

Gefen

8x8 Crosspoint Matrix for HDMI 1.3

EXT-HDMI1.3-848CP

User Manual



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Rev A

CONTENTS

- 1 Introduction**
- 2 Operation Notes**
- 3 Features**
- 4 Panel Layout**
- 5 Panel Descriptions**
- 6 Connecting The 8X8 Crosspoint Matrix For HDMI 1.3**
- 8 Crosspoint Matrix Remote Description & Operation**
- 9 8X8 Crosspoint Matrix For HDMI 1.3 Remote Installation**
- 10 IR Address Definition And Binary Codes**
- 11 RS-232 Serial Control Interface**
- 13 Specifications**
- 14 Warranty**

INTRODUCTION

Congratulations on your purchase of the 8x8 Crosspoint Matrix for HDMI 1.3. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

The Gefen 8x8 Crosspoint Matrix for HDMI 1.3

The 8x8 Crosspoint Matrix for HDMI 1.3 routes high definition video at resolutions of up to 1080p with multichannel digital audio from any eight HDMI sources to any eight displays. The 8x8 Crosspoint Matrix supports advanced digital audio formats such as Dolby True HD and DTS HD Master audio. Each source is accessible at all times by any display by selecting it with the included IR remote, by using the RS232 port or by using the button switches on the front panel.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 8X8 CROSSPOINT MATRIX FOR HDMI 1.3

- 8x8 Crosspoint Matrix for HDMI 1.3 is a fully featured crosspoint matrix for eight inputs and eight outputs. Any source can be connected to any display at any time, using the remote control or by controlling it via the buttons on the front panel.
- The 8x8 Crosspoint Matrix for HDMI 1.3 maintains high resolution video up to 1080p connecting any source to any of the eight display outputs.
- The 8x8 Crosspoint Matrix for HDMI 1.3 uses crosspoint-based switching that allows HDCP from any input to any output.
- There is no internal scaling in the 8x8 Crosspoint Matrix for HDMI 1.3. All of the attached monitors must be able to display the resolutions output by the source devices. For maximum compatibility it is recommended that only one compatible / common resolution be used by all of the source devices.

FEATURES

Features

- Distributes any of the eight inputs to any combination of the eight HDMI™ output displays
- Maintains high resolution video - beautiful, sharp HDTV resolutions up to 1080p, 2k, and computer resolutions up to 1920 x 1200 are easily achieved
- Serial RS232 port for remote control
- Discrete IR remote control (included)
- Rackmountable
- HDMI and HDCP compliant

HDMI 1.3 Matrix Features Supported:

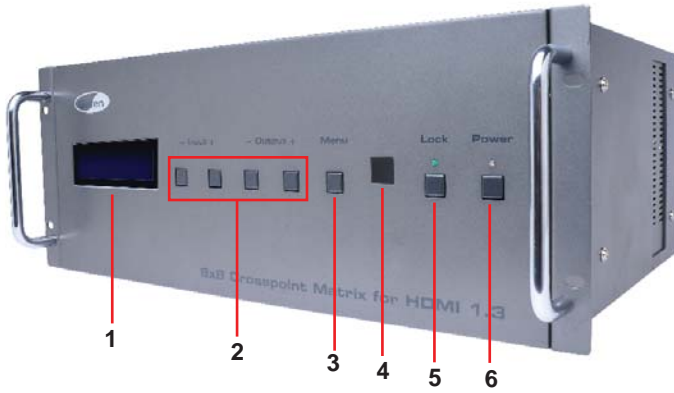
- Dolby TrueHD & DTS-HD Master Audio
- Deep Color (xvYCC Color)
- 225 MHz (up to 12 bit YUV 444 @ 1080p)
- Lip-Sync Pass Through
- CEC Pass Through

Package Includes

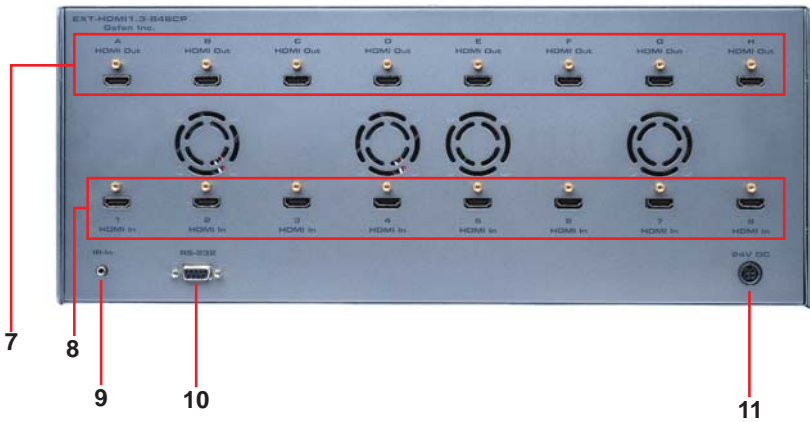
- (1) 8x8 Crosspoint Matrix for HDMI 1.3
- (1) IR remote control
- (1) One 24V DC Power Supply
- (8) 6-foot HDMI cables (M-M)
- (1) User's Manual

PANEL LAYOUT

Front Panel



Back Panel



PANEL DESCRIPTIONS

1 Main LCD Display

This is a two-line, sixteen-character display which displays status information and is also used to manage display / source routing

2 Navigation Buttons

These buttons are used to navigate between the inputs and outputs of the 8x8 Crosspoint Matrix for HDMI 1.3. For details on how these controls are used, please see pages 7 and 8

3 Menu Button

Pressing this button changes between routing mode and status mode

4 Infrared (I/R) Receiver

This IR receiver will accept commands from the included RMT-848IR remote control. Line-of-sight between this receiver and the remote controls needs to be preserved for proper operation.

5 Lock Button

Temporarily locks the front panel controls. This prevents inadvertent routing changes or power-down. The LED above the button is red when front panel is locked. Press once to lock the panel. Press this button again to unlock panel buttons.

6 Power On/Off Button

Turn the power on or off using this button. (The LED will change color from red to green.)

7 HDMI Output Ports 1 – 8

These outputs are used to connect up to 8 HDMI-capable displays

8 HDMI Input Ports 1 – 8

These inputs are used to connect up to 8 HDMI-capable sources

9 I/R Port

An optional I/R blaster can be connected to this port

10 RS-232 Serial Communications Interface

This interface is designed to accept commands from an external control system. Please see page 11 for more information.

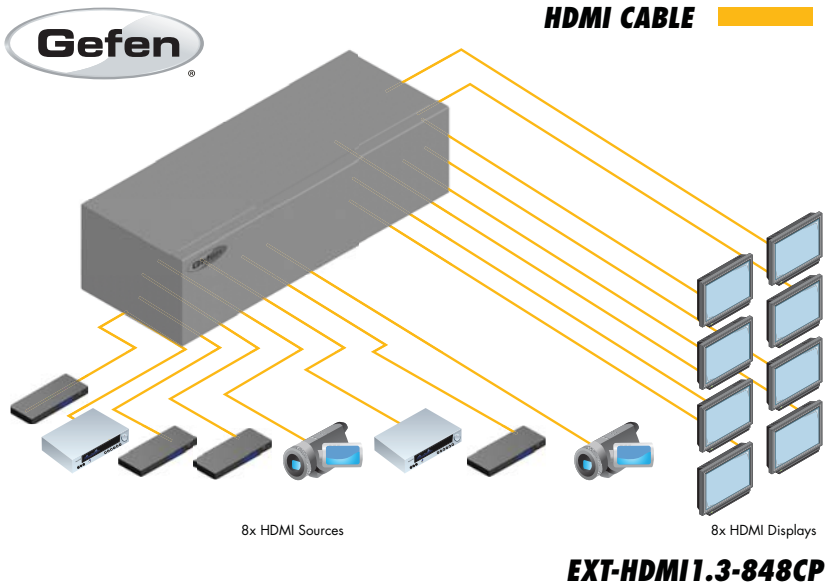
11 24V DC Power Receptacle

The port accepts power from the included 24V DC power supply

CONNECTING THE 8X8 CROSSPOINT MATRIX FOR HDMI 1.3

HOW TO CONNECT THE 8X8 CROSSPOINT MATRIX FOR HDMI 1.3

1. Connect up to 8 HDMI source devices to the HDMI inputs on the rear panel of the 8x8 Crosspoint HDMI Matrix for HDMI 1.3 using the supplied HDMI cables.
2. Connect up to 8 HDMI capable displays to the HDMI outputs on the rear panel of the 8x8 Crosspoint HDMI Matrix for HDMI 1.3 using HDMI cables.
3. Connect the included 24V DC power supply to the power receptacle on the rear panel of the 8x8 Crosspoint HDMI Matrix for HDMI 1.3. Connect the opposite end of the power cable to an available wall power socket.



HOW TO OPERATE THE 8x8 CROSSPOINT MATRIX FOR HDMI 1.3

How to Switch between Inputs and Outputs

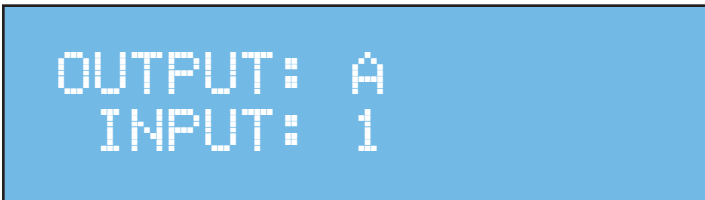
The main display of the 8x8 Crosspoint Matrix for HDMI 1.3 is a sixteen-character, two-line LCD (Liquid Crystal Display). This display shows the current routing status and is also used to aid in switching between sources and displays.



The first row represents outputs A through H on the back of the unit. The second row represents the input to which each output is routed. Each input can have a value from 1 to 8.

Routing sources to a display

On the front panel, press the MENU button. The display will change to show a single output (letter) and input (number). Press the **OUTPUT+** or **OUTPUT-** button to select the desired display to which you will select the input. Once you have selected the display you want to use, press the **INPUT+** or **INPUT-** button to select the desired source. Once the routing is complete, press the MENU button to effect the change. Note that it is necessary to press the **MENU** button to complete routing modifications.





1 LED Button Press Indicator

This LED will activate momentarily upon each button press. This visual indicator is to inform the user that a command has been sent by the IR remote control.

2 Display / Source Selection Buttons

These buttons are used to send display and source selections to the 8x8 Crosspoint Matrix for HDMI 1.3

Routing Sources to Displays

Buttons 1 through 8 on the RMT-848IR remote control correspond to display outputs A through H. Button A enables / disables the LOCK button on the front panel. Button B serves as the remote power button. The unit can be turned on or turned off using this button.

Select the desired display (1-8). Press the button again to begin cycling through the input sources. For example, to route the source connected to input 6 to the display connected to output D the input steps would be the following:

- 1 Press and release button 4 (display D) on the RMT-848IR remote control.
- 2 Continue to press and release button 4 on the remote until the number 6 is displayed under the letter D.

NOTE: Although the **LOCK** button will prevent accidental routing changes (or a power-down) when controlling the unit from the front panel, it will not prevent changes or a power-down using the RMT-848IR.

8X8 CROSSPOINT MATRIX FOR HDMI 1.3 REMOTE INSTALLATION

RMT-848IR REMOTE INSTALLATION

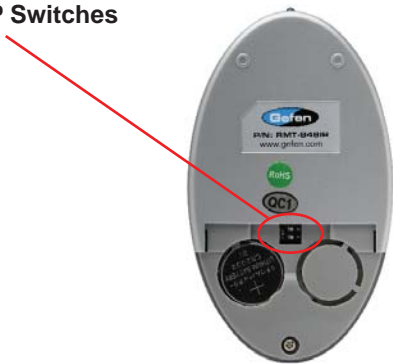
To use the RMT-848IR remote, remove the battery cover on the back of the remote to reveal the battery compartment. Insert the included battery into the open battery slot. The positive (+) side should be facing up. The remote ships with 2 batteries. One battery is required for operation and the other battery is complimentary.

The RMT-848IR remote control contains a bank of DIP (Dual Inline Package) Switches for configuring the remote channel. The DIP switch bank on the RMT-848IR is located underneath the battery cover. Make sure that both DIP (Dual In-line Package) switches are in the OFF position. Replace the battery cover.

HOW TO RESOLVE IR CODE CONFLICTS

In the event that IR commands from other remote controls conflict with the supplied RMT-848IR remote control, changing the remote channel will correct this issue.

IR Code DIP Switches



Remote Channel 1:
Default



Remote Channel 2:



Remote Channel 3:



Remote Channel 4:



When changing the IR channel on the remote, you will also need to change the IR channel on the 8x8 Crosspoint Matrix for HDMI 1.3.

IR ADDRESS DEFINITION AND BINARY CODES



1. Press the **INPUT-**, **INPUT+** and **OUTPUT-** buttons simultaneously.
2. The Main LCD Display will show the following



SETTING IR ADDRESS MODE MENU OPTIONS ON THE MATRIX:

Use the **INPUT +** and **INPUT -** buttons to cycle through the I/R address settings. It is important that the I/R setting that is selected match the DIP switch settings on the I/R remote. For example, if you set both DIP switches on the remote to the down position (toward the “1” and “2”), you must select “IR Address : 0, 1-OFF, 2-OFF”.

IR ADDRESS	REMOTE SW1	REMOTE SW2
0	OFF	OFF
1	ON	OFF
2	OFF	ON
3	ON	ON

Once you have selected the proper IR address on the 8x8 Crosspoint Matrix for HDMI 1.3, press the MENU button

RS-232 SERIAL CONTROL INTERFACE



Only Pins 2 (RX), 3 (TX), and 5 (Ground) are used on the RS-232 serial interface

RS232 Settings

Bits per second 9600
 Data bits 8
 Parity None
 Stop bits 1
 Flow Control Off

RS-232 Commands:-

RS-232 commands are represented in the following table:-

Command	Function
X	Power off
Y	Power ON
Ax (x:1~8)	Output A and Input 1~8 signal select
Bx (x:1~8)	Output B and Input 1~8 signal select
Cx (x:1~8)	Output C and Input 1~8 signal select
Dx (x:1~8)	Output D and Input 1~8 signal select
Ex (x:1~8)	Output E and Input 1~8 signal select
Fx (x:1~8)	Output F and Input 1~8 signal select
Gx (x:1~8)	Output G and Input 1~8 signal select
Hx (x:1~8)	Output H and Input 1~8 signal select
ST	Check IN/OUT PORT status and FW version
RS	System Reset to A1,B2,C3,D4,E5,F6,G7,H8 ; IR Address : 0

REMOTE FUNCTION

The RS-232 serial interface can be used to control routing functions on the 8x8 Crosspoint Matrix for HDMI 1.3

Switching Command

First character indicates the output monitor. Second character indicates the input number.

Example: 'A5' routes input 5 to output monitor A

Power On / Power Off Commands

Press 'X' or 'x' to power on the matrix. Press 'Y' or 'y' to power-down the matrix.

Status Command

The 'ST' or 'st' (alternately 'M' or 'm') command returns the current routing status of the matrix in addition to the firmware version.

Reset Command

The 'RS' or 'rs' command will reset the matrix to the default routing status (A1, B2, C3, D4, E5, F6, G7, H8) and IR address 0.

SPECIFICATIONS

Video Amplifier Bandwidth	225 MHz
Single Link Range.....	1080p / 1920x1200
Input Video Signal.....	1.2 Volts p-p
Input DDC Signal.....	5 Volts p-p (TTL)
Remote Control Ports.....	One RS232 female, mini-stereo
Rack mountable.....	Yes: 5U rack space
HDMI Input connectors (8).....	Type A, 19-pin male
HDMI Output connectors (8).....	Type A, 19-pin male
Power Supply.....	24V DC 4.16A
Power Consumption (max).....	60W max
Dimensions.....	19.0"W x 7.0"H x 13.375"D
Shipping Weight.....	24.7 lbs

WARRANTY

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, please visit Gefen's Warranty web page at <http://www.gefen.com/kvm/aboutus/warranty.jsp>

PRODUCT REGISTRATION

Please register your product online by visiting Gefen's web site at <http://www.gefen.com/kvm/Registry/Registration.jsp>

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