

Specs

- Power: Typical draw 9VDC 25mA
- Operating frequency: 8MHz
- Scan rate: 5 seconds
- Connectors: 4 RCA Female, 1 RCA Male, 1 RJ45 for Serial, 2.1mm x 5.5mm Coax Power Jack
- EMI: Verified FCC Part 15 Class B compliant. This product has not been certified for CE mark.
- Video: NTSC and PAL compatible
- Hardware platform: VS4T1
- Firmware: RSVSwitch



RSVSwitch
VS4T1

Note:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

Safety

Installation of this product should be performed following proper industry standard wiring practices. Outdoor cabling should be properly grounded for lightning protection.

This product is intended for indoor use only. Keep this unit away from heat sources such as radiators and furnace vents and use it in a properly ventilated area. To prevent shock or fire hazard, do not expose this unit to rain or moisture or use near water. The power supply packaged with this unit is intended for US and Canadian power systems and should only be used with compatible systems. No user serviceable parts are contained inside the device. This device is not intended for use by children. This device does not contain any user serviceable parts.

This product is not intended for use with RF, VGA or amplified audio signals. If high voltage signals, such as amplified TV antennas or speaker outputs, are connected to the device damage or fire may occur. This device is intended only for composite video signal switching of NTSC signals. It is not certified for use in the European Union. Current inventory of this product is not completely certified for European RoHS standards. The internal electrical components of this device may contain lead. Newly manufactured units will be made RoHS compliant. This product is not intended for export outside the USA.

Troubleshooting

Like most video equipment, the RSVSwitch provides only a switching function for video. It does not modify or process signals. If you are running very long lines to remote cameras, the additional load of the RSVSwitch may reduce video quality slightly. The switch provides a small amplification of the video signal to compensate for long runs.

When switching between signals, some momentary video distortion is normal while the video display locks in the video sync signal. If you find this disruptive, or if your equipment has trouble locking the sync, you can switch the video inputs off first (send a zero (0)) and then switch to the new input. This allows the video display to drop the prior sync before receiving the new sync signal.

If the RSVSwitch does not respond to the serial port, verify the port number, data rate, stop bits and parity. The data rate may have been switched. The RSVSwitch supports 2400, 4800, 9600 and 19200bps. Try connecting at each data rate. If the device still does not respond, unplug the power and reconnect to restart. Close all applications that may be using the serial port. Try restarting your terminal software.

See our website for additional troubleshooting and support assistance.

Warranty and Use Limitations

This product is warranted for a period of 90 days from the date of purchase against defects. No warranty is provided against abuse, damage, improper wiring or use in a manner contrary to the guidelines and specifications listed in this document. Opening the product case voids the warranty. Electrical damage to the device introduced thru the external connections voids the warranty. The purchaser assumes all liability for custom cabling, cabling practices and video equipment installation. Tech World warranties only the equipment we sell, not a particular installation or application. Third party installers and equipment are the responsibility of the user.

This product is not intended for use in life or property protection security systems or for life sustaining or life critical medical applications. Use of the product for these applications is at your own risk and subject to the following terms:

You agree to indemnify, defend, and hold harmless Tech World, Inc. and any of its officers, directors, employees, agents, information providers, partners, advertisers, suppliers, and any of our successors, as-signs or licensees, together with any of their respective officers, directors, and employees, from and against any and all damages, losses, liabilities, suits, actions, demands, proceedings (whether legal or administrative), judgments, costs and expenses (including reasonable attorney's fees), arising out of any and all claims by you or a third party relating to your use of the product or application notes contained on the website, or any breach or violation of these Terms of Use or any other term or condition contained on the Tech World website. You agree that sole remedy for claims arising out of use of the product will be replacement of the product or refund of the purchase price at the sole discretion of Tech World, Inc.

If you do not agree to these terms, you may return the product to the point of purchase for a full refund within 10 days of purchase.

Command Reference

0 (Zero)	No connection, video inputs are all disconnected
1	Video Source 1 is connected to output, all others are disconnected.
2	Video Source 2 is connected to output, all others are disconnected.
3	Video Source 3 is connected to output, all others are disconnected.
4	Video Source 4 is connected to output, all others are disconnected.
A	Set serial rate to 2400bps 8N1. Change happens immediately, control device must switch to new settings to communicate. This function is not available until the "!" command is used.
B	Set serial rate to 4800bps 8N1. Change happens immediately, control device must switch to new settings to communicate. This function is not available until the "!" command is used.
C	Set serial rate to 9600bps 8N1. Change happens immediately, control device must switch to new settings to communicate. This function is not available until the "!" command is used.
D	Set serial rate to 19200bps 8N1. Change happens immediately, control device must switch to new settings to communicate. This function is not available until the "!" command is used.
E	Event feedback On. All camera changes are echoed to the serial port as 0,1,2,3,4.
F	Load the factory defaults. Use the W command to save the settings.
G	Query current camera selection. Returns 0-4
H	Query current sensor values. Returns a three position binary value for sensors 2,3,4. For example: 100 indicates sensor 2, 110 indicates sensor 2 and 3.
I	Disable sensor inputs (default).
J	Enable sensor inputs. The switch will respond to sensor events.
M	Manual select mode. Video inputs are selected by commands.
Q	Quiet - Events Off. Camera changes are not echoed to serial port.
R	Reset the device. Disconnecting power will also reset the device.
S	AutoSequencer scan mode. Video Inputs 1 thru MaxCam are displayed in a rotating sequence.
W	Write current settings to non-volatile memory used to initialize the RSVSwitch during startup. The RSVSwitch will boot up with your current settings.
X	Sets MaxCam to 2. Sequencer mode will scan cameras 1 and 2.
Y	Sets MaxCam to 3. Sequencer mode will scan cameras 1, 2 and 3.
Z	Sets MaxCam to 4. Sequencer mode will scan cameras 1, 2, 3 and 4.
!	Unlock the BPS commands. To help prevent accidental baud rate switching the "!" command must first be issued before any BPS commands will be accepted. Changing baud rate, powering down or resetting the switch will relock the BPS commands.
?	Help Menu

RSVSwitch Video Switch Quick Reference

Visit our website for application notes, sample code, software and extended documentation.

Package Contents

The RSVSwitch kit includes the following items:

- The RSVSwitch video switch
- DB9 Serial to RJ45 cable
- An AC power adaptor
- This document.

Requirements

The RSVSwitch connects to your computer as a serial device. You need to have an available serial port with a DB9 connector. Refer to your computer manual for instructions on setting up your serial port. The RSVSwitch does not require any drivers.

Connecting the RSVSwitch

- Plug the serial RJ45 cable into the RSVSwitch. Plug the other end into the serial port on the PC.
- If your computer does not have a serial port, a USB to serial adaptor is available separately.
- Plug the AC Adaptor into a wall outlet.
- Plug the coaxial power plug on the AC wall adaptor into the RSVSwitch power socket. The green LED light on the RSVSwitch should turn on.

Connecting video to the RSVSwitch

You can connect video outputs of security cameras, DVD players, monitors, vidcams, or any other video capable device to the RSVSwitch. The RSVSwitch supports composite video signals in NTSC or PAL formats.

The RSVSwitch is intended to switch up to four cameras or video sources to a single video output (monitor, capture card, etc.) Plug the black video out connector into your monitor or capture card. Plug your cameras or other video sources into the yellow input jacks.

Alternate application: A video source can be connected to the black connector of the RSVSwitch and switched to one of the four yellow connectors. This is a reversed application of the normal video switching application and may not work for all types of hardware.

Controlling the RSVSwitch

The RSVSwitch is controlled using single letter commands via a serial port. You can control the RSVSwitch using a terminal program, via software applications designed to control the device, via custom programming code that can send data to a serial port, using contact closures such as alarm sensors or motion detectors, and via TTL level interfacing from microcontroller or electronics projects. See our website for application notes for Visual Basic, C, PHP, Perl and for application software.

Made in Taiwan, programmed and designed in the USA.
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