5X5 VGA Matrix Switch with Audio and Ethernet Support

Model #: SW-VGA-5X5

HD ready 1080p **WUXGA** 1920x1200

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1 Section 1: Getting Started

1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
    - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
    - Repair or attempted repair by anyone not authorized by us.
    - Any damage of the product due to shipment.
    - Removal or installation of the product.
    - Causes external to the product, such as electric power fluctuation or failure.
    - Use of supplies or parts not meeting our specifications.
    - Normal wear and tear.
    - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 Safety Instructions

The SW-VGA-5X5 VGA Matrix with Audio and Ethernet support has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, SW-VGA-5X5 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

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1.3   Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

1.4   Introduction

This Avenview SW-VGA-5X5, 5X5 VGA Matrix Switch with Audio and Ethernet Support receives and amplifies up to 5 VGA inputs, perfectly switches the desired input to the VGA equipped monitor or receiver. This matrix enables the broadcast of multiple computers' audio and video outputs to multiple displays. Any one of the inputs can be broadcasted to any or all of the outputs without introducing noticeable video quality distortion.

The matrix switch supports VGA video bandwidth up to 400MHz and also supports YPbPr (component) signals. The re-transmitted video quality is guaranteed and the longest transmission is up to 65 meters (210 feet). Therefore, SW-VGA-5X5 offers the most convenient and cost effective means for swift switch of high quality PC graphics and HDTV videos with crystal clear audio in the market. With equipped audio matrix, SW-VGA-5X5 is ready to be as YPbPr (Component) matrix with stereo audio and ideally for boardroom, showroom, and exhibition. Through IR remote, RS-232 or front panel push button, the control of SW-VGA-5X5 becomes versatile and easier.

- Broadcasts the audio and video outputs from five computers to five monitors and speakers
- Up to 5 Graphics/Video Inputs (appropriate adapters are required for Component))
- Supports video bandwidth up to 400 MHz
- Any one of the inputs can be broadcasted to any or all of the outputs
- Built-in video signal amplifier for up to 65m (210-ft) long transmission
- 3.5mm audio outputs to drive either speakers or earphones
- Multiple control by IR remote, push button, RS-232 control and Ethernet
- 1U rack mountable

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SW-VGA-5X5

CABLE INDEX

- Output
- Input / Source
- Audio
- RS-232
- IR
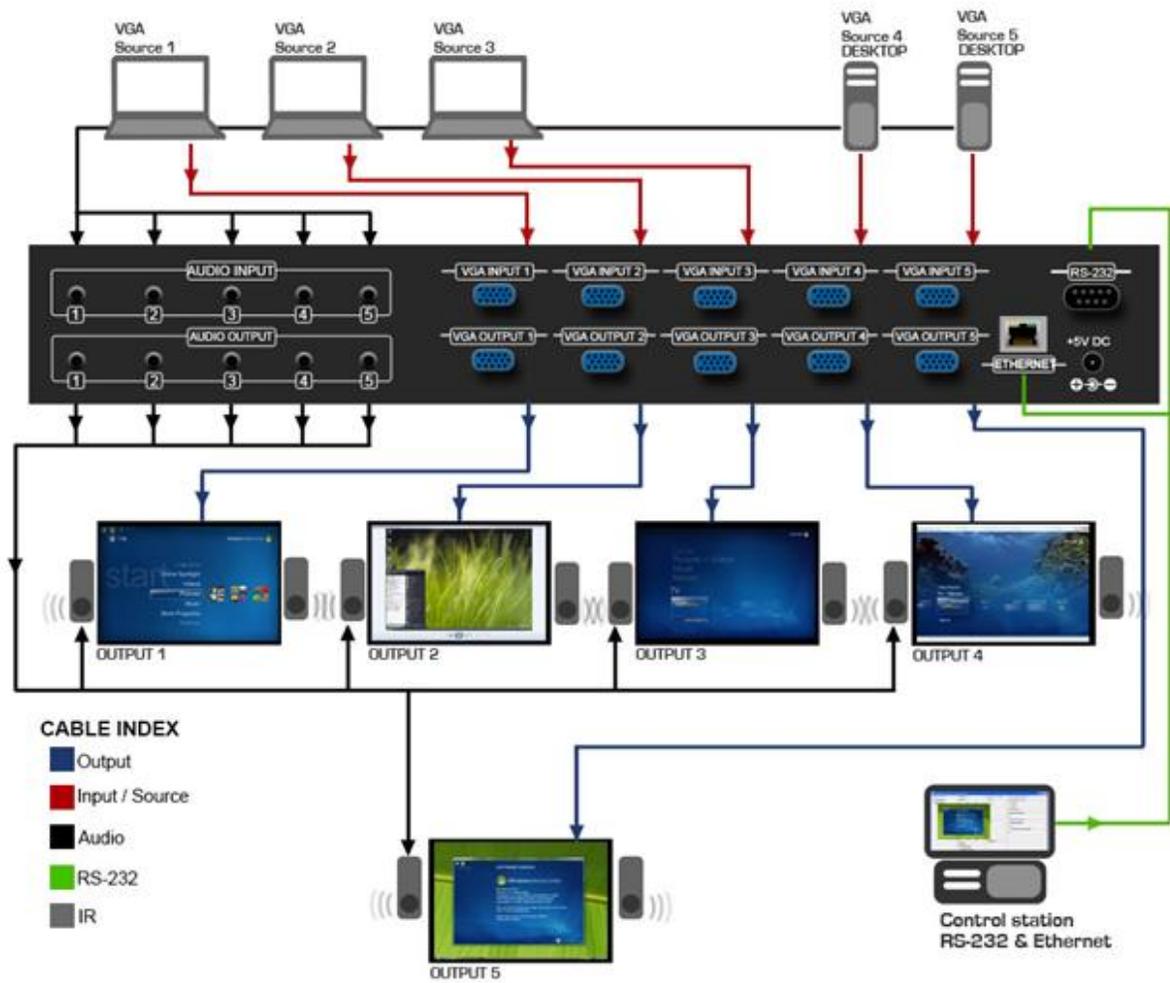
1.5   Package Contents

Before you start the installation of the converter, please check the package contents.

- SW-VGA-5X5   x 1
- IR Remote Control   x 1
- Power Adapter (+5VDC)   x 1
- Mounting Brackets   x 1
- Software CD   x 1
- User's Manual   x 1

1.6   Before Installation

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

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1.7   Panel Description

1.7.1 SW-VGA-5X5
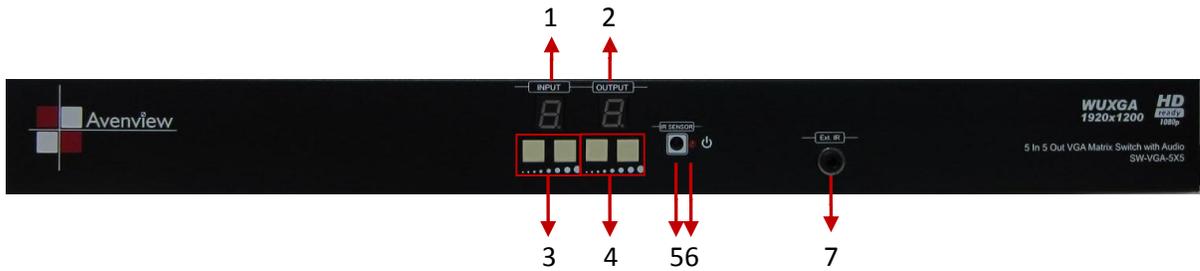
1.	Output Display LED	2.	Input Display LED
3.	Select Output	4.	Select Input
5.	IR Sensor	6.	Power Indication LED
7.	Ext. IR: IR Receiver		

1.7.2 SW-VGA-5X5 Rear Panel

8.	Analog Audio Inputs	9.	Analog Audio Outputs
10.	VGA Inputs	11.	VGA Outputs
12.	Ethernet Control Input	13.	Serial Channel Control
14.	Power Connector	15.	ON/Off Switch

1.8   Software Control via RS232 or Ethernet Port
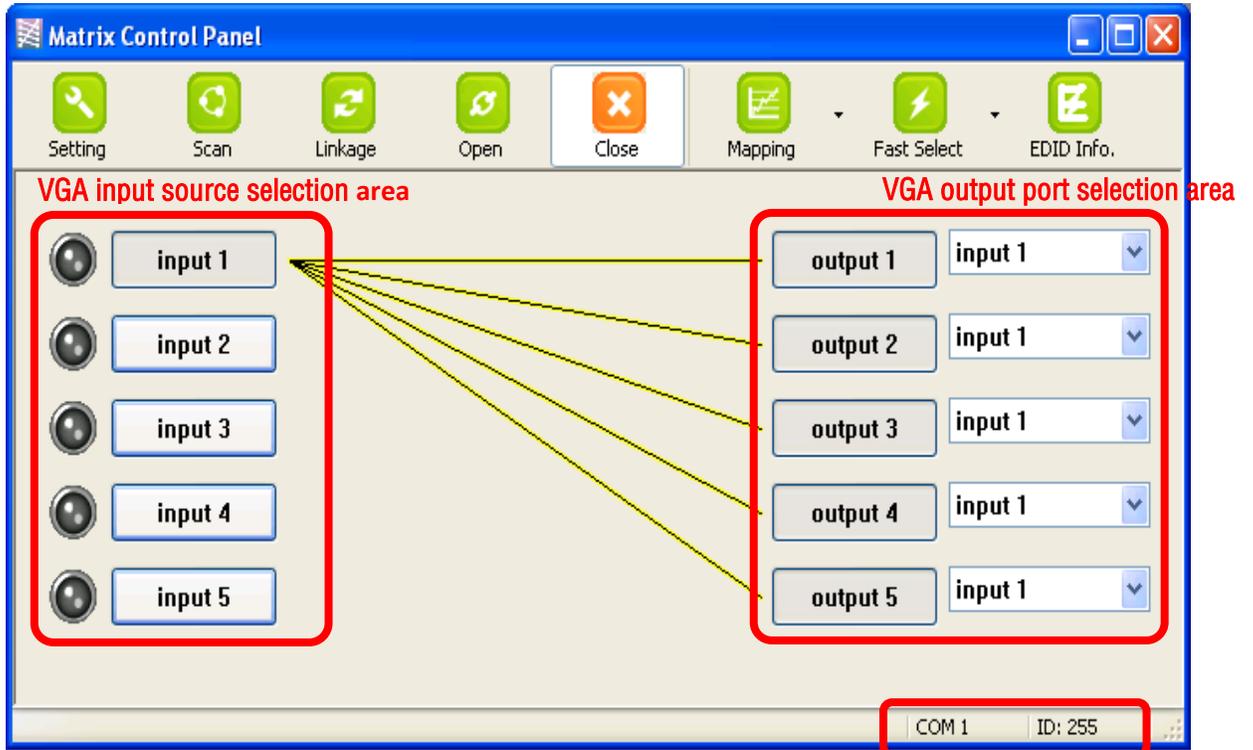
Software Control Menu

1. Setting Button

Click **Get** button to read back device ID.

Click **Set** button to write device ID.

Click **Rename** button to open the String Table.

For **Ethernet** 1 group, users have to define Ethernet properties through RS-232 for the matrix. All the parameters for Ethernet have to be saved into the matrix by clicking on **Write To Device** button.

In the **Communication** 2 group, users can choose the control interface between matrix and PC host.

1   Initial or any change to Ethernet settings, users MUST power cycle VGA matrix in order to get the network settings effective!

2   Please notice that Ethernet control has a higher priority than RS-232. If RS-232 and Ethernet controls come from 2 different hosts, commands may coincide and in this case, commands from Ethernet will be effective immediately no matter whether commands from RS-232 are accurately sent and executed!

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In the **GUI String Table** group, click on "Rename" button and assign the captions for each input and output port for easy recognition.

For example

Rename the Input1 to "Main PC", Input2 to "Sub PC," input3 to "PC-3," … etc., and rename output1 to "Conf. RM1," output2 to "Main monitor," output3 to "Lobby," output4 to "Main projector," … etc.
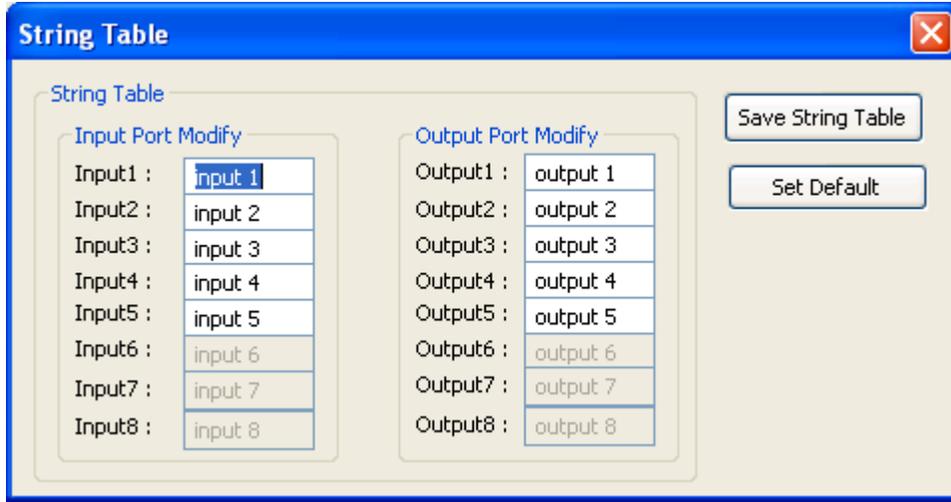
2. Scan Button:

Serial Port Scan

Click **Scan** button, the machine will scan the all com port and show them.

Select the RS232 serial port connected to the machine. And set device ID 255 is for all device.

Only the same device id or 255 can get the command you sent.

Click **OK**. Get the new status from the machine you select.

3. Linkage Button:
Click **Linkage** button to read back all status.

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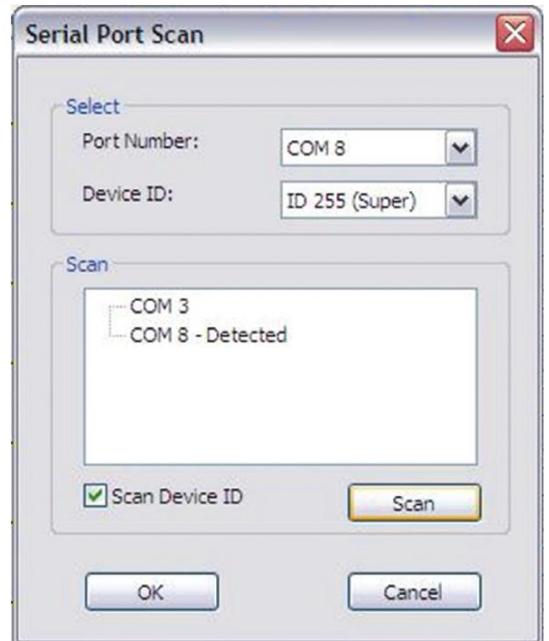
4. Open/Close Button:

Click this button to close or open COM port.

5. Mapping button:
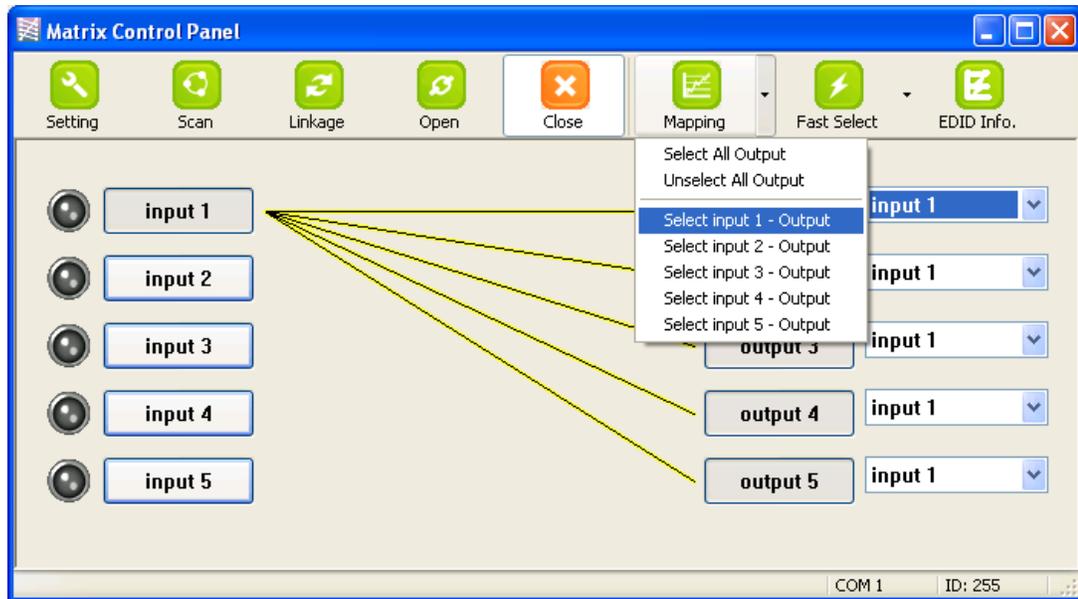
Select All Output

Select **set all output**, and then select the source on main menu. You can quickly set all output to the same source.

Unselect All Output

Release output selection.

Select Input1~5-Output

Select Input Source. Then select the output port icon.

For example

Select input source 1. Select output port 1 and 2. The video and audio will be sent to port 1 and 2.

6. Fast Select button:
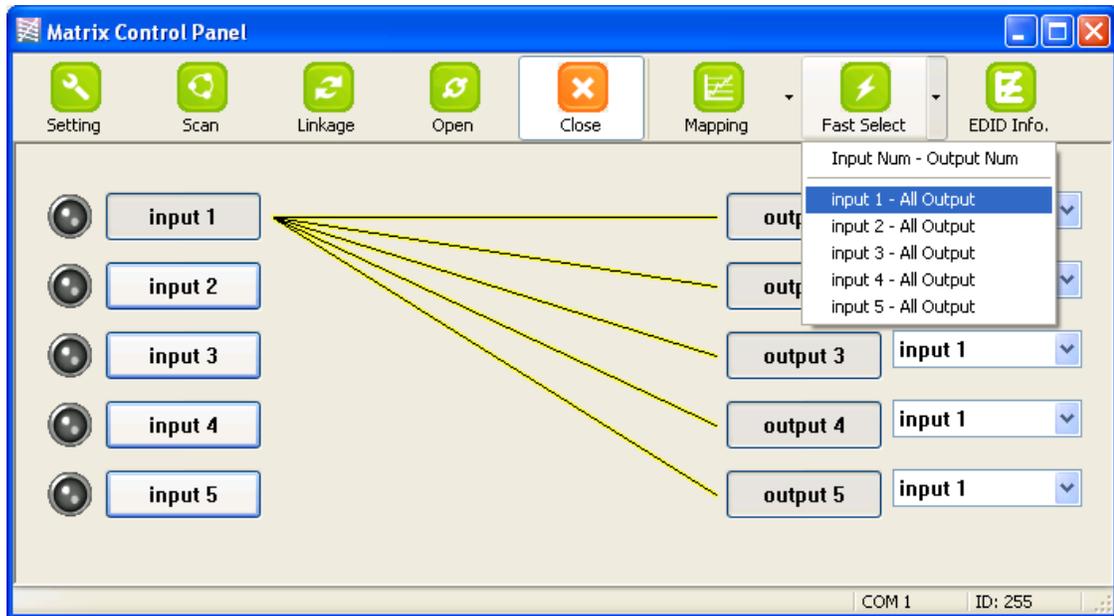
Click **Fast select** button. Quick setting.

    Input one > Output Port one

    Input two > Output Port two

    …..

Click Fast select pull down menu.

Select Input Num-Output Num

    Input source #1 > Output port #1

    Input source #2 > Output port #2   …..

Select Input* - All Output

    Send the same source to all output.

7. Output Port:
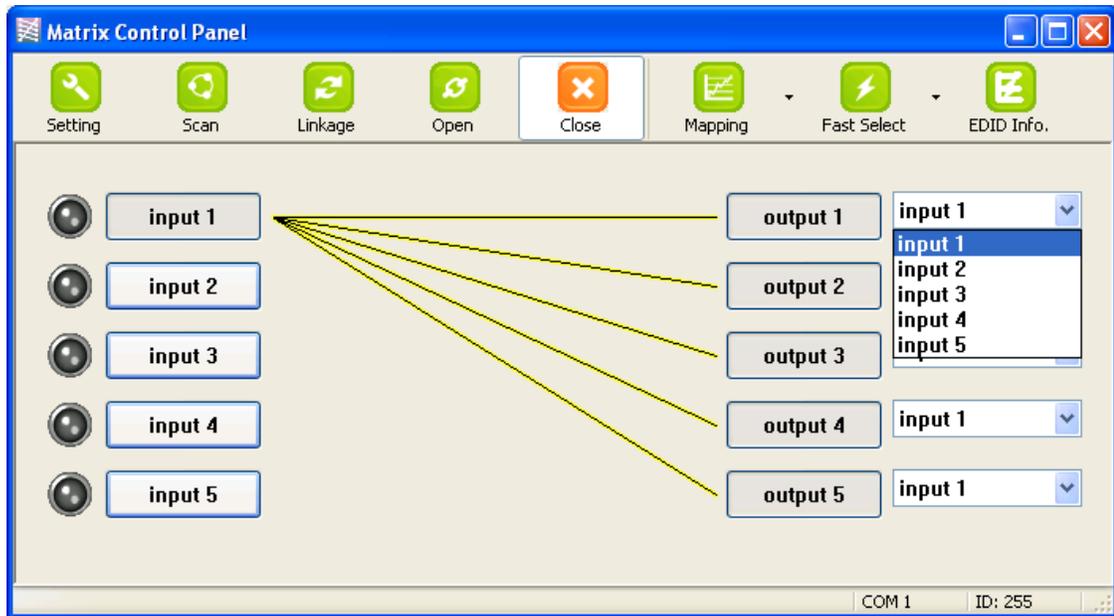
Pull down menu and select which source to be sent to this output port.

One by one setting

On main menu screen

First select input source. Then select the output ports which you want to send the video and audio from this source. When you select the input source, the source will change to gray. When you select the output port one by one, the selected output port will change to gray.

The linking line will change to yellow.

Group setting

First select output ports one by one. Then select the input source. The selected output ports change the setting at the same time.

By using Terminal:

Baud rate: 9600
Data length: 8bit
Parity check: No
Stop bit: 1

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Command Set:

COMMAND	ACTION	COMMAND	ACTION
ST	System Status	VR	Firmware Version
A1	Output A selects Input 1	D1	Output D selects Input 1
A2	Output A selects Input 2	D2	Output D selects Input 2
A3	Output A selects Input 3	D3	Output D selects Input 3
A4	Output A selects Input 4	D4	Output D selects Input 4
A5	Output A selects Input 5	D5	Output D selects Input 5
B1	Output B selects Input 1	E1	Output E selects Input 1
B2	Output B selects Input 2	E2	Output E selects Input 2
B3	Output B selects Input 3	E3	Output E selects Input 3
B4	Output B selects Input 4	E4	Output E selects Input 4
B5	Output B selects Input 5	E5	Output E selects Input 5
C1	Output C selects Input 1		
C2	Output C selects Input 2		
C3	Output C selects Input 3		
C4	Output C selects Input 4		
C5	Output C selects Input 5		

1.9   IR Remote Control

Please push one of the INPUT buttons to choose which VGA input source you are going to setup. After that, you can have multiple outputs playing the same content from the selected **INPUT 1 – INPUT 5** by pushing the corresponding OUTPUT buttons. The setting will be effective in a couple of seconds.

INPUT & OUTPUT MAPPING

INPUT 1	VGA input port #1
INPUT 2	VGA input port #2
INPUT 3	VGA input port #3
INPUT 4	VGA input port #4
INPUT 5	VGA input port #5
OUTPUT 1	VGA output port #1
OUTPUT 2	VGA output port #2
OUTPUT 3	VGA output port #3
OUTPUT 4	VGA output port #4
OUTPUT 5	VGA output port #5
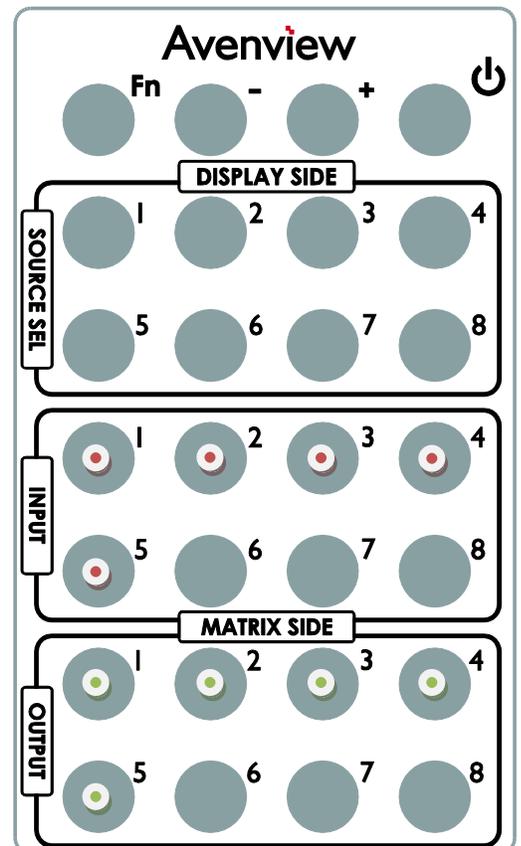
1.10 Installation

To setup Avenview SW-VGA-5X5, follow these steps:

1. Connect VGA enable equipment's to the outputs of SW-VGA-5X5.
2. Connect the VGA input sources to the inputs of SW-VGA-5X5.
3. Plug power adapter cable into 5V DC power jack.
4. Use IR Remote, Ethernet, RS-232 serial commands, or front panel push button to switch among inputs.

2   Section 2: Specifications

Item	Description
Units	SW-VGA-5X5
Unit Description	VGA Matrix Switch with Audio and Ethernet
Supported Input / Output	VGA / Component
Video Bandwidth	400 MHz
Supported Resolutions	1080p 60, WUXGA (1920x1200 @ 60Hz)
Audio Support	Analog Stereo
Input	5 x VGA 5 x 3.5mm 1 x RS232 (Component through VGA to Component Adapter)
Output	5 x VGA 5 x 3.5mm (Component through VGA to Component Adapter)
Input Selection	IR Remote / Push Button / RS232 Control / Ethernet
IR Remote Control	Electro-optical characteristics: ⊡ = 25° / Carrier frequency: 36-40kHz
VGA Connector	HD-15 (15 pin D-sub female)
Audio Connector	3.5mm Earphone Jack for analog stereo audio
RS232 Connector	DE-9 (9-pin D-sub Female)
Dimensions (L x W x H)	17" x 3.8" x 1.7"
Power Supply	5V 4A DC
Power Consumption	13 Watt (max)

Environmental

Operating Temperature	32˚ ~ 104˚F (0˚ to 40˚C)
Storage Temperature	-4˚ ~ 140˚F (-20˚ ~ 60˚C)
Relative Humidity	20~90% RH (no condensation)

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