4x4 HDMI 1.3 CAT5e Matrix Quick Installation Guide

Introducing the *4x4 HDMI 1.3 CAT5e Matrix*

The *4x4 HDMI 1.3 CAT5e 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 four HDMI sources to the remote displays.

Features and Benefits

- HDMI 1.3c and HDCP compliant
- Chipset: Silicon Image
- Video bandwidth: 10.2 Gbps (single-link 340MHz)
- Input TMDS signal: 1.2V (peak-to-peak)
- Input DDC signal: 5V (peak-to-peak)
- Resolution: 480i / 480p / 720p / 1080i / 1080p (60Hz)
- Transmission:
  -720p/1080i (HD): 165ft (CAT5e) & 180ft (CAT6)
  -1080p (full HD): 115ft (CAT5e) & 130ft (CAT6)
- Power supply: 5V DC, 6A
- Power consumption: 20 Watts (max)
- Housing: metal (for better RF shielding)

Package Contents

- 1x Matrix Transmitter
- 4x Matrix Receiver
- Power Adapter
- IR emitting extension cable
- 4x IR receiving extension cable
- IR Remote Controller
- Installation CD
- Quick Installation Guide

Layout

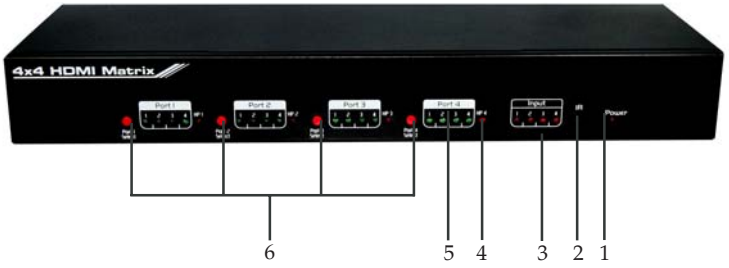

Figure 1: Transmitter Front Layout

1. **Power**: Power indicator LED
2. **IR**: IR receiver LED
3 **Input**: Input source indicator LED (1-4)
4. **HP 1–HP 4**: Connection status indicator LED
5 **Port 1–Port 4**: Input source channels mapping LED for each output channel
6 **Port 1 –Port 4 Selector**: Push button to select input channel

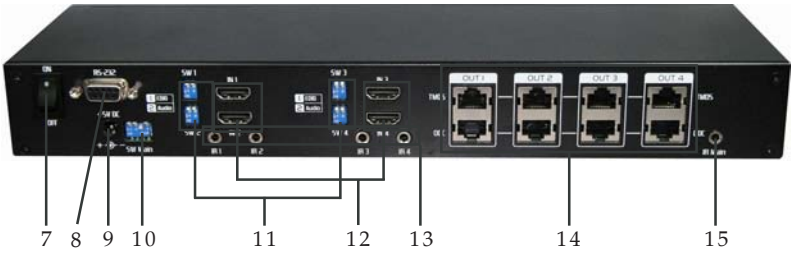

Figure 2: Transmitter Back Layout

7. **ON–OFF:** Power ON/OFF
8. **RS-232**: RS-232 control port
9. **+5V DC**: 5V DC power jack
10. **SW Main**: DIP switches (see DIP Switch below in the next page)
11. **SW 1–SW 4**: DIP switch (see DIP Switch in the next page)
12. **IN 1–IN 4**: HDMI inputs
13. **IR 1–IR 4**: IR extender jacks for individual HDMI source
14. **OUT 1–OUT 4**: RJ-45 TMDS/DDC outputs for each output channel
15. **IR Main:** IR extender jack for all HDMI sources (default socket for IR emitter)

SW 1-SW 4 for EDID/Audio

DIP Switch Position		Video	Audio	Description
Pin #1	Pin #2			
OFF ⬆	OFF ⬆	1080p	Stereo[1]	**Default Mode**[2] : 1080 & Stereo
OFF ⬆	ON ⬇	720p	Stereo	**Safe Mode**[3] **:** Enforce the system output at 720p/1080i video and stereo audio for basic compatibility
ON ⬇	OFF ⬆	Bypass[4]	Bypass[4]	**EDID Learning Mode**[5]**:** For learning EDID from the display while playing any received HDMI audio format
ON ⬇	ON ⬇	Stereo	Stereo	**EDID Learning & Stereo Mode**[5]**:** For learning EDID from the display while enforcing stereo output if any HDTV cannot play surround sound

Note:

1. If the HDTV shows video without audio, try setting audio mode to stereo.
2. **Default Mode** - Factory default of SW 1-SW 4: Pin#1- OFF & Pin#2- OFF for 1080p with stereo.
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**: Set Pin#1- ON first then connect the HDMI Input to the HDTV through an HDMI cable. Wait for 20 seconds. The EDID of the display will be saved. If you want to learn the EDID from another HDTV, you must set Pin#1 at OFF first and repeat this process.

Figure 3: Receiver Front Layout

- **IN**: Push button to switch input source channels in sequential order
- **EQ**: 8-level equalization control for HDMI signals. 0-7 = strongest–weakest. It is recommended to switch from 0 to 7 to find the optimal visual experience
- **Source LED**: Indicates input source
- **HDMI Out**: Connect to HDTV via HDMI cable
- **IR**: Plugs in IR receiver cable

Figure 4: Receiver Back Layout

- **+5V DC**: 5V power jack (optional)

> **Note**: The *4x4 HDMI 1.3 CAT5e Matrix* has been tested extensively and found that it doesn't require an external power supply. However, if you find it not working please connect a 5V power supply similar to the power supply that powers the Transmitter.

- **TMDS**: Connects to TMDS Out of the Transmitter via RJ45 cable
- **DDC**: Connects to DDC Out of the Transmitter via RJ45 cable

IR Sockets

IR Emitter Cable (for Matrix Transmitter)

- **IR Main**: The default location for IR emitter extension cable. Transmits IR command signals received from any of the four remote receivers to all of the HDMI sources
- **IR1**: IR emitting cable connected here. Transmits IR command signals from the remote receivers that are connected to input channel 1 (**IN 1**)

- **IR2**: IR emitting cable connected here. Transmits IR command signals from the remote receivers that are connected to input channel 2 (**IN 2**)
- **IR3**: IR emitting cable connected here. Transmits IR command signals from the remote receivers that are connected to input channel 3 (**IN 3**)
- **IR4**: IR emitting cable connected here. Transmits IR command signals from the remote receivers that are connected to input channel 4 (**IN 4**)

IR Receiver Cable (for Matrix Receiver)

- **IR**: IR receiving cable connected here. Receives IR command signals from the IR remote control of the transmitter and all other HDMI source devices.

Hardware Installation

The *4x4 HDMI 1.3 CAT5e Matrix* as master

1. Connect your HDMI sources to the HDMI inputs (**IN 1 - IN 4**) on the **Matrix Transmitter**.
2. Connect each DDC output on the transmitter to respective DDC input on the **Matrix Receiver**.
3. Connect each TMDS output on the **Matrix Transmitter** to respective TMDS input on the **Matrix Receiver**.
4. Connect IR emitter cable to the **Matrix Transmitter** and direct the IR emitter to the built-in IR receiver of the HDMI source devices.
5. Connect the +5V DC power supply to the **Matrix Transmitter**.
6. Power on all HDMI source devices.
7. Power on the **Matrix Transmitter**.

The *4x4 HDMI 1.3 CAT5e Matrix* as receiver

1. Connect each HDMI output to HDMI displays.
2. Connect the TMDS input on the **Matrix Receiver** to the TMDS output on the **Matrix Transmitter**.
3. Connect the DDC input on the **Matrix Receiver** to the DDC output on the **Matrix Transmitter**.
4. Connect IR receiver cable and place the IR receiver at the appropriate position to be able to receive the IR signals sent from the users.
5. Use the EQ dial to adjust the equalization until the picture and sound are clear.

Operation and IR Control

Source Side

Method A: Push Button

Push the **Port Select** button on the front panel, the source will change in sequential order.

Method B: IR Remote Control

1. Please press  to enter IR control mode.

   Note: If Matrix Transmitter receives the IR commands, the LED will flash. If not, try again.

2. Decide which output port to be controlled by pressing F1 to F4, and wait a few seconds for audio/video of next channel to appear.

   Note: If the setting is correct, the corresponding LED will flash. If not, press output port select button or repeat step (1) and (2).

F1	HMDI output #1
F2	HMDI output #2
F3	HMDI output #3
F4	HMDI output #4

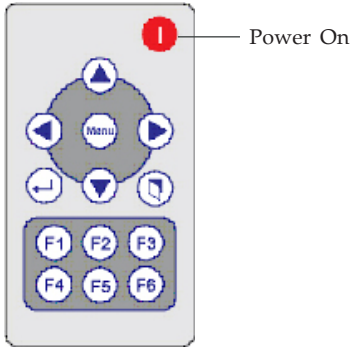

Figure 5: Remote Control

3. Use the left or right keys to select input source device and wait a few seconds for the audio/video of the next channel to appear.

> Note: If the setting is correct, the corresponding LED will flash. If there is no response, please wait until the LED stops flashing, and try again. Left button to switch channels in ascending order (1, 2, 3, 4, 1, ...) Right button to switch channels in descending order (1, 4, 3, 2, 1, …)

Display Side

Method A: Push button

Push the switch buttons of respective output channels and the output channel will switch from HDMI source 1 to source 4 in sequential order, wait a few seconds for audio/video of next channel to appear.

Method B1: IR remote control

1. Press Power on button to enable IR control function.

   Note: If **Matrix Receiver** receives the IR command, the LED will flash. If not, try again.

2. Press hot key, **F1-F4**, for input source. Please refer **Figure 5** in page 9.

Method B2: IR remote control for controlling the HDMI sources

Users can use the corresponding IR remote to control respective DVD player or any HDMI compliant devices including **Matrix Receiver** itself with IR control at any display site.

RS-232 Serial Port Control

Method C: Software Control through RS-232

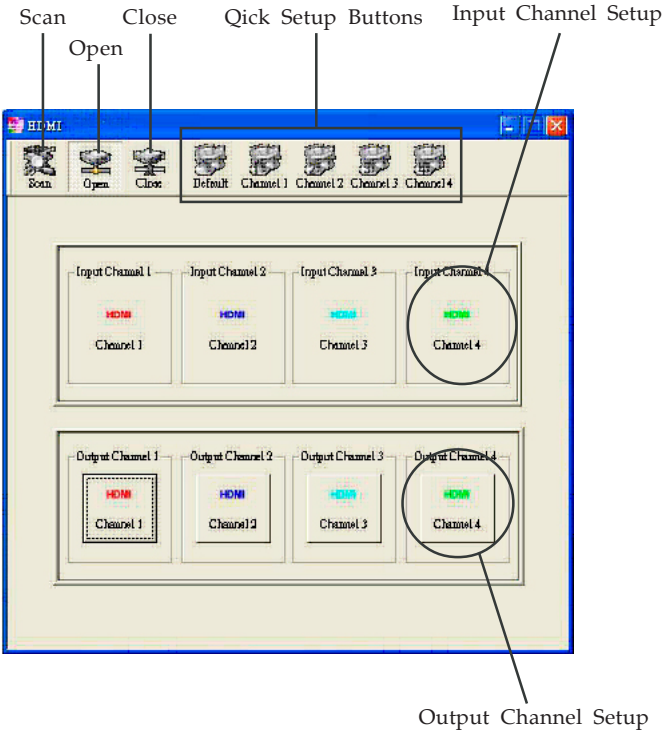

Figure 6: RS-232

- **Scan**: Clicking this button will start searching all the available COM ports (1-255). If the matrix is detected, the window on the left will show up.

Otherwise, the window on the right shows up to indicate no device can be found.

- **Open**: Opens the COM port after scan to establish the connection between PC and the matrix
- **Close**: Releases the COM port after scan
- **Quick Setup Buttons**: Provides fast setup between inputs and outputs of the matrix. "Default" button makes input 1, 2, 3, 4 mapped to output 1, 2, 3, 4 respectively. "Channel 1" makes all outputs see Input-1, same for the remaining buttons
- **Output Channel Setup**: Click on this button, a quick selection table of inputs will show up. Users can then easily select the input video for each output
- **Input Channel Setup**: This button will bring up the setup window. See the next page.

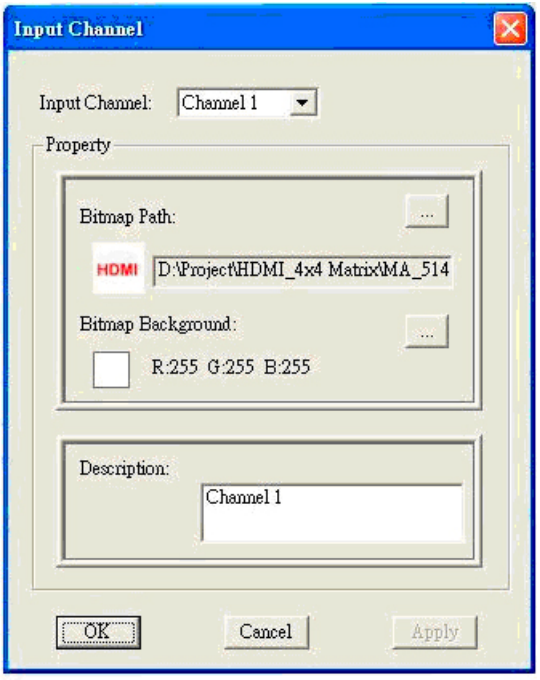

Figure 7: Input Channel

- **Input Channel**: Select the input channel
- **Bitmap Path**: Select the figure for each channel. Notice that only pictures in BMP format are supported
- **Description**: Channel description

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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 analysts will promptly respond.

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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**, 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.

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PRODUCT NAME

4x4 HMDI 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

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