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4x4 HDMI Matrix Video Switch Splitter with RS232

VS440HDMI

*actual product may vary from photos

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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

The VS440HDMI 4x4 HDMI Matrix Video Switch Splitter with Audio and RS232 allows you to share up to four distinct HDMI or DVI inputs (Using HDMI to DVI adapters - not included) with audio between four independent displays or projectors.

Providing convenient front panel push-button and RS-232 PC control using the included software, this Matrix switch allows each input and the corresponding audio to be switched individually, meaning that different sources can be shown on each output display or a single source can be output to several, offering maximum flexibility.

This flexible device features a front panel LCD for easy status monitoring, plus an included remote control and IR extender module for simple control from a distance. Designed to provide maximum control while saving space, the VS440HDMI can be used as a standalone solution or rack-mounted using the included ear-mounts.

Backed by a StarTech.com 1 year warranty and free lifetime technical support.
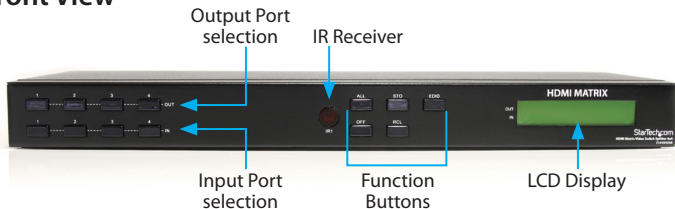
Packaging Contents

- 1 x VS440HDMI Video Switch
- 1 x IR Extender Module
- 1 x Remote Control
- 2 x Rack Mounting Brackets
- 6 x Screws for Rack Mount Brackets
- 1 x DB9 RS232 Cable
- 1 x Universal Power Adapter
- 1 x Software Installation CD
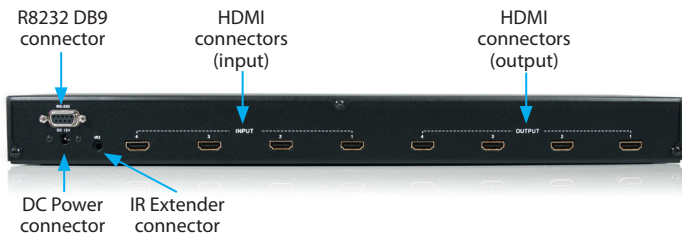- 1 x Instruction Manual

System Requirements

- HDMI enabled video source device(s) (i.e. computer, game console, PVR/DVR, etc)
- HDMI enabled display device(s) (i.e. monitor, projector, HDTV, etc)
- Available AC power outlet
- **Software:** Microsoft® Windows® 2000/XP/Vista/7 (32/64-bit), 32MB RAM, 10MB storage space, CD-ROM drive, RS232 serial port

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Front View

Output Port selection

IR Receiver

Input Port selection

Function Buttons

LCD Display

Rear View

R8232 DB9 connector

HDMI connectors (input)

HDMI connectors (output)

DC Power connector

IR Extender connector

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Installation

Hardware Installation

1. Make sure that all devices are powered off before beginning installation.

2. Connect the HDMI display device(s) to the HDMI Output connectors on the rear of the matrix switch.

3. Connect the HDMI video source device(s) to the HDMI Input connectors on the rear of the matrix switch.

4. **OPTIONAL:** If planning to use RS232 control for the matrix switch, connect a DB9 RS232 cable from the rear of the matrix switch, to the RS232 port on the host computer system.

5. **OPTIONAL:** If using the IR Extender module, connect it into the rear of the matrix switch.

6. Connect the power adapter to the matrix switch, followed by powering on the display devices, then the HDMI source devices.

7. The LCD screen on the front of the matrix switch should activate and display the current status and Input-to-Output display relationships. The top row of the LCD lists each output port, while the bottom row indicates which input port is being displayed on it, with "0" representing no input selected (no video).

HDMI MATRIX

OUT	1	2	3	4	EDID
IN	1	2	0	0	FIX

Software Installation

1. Insert the software installation CD into the computer's CD/DVD drive.

2. On the CD, in the "AVM" folder, double click the AV Matrix file to start the installation.

3. Proceed through the installation prompts.

4. Once installation is complete, close the installation wizard. The software should now be ready for use.

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How to Use

Front Panel

OUT 1~4: Selects the numbered Output Port to be configured. An output must be selected before selecting an input.

IN 1~4: Selects the numbered Input Port to map to an Output Port. Should only be used after an Output Port has been selected first, otherwise an error message will be generated on the LCD status display.

ALL: Selects all of the Output ports at once. Used to configure all output ports simultaneously with the same setting.

STO: Stores/saves the current Input/Output display relationships to internal memory.

EDID: Switches between "FIX" and "TV1" modes. FIX uses an internal EDID profile that supports up to 1080p and sends it to each input device. TV1, uses the EDID from the display connected to Output port 1 and sends it to each input device. Useful if the connected display devices have different capabilities than the built in EDID that you wish to use (i.e. different display resolutions).

OFF: Turns off the selected Output port. No video will be sent to the selected display(s).

RCL: Recalls/loads the stored display relationships from the "STO" button.

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Software

Once the software is installed and the matrix switch is properly connected to the host computer, launch the AV Matrix software to bring up the main control panel

The panel on the left side will list all compatible matrix switches that are connected to the host computer system. The name/model, number of ports will also be listed.

The center panel displays a grid showing the current Input-to-Output relationships for the selected matrix switch. The numbered ports for Input and Output are listed along the X and Y axis of the grid, with the currently set relationships highlighted.

The panel on the right side displays the stored display relationship profiles for the selected matrix switch. Up to 4 different custom profiles can be saved for each matrix switch from the software (front panel controls can only store 1).

The buttons along the bottom of the software window serve various functions:

Select/Deselect all output: Selects or deselects all 4 of the "Output" ports on the matrix switch.

Disconnect all: Disables video output to all displays.

Scan: Refreshes the software window with any changes that may have been made through directly using the front panel controls on the matrix switch while the software is running.

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Options: Used to configure the serial port on the computer, if necessary.

Selecting Video Output

Mapping the "Output" ports to an "Input" port can be accomplished through one of two methods

Method 1:

1. Ensure the "Video" checkbox is checked in the bottom right corner of the center panel.
2. Click on the appropriate location on the grid to map the numbered "Output" port to a numbered "Input" port.

Method 2:

1. Ensure the "Video" checkbox is checked in the bottom right corner of the center panel.
2. Click on the numbered "Output" port button(s) along the side of the grid.
3. Click on the numbered "Input" port button along the bottom of the grid that you want the previously selected outputs to use.
4. Press the "Deselect all output" button in the bottom left corner of the window.

NOTE: If the I/O port relationships are changed from the front panel controls directly, the software will need to be refreshed using the "Scan" button.

Disconnect/Disable Video Output

To stop video from being sent to one or more of the Output ports:

1.Press the numbered button for the Output port(s) from the side of the grid.

2.Press the "Disconnect" button in the bottom right corner of the grid.

3.Press the "Deselect all output" button in the bottom left corner of the software window.

Saving/Loading Stored Profiles

The matrix switching software can store up to 4 different display relationship profiles. To save the current configuration, select the desired profile number from the drop down list and press the "Save" button. To load the currently selected profile, click the "Load" button.

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Troubleshooting

If switching input/output with the front panel keys are not responsive.

• Press and hold the key for 2 seconds, then release, instead of just a quick press.

Loss of video output or color, or the unit becomes unusually hot.

• If the signal voltage difference between the video source device(s) and the matrix switch is too large, hot plugging could easily cause damage to the IC chips. Please turn off power to the system before plugging or unplugging.

The LCD displays normally and the communication port has a return code but no image is being output.

• The output/input cable connectors are loose. Simply reconnect the cables.

• The connection cable short-circuited. Simply replace the cable.

• The connection cable is broken. Simply replace the cable.

The front panel keys and communication ports are not responsive.

• Check that the equipment input power is properly connected and the computer communication ports are working.

• Disconnect all cables and power and let sit for several minutes before attempting to use again.

• Otherwise, contact technical support for further assistance.

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Specifications

Video Signal	High Speed HDMI (HDMI 1.3)
Number of Inputs	4
Number of Outputs	4
External Connectors	4 x HDMI type A female (input)
	4 x HDMI type A female (output)
	1 x DB9 female
	1 x IR Extender connector
	1 x DC Power
LEDs	N/A
Maximum Video Resolution	1080p / 1920x1200
Maximum Cable Length	10m / 32.8ft
Audio Support	Yes
EDID Support	Yes
Rack Mountable	Yes
Power Adapter	12VDC, 1500mA, center positive
Enclosure Material	Metal
Operating Temperature	0°C ~ 70°C (32°F ~ 158°F)
Storage Temperature	-20°C ~ 85°C (-4°F ~ 185°F)
Humidity	0% ~ 95% RH
Dimensions	440.0mm x 185.0mm x 42.0mm
Weight	2350g
Compatible Operating Systems (Software)	Windows 2000/XP/Vista/7 (32/64-bit)

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Warranty Information

This product is backed by a two year warranty.

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