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4x4 HDMI Matrix 4K
User's Guide

P/N: Matrix44

G4-0044A

Thank you for purchasing from gofanco. Our products aim to meet all your connectivity needs wherever you go. For optimum performance and safety, please read the instructions carefully and keep this User's Guide for future reference. If you need more information about our products, please visit www.gofanco.com. For technical support, please email us at support@gofanco.com. For drivers/manuals download, please go to www.gofanco.com/download.

Important Safety Notices

Please read safety instructions carefully before installation and operation.

- Please pay close attention to all warnings and hints for this device
- Do not expose this unit to rain, heavy moisture, or liquid
- Do not repair the device or open the enclosure without professional guidance to avoid electric shocks. Doing so may void your warranty
- Keep the product in a well-ventilated location to avoid damage from overheating
- Shut off power and make sure environment is safe before installation
- Do not plug the HDMI cables and IR cables in/out when the device is in use to avoid cable damage. Make sure they are plugged into the correct ports
- Use the included DC12V power adapter only. Make sure the specification matches if using 3rd-party DC power adapter

Package Contents

- 4x4 HDMI Matrix 4K
- IR Receiver Extension Cable
- IR Remote Control
- Power Adapter
- RS-232 Cable
- Plastic Cushions (4x)
- User's Guide

Introduction

The 4x4 HDMI Matrix 4K allows you to switch between any of the 4 source devices to up to any of the 4 display devices with support for up to 4K@60Hz resolution.

Features

- Supports HDMI resolution up to 4K/60Hz/4:2:0
- Supports 1080p 3D
- Compliant with HDMI 1.4 and HDCP 2.2 and backward compatible with previous versions
- Smart EDID management to match the connected displays
- Switching via front panel buttons, IR remote, or RS232 control
- Sturdy metal housing with surface-mount mechanism
- Features firmware update option for future compatibility expansion

Product Layout

Front Panel

No.	Name	Description
1	Firmware	Micro USB port for performing firmware update
2	Power LED	The LED is illuminated when powered on
3	Input LEDs	One LED illuminates to indicate the selected input source
4	Input Select Button	Press the button to cycle through the four input sources

Rear Panel

No.	Name	Description
1	INPUT (1-4)	Connects to your HDMI source devices
2	OUTPUT (A-D)	Connects to your HDMI displays
3	CONTROL	RS232: Connects to your computer's RS232 port using the included RS232 cable
		IR Eye: Connects to the included IR Receiver Extension cable
4	DC 12V Power Jack	Connects to the included power adapter

Installation Requirements

1. HDMI source device (computer, DVD player, XBOX, PS3, etc).
2. HDMI display device (SDTV/Monitor, HDTV/Monitor, projector, etc.).

Hardware Installation

1. Power off all devices including your HDMI source and HDMI display.
2. Connect your HDMI source devices to the HDMI INPUT (1-4) connectors with HDMI cables (HDMI cables not included).
3. Optional: Plug the included RS232 cable into the Matrix 3-Pin RS232 connector then connect the other end to a RS232 serial port of your computer, this connection is needed only if you require device control via a computer system.
4. Connect your HDMI displays to the HDMI OUTPUT (A-D) connectors with HDMI cables (HDMI cables not included).
5. Plug the included **IR Receiver Extension cable** into the **IR EYE** port. This connection is needed only if you require device control using the included IR remote.
6. Plug the included power adapter into the DC-12V power jack then plug the power adapter into a reliable power source.
7. Power on all connected devices.
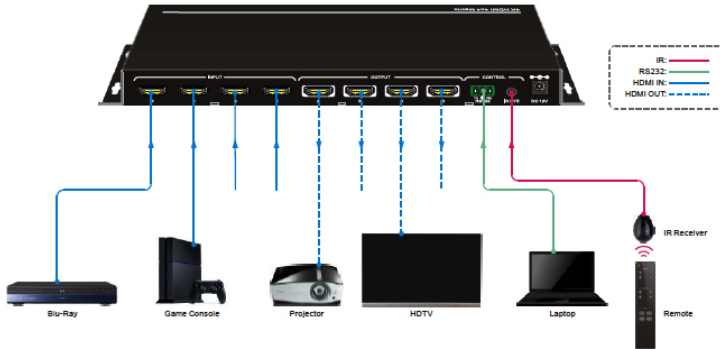8. The HDMI Matrix is ready for use.

Application

Figure 1: Hardware Connections

Device Switching

Front Panel Control

Repeatedly press the **Input Select Button** to cycle through the various inputs.

IR Remote Control

- Press the **Standby (1)** button to enter or exit Standby mode
- To switch an input to one or more outputs, first press the number corresponding to the desired **INPUT**, then press one or more **OUTPUTs** or the **ALL** button, then press the **ENTER** button to execute the command

Examples

Send the source device on input 3 to the display on output 2

INPUTS: Press button 3

OUTPUTS: Press button 2

MENU: Press ENTER to execute the command

Send the source device on input 1 to the displays on outputs 1 & 4

INPUTS: Press button 1

OUTPUTS: Press both buttons 1 & 4

MENU: Press ENTER to execute the command

Send the source device on input 4 to all of the displays

INPUTS: Press button 4

MENU: Press the All button

MENU: Press ENTER to execute the command

Set the EDID for one or more source devices to the EDID of a specific output

MENU: Press the EDID button

INPUTS: Press the desired button(s) or the ALL button

OUTPUTS: Press the button corresponding to the desired display

MENU: Press the ENTER button to execute the command

RS232 Control

The HDMI Matrix can be controlled from a Windows PC using an RS232 connection with a 3rd party RS232 control software such as **CommWatch** shown below. Please use the same configuration settings for the RS232 control software of your choosing.
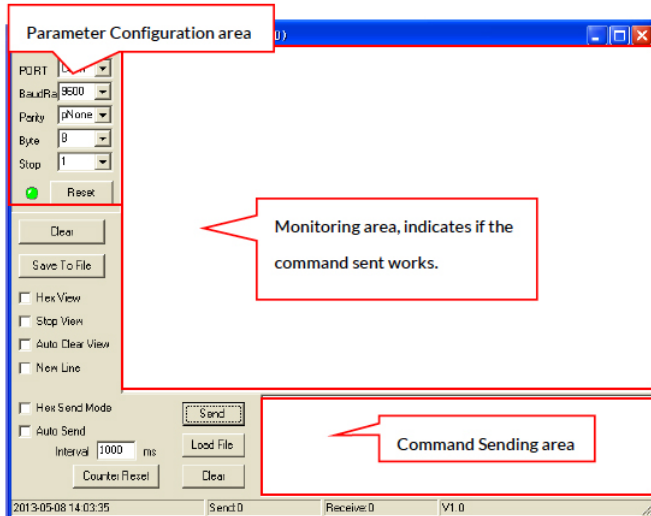
Select the COM port, baud rate, data bit, stop bit, and parity correctly.

RS232 Settings
- Baud rate: 9600
- Data bit: 8
- Stop bit: 1
- Parity: None

RS232 Commands

System Commands

Command	Description	Command Example and Response
/*Type;	Report system model.	/*Type; CE-MX44
/%Lock;	Lock front panel buttons.	/%Lock; System Locked!
/%Unlock;	Unlock front panel buttons.	/%Unlock; System UnLock!
/^Version;	Report software version.	/^Version; V1.0.0
Undo.	Cancel the current operation and return to previous switching status.	Undo. Undo Ok!
PWON.	Power on the system.	PWON. PWON
STANDBY.	Turn the system to standby mode.	STANDBY. STANDBY
%9961.	Report the system locking status.	%9961. System UnLock! System Locked!
%9962.	Report the system power status.	%9962. PWON
%0911.	Reset to factory default.	%0911. Factory Default

Signal Switching

Command	Description	Command Example and Response
[x]All.	Switch input [x] AV to all output. x=1~4.	2All. 02 To All.
All#.	Switch all input signal to the corresponding output channel.	All#. All Through.
All$.	Switch off all output.	All$. All Closed.
[x]#.	Switch input [x] to output [x]. x=1~4.	1#. 01 Through.
[x]$.	Turn off output [x]. x=1~4.	1$. 01 Closed.
[x]@.	Turn on output [x]. x=1~4.	1@. 01 Open.
All@.	Turn on all outputs.	All@. All Open.
[x]V[y1],	Switch input [x] to outputs [y]. x=1~4, y=1~4.	1V1,2,3,4.

Command	Description	Command Example and Response
[y2],[y3],[y4].		AV:01->01,02,03,04
Status[x].	Report the input channel on output [x]	Status1. AV: 01->01
Status.	Report the input channel on output channel one by one.	Status. AV:01->01 AV:01->02 AV:01->03 AV:01->04
%9971.	Get the input link status.	%9971. In 01 02 03 04 Connect Y Y Y Y
%9972.	Get the output link status.	%9972. Out 01 02 03 04 Connect Y Y Y Y
%9975.	Get the switching status.	%9975. Out 01 02 03 04 In 01 02 03 04

Preset Setting

Command	Description	Command Example and Response
Save[y].	Store the current switching status to present [y]. y=0~ 9.	Save3. Save To F3
Recall[y].	Recall present [y]. y=0~ 9.	Recall9. Recall From F9
Clear[y].	Clear the present [y].	Clear9. Clear F9

EDID Management

Command	Description	Command Example and Response
EDIDPCM[x].	Set the audio format of input [x] to PCM. x=1~ 4.	EDIDPCM1. EDIDPCM1
EDIDG[x].	Get the EDID data from output [x]. x=1~ 4.	EDIDG1.
EDIDMInit.	Reset factory default EDID to all input ports.	EDIDMInit. EDIDMInit.
EDIDM[x]B[y].	Set the EDID data of output [x] to input [y]. If the EDID data is not available, the matrix will set it to initial EDID data.	EDIDM2B1. EDIDM2B1.
EDIDH[x]B[y].	Set the EDID data of output [x] to input [y].If the EDID data is available and the audio part supports not only PCM format, then force-set it to only support PCM. If the EDID data is not available, it will set to initial EDID.	EDIDH2B1. EDIDH2B1
EDIDUpgrade[x].	Upgrade the EDID data of the input port [x]. When the command applied, system prompts to upload the EDID file (.bin). Operation will be cancelled in 10 seconds	EDIDUpgrade1. Please send the EDID file !EDID Upgrade OK!
GetInPortEDID [x].	Get the EDID of input [x]. x=1~ 4.	GetInPortEDID1.

HDCP Management

Command	Description	Command Example and Response
/%[y]/[x]:[z].	HDCP management. y=O is for output port; x=1~4 is the number of the output port, if the x=ALL, it means all ports; z=1/0 is for HDCP compliant status, the value may be 1 (HDCP compliant) or 0 (not HDCP compliant).	/%O/ALL:0. /%O/ALL:0.
%0801.	Auto HDCP management mode.	%0801. %0801
%9973.	Get the HDCP status of input ports.	%9973. In　01 02 03 04 HDCP　Y　Y　Y　Y
%9974.	Get the HDCP status of output ports.	%9974. Out　01 02 03 04 HDCP　Y　Y　Y　Y
%9978.	Reports the HDCP compliance status of the inputs.	%9978. In　01 02 03 04 HDCPEN　YYYY

Audio Setting

Command	Description	Command Example and Response
DigitAudioON[x].	Turn on the HDMI digital audio of output [x]. x=1~4. When x=5, it means to turn on all outputs.	DigitAudioON1. DigitAudio ON with Output 1
DigitAudioOFF[x].	Turn off the HDMI digital audio of output [x]. x=1~4. When x=5, it means to turn off all outputs.	DigitAudioOFF1. DigitAudio OFF with Output 1
%9977.	Get HDMI digital audio status of outputs.	%9977. Out 01 02 03 04 Audio Y Y Y Y

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