEO

Gain.....	Unity
Bandwidth .....	350 MHz (-3dB)
Crosstalk .....	-68dB @ 10 MHz

## VIDEO INPUT

Number/signal type.....	2, 4, or 6 (depending on the model) VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs computer video
Connectors .....	2, 4, or 6 (depending on the model) 15-pin HD female
Minimum/maximum levels .....	Analog-0.3V to 1.5V p-p with no offset
Impedance.....	75 ohms
Horizontal frequency .....	15 kHz to 145 kHz
Vertical frequency .....	30 Hz to 170 Hz
Return loss .....	-42dB @ 5 MHz

## VIDEO OUTPUT

Number/signal type.....	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs computer video
Connectors .....	1 15-pin HD female
Minimum/maximum levels .....	0.3V to 1.5V p-p
Impedance.....	75 ohms
Return loss .....	-43dB @ 5 MHz
DC offset .....	±5mV maximum with input at 0 offset

## SYNC

Input type .....	RGBHV, RGBS, RGsB, RsGsBs
Output type.....	RGBHV, RGBS, RGsB, RsGsBs
Input level .....	0.5V to 5.0V p-p
Output level.....	TTL: 5.0V p-p (unterminated)
Input impedance .....	High Z
Output impedance .....	75 ohms
Max. propagation delay.....	30 ns
Max. rise/fall time .....	4.2 ns
Polarity .....	Positive or negative (follows input)

## AUDIO — SW 2/4/6 VGA ARS MODELS ONLY

Gain.....	Unbalanced +6dB, balanced +12dB
Frequency response .....	20 Hz to 20 kHz, ±0.05 dB
THD + Noise .....	0.3% @ 1 kHz, 0.3% @ 20 kHz at rated maximum output drive
S/N .....	>90dB at rated maximum output drive
Crosstalk .....	<-65dB @ 20 kHz, <-80dB @ 1 kHz or below 60 Hz
Stereo channel separation .....	>80dB @ 20 Hz to 20 kHz
CMRR .....	>75dB @ 20 Hz to 20 kHz

## AUDIO INPUT — SW 2/4/6 VGA ARS MODELS ONLY

Number/signal type.....	2, 4, or 6 (depending on the model) stereo, unbalanced
Connectors .....	2, 4, or 6 (depending on the model) 3.5 mm female stereo mini jacks; tip (L), ring (R), sleeve (Gnd)
Impedance.....	>10 kohms unbalanced, DC coupled
Nominal level.....	-10dBV (316mV)
Maximum level .....	+20dBu, (unbalanced) at the stated %THD+N

## AUDIO OUTPUT — SW 2/4/6 VGA ARS MODELS ONLY

Number/signal type.....	1 stereo, balanced/unbalanced
Connectors .....	1 3.5 mm captive screw connector, 5 pole
Impedance .....	50 ohms unbalanced, 100 ohms balanced
Nominal level.....	+4dBu (1.23V), balanced -4dBV (0.63V), unbalanced
Maximum level (Hi-Z) .....	>+20dBu, balanced or unbalanced at stated %THD+N
Maximum level (600 ohm) .....	>+15dBm, balanced or unbalanced at stated %THD+N

NOTE: 0dBu = 0.775 volts (RMS).

## CONTROL/REMOTE — SWITCHER

Serial control port .....	RS-232 9-pin female D connector (shared with contact closure)
Baud rate and protocol .....	9600, 8-bit, 1 stop bit, no parity
Serial control pin configurations ..	2 = TX, 3 = RX, 5 = GND
Contact closure .....	RS-232 9-pin female D connector (shared with RS-232)
Contact closure pin configurations .....	1 = input #1, 4 = input #2, 6 = input #3, 7 = input #4, 8 = input #5, 9 = input #6
Program control.....	Extron's control program for Windows® Extron's Simple Instruction Set™ - SIS™

## GENERAL

Power .....	100VAC to 240VAC, 50/60 Hz, 10 watts, internal, auto-switchable
Rack mount .....	Yes, with optional 1U rack shelf, part #60-190-01
Enclosure type .....	Metal
Enclosure dimensions.....	1.75" H x 8.75" W x 9.5" D (1U high, half rack width) 4.4 cm H x 22.2 cm W x 24.1 cm D (Depth excludes connectors.)
Product weight .....	2.5 lbs (0.5 kg)
Shipping weight .....	5 lbs (2.3 kg)
Listings .....	UL, CUL
Compliances .....	CE, FCC Class A, VCCI, AS/NZS, ICES

## Model Part Number

### VGA Only Models

SW2 VGArS.....	60-257-02
SW4 VGArS.....	60-258-02
SW6 VGArS.....	60-259-02

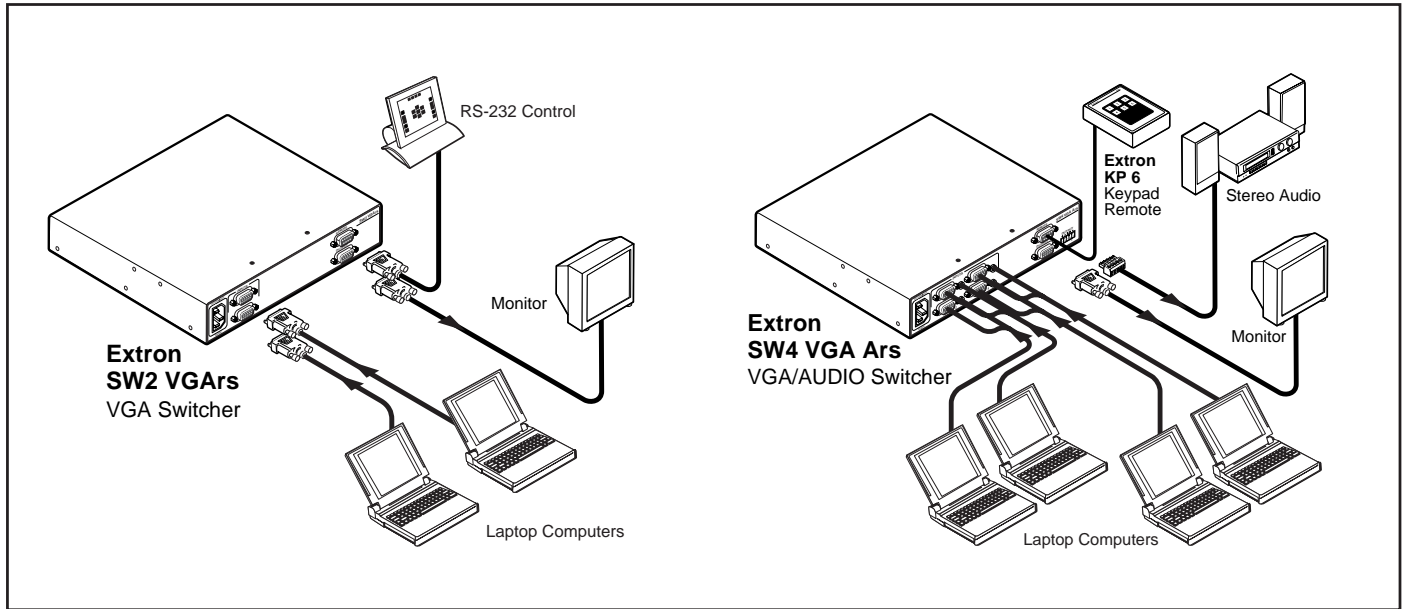
### VGA & Audio Models

SW2 VGA Ars .....	60-257-22
SW4 VGA Ars .....	60-258-22
SW6 VGA Ars .....	60-259-22
IR 102 Kit .....	70-224-01
KP 6 Keypad Remote Control.....	60-111-20

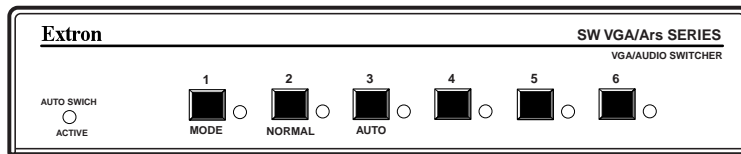
### Optional Accessories

Universal rack mount kit.....	60-190-01
Through-desk mount kit.....	70-077-02
Under-desk mount kit .....	70-077-01

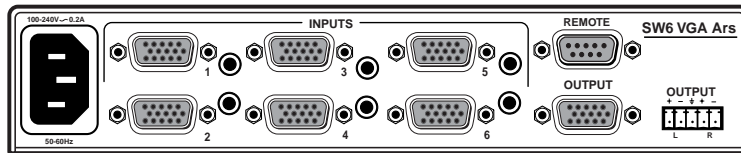
# APPLICATION DIAGRAMS



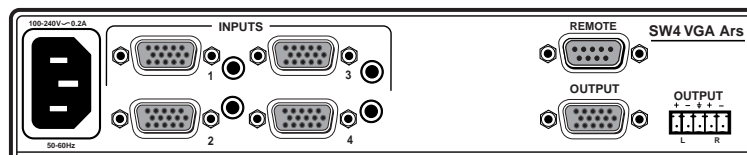
# PANEL DRAWINGS



SW6 VGA Ars (Front)



SW6 VGA Ars (Back)



SW4 VGA Ars (Back)



SW2 VGA Ars (Back)



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