



4x4 HDMI CAT5e FST Matrix Switcher Installation Guide

Introduction

The *4x4 HDMI CAT5e FST Matrix Switcher* provides high definition video sources plus multi-channel digital audio from any of the four HDMI sources to the remote displays at the same time.

Features and Benefits

- Distribute content from any of the four HDMI sources to any connected display
- Device and display switching via push buttons, IR remote control, RS-232 and Ethernet control
- Supports HDMI Deep Color, full 3D and HDCP 2.0
- Supports Fast Switch and no blinking technology
- Supports distance up to 200ft with uncompressed 7.1 channel or stereo digital audio
- Metal housing with wall mount support

Package Contents

- *4x4 HDMI CAT5e FST Matrix Switcher*
- Receiver units (4)
- Remote control
- IR Blaster cable
- IR Receiver cables (5)
- TX (Transmitter) 5V/4A power adapter and power cord

- RX (Receiver) 5V/2A power adapters (4)
- Rack-mounting ears and screws
- Software CD
- Installation guide

Layout

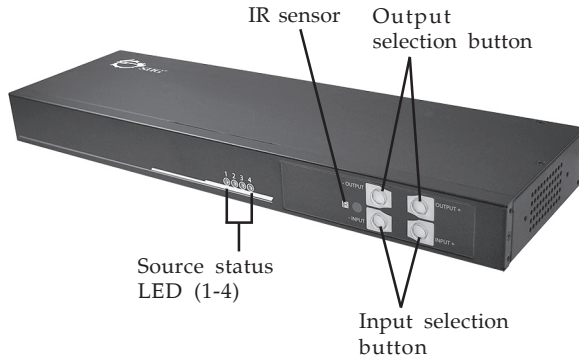


Figure 1: 4x4 HDMI CAT5e FST Matrix Switcher Layout - Front

- **Source status LED:** HDMI input source status LED indicator. Steady blue light when HDMI source is connected. Each HDMI IN connector has a LED indicator
- **IR sensor:** IR sensor for receiving the IR commands from IR remote
- **Output selection button:** Press the Output button(s) to select the output display
- **Input selection button:** Press the Input button(s) to select the input signal

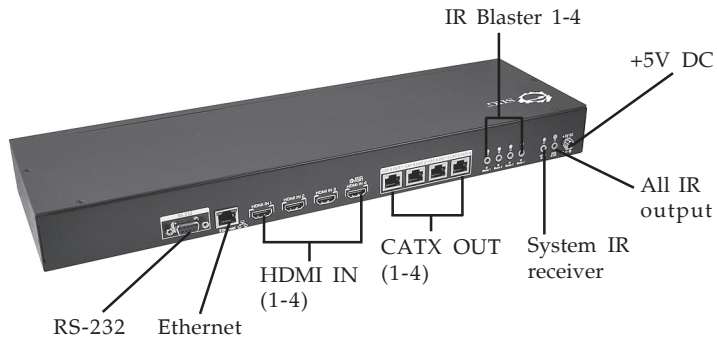


Figure 2: 4x4 HDMI CAT5e FST Matrix Switcher Layout - Rear

- **RS-232:** RS-232 control port
- **Ethernet:** IP (Ethernet) control port
- **HDMI IN 1-3:** HDMI input. Connect to your HDMI source's HDMI output via HDMI cables (cables not included)
- **HDMI IN 4:** HDMI input with EDID learning from display. Connect to your HDMI source's HDMI output via HDMI cable (cable not included)
- **CATX OUT 1-4:** HDMI signal out. Connect Matrix Switcher's **CATXOUT** with Receiver's **HDMI Signal IN** for HDMI signal transmission extension
- **IR Blaster 1-4:** Four IR blaster sockets for individual HDMI source control. Plug in IR blaster cable here
NOTE: Only one IR blaster cable is included. Purchase other IR blaster cables, if needed.
- **System IR receiver:** External IR sensor to receive signal from remote control. Connect your IR receiver cable here, if needed
- **All IR output:** HDMI source control for all four inputs. Connect the IR blaster cable here
- **+5V DC:** Connect the included 5V/4A power adapter here

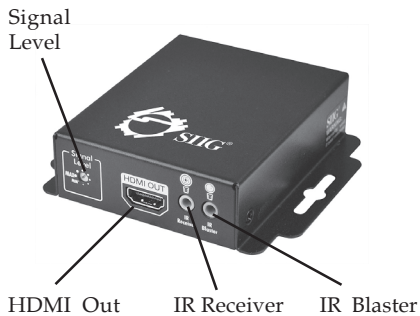


Figure 3a: Receiver - Front



Figure 3b: Receiver - Rear

- **Signal Level:** Adjust the 8-level rotary switch to the received HDMI signals. The HDMI signal level varies from strongest (**MAX**) to weakest (**MIN**) for transmission length from longest possible range to short distance
- **HDMI Out:** HDMI signal output. Connect to your HDMI displays here
- **IR Receiver:** The IR Receiver socket is for the purpose of receiving all IR command signals from the IR remote controls of the *Matrix Switcher*. Plug in the IR receiver cable, if needed
NOTE: When using this function, the IR blaster cable should be connected to the *Matrix Switcher*'s IR blaster socket at the same time
- **IR Blaster:** The IR blaster function is not available here
- **+5VDC:** Connect the included 5V/2A power adapter here
- **HDMI Signal IN:** Connect to your *Matrix Switcher*'s **CATX OUT** via HDMI cables (cables not included)

IR Extension Cable

IR blaster cable

1. IR Signal
2. Ground

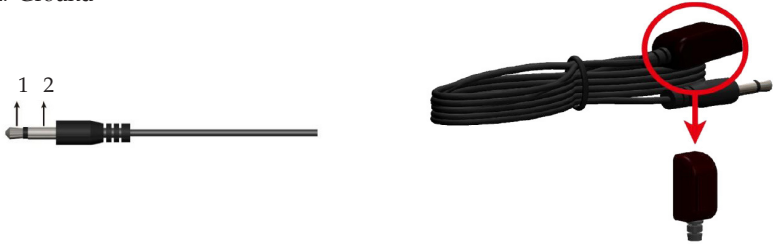


Figure 4

IR receiver cable

1. IR Signal (20-60kHz)
2. Ground
3. Power



Figure 5

Hardware Installation

1. Power off all source devices and displays.
2. Connect up to four HDMI source devices to the *Matrix Switcher's* HDMI input ports by using HDMI cables (cables not included).
3. Connect *Matrix Switcher's* **CATX OUT** port with Receiver's **HDMI Signal IN** port by using a CATx cable (cable not included).
4. Connect your HDMI display to each Receiver's **HDMI Out** port by using HDMI cables (cables not included).
5. For software control over the input/output selection and related settings, please connect your RS-232 cable and Ethernet cable to the *Matrix Switcher's* serial port and Ethernet port, then connect the RS-232 to your control system and the Ethernet cable to a switch or router on your network.

Note: If you want to control the software through RS-232 port, connect RS-232 cable only. If you want to control the software through Ethernet port, connect both RS-232 cable and Ethernet cable at the beginning.

6. Plug the included 5V/4A power adapter into the *Matrix Switcher's* power jack, then plug the power adapter into a reliable power outlet. The *Matrix Switcher* is powered on automatically.
7. Plug the included 5V/2A power adapter into each Receiver, then plug the power adapter into a reliable power outlet.
8. Power on all devices. The *Matrix Switcher* is now ready for use.

9. To enable remote control features, please follow steps 10 and 11.
10. Plug the IR receiver cable to the *Matrix Switcher's System IR receiver* if an external IR sensor is needed.
11. Plug the IR receiver cable into *Receiver's IR Receiver* socket, then plug the IR blaster cable into the *Matrix Switcher's IR Blaster 1-4* or *All IR output* if you want to use the remote IR controls over HDMI source(s).

Operation

There are four ways to control the input and output:

1. Selection button on the front panel;
2. IR remote control;
3. RS-232 control port;
4. IP (Ethernet) control port.

Control over Input selection button

Refer to **Figure 6** for the position of each control button:

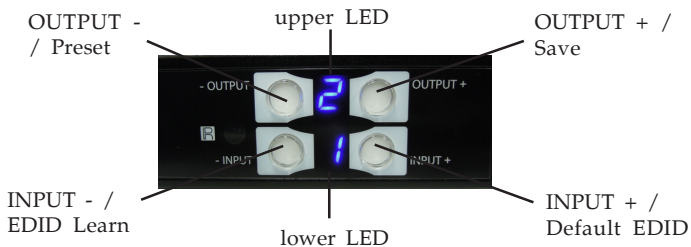


Figure 6

INPUT / OUTPUT Selection

1. Press **INPUT +** (the bottom, right button) or **INPUT -** (the bottom, left button) button to choose your input source.

"+" means increasing in the number of the input, "-" means decreasing. The lower LED will display the selected input number.

2. Press **OUTPUT +** (the top, right button) or **OUTPUT -** (the top, left button) to choose your output display. "+" means increasing in the number of the display, and "-" means decreasing. The **upper LED** will display the selected output number.
3. After both output and input are selected, the LED will blink twice, and the setting is taking effect now. The selected output will display the input source you selected.

Save Mapping

1. Press **INPUT +** or **INPUT -** button to choose your input.
2. Press **OUTPUT +** or **OUTPUT -** button to choose your output. Once the your preferred output is selected, keep pressing the **OUTPUT+** button (that is, **Save mapping** button), the upper LED will show **d**. The *Matrix Switcher* is in saving mode now.
Note: Continue to hold down the **OUTPUT+** button (**Save mapping** button) until instructed otherwise.
3. Press **INPUT +** or **INPUT -** button to choose a channel from **0-7**. The channel you choose is the channel you save this mapping in.
4. Release the **OUTPUT+** button (**Save mapping** button) now, the upper and lower LED will blink twice. The mapping is saved now.

Delete Saved Mapping

1. Press and hold down the **OUTPUT -** button (that is, **Preset** button). **Note:** Continue to hold down the **Preset** button until instructed otherwise.

2. When the **upper LED** shows **P**, press **INPUT +** or **INPUT -** button to choose the channel from **0-7**. The channel you choose is the channel you want to erase the mapping memory.
3. Release the **Preset** button now, the upper and lower LED will blink twice. The mapping is erased now.

Learning Default EDID

1. Press **INPUT +** or **INPUT -** button to choose an input you want to learn the default EDID. Once your preferred input is selected, keep pressing the **INPUT+** button (that is, **Default EDID** button).
Note: Continue to hold down the **Preset button** until instructed otherwise.
2. Press **OUTPUT +** or **OUTPUT -** button, the upper LED will show **E**, and the lower LED will show **d**. The *Matrix Switcher* is in default EDID learning mode.
3. Press **OUTPUT +** or **OUTPUT -** button to choose the default EDID mode from 1-8.
 - 1) Full-HD(1080p@60)-24bit 2D & 2ch
 - 2) Full-HD(1080p@60)-24bit 2D & 7.1ch
 - 3) Full-HD(1080p@60)-24bit 3D & 2ch
 - 4) Full-HD(1080p@60)-24bit 3D & 7.1ch
 - 5) Full-HD(1080i@60)(720p@60)-24bit 2D & 2ch
 - 6) Full-HD(1080i@60)(720p@60)-24bit 2D & 7.1ch
 - 7) Full-HD(1080p@60)-36bit 2D & 2ch
 - 8) Full-HD(1080p@60)-36bit 2D & 7.1ch
4. Release the **Default EDID** button, the upper and lower LED will blink twice. The selected default EDID is learned now.

EDID Learning Mode

1. Press **INPUT +** or **INPUT -** button to choose an input you want to learn. Once your preferred input is selected, keep pressing the **INPUT-** button (that is, **EDID Learning** button).

Note: Please don't let go of the **EDID Learning** button until instructed to do so.

2. Press **OUTPUT +** or **OUTPUT -** button, the upper LED will show **E**, and the lower LED will show **L**. The *Matrix Switcher* is in EDID learning mode now.
3. Press **OUTPUT +** or **OUTPUT -** button to select a EDID port from 1-4.
4. Release the **EDID Learning** button now, the upper and lower LED will blink twice. The EDID is learned by your selected output.

Control over IR Remote Control

INPUT / OUTPUT Selection

Select your input and output by pressing the circled buttons below. See **Figure 7**.

Take button B for example, button B is on the crossed point of input 2 and output 1. So when you press button B, the signals from input 2 will display on output 1. See **Figure 7** on the next page.

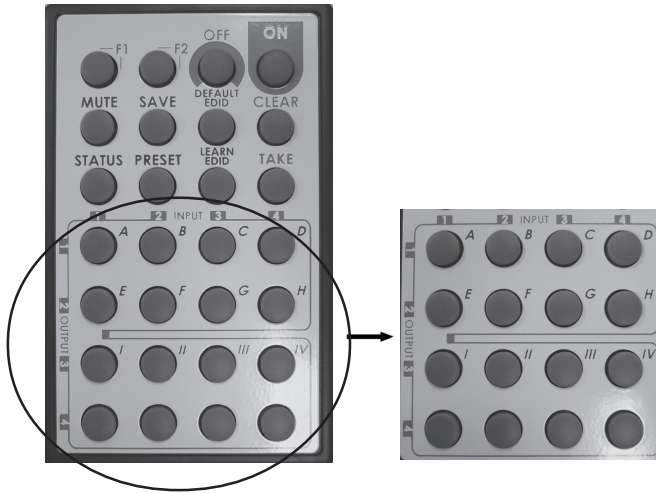


Figure 7

Save Mapping

1. After the preferred input/output is selected, press **SAVE**. The upper LED on *Matrix Switcher* will show **d**.
2. Press button **A-H** to select your storage channel. **Note:** Buttons **A-H** represent storage channels 1-8.
3. Press the **TAKE** button. The mapping has been saved.

Delete Saved Mapping

1. If you want to delete a saved mapping, press the **PRESET** button. The upper LED on *Matrix Switcher* will show **P**.
2. Press button **A-H** to select your storage channel. **Note:** Buttons **A-H** represent storage channels 1-8.
3. Press the **TAKE** button. The mapping has been deleted.

Learning Default EDID

1. Press the **DEFAULT EDID** button . The upper LED will show **E** and lower LED will show **d**.
2. Press button **A-H** to select your default EDID mode.
Note: Buttons **A-H** represent default EDID mode 1-8. Please refer to page 6 for the default EDID list.
3. Press button **I-IV** to select a desired input. **Note:** Buttons **I-IV** represent input source 1-4.
4. Press the **TAKE** button.

EDID Learning Mode

1. Press the **LEARN** button. The upper LED will show **E** and lower LED will show **L**.
2. Press button **A-H** to select EDID port.
3. Press button **I-IV** to select a desired input. **Note:** Buttons **I-IV** represent input source 1-4.
4. Press the **TAKE** button.

Disable Output

1. If you want to disable any of your outputs, press the **MUTE** button.
2. Press button **A-D** to select your output display.
Note: Buttons **A-D** represent output display 1-4.
3. Press the **TAKE** button.

Others: Function Key Definition

Refer to Table 1 below for the definition of each button:

Button	Function
OFF	Set the matrix switcher to standby mode
ON	Power on the matrix switcher
MUTE	Disable output display(s)
STATUS	Preset output status
SAVE	Save current mapping mode
PRESET	Delete saved mapping mode
DEFAULT EDID	Begin default EDID selection
LEARN EDID	Begin EDID learning from one output
CLEAR	Clear the previous IR operation procedure
TAKE	Trigger the previous setting
F1	Reserved
F2	Reserved

Table 1

Control over RS-232 Control Port

1. Double click the **setup** file in the HDMI FST Matrix Switcher folder of your driver CD to start the program.

Important: The software only can be used under Windows 7 and XP.

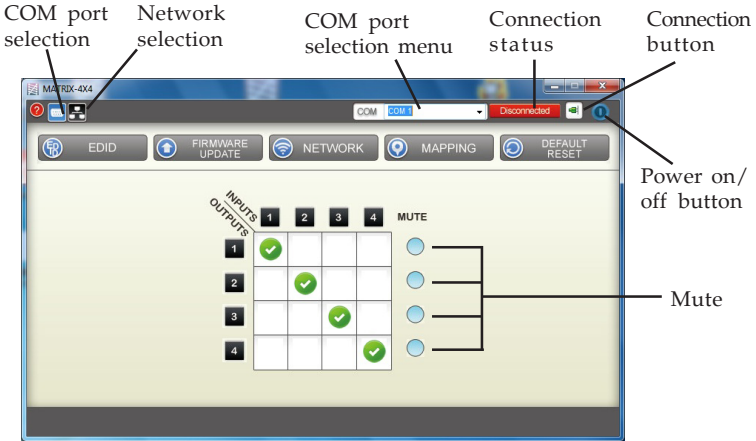


Figure 8


2. Select your COM port from the **COM port selection menu**, then click the **Connection button**.  Once it's connected, the **Connection status** will show **Connected** green color, see **Figure 9a**. **Note:** Make sure the status is connected before you go to the next step. If the status is not connected, the connection status will show **Connecting** (orange) or **Disconnected** (red). See **Figure 9b** and **9c** respectively.



Figure 9a



Figure 9b



Figure 9c

INPUT / OUTPUT Selection

After successful connection, select your input/output by clicking the crossed cell of the input and output.

See **Figure 10a** for example, all four input sources output to different displays. Input source 1 to display 1, source 2 to display 2, source 3 to display 3, source to display 4.

See **Figure 10b** for example, input source 1 outputs to all 4 displays.

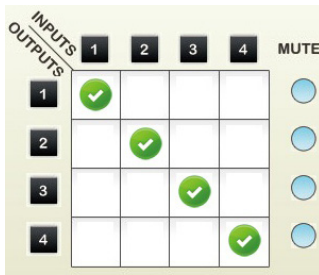


Figure 10a

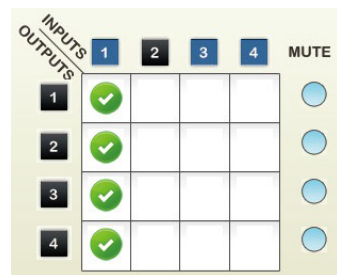


Figure 10b

Disable Output

If you want to disable the output display(s), click the Mute bullet on the right side. The bullet will turn red when disabled. Click the red bullet again to enable the display.

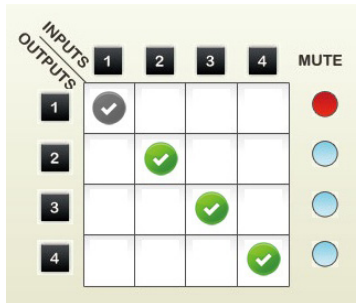


Figure 11

EDID Setup

Click the EDID button on the main menu to enter EDID setup.

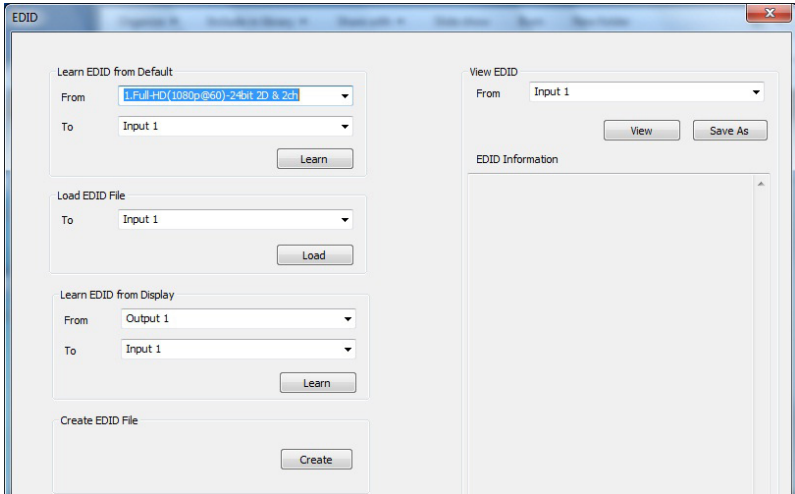


Figure 12

1. Learning Default EDID:
Select the default EDID mode from the drop down list, select the input, then click **Learn**.
2. Load EDID File:
Select Input from the drop down list, then click **Load** to load the EDID file.
3. Create EDID File
Click **Create** to create a new EDID file.
4. View EDID
Select Input from the drop down list, then click **View** to view the EDID information.

Firmware update

Firmware updates are released periodically, updates are not needed if your switcher is working properly. Check for any firmware updates at SIIG website: www.siiig.com/download.

1. Click **Load File** to select firmware file.
2. Click **Break**.
3. Quickly remove and reconnect the power adapter.
4. Click **Start** to begin the firmware update procedure.

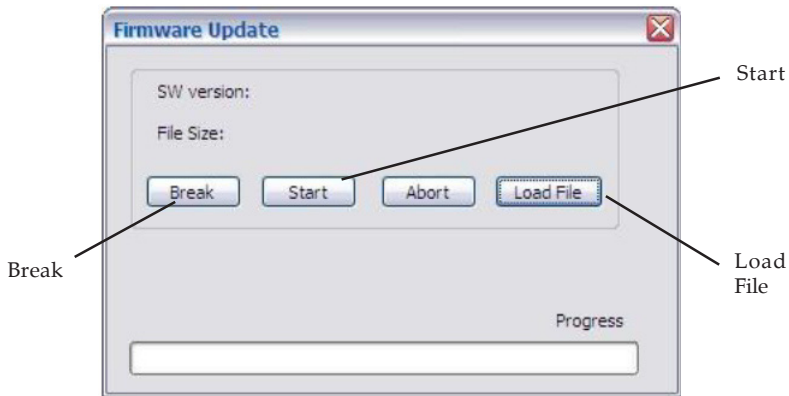


Figure 13

Mapping

1. Save mapping:
Select mapping from 1-8, then click **Save**.
2. Preset mapping:
Select mapping from 1-8, then click **Recall**.
3. Rename mapping:
Rename the mapping, then click **Confirm**.

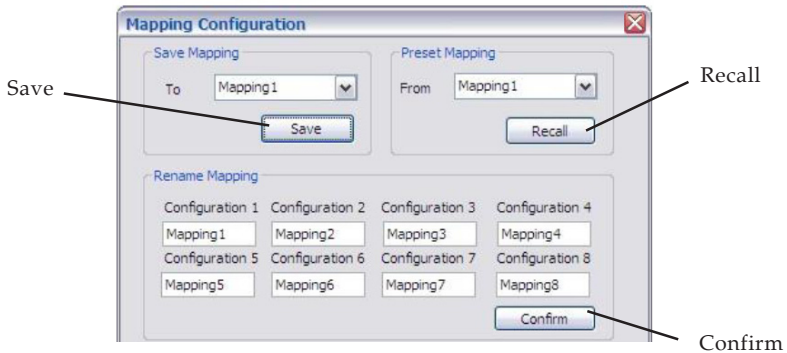


Figure 14

Control over Ethernet Control Port

Make sure a serial cable (not included) is connected to your PC and an Ethernet cable (not included) is connected to a Router or Switch on your network before proceeding.

1. Double click the **setup** file in HDMI FST Matrix Switcher folder on your driver CD.
2. Select your COM port from the **COM port selection menu**, then click the **Connection button**.
3. Make sure the **Connection status** is **Connected**. At the main menu, click **NETWORK**.

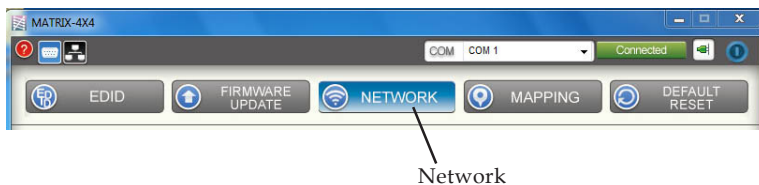


Figure 15

4. At the **Device Setting** window, select **RS232**, then click **Read From Device**. See Figure 13.

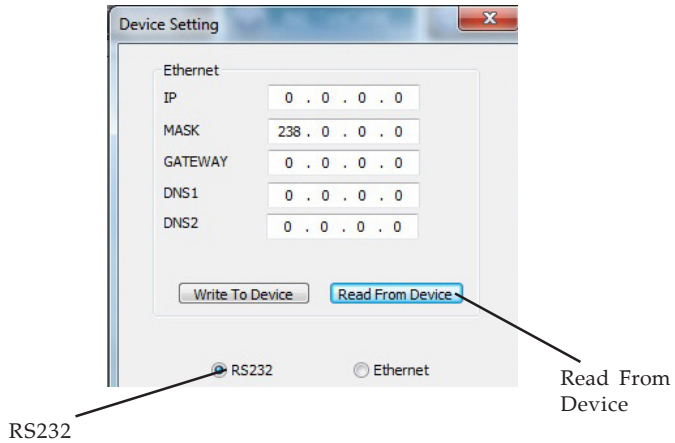


Figure 16

5. Fill in the **IP** and **MASK** column so that the *Matrix Switcher* is in the same IP domain as your network. Click **Write to Device**.

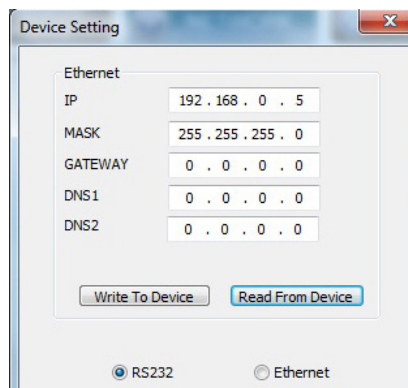


Figure 17

6. At the prompted **Complete** window, click **OK**.
7. Select **Ethernet**, type in the IP, then click **OK**.

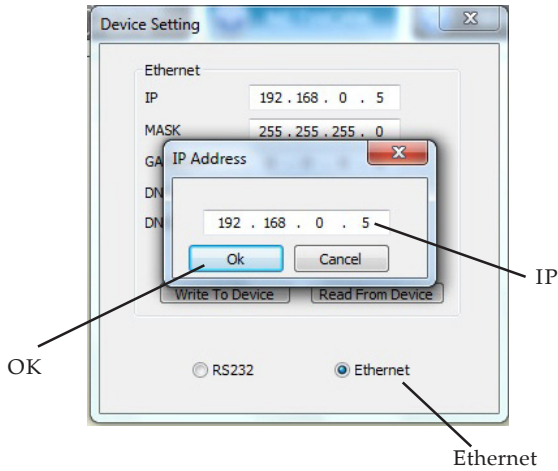


Figure 18

8. The Ethernet connection is established now. You can control the *Matrix Switcher* through Ethernet port now.

Application

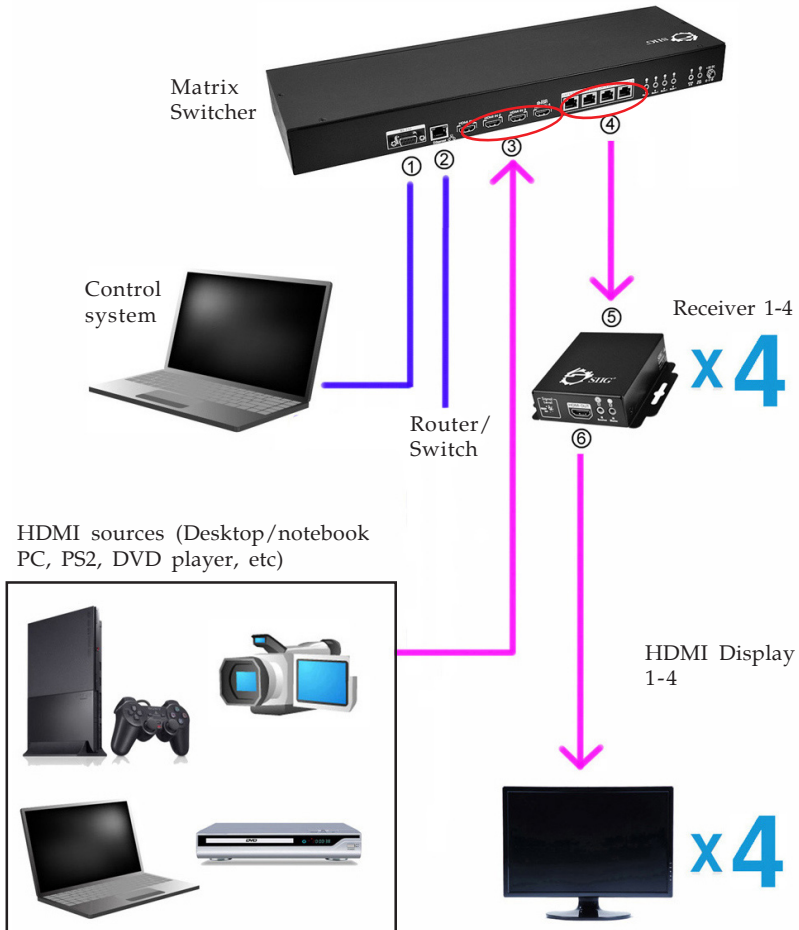


Figure 19: Application

- ① To control the Matrix Switcher by RS-232, connect this RS-232 port to your PC's RS-232 port by using an RS-232 cable (not included)

- ② To control the Matrix Switcher by Ethernet, connect the Ethernet port to a router or switch on your network
- ③ Connect these HDMI input ports to HDMI sources by using HDMI cable
- ④⑤ Connect Matrix Switcher's **CATX OUT** port with Receiver's **HDMI Signal IN** port by using a CATX cable
- ⑥ Connect the **HDMI Out** port to HDMI display by using an HDMI cable

Technical Support and Warranty

QUESTIONS? SIIG' s **Online Support** has answers! Simply visit our web site at www.siig.com and click **Support**. Our online support database is updated daily with new drivers and solutions. Answers to your questions could be just a few clicks away. You can also submit questions online and a technical support analyst will promptly respond.

SIIG offers a 3-year manufacturer warranty with this product. This warranty covers the original purchaser and guarantees the product to be free of any defects in materials or workmanship for three (3) years from the date of purchase of the product.

SIIG will, at our discretion, repair or replace (with an identical product or product having similar features and functionality) the product if defective in materials or workmanship. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Please see our web site for more warranty details.

If you encounter any problems with this product, please follow the procedures below.

A) If it is within the store's return policy period, please return the product to the store where you purchased it.

B) If your purchase has passed the store's return policy period, please follow these steps to have the product repaired or replaced.

Step 1: Submit your RMA request. Go to www.siig.com, click **Support**, then **Request A Product Replacement** to submit a request to [SIIG RMA](#) or fax a request to 510-657-5962. Your RMA request will be processed, if the product is determined to be defective, an RMA number will be issued.

Step 2: After obtaining an RMA number, ship the product.

- Properly pack the product for shipping. All software, cable(s) and any other accessories that came with the original package must be included.
- Clearly write your RMA number on the top of the returned package. SIIG will refuse to accept any shipping package, and will not be responsible for a product returned without an RMA number posted on the outside of the shipping carton.
- You are responsible for the cost of shipping to SIIG. Ship the product to the following address:

SIIG, Inc.
6078 Stewart Avenue
Fremont, CA 94538-3152, USA
RMA #: _____

- SIIG will ship the repaired or replaced product via Ground in the U.S. and International Economy outside of the U.S. at no cost to the customer.

About SIIG, Inc.

Founded in 1985, SIIG, Inc. is a leading manufacturer of IT connectivity solutions (including Serial ATA and Ultra ATA Controllers, FireWire, USB, and legacy I/O adapters) that bridge the connection between Desktop/ Notebook systems and external peripherals. SIIG continues to grow by adding A/V and Digital Signage connectivity solutions to our extensive portfolio. All centered around the distribution and switching of A/V signals over CAT5/6, these products include matrix switches, distribution amplifiers, extenders, converters, splitters, cabling, and more.

SIIG is the premier one-stop source of upgrades and is committed to providing high quality products while keeping economical and competitive prices. High-quality control standards are evident by one of the lowest defective return rates in the industry. Our products offer comprehensive user manuals, user-friendly features, and most products are backed by a lifetime warranty.

SIIG products can be found in many computer retail stores, mail order catalogs, and e-commerce sites in the Americas, as well as through major distributors, system integrators, and VARs.

PRODUCT NAME

4x4 HDMI CAT5e FST Matrix Switcher

FCC RULES: TESTED TO COMPLY WITH FCC PART 15, CLASS B OPERATING ENVIRONMENT: FOR HOME OR OFFICE USE

FCC COMPLIANCE STATEMENT:

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.

THE PARTY RESPONSIBLE FOR PRODUCT COMPLIANCE

SIIG, Inc.
6078 Stewart Avenue
Fremont, CA 94538-3152, USA
Phone: 510-657-8688

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