



# 8x8 HDMI 1.3 Matrix Quick Installation Guide

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## Introduction

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The *8x8 HDMI 1.3 Matrix* provides the most flexible and cost effective solution in the market to route high definition video sources plus multi-channel (up to 7.1-channel) digital audio from any of the eight HDMI sources to the remote displays.

## Features and Benefits

- HDMI 1.3c and HDCP compliant
- Video bandwidth: 6.75 Gbps (single-link 225MHz)
- Allows any source to be displayed on any or multiple displays at the same time
- Supports uncompressed 7.1 channel digital audio
- Resolution: Up to 1080p (60Hz)
- Supports default HDMI EDID and EDID learning
- Power consumption: 1 watt (max)
- Metal housing for superior RF shielding

## Package Contents

- 8x8 HDMI 1.3 Matrix
- Power cord
- IR Remote control and IR Receiver cable
- Rack mounting ears
- 2 Keys
- Software CD
- Quick Installation Guide

# Layout

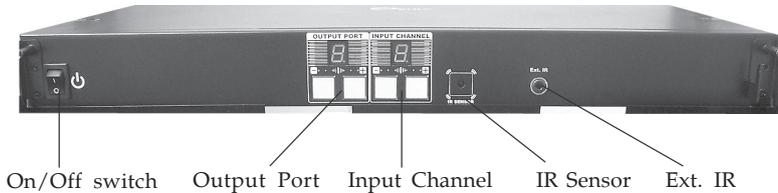
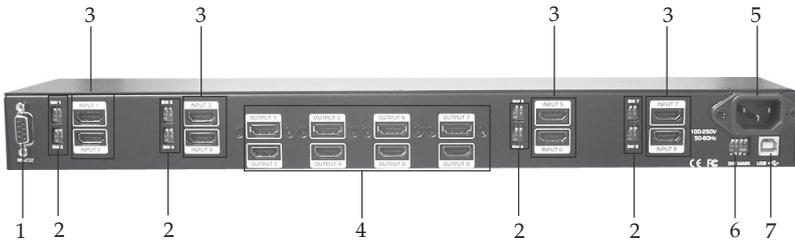


Figure 1: Front Layout

- **On/Off Switch:** Powers On or Off the Matrix
- **Output Port:** Output source indicator LED. Push buttons to display/change current output port source
- **Input Channel:** Input source indicator LED. Push buttons to display/change current Input Channel source
- **IR Sensor:** Receives IR signals from the included Remote Controller when the front panel cover is open
- **Ext. IR:** Plug the included IR Receiver cable here. Receives signals from the included IR Remote Controller when the front panel cover is closed



**Figure 2: Back Layout**

1. **RS-232:** RS-232 control port for software control and firmware update. This connection is optional and only needed if you want to control input/output device switching via your computer's serial port.
2. **SW 1 - 8:** 2-pin DIP switch for manual EDID and audio/video settings. See **DIP Switch** on page 4 for more information
3. **Input 1-8:** HDMI inputs
4. **Output 1- 8:** HDMI outputs
5. **AC Power Jack:** Plug in the power cord
6. **SW Main:** 4-pin DIP switch for setting RS-232 operation, USB operation and firmware update. See **SW Main** on page 5 for more information
7. **USB:** USB control port for software control. For the best performance and compatibility, SIIG recommends using **RS-232** serial port, see #1 above, to control input/output device switching via computer software. However, in the event that your computer does not have a serial port, USB control is available (see SIIG website at [www.siig.com](http://www.siig.com) to download USB driver and setup instructions). **Note:** USB control is compatible with Windows 7 and Windows Vista only.

# DIP Switch

## SW 1-SW 8 for EDID & Audio/Video

| DIP Switch Position   |   | Video               | Audio                 | Description  |
|---|---|---------------------|-----------------------|--|
| Pin #1  | Pin #2  |                     |                       |  |
| OFF  | OFF  | up to 1080p         | Surround <sup>1</sup> | <b>Default Mode</b> <sup>2</sup> : Up to 1080p & surround sound up to 7.1ch  |
| OFF  | ON   | Up to 1080p         | Stereo                | <b>Safe Mode</b> <sup>3</sup> : System output at 1080p and stereo audio - for basic compatibility  |
| ON   | OFF  | Bypass <sup>4</sup> | Bypass <sup>5</sup>   | <b>EDID Learning Mode</b> <sup>5</sup> : For learning EDID from the display while playing any received HDMI audio format   |
| ON   | ON   | Bypass              | Stereo                | <b>EDID Learning &amp; Stereo Mode</b> <sup>5</sup> : For learning EDID from the display while enforcing stereo output if any HDTV cannot play surround sound normally |

### Note:

- **1:** If the HDTV shows video without audio, try setting audio mode to stereo.
- **2: Default Mode** - Factory default of SW 1-SW 8: Pin#1-OFF & Pin#2- OFF for 1080p with surround sound.
- **3:** If you encounter an audio/video output problem during system installation, set the appropriate SW switch to **Safe Mode** to check your system setup.
- **4:** In **Bypass Mode** the Matrix will play the audio/video signals in original format. In this mode you may encounter compatibility issues among different HDMI sources and displays. If you cannot get the audio and/or video to display, change the DIP switch setting to **Default Mode** or **Safe Mode** to verify functionality of the device.

- **5: EDID Learning:** Learn the EDID of the selected HDMI display. See EDID Learning steps on page 16 for more information.

## SW Main

| DIP Switch Position                       |                  | Pin 1   | Pin 2   | Pin 3   | Pin 4   |
|---|------------------|---------|---------|---------|---------|
| Normal Operation Mode [via RS-232 port] 5 |                  | OFF [↑] | OFF [↑] | OFF [↑] | OFF [↑] |
| Normal Operation Mode [via USB port] 7    |                  | OFF [↑] | OFF [↑] | OFF [↑] | ON [↓]  |
| Firmware Update Mode 8                    | Block A [main]   | ON [↓]  | OFF [↑] | OFF [↑] | OFF [↑] |
|   | Block B [remote] | ON [↓]  | OFF [↑] | ON [↓]  | OFF [↑] |
|   | Block C [HDMI]   | ON [↓]  | ON [↓]  | OFF [↑] | OFF [↑] |

### Note:

- **6:** Factory default RS-232 mode - Pin 1 OFF, Pin 2 OFF, Pin 3 OFF and Pin 4 OFF. Please use this setting for use with RS-232 port.
- **7:** Use this setting for use with USB control port (see SIIG website at [www.siig.com](http://www.siig.com) to download USB driver and setup instructions). See page 3, step 7 for more information.
- **8:** Settings for firmware update

## Firmware Update

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Firmware update can only be done via Matrix RS-232 port connect to COM 1 of the computer.

**Note:** Check SIIG website, [www.siig.com](http://www.siig.com), for firmware update and utility as they become available.

1. Power off the Matrix. Connect the Matrix to your computer's COM1 serial port using a straight through serial cable.
2. Start the firmware update program.
3. Set Pin 1 to ON for firmware update mode.
4. Set pin 2 and pin 3 at respective positions to assign which block is updated.
5. Power on the Matrix. The firmware update process should start automatically. If the process does not start, check the serial cable connection.
6. When firmware update is successful, you will see OK. Then turn off the Matrix.
7. Repeat steps 4-6 to update the remaining blocks.
8. When all updates are completed, set the main switch to normal operating mode.
9. Power on the Matrix.

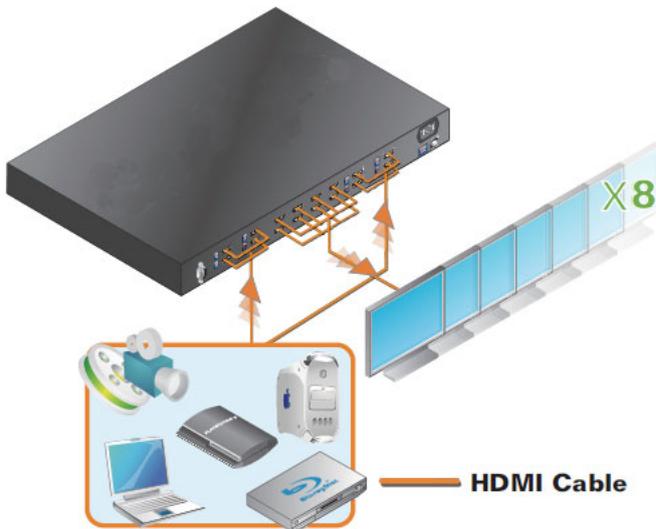
## Hardware Installation

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1. Connect your HDMI sources to the HDMI inputs (**Input 1 - 8**) on the Matrix using HDMI cables (cables not included).
2. Connect your HDMI displays to the HDMI Outputs (**Output 1 - 8**) on the Matrix using HDMI cables (cables not included).
4. Connect the included **IR Receiver Cable** to the Matrix and route the cable through the slot on the front panel cover. **Note:** This connection is optional and only needed when IR control is required when the front panel is closed.
5. Connect one end of the power cord to the Matrix and plug the other end into a reliable power outlet.
6. Power on all HDMI source devices, all HDMI displays and the Matrix.

## Application Diagram

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## Channel Control

### Front Panel Push Button

1. Use the Output Port button (+ or -) to select the output port to be changed.
2. Push the Input Port button (+ or -) to select the input source. After a few seconds the setting will be active.

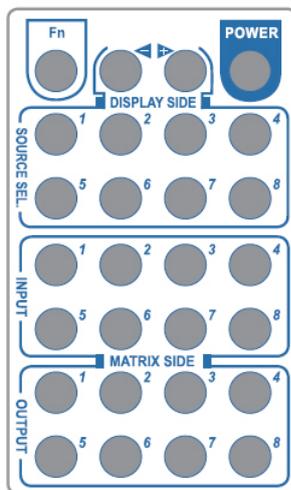
### IR Remote Controller

1. Press the Input button 1 - 8 to select the HDMI source you want to setup.
2. Press Output button 1 - 8 to select the HDMI display. After a few seconds the setting will be active.

**Note:** The **Source Sel.** buttons are not used for the *8x8 HDMI 1.3 Matrix*.

#### INPUT & OUTPUT MAPPING

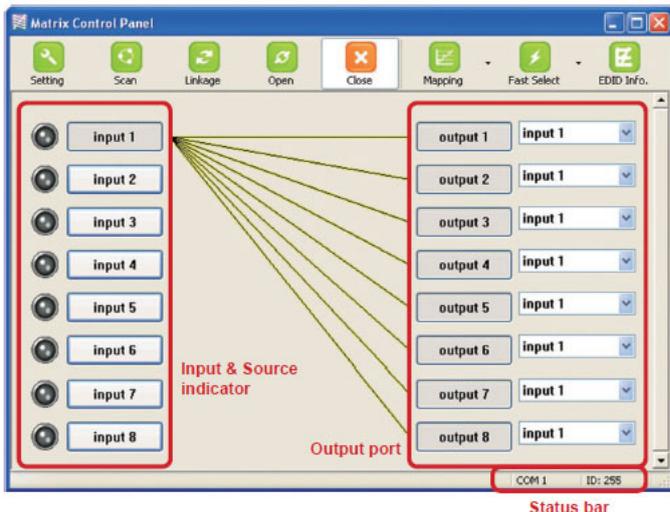
|          |                     |
|----------|---------------------|
| INPUT 1  | HDMI input port #1  |
| INPUT 2  | HDMI input port #2  |
| INPUT 3  | HDMI input port #3  |
| INPUT 4  | HDMI input port #4  |
| INPUT 5  | HDMI input port #5  |
| INPUT 6  | HDMI input port #6  |
| INPUT 7  | HDMI input port #7  |
| INPUT 8  | HDMI input port #8  |
| OUTPUT 1 | HDMI output port #1 |
| OUTPUT 2 | HDMI output port #2 |
| OUTPUT 3 | HDMI output port #3 |
| OUTPUT 4 | HDMI output port #4 |
| OUTPUT 5 | HDMI output port #5 |
| OUTPUT 6 | HDMI output port #6 |
| OUTPUT 7 | HDMI output port #7 |
| OUTPUT 8 | HDMI output port #8 |



## Software Control through RS-232 (Serial port)

Install the HDMI Matrix Control software into your computer. This software is optional and only needed if you want to control input/output device switching via your computer's serial port.

1. Connect the Matrix RS-232 port to the computer's COM 1 serial port using a 9-pin to 9-pin straight through serial cable (cable not included).
2. Insert the installation CD into the CD-ROM drive of your computer.
3. Open Windows Explorer and double click on the CD-ROM drive, then double click **Setup** to start the software installation.
4. Follow the onscreen prompts to complete the software installation.
5. Start the HDMI Matrix Control software utility and the Control Software Menu, similar to below, will open.

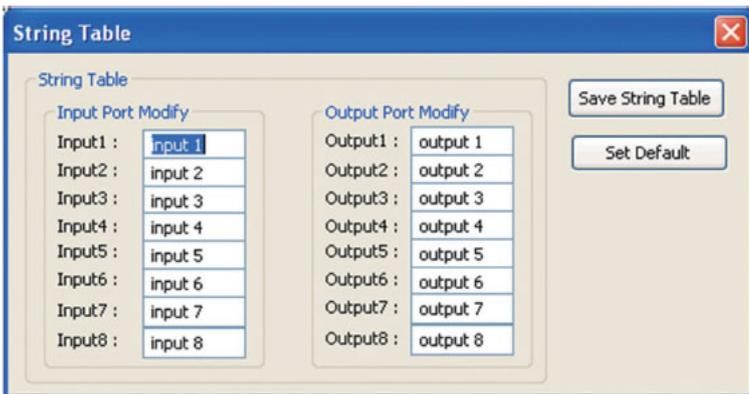


## Setting

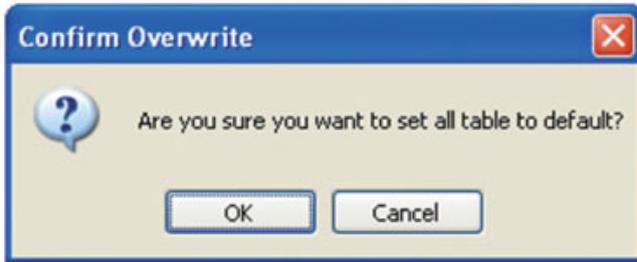
Allows you to assign names to your Input and Output devices.



1. Click **Get** to read back the device ID.
2. Click **Set** to write the device ID.
3. Click **Rename** to open the String Table. the String Table allows you to assign names for each input and output device for easy recognition.



4. Click **Save String Table** to save your changes. Then click **Ok** to confirm.



## Scan

1. Click **Scan** to display the status of all COM ports.
2. Select the RS232 serial port connected to the Matrix and set device ID to 255 for all the devices. **Note:** Only device ID 255 should be used.
3. Click **OK** to save the settings and return to main menu.



## Linkage

Displays the status of all Input and Output devices.

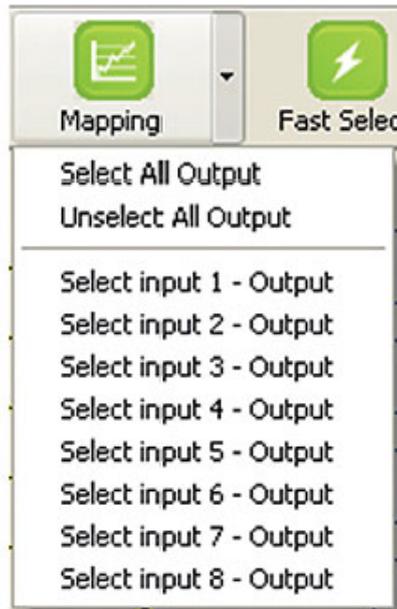
## Open / Close

Opens or Closes the COM port

## Mapping

Allows you to quickly and easily map your input and output devices.

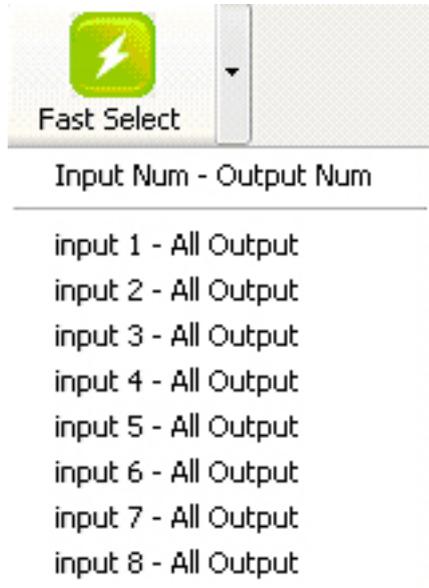
- **Select All Output:** Quickly sets all outputs to the same source
- **Unselect All Output:** Quickly releases all outputs
- **Select Input 1~8 Output:** Select Input source, then select output port. **Example:** Select Input source 1, then select output sources 1 , 2 and 3.



## Fast Select

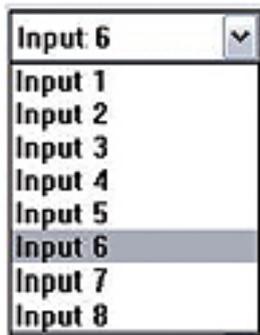
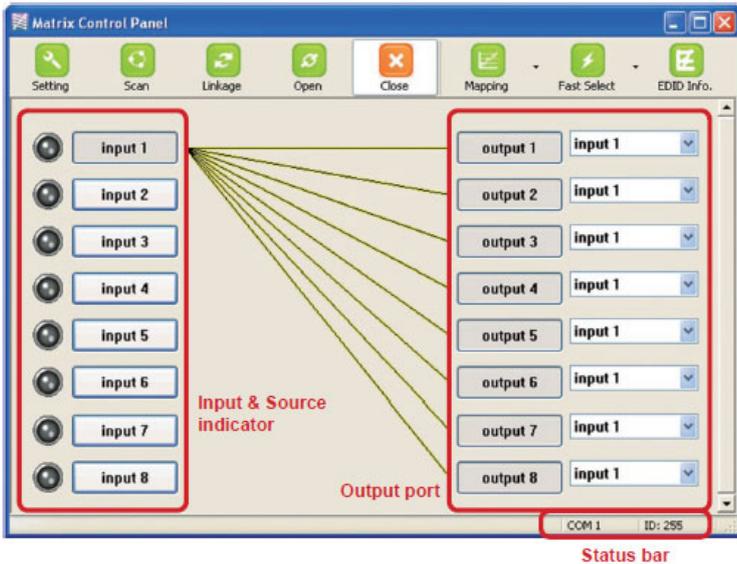
Offers one step Input to Output configuration.

- **Click Fast Select icon:** Assigns the Input source to its respective Output port. **Example:** Assigns Input source 1 to be displayed to Output port 1, assigns Input source 2 to be displayed to Output port 2, etc.
- **Fast Select pull down menu:** Assigns the selected Input source to be displayed on all Output ports.



## Output Port

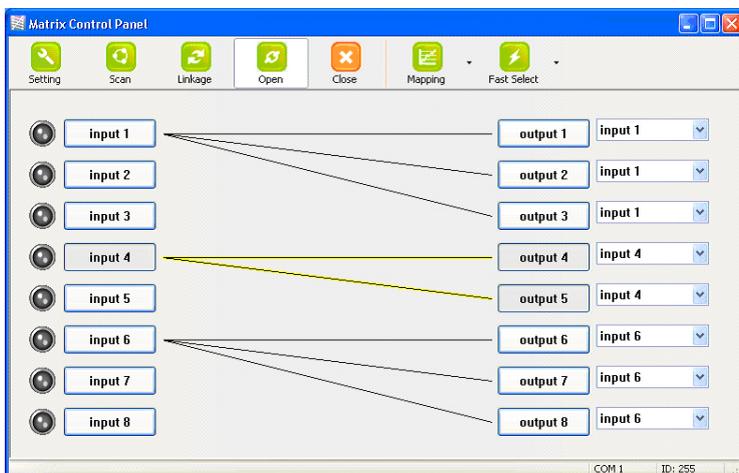
- **Input drop down box:** Click on the down arrow, then select which Input source to be sent to the Output port.



**One by One Setting:** From the main screen select the Input source, then select the output port(s) which you want to send the signal. The linking line will change to yellow.

**Group Setting:** First select select the output ports one by one, the output ports will change to gray. Then select the input source. The linking line will change to yellow.

**Example:** In the image below, Output 4 & Output 5 are selected, then Input 4 is selected.



## **EDID Learning**

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EDID learning is only necessary whenever an HDMI display can not display video and play audio properly.

### **Manually connect displays to HDMI Inputs**

1. Power up the Matrix. Connect the HDMI display that to be learned to the HDMI Input port where the picture does not display normally.
2. Move DIP switch PIN 1 of the respective HDMI Input port to On and wait for 5 seconds to complete EDID learning process. Do not move the DIP switch.
3. Repeat steps 1 & 2 for the other HDMI Inputs if necessary.

### **Using the Front Panel Buttons**

#### *For One on One Learning*

1. Use the "+" and "-" button to select the desired Output Port and Input Channel for EDID learning.
2. Hold down the "+" button of the Output Port and "-" button of the Input Channel at the same time for 2 seconds, then release both buttons.
3. If the process is successful, the Input Channel will show "O". If not successful, it will show "F".

#### *For All-in-One Learning*

1. Hold down the "+" button of the Output Port and "+" button of the Input Channel at the same time for 2 seconds, then release both buttons.
2. If the process is successful, the Input Channel will show "O". If not successful, it will show "F".

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# Technical Support and Warranty

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**QUESTIONS?** SIIG's **Online Support** has answers! Simply visit our web site at [www.siig.com](http://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 analysts will promptly respond.

SIIG offers a 3-year manufacturer warranty with this product. 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 from.

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](http://www.siig.com), click **Support**, then **RMA** to submit a request to [SIIG RMA](#). 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. 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.

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Founded in 1985, SIIG, Inc. is a leading computer upgrade manufacturer of I/O connectivity products, including PCIe, PCI & ISA serial and parallel ports, USB, Serial ATA & UltraATA controllers, FireWire (1394a/b), networking, sound cards, and other accessories. SIIG is the premier one-stop source of upgrades.

SIIG products offer comprehensive user manuals, many user-friendly features, and are backed by an extensive manufacturer warranty. High-quality control standards are evident by the overall ease of installation and compatibility of our products, as well as one of the lowest defective return rates in the industry. SIIG products can be found in computer retail stores, mail order catalogs, through major distributors, system integrators, and VARs in the Americas and the UK, and through e-commerce sites.

### **PRODUCT NAME**

8x8 HDMI 1.3 CAT5e Matrix

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.  
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Fremont, CA 94538-3152, USA  
Phone: 510-657-8688

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