

## 4 Port VGA Video Audio Switch with RS232 control

VS410RVGAA



\*actual product may vary from photos

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Manual Revision: 08/31/2016

## **FCC Compliance Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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# Introduction

This 4 Port VGA Video and Audio Switch lets you switch between four separate VGA signals, as well as the corresponding audio, for output to a single display or projector.

An ideal solution for situations where VGA and audio input ports are scarce, the VGA switch eliminates the hassle of having to swap out connections to your display and audio receiver, while letting you select the video source at the push of a button.

The VGA switch also features convenient remote switching capability, through either RS232 serial remote control or the included IR remote control - allowing you to switch between VGA input signals from a distance and in turn providing a convenient addition to presentation displays, trade shows, security environments and more.

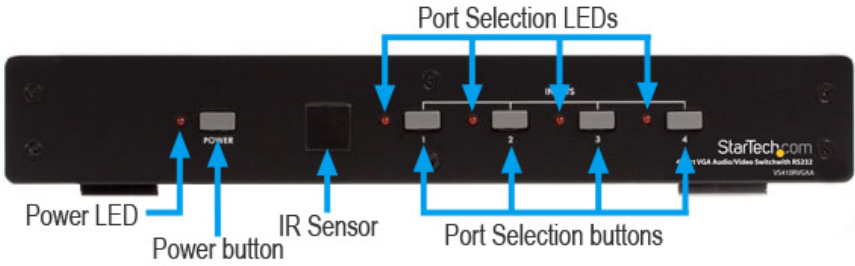
## Packaging Contents

- 1 x IR remote control
- 1 x 4x1 VGA switch
- 1 x 3 ft. VGA cable
- 1 x universal power adapter (US/UK/EU/ANZ)
- 1 x instruction manual

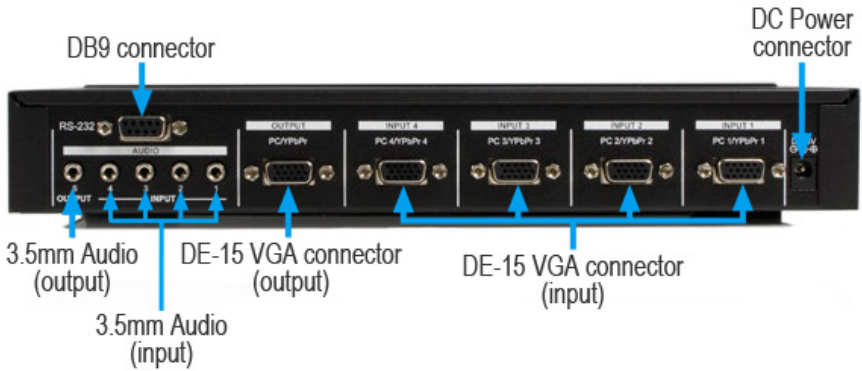
## System Requirements

- VGA enabled video source device (i.e. computer, DVR/PVR, etc.)
- VGA enabled display device (i.e. monitor, projector, etc.)
- Available AC electrical outlet

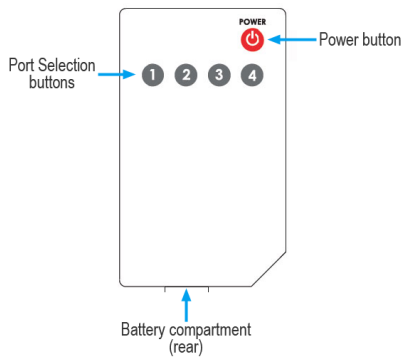
## Front View



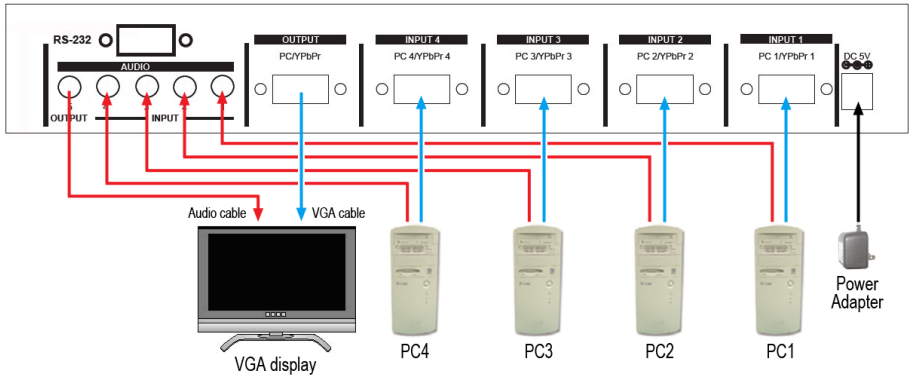
## Rear View



## Remote Control



# Installation



## Hardware Installation

1. Make sure all devices are powered off before beginning the installation.
2. Connect a male/male VGA cable from the "Output" connector on the switch to the VGA connector on the display device (e.g. monitor).
3. Connect a male/male VGA cable from one of the VGA video sources (e.g. computer) to input 1 on the video switch. Repeat for Port 2 ~ 4.
4. Connect the power adapter from an AC electrical outlet to the video switch. Press the power button on the front panel. The Power LED and Port 1 Selection LED should light up to indicate the currently active input.
5. Power on the display device first, followed by the video source on port 1.
6. Once video output is confirmed, switch to the next port by pressing the front panel button or remote control and power up the next video source. Repeat this process for each video source.
7. To switch between the inputs on the switch, the front panel buttons or the IR remote control can be used.

**OPTIONAL:** If using RS232 serial control, connect a DB9 (9-pin) serial cable from the DB9 connector on the video switch, to the RS232 serial port on the host system (i.e. computer).

# How to Use

## RS232 Serial Control

The video switch can be controlled from a remote terminal (e.g. computer) through RS232 serial. A DB9 (9-pin) cable needs to be connected between the video switch and the remote terminal. A regular PC should be connect via straight-through male/female serial cable.

**Baud Rate:** 9600 bps  
**Data Bits:** 8  
**Parity:** None  
**Stop Bits:** 1

## RS232 Pinout

| VS410RVGAA |        |
|------------|--------|
| Pin        | Signal |
| 1          | NC     |
| 2          | TxD    |
| 3          | RxD    |
| 4          | NC     |
| 5          | GND    |
| 6          | NC     |
| 7          | NC     |
| 8          | NC     |
| 9          | NC     |

## Commands

| Command   | Description            |
|-----------|------------------------|
| "1" + "1" | Select Port 1          |
| "1" + "2" | Select Port 2          |
| "1" + "3" | Select Port 3          |
| "1" + "4" | Select Port 4          |
| "P" + "1" | Power On video switch  |
| "P" + "0" | Power Off video switch |

# Troubleshooting

| Symptom  | Solution   |
|--|--|
| <b>Remote Control does not work/<br/>stopped working</b> | Make sure the front panel of the video switch is not blocked or obscured by other objects.   |
|  | Make sure you are pointing the remote control directly at the front panel of the video switch.   |
|  | Try switching using the buttons on the front panel of the video switch:<br>If this works correctly, replace the battery (CR-23) in the remote control.<br>If this does not work, the video switch has locked up (see below). |
| <b>No video</b>  | Check the front panel of the video switch to make sure the correct input is selected.  |
|  | Make sure the video source connected to the input is turned on or awake.   |
|  | Make sure that the monitor/display is set to the VGA input.  |
|  | If the video source has multiple outputs (e.g. laptop), make sure the VGA port is active.  |
|  | Check that the VGA cables are securely connected:<br>Between the video source and the input on the video switch.<br>Between the monitor/display and the output on the video switch.  |
|  | Connect the display directly to the video source to make sure the output video resolution is supported by the display (e.g. 1920x1200 or 1080p).<br>Ensure this video resolution is also supported by the video switch.      |
| <b>Video is blurry and/or has bad color</b>              | If all other checks fail, try replacing the VGA cables.<br>Check that the VGA cables are securely connected:<br>Between the video source and the input on the video switch.  |
|  | Between the monitor/display and the output on the video switch.  |
|  | Try replacing the VGA cables.  |



| Symptom  | Solution  |
|--|---|
| <b>Image is not centered properly on the monitor/display</b> | Turn the display off, then back on.   |
|  | Look for an auto adjust button or setting on the display.   |
|  | Make sure the video source is outputting a standard video resolution that is supported by the video switch and the display. |
|  | Manually adjust the vertical and/or horizontal positioning from the display's on screen menu.                               |
| <b>No audio</b>  | Try replacing the VGA cables.   |
|  | Check that the audio cables are securely connected:   |
|  | Between the audio source and the input on the video switch.   |
|  | Between the speakers and the output on the video switch.  |
| <b>The video switch is locked up</b>                         | Check that the audio source is outputting sound by plugging in speakers or headphones directly to the audio source          |
|  | Try replacing the audio cables.   |
|  | Unplug the power adapter from the video switch or electrical outlet, wait 20 seconds, then plug the power adapter back in.  |

# Specifications

|                                     |   |
|-------------------------------------|---|
| <b>Video Signal</b>                 | VGA (RGBHV): 0.7Vp-p or 1Vp-p with sync<br>75 Ohm   |
| <b>External Connectors (Input)</b>  | 4 x DE-15 VGA female<br>4 x 3.5mm Audio mini-jack female<br>1 x DB9 female<br>1 x DC Power female |
| <b>External Connectors (Output)</b> | 1 x DE-15 VGA female<br>1 x 3.5mm Audio mini-jack female  |
| <b>LEDs</b>                         | 1 x Power<br>4 x Port Selection Indicator   |
| <b>Maximum Video Resolution</b>     | 1920 x 1200 / 1080p   |
| <b>Video Bandwidth</b>              | 650 MHz (-3dB)  |
| <b>Differential Gain</b>            | 0.05%   |
| <b>Differential Phase</b>           | 0.05 degrees  |
| <b>Switching Methods</b>            | Front Panel Buttons, IR Remote Control,<br>RS232 Serial   |
| <b>Power Consumption</b>            | 5W (max)  |
| <b>Power Adapter</b>                | 5VDC, 2600mA, center positive   |
| <b>Enclosure Material</b>           | Aluminum  |
| <b>Dimensions (LxWxH)</b>           | 292.0mm x 73.0mm x 44.0mm   |
| <b>Weight</b>                       | 1500g   |

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# Warranty Information

This product is backed by a two year warranty.

In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

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