



1080P
PROGRESSIVE



8x8 DVIKVM Dual Link Matrix w/ Push Button Control

GEF-DVIKVM-848DL-PB

User Manual

www.gefenpro.com

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INTRODUCTION

Congratulations on your purchase of the 8x8 DVIKVM Dual Link Matrix. Your complete satisfaction is very important to us.

GefenPRO

In the realm of video distribution, certain features are invaluable in a commercial or broadcast environment. Accommodations such as a built-in power supply and flat black rack-mount enclosures set GefenPRO apart from our traditional products. Complex distribution units allow for professional DVI, 3G-SDI, and HDMI signals to be routed and converted easily and seamlessly, while being backed up by a renowned and dependable technical support team. Gefen invites you to explore the GefenPRO product line and hopes that you find the solution that fits your needs.

The GefenPRO 8x8 DVIKVM Dual Link Matrix

The GefenPRO 8x8 DVIKVM Dual Link Matrix with Push Button Control provides a professional-grade KVM solution to route DVI, USB, and Audio from any eight computers to any eight Hi-Def workstations. Dual link resolutions up to 3840 x 2400 are supported. Audio can be routed with the video or independently from the video using mini-stereo cables to provide full multimedia content for digital signage applications. The front panel display shows the current routing status and the front panel push buttons are used to manage local source routing. Four methods are available for controlling the GefenPRO 8x8 DVIKVM Dual Link Matrix: front panel push buttons, an included IR remote, a built-in RS-232 interface, or by using IP control via the built-in Web interface.

How It Works

Connect up to eight KVM source devices to the GefenPRO 8x8 DVI KVM Dual Link Matrix with Front Panel Push Button Control using the supplied DVI cables. Connect up to eight monitors to the DVI outputs. Connect the USB devices (keyboard, mouse device, etc.) to the USB input and output connectors. For audio, connect mini-stereo cables between each audio source and the audio inputs on the Matrix. Connect the mini-stereo cables between the audio outputs on the Matrix to the audio device. Plug in the power cord and apply power to the Matrix. The DVI, USB and Audio sources will be routed according to the current routing selection.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX WITH PUSH BUTTON CONTROL

- The 8x8 DVIKVM Dual Link Matrix will not pass HDCP content.
- There is no internal scaling in the 8x8 DVIKVM Dual Link Matrix. 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.
- Advanced EDID features and IP configuration features are accessible via the RS-232 serial communication port. See page 23 for more information.
- Routing and EDID features can be accessed via a web browser using the IP control feature, built into the 8x8 DVIKVM Dual Link Matrix.
- **IMPORTANT:** If the unit is installed in a closed or multi-rack assembly, do not block the ventilation holes of the enclosure.

Features

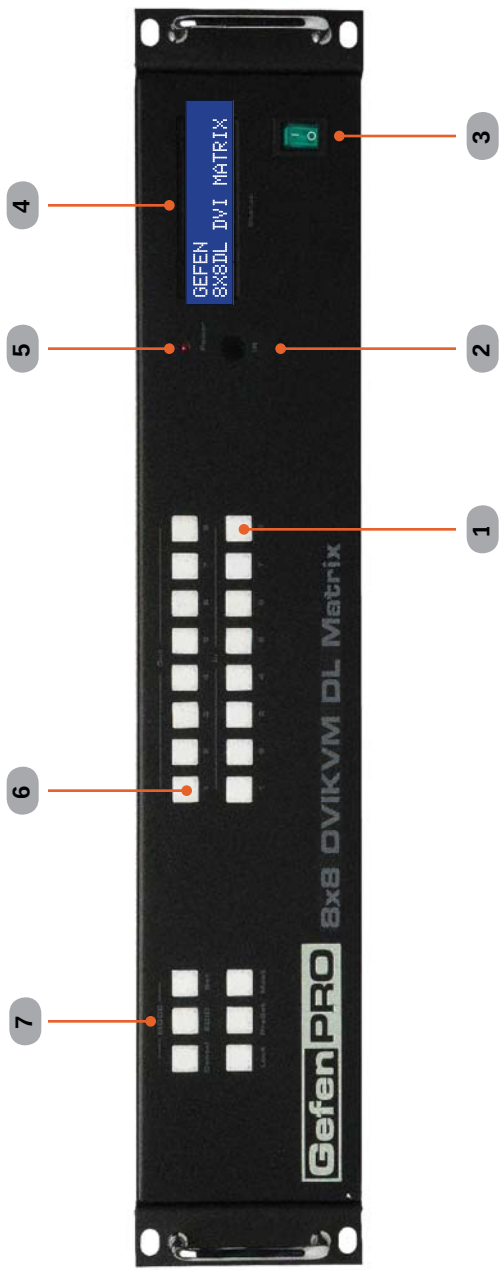
- Supports resolutions up to 2560 x 1600
- Front panel control buttons for local switching
- Status LCD (shows routing status)
- Advanced EDID management permits uploading of custom internal or external EDID settings
- Serial RS-232 interface for remote control via a computer or control automation devices
- IP Control
- Output masking command
- IR Remote Control
- IR Extender
- Power On/Off switch
- Internal power supply
- Grounding Terminal
- Standby mode
- Supports DDWG standards for DVI
- Rack mountable

Package Includes

- (1) GefenPRO 8x8 DVIKVM Dual Link Matrix
- (8) 6 ft. DVI Dual Link cables (M-M)
- (8) Audio Cables
- (8) USB Cables
- (1) IR Remote Control Unit
- (1) AC Power Cord
- (1) Quick-Start Guide

PANEL LAYOUT

Front Panel



PANEL DESCRIPTIONS

Front Panel

1 *Input Buttons (1 - 8)*

Used for routing an Input to an Output. Each of these buttons represents an Input. See page 14 for more information on routing DVI sources.

2 *IR Window*

Receives signals from the IR Remote Control unit.

3 *Power Switch*

Turn the power on or off using this switch.

4 *LCD Display*

Displays the current routing status of the Matrix and is also used to manage source routing.

5 *Power Indicator*

This LED indicator will glow bright red when the power is turned on.

6 *Output Buttons (1 - 8)*

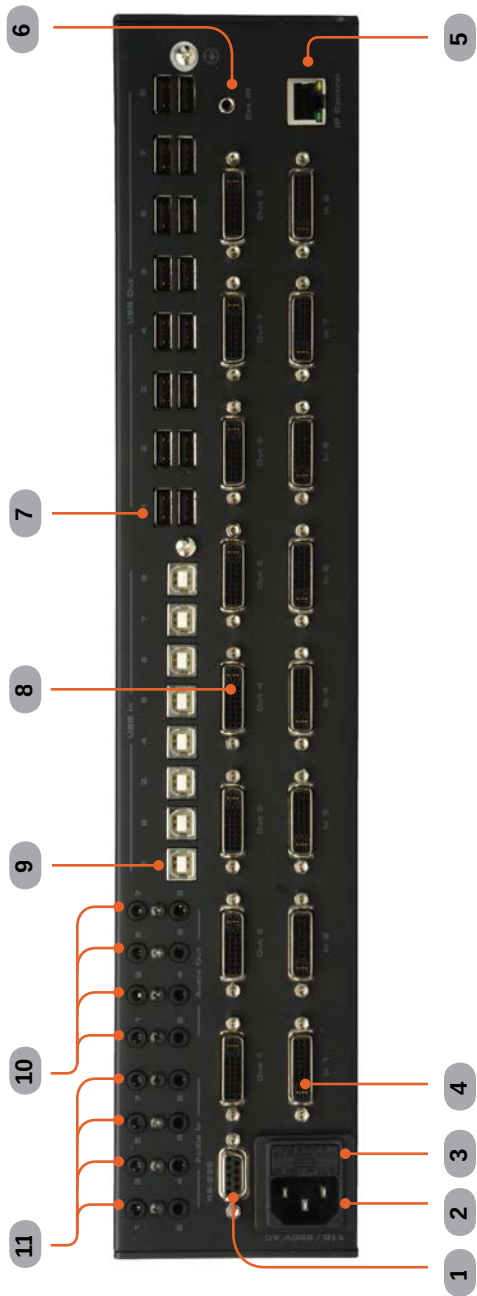
Used for routing an Input to an Output. Each of these buttons represents an Output. See page 14 for more information on routing DVI sources.

7 *Control Buttons*

These buttons are used to control other features on the product. See pages 14 - 22 for details.

PANEL LAYOUT

Back Panel



PANEL DESCRIPTIONS

Back Panel

1 RS-232 Serial Port

Connects to the RS-232 control device. The 8x8 DVIKVM Dual Link Matrix may be controlled remotely using this port. See pages 23 - 50 for details.

2 AC 110 / 220V (50/60 Hz) Power Cable Receptacle

Connect the included AC power cord from this receptacle to an available electrical outlet.

3 Fuse Drawer

Each power receptacle houses a fuse drawer. Within each fuse drawer are two (2) 250 V fuses. One fuse is active and the other is a spare.

4 DVI Input Ports (1 - 8)

Connect DVI source devices to these ports.

5 IP Control Interface

Connect to this port to control the 8x8 DVIKVM Dual Link Matrix using IP Control. See page 51 for more information.

6 IR Extender Port

Connect an IR extender cable to this port.

7 USB Output Ports (16)

Connect USB devices to these ports (two outputs per channel).

8 DVI Output Ports (1 - 8)

Connect DVI monitors to these ports.

9 USB Input Ports (1 - 8)

Connect USB source devices to these ports

10 Audio Output Connector (3.5 mm Mini-Stereo)

Connect audio devices to these ports using 3.5 mm mini-stereo cables.

11 Audio Input Connectors (3.5 mm Mini-Stereo)

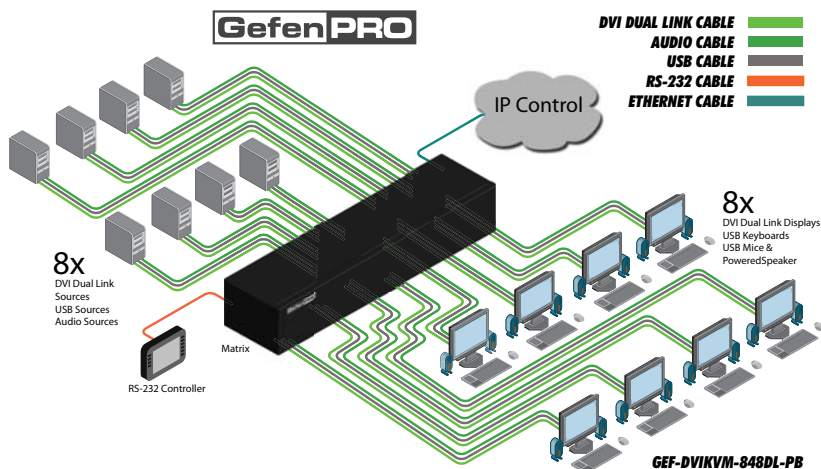
Connect audio output devices to these ports using 3.4 mm mini-stereo cables.

CONNECTING THE 8X8 DVIKVM DUAL LINK MATRIX

How to Connect the GefenPRO 8x8 DVIKVM Dual Link Matrix

1. Connect up to 8 DVI source devices to the DVI inputs on the rear panel of the GefenPRO 8x8 DVIKVM Dual Link Matrix using the supplied DVI cables.
2. Connect up to 8 DVI monitor to the DVI outputs on the rear panel of the GefenPRO 8x8 DVIKVM Dual Link Matrix with user-supplied DVI cables.
3. Connect the included AC power cable to the power receptacle on the rear panel of the GefenPRO 8x8 DVIKVM Dual Link Matrix. Connect the opposite end of the cable into an available electrical outlet.

Wiring Diagram for the GefenPRO 8x8 DVIKVM Dual Link Matrix



WARNING: This product should always be connected to a grounded electrical socket.

Booting Up / Standby Screen

The front-panel LCD of the 8x8 DVIKVM Dual Link Matrix is a 16 character 2 line display. This display is used to aid in performing routing commands, as well as displaying additional system information. When the unit is powered on, the following screens are displayed:



After a few moments, the standby screen is displayed:



IR REMOTE CONTROL UNIT LAYOUT

RMT-8IR Remote Control Unit



1 Activity Indicator

This LED will be activated momentarily each time a button is pressed.

2 Source / Monitor Selection Buttons (1 - 8)

These buttons are used to select the source and monitor.

See page 13 for information on using the IR Remote Control unit.



NOTE: An Activity Indicator that flashes quickly while holding down any one of the 8 buttons indicates a low battery. Replace the IR Remote Control battery as soon as possible.

IR REMOTE CONTROL UNIT INSTALLATION

Installing the RMT-8IR Battery

1. Remove the battery cover on the back of the IR Remote Control unit.
2. Insert the included battery into the open battery slot. The positive (+) side of the battery should be facing up.
3. Replace the battery cover.

The Remote Control unit ships with two batteries. One battery is required for operation and the other battery is a spare.



Battery Slot



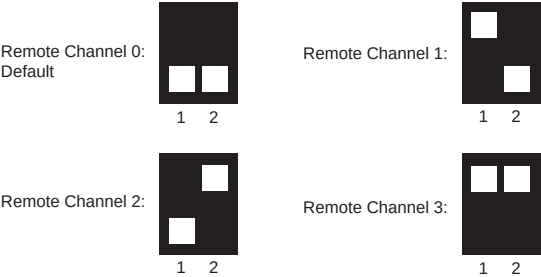
WARNING: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

IR REMOTE CONTROL UNIT CONFIGURATION

How to Resolve IR Code Conflicts

In the event that IR commands from other remote controls interfere with the supplied IR Remote Control unit, changing the IR Remote Control's IR channel will fix the problem. The IR Remote Control unit has a bank of DIP switches used for setting the IR channel.

The DIP switch bank is located underneath the battery cover.



Left: Picture of the opened rear battery compartment of the IR remote showing the exposed DIP Switch bank between the battery chambers.

It is important that the IR channel on the Remote Control unit, matches the IR channel set on the 8x8 DVIKVM Dual Link Matrix. For example, if both DIP switches on the IR Remote Control unit are set to IR channel 0 (both DIP switches down), then the 8x8 DVIKVM Dual Link Matrix must also be set to IR channel 0. See page 47 on how to change the IR channel on the 8x8 DVIKVM Dual Link Matrix.

USING THE IR REMOTE CONTROL UNIT

IR Remote Control Key Mapping

Each input and output on the 8x8 DVIKVM Dual Link Matrix with Push Button Controls is represented by a button on the IR Remote Control unit. The table below lists the corresponding inputs and outputs.

Remote Button	Monitor / Source
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

Routing Sources using the IR Remote Control unit

Issuing a routing command is a two step process. The first step is to select the monitor where the source will be routed. The second step is to select the source.

Example 1

Route the source device connected to In 7 to the monitor connected to Out 3.

1. Press button 3 (monitor 3) on the IR remote control unit.
2. Press button 7 (source 7) on the IR remote control unit.

The source connected to In 7 will be routed to the monitor connected to Out 3.

Example 2

Route the source device connected to In 1 to the monitor connected to Out 1.

1. Press button 1 (monitor 1) on the IR remote control unit.
2. Press button 1 (source 1) on the IR remote control unit.

The source connected to In 1 will be routed to the monitor connected to Out 1.

OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

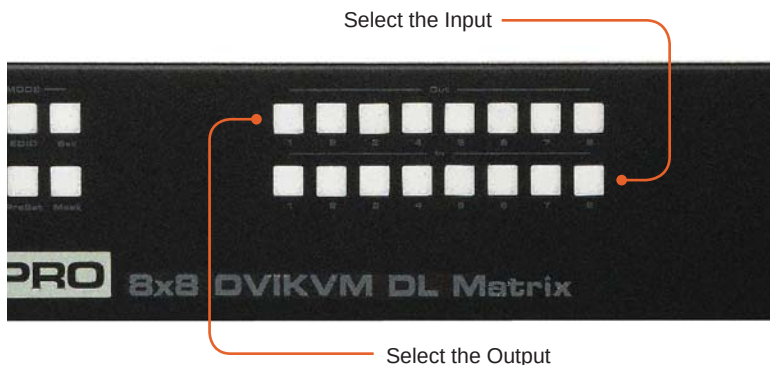
Routing Sources

In order to change current routing state:

- 1 Press Set Button to activate Routing Mode.



- 2 Press any Input on the bottom row of buttons (1 - 8). The system indicates the current routing status.



- 3 Press the desired Output button. One or more Output buttons may be selected.
- 4 Press the Set button to complete the operation. The system will remain in Routing Mode.

OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

System Lock Mode

Locking the Matrix prevents changes to any of the Matrix settings. This feature is useful in case any of the front panel buttons are pressed by accident. Locking the Matrix also prevents changes using the IR Remote Control Unit.

- 1 Press the Lock button to activate System Lock Mode.



- 2 Press the Lock button a second time to deactivate System Lock Mode.

Returning to Standby Mode

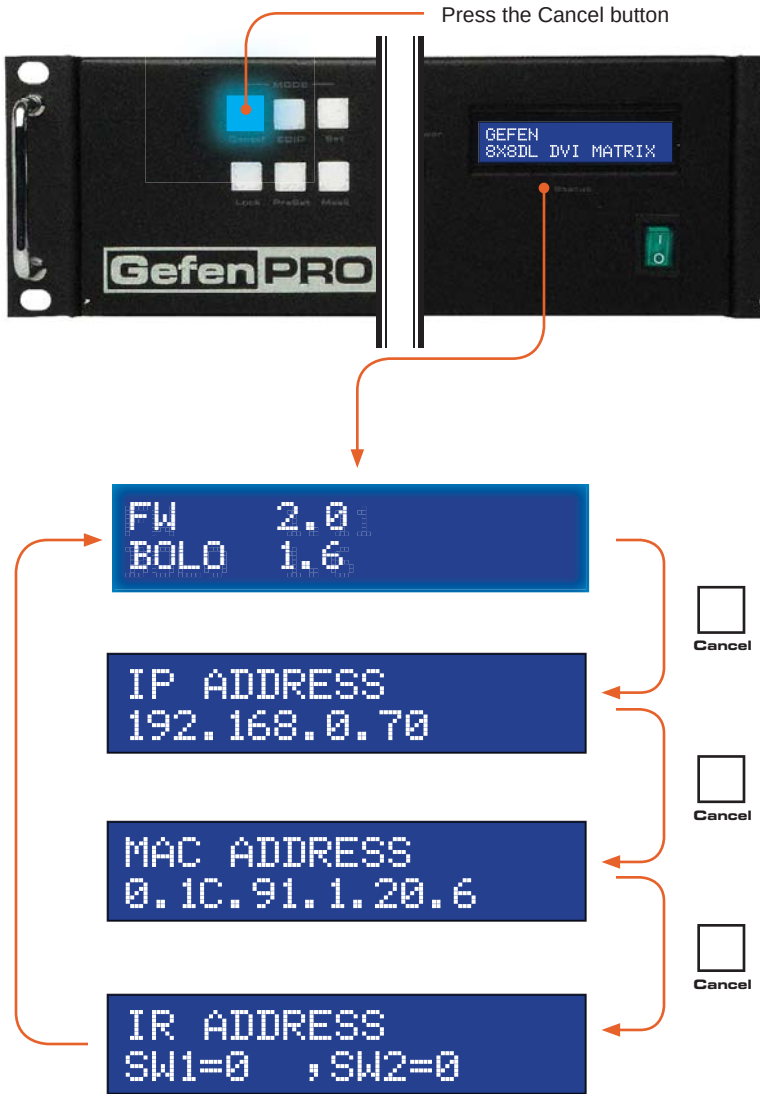
Press the Cancel button, while in any mode, to return to the Standby Mode screen.



OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

Cycling between Information Screens

Press the Cancel button, while in Status Check Mode, to cycle through the Information Screens.



OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

Activating / Deactivating Standby Mode

Press and hold the Cancel button for 5 seconds to activate or deactivate Standby Mode.



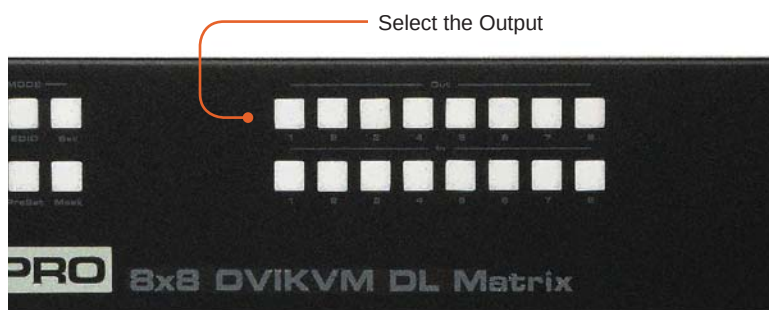
Saving the Downstream EDID to Local Memory:

- 1 Press EDID button *once* to activate DSTOLO (Downstream To Local) Mode.

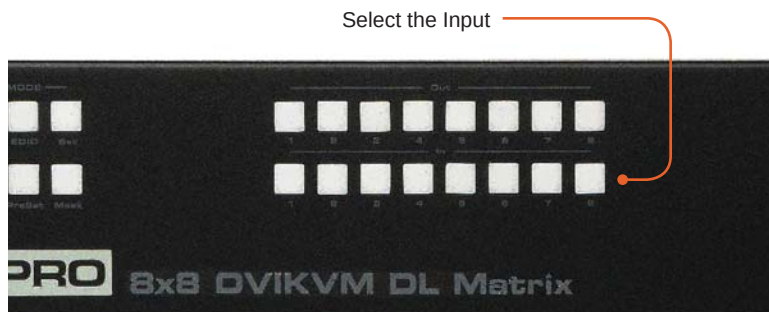


OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

- 2 Press the Output button to select the EDID data source.



- 3 Press the Input button to select EDID data destination.



- 4 Press the Set button to complete the operation. The system will remain in DSTOLO mode.



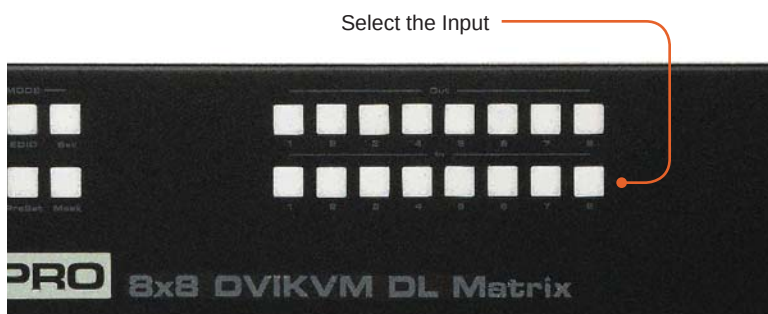
OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

Saving the default EDID to Local Memory

- 1 Press the EDID button *twice* to activate DETOLO (Default EDID To Local) Mode.



- 2 Press the Input button to select EDID data destination.



- 3 Press the Set button to complete the operation. The system will remain in DETOLO mode.



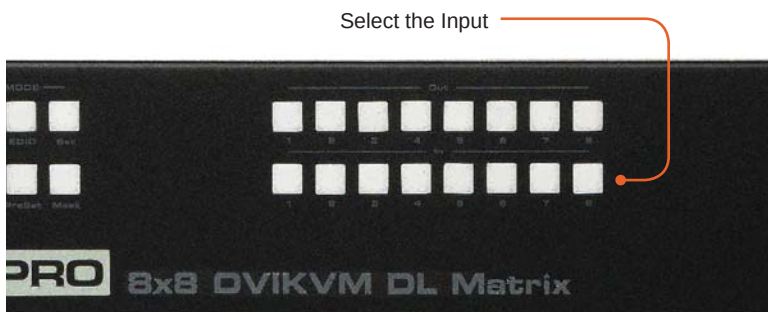
OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

Saving the current Routing State

- 1 Set the routing state (see page 14), then press the PreSet button *twice* to activate Preset Mode.



- 2 Press an Input button (1 - 8) to store the current routing state.



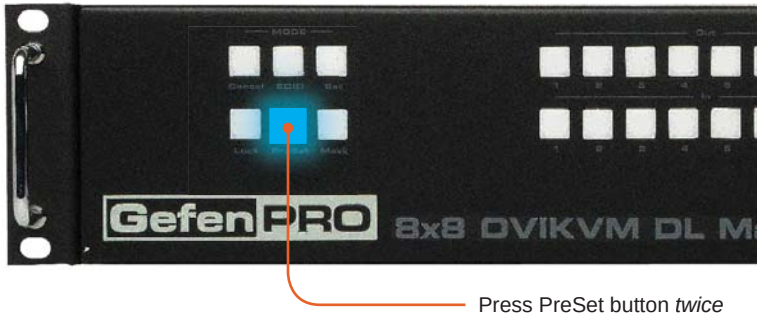
- 3 Press the Set button to complete the operation. The system will remain in Save Current Preset Mode.



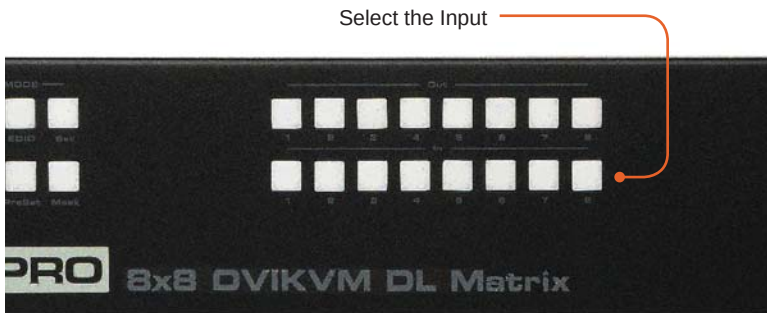
OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

Recalling a Routing State

- 1 Press the PreSet button *once* to activate Recall Preset Mode.



- 2 Press the Input button (1 - 8) of the routing state to be recalled.



- 3 Press the Set button to complete the operation. The system will remain in Recall Saved Set Mode.



OPERATING THE 8X8 DVIKVM DUAL LINK MATRIX

Masking Outputs

Masking prevents the output device (display, etc) from receiving an output signal, instead of powering-down the output device. The masking process is identical for masking or unmasking outputs.

- 1 Press the Mask button to activate Mask Mode.



Press the Mask button

- 2 Select the Output to be masked.

Select the Output

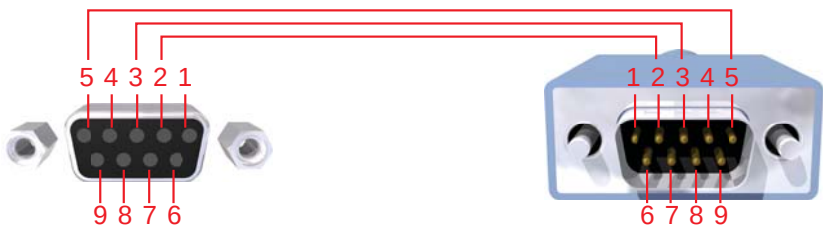


- 3 Press the Set button to complete the operation. The system will remain in Save Current Preset Mode.

Press the Set button



RS-232 SERIAL CONTROL



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

RS232 Settings

Bits per second 19200

Data bits 8

Parity None

Stop bits1

Flow Control None



IMPORTANT: When sending RS-232 commands, a *carriage return* and a *line feed* character must be included at the end of each line. Telnet Commands, Device Names, and Command Names are all case-sensitive.

EDID Management

Command	Description
#dynamic_edid	Enables / disables dynamic EDID
#edidbatolo	Read downstream EDID and stores in any Local Input
#ediddetolo	Sets Local EDID to Default EDID
#ediddstoba	Read downstream EDID and stores in EDID Bank
#ediddstolo	Read downstream EDID and stores into a Local EDID
#lock_edid	Secures Local EDID
#prbaedid	Read EDID from an EDID bank and sends to serial port
#prdsedid	Read downstream EDID and sends to serial port
#predidst	Prints EDID details
#prloedid	Read Input Local EDID and sends to serial port

#dynamic_edid Command

The #dynamic_edid command provides the ability to route any downstream EDID to any input. When enabled, the EDID is copied to all inputs from the last selected active output. When disabled, the EDID is copied to all inputs from the first active display detected, starting from Output 1.

Syntax:

```
#dynamic_edid param1
```

Parameters:

param1 Value [0 - 1]

Value	Meaning
0	Disable
1	Enable

Notes:

The default setting for Dynamic EDID is *disabled*.

Example:

```
#dynamic_edid 1
Enable Dynamic EDID mode
```

#edidbatolo Command

The #edidbatolo command reads the downstream EDID and stores it to any local input. Up to eight inputs can be specified.

Syntax:

```
#edidbatolo param1 param2 [param3...param9]
```

Parameters:

<i>param1</i>	EDID bank offset	[1 - 5]
<i>param2</i>	Input	[1 - 16]

Notes:

If *param2* = 0, then the EDID in the specified bank is copied to all eight inputs.

Examples:

```
#edidbatolo 2 3
Finished reading EDID from bank 2
Finished loading EDID to local 3
```

```
#edidbatolo 4 0
Finished reading EDID from bank 4
Finished loading EDID to local 1
Finished loading EDID to local 2
Finished loading EDID to local 3
Finished loading EDID to local 4
Finished loading EDID to local 5
Finished loading EDID to local 6
Finished loading EDID to local 7
Finished loading EDID to local 8
```

#ediddetolo Function

The #ediddetolo function stores the Default EDID (640x480) in the specified Local EDID inputs. Up to eight inputs can be specified.

Syntax:

```
#ediddetolo param1 [param2...param9]
```

Parameters:

<i>param1</i>	Input	[1 - 8]
---------------	-------	---------

Notes:

If *param1* = 0, then all 8 DVI inputs will be set to the Default EDID.

Examples:

```
#ediddetolo 7
```

```
Finished loading EDID to local 7
```

```
#ediddetolo 0
```

```
Finished loading EDID to local 1
```

```
Finished loading EDID to local 2
```

```
Finished loading EDID to local 3
```

```
Finished loading EDID to local 4
```

```
Finished loading EDID to local 5
```

```
Finished loading EDID to local 6
```

```
Finished loading EDID to local 7
```

```
Finished loading EDID to local 8
```

#ediddstoba Function

The #ediddstoba function reads the downstream EDID and stores it to a specified EDID bank.

Syntax:

```
#ediddstoba param1 param2
```

Parameters:

<i>param1</i>	A downstream monitor	[1 - 8]
<i>param2</i>	EDID bank offset	[1 - 5]

Example:

```
#ediddstoba 4 2
```

```
Finished reading EDID from output 4
```

```
Finished loading EDID to bank 2
```

#ediddstolo Function

The #ediddstolo function reads the downstream EDID and stores it to a Local EDID input.

Syntax:

```
#ediddstolo param1 param2 [param3...param9]
```

Parameters:

<i>param1</i>	A downstream monitor	[1 - 8]
<i>param2</i>	Input list	[1 - 8]

Notes:

If *param2* = 0, then the downstream EDID is stored to all 8 DVI inputs.

Examples:

```
#ediddstolo 2 3
```

```
Finished reading EDID from output 2
```

```
Finished loading EDID to local 3
```

```
#ediddstolo 2 0
```

```
Finished reading EDID from output 2
```

```
Finished loading EDID to local 1
```

```
Finished loading EDID to local 2
```

```
Finished loading EDID to local 3
```

```
Finished loading EDID to local 4
```

```
Finished loading EDID to local 5
```

```
Finished loading EDID to local 6
```

```
Finished loading EDID to local 7
```

```
Finished loading EDID to local 8
```


#lock_edid Function

The #lock_edid function secures the Local EDID and disables the automatic loading of the downstream EDID after the Matrix is powered on.

Syntax:

#lock_edid param1

Parameters:

param1

Input

[0 - 1]

Value	Meaning
0	Disable
1	Enable

Example:

#lock_edid 0

Disable Lock EDID mode

#prbaedid Function

The #prbaedid function reads the EDID file from the specified bank and sends to serial port.

Syntax:

#prbaedid param1

Parameters:

param1	Input	[1 - 5]
--------	-------	---------

Example:

#prbaedid 2

Finished reading EDID from bank 2

```
0x00 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0x00
0x4C 0x2D 0xAC 0x06 0x01 0x00 0x00 0x00
0x34 0x13 0x01 0x03 0x80 0x66 0x39 0x78
0x0A 0xEE 0x91 0xA3 0x54 0x4C 0x99 0x26
0x0F 0x50 0x54 0xBD 0xEF 0x80 0x71 0x4F
0x81 0x00 0x81 0x40 0x81 0x80 0x95 0x00
0x95 0x0F 0xB3 0x00 0xA9 0x40 0x02 0x3A
0x80 0x18 0x71 0x38 0x2D 0x40 0x58 0x2C
0x45 0x00 0xA0 0x5A 0x00 0x00 0x00 0x1E
0x66 0x21 0x50 0xB0 0x51 0x00 0x1B 0x30
0x40 0x70 0x36 0x00 0xA0 0x5A 0x00 0x00
0x00 0x1E 0x00 0x00 0x00 0xFD 0x00 0x18
0x4B 0x1A 0x51 0x17 0x00 0x0A 0x20 0x20
0x20 0x20 0x20 0x20 0x00 0x00 0x00 0xFC
0x00 0x53 0x41 0x4D 0x53 0x55 0x4E 0x47
0x0A 0x20 0x20 0x20 0x20 0x20 0x01 0x59
0x02 0x03 0x29 0xF1 0x46 0x90 0x04 0x05
0x03 0x20 0x22 0x23 0x09 0x07 0x07 0x83
0x01 0x00 0x00 0xE2 0x00 0x0F 0xE3 0x05
0x03 0x01 0x6E 0x03 0x0C 0x00 0x20 0x00
.
.
.
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x65
```

#prdsedid Function

The #prdsedid function reads the downstream EDID and sends it to the serial port.

Syntax:

```
#prdsedid param1
```

Parameters:

<i>param1</i>	A downstream monitor	[1 - 8]
---------------	----------------------	---------

Example:

```
#prbaedid 2
```

Finished reading EDID from output 1

```
0x00 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0x00
0x4C 0x2D 0xAC 0x06 0x01 0x00 0x00 0x00
0x34 0x13 0x01 0x03 0x80 0x66 0x39 0x78
0x0A 0xEE 0x91 0xA3 0x54 0x4C 0x99 0x26
0x0F 0x50 0x54 0xBD 0xEF 0x80 0x71 0x4F
0x81 0x00 0x81 0x40 0x81 0x80 0x95 0x00
0x95 0x0F 0xB3 0x00 0xA9 0x40 0x02 0x3A
0x80 0x18 0x71 0x38 0x2D 0x40 0x58 0x2C
0x45 0x00 0xA0 0x5A 0x00 0x00 0x00 0x1E
0x66 0x21 0x50 0xB0 0x51 0x00 0x1B 0x30
0x40 0x70 0x36 0x00 0xA0 0x5A 0x00 0x00
0x00 0x1E 0x00 0x00 0x00 0xFD 0x00 0x18
0x4B 0x1A 0x51 0x17 0x00 0x0A 0x20 0x20
0x20 0x20 0x20 0x20 0x00 0x00 0x00 0xFC
0x00 0x53 0x41 0x4D 0x53 0x55 0x4E 0x47
0x0A 0x20 0x20 0x20 0x20 0x20 0x01 0x59
0x02 0x03 0x29 0xF1 0x46 0x90 0x04 0x05
0x03 0x20 0x22 0x23 0x09 0x07 0x07 0x83
0x01 0x00 0x00 0xE2 0x00 0x0F 0xE3 0x05
0x03 0x01 0x6E 0x03 0x0C 0x00 0x20 0x00
.
.
.
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x65
```

#predidst Function

The #predidst function reads the downstream EDID. This function displays a table containing details relating to the Local EDID and the monitor name.

Syntax:

#prdsedid

Parameters:

None

Example:

#predidst

Input		Source		Name
-----		-----		-----
1		Default		GEFEN_XPT_DL
2		Output_1		
3		Default		GEFEN_XPT_DL
4		Default		GEFEN_XPT_DL
5		External		SAMSUNG
6		Output_1		
7		Output_1		
8		Output_1		

#prloedid Function

The #prloedid function reads the local EDID of a specified input and spools it to the serial port.

Syntax:

#prloedid param1

Parameters:

param1	A specified Input	[1 - 8]
--------	-------------------	---------

Example:

#prloedid 1

Finished reading EDID from Local EDID input 1

```
0x00 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0x00
0x1C 0xA6 0x00 0x01 0x00 0x00 0x00 0x01
0x01 0x14 0x01 0x03 0x80 0x50 0x2D 0x78
0x0A 0x0D 0xC9 0xA0 0x57 0x47 0x98 0x27
0x12 0x48 0x4C 0x21 0x4F 0x00 0x81 0x00
0xA9 0x40 0xD1 0x00 0x71 0x40 0x01 0x01
0x01 0x01 0x01 0x01 0x01 0x01 0x30 0x2A
0x00 0x98 0x51 0x00 0x2A 0x40 0x30 0x70
0x13 0x00 0x52 0x0E 0x11 0x00 0x00 0x1E
0xB0 0x68 0x00 0xA0 0xA0 0x40 0x2E 0x60
0x30 0x20 0x36 0x00 0x81 0x90 0x21 0x00
0x00 0x1E 0x00 0x00 0x00 0xFC 0x00 0x47
0x45 0x46 0x45 0x4E 0x5F 0x58 0x50 0x54
0x5F 0x44 0x4C 0x20 0x00 0x00 0x00 0xFD
0x00 0x3B 0x3D 0x0F 0x71 0x1C 0x00 0x0A
0x20 0x20 0x20 0x20 0x20 0x20 0x00 0x3C
```

IP / Telnet Configuration

Command	Description
<i>#display_telnet_welcome</i>	Set Telnet welcome message on login
<i>#ipconfig</i>	Displays all TCP/IP settings
<i>#resetip</i>	Resets IP configuration to factory settings
<i>#set_http_port</i>	Sets the Web server listening port
<i>#set_telnet_pass</i>	Prompts for password when using Telnet
<i>#set_telnet_port</i>	Sets the Telnet listening port
<i>#set_telnet_username</i>	Sets the user name for the login procedure
<i>#sgateway</i>	Sets the IP gateway address
<i>#show_telnet_pass</i>	Prompts for password when using Telnet
<i>#show_telnet_username</i>	Prompts for user name when using Telnet
<i>#show_ver_data</i>	Displays the hardware and firmware version of the matrix
<i>#sipadd</i>	Sets the IP address of the matrix
<i>#snetmask</i>	Sets the IP network mask
<i>#use_telnet_pass</i>	Use password during Telnet sessions

#display_telnet_welcome Command

The #display_telnet_welcome command sets (enables/disables) the Telnet welcome message on login.

Syntax:

```
#display_telnet_welcome param1
```

Parameters:

param1

State

[0 - 1]

State	Meaning
0	Do not display welcome message
1	Display welcome message

Example:

```
#display_telnet_welcome 1
```

Telnet welcome at login is set to ON

#ipconfig Command

The #ipconfig command displays the current TCP/IP settings for the matrix.

Syntax:

#ipconfig

Parameters:

None

Example:

#ipconfig

----- TCP/IP settings -----

MAC add = 00:1C:91:01:50:07

IP add = 192.168.1.72

Net Mask = 255.255.255.0

Gateway = 192.168.2.1

Web Server Port = 80

Telnet Server Port = 23

Telnet password at login is set to ON

Telnet welcome at login is set to ON

#resetip Command

The #resetip command resets all TCP/IP settings to factory defaults.

Syntax:

#resetip

Parameters:

None

Notes:

The matrix must be rebooted after executing this command.

Example:

#resetip

Reset ip configuration to factory default

#set_http_port Command

The #set_http_port command sets the Web server listening port.

Syntax:

#set_http_port param1

Parameters:

param1	Port	[0 - 65535]
--------	------	-------------

Notes:

The default port setting is 80.

The matrix must be rebooted after executing this command.

Example:

#set_http_port 34

New HTTP port set to: 34

#set_telnet_pass Command

The #set_telnet_pass command sets the Telnet password. The maximum length of the password is 20 characters. The password is case-sensitive.

Syntax:

```
#set_telnet_pass param1
```

Parameters:

<i>param1</i>	Password
---------------	----------

Notes:

The default password is *Admin*.

The matrix must be rebooted after executing this command.

Example:

```
#set_telnet_pass reindeer
```

```
Telnet password updated to: reindeer
```

#set_telnet_port Command

The #set_telnet_port command sets the Telnet listening port.

Syntax:

```
#set_telnet_port param1
```

Parameters:

<i>param1</i>	Port	[0 - 65535]
---------------	------	-------------

Notes:

The default port setting is 23.

The matrix must be rebooted after executing this command.

Example:

```
#set_telnet_port 80
```

```
New Telnet port set to: 80
```

#set_telnet_username Command

The #set_telnet_username command sets the Telnet user name. The maximum length of the user name is 20 characters. The user name is case-sensitive.

Syntax:

```
#set_telnet_username param1
```

Parameters:

<i>param1</i>	User name
---------------	-----------

Notes:

The default username is *Admin*.

The matrix must be rebooted after executing this command.

Example:

```
#set_telnet_username andrew
```

```
Telnet login updated to: andrew
```

#sgateway Command

The #sgateway sets the IP gateway (router) address. Dot-decimal notation must be used when specifying the IP address. The default address is 192.168.1.254.

Syntax:

```
#sgateway param1
```

Parameters:

<i>param1</i>	IP gateway
---------------	------------

Notes:

The default gateway IP address is *192.168.1.254*

The matrix must be rebooted after executing this command.

Example:

```
#sgateway 192.168.1.1
```

```
New IP Gateway set to: 192.168.1.1
```

#show_telnet_pass Command

The #show_telnet_pass command shows the Telnet password for login (if required).

Syntax:

```
#show_telnet_pass
```

Example:

```
#show_telnet_pass
```

```
Telnet password: reindeer
```

#show_telnet_username Command

The #show_telnet_username command returns the user name required for login.

Syntax:

```
#show_telnet_username
```

Parameters:

None

Example:

```
#show_telnet_username
```

```
Telnet login: andrew
```

#show_ver_data Command

The #show_ver_data command displays the hardware and firmware version of the matrix.

Syntax:

#show_ver_data

Parameters:

None

Example:

#show_ver_data

Hardware version 1

Firmware Release version 2.0.30

Release data: Apr 9 2012

Boot loader version 1.6

#sipadd Command

The #sipadd command sets the IP address of the matrix. Dot-decimal notation must be used when specifying the IP address.

Syntax:

#sipadd param1

Parameters:

param1 IP address

Notes:

The matrix must be rebooted after executing this command.

Example:

#sipadd 192.168.1.72

New IP set to: 192.168.1.72

#snetmask Command

The #snetmask command sets the IP network mask. Dot-decimal notation must be used when specifying the IP network mask.

Syntax:

#snetmask param1

Parameters:

param1 Network mask

Notes:

The default net mask is set to 255.255.255.0

The matrix must be rebooted after executing this command.

Example:

```
#snetmask 255.255.0.0
```

New IP Mask set to: 255.255.0.0

#use_telnet_pass Command

The #use_telnet_pass command requires or disables login credentials.

Syntax:

#use_telnet_pass param1

Parameters:

param1 State [0 - 1]

Value	Meaning
0	Disable password
1	Enable (force) password

Notes:

The default setting is *disabled*

Example:

```
#use_telnet_pass 1
```

Telnet password at login is set to ON

Routing

Command	Description
<i>#callpreset</i>	Recalls a routing / mask preset
<i>#saudio</i>	Routes audio independently from video
<i>#savepreset</i>	Saves the current routing/masking state to a preset
<i>a</i>	Routes audio independently from video
<i>r</i>	Routes the specified inputs to the specified outputs
<i>s</i>	Routes the specified input to all outputs

#callpreset Command

The #callpreset command recalls a routing preset. Any masked outputs will also be recalled.

Syntax:

#callpreset param1

Parameters:

param1 Preset [1 - 8]

Example:

#callpreset 4

Recall Saved Set 4

#saudio Command

The #saudio command routes the selected audio input to all outputs.

Syntax:

#saudio param1

Parameters:

param1	Preset	[1 - 8]
--------	--------	---------

Notes:

If *param1* = 0, then each audio input will be routed to its associated output (e.g. 1-1, 2-2, 3-3, etc.).

Example:

#saudio 2

Independent audio route input 2 to all outputs

#saudio 0

Independent audio routing 1-1, 2-2...

#savepreset Command

The #savepreset command saves the current routing state to the specified preset. Any masked outputs will also be saved as part of the current routing state.

Syntax:

#savepreset param1

Parameters:

param1	Preset	[1 - 8]
--------	--------	---------

Example:

#savepreset 5

Saved current as set 5

a Command

The a command routes the audio independently from the video.

Syntax:

a param1 param2 [param3...param9]

Parameters:

<i>param1</i>	Audio input	[1 - 8]
<i>param2</i>	Audio output	[1 - 8]

Example:

a 1 2 3

Audio input 1 is routed to outputs: 2 3

r Command

The **r** command routes the specified input to the specified outputs.

Syntax:

```
r param1 param2 [param3...param9]
```

Parameters:

<i>param1</i>	Input	[1 - 8]
<i>param2</i>	Outputs	[1 - 8]

Notes:

If *param2* = 0, then the specified input is routed to all outputs.

Examples:

```
r 7 3 4 5 6 1 2
```

Input 7 is routed to outputs: 3 4 5 6 1 2

If *Dynamic EDID* (see page 24) is enabled, then the last output in the list will be saved to the specified input (*param1*), as shown below:

```
r 7 3 4 5 6 1 2
```

Input 7 is routed to outputs: 3 4 5 6 1 2

Finished reading EDID from output 2

Finished loading EDID to local 7

```
r 0
```

All outputs are routed to input 1

s Command

The s command routes the specified input to all outputs.

Syntax:

s param1

Parameters:

<i>param1</i>	Input	[1 - 8]
---------------	-------	---------

Example:

s 1

All outputs are routed to input 1

Masking

Command	Description
<i>#maskaud</i>	Masks the selected audio output(s)
<i>#maskout</i>	Masks the selected (video) output(s)
<i>#maskusb</i>	Masks the selected USB channel(s)
<i>#unmaskout</i>	Unmasks the selected output(s)

#maskaud Command

The *#maskaud* command masks the selected audio output(s).

Syntax:

#maskaud param1 param2

Parameters:

param1 Output [1 - 8]

param2 State [0 - 1]

Value	Meaning
0	Active
1	Mask

Notes:

The current masking state will be lost if power is interrupted or if the masking state is not saved (see *#savepreset* on page 44).

Example:

#maskaud 2 0

Active AUDIO Output 2

#maskout Command

The #maskout command allows blanking of the specified outputs.

Syntax:

```
#maskout param1 param2
```

Parameters:

param1 Output [1 - 8]

param2 State [0 - 1]

Value	Meaning
0	Active
1	Mask

Notes:

The current masking state will be lost if power is interrupted or if the masking state is not saved (see #savepreset on page 44).

Example:

```
#maskout 2 0
```

Mask outputs: 2

#maskusb Command

The #maskusb command masks the selected USB channel(s).

Syntax:

```
#maskusb param1 param2
```

Parameters:

param1 Output [1 - 8]

param2 State [0 - 1]

Value	Meaning
0	Active
1	Mask

Notes:

The current masking state will be lost if power is interrupted or if the masking state is not saved (see #savepreset on page 44).

Example:

```
#maskusb 1 0
```

```
Active USB DownStream 1
```

#unmaskout Command

The #unmaskout command unmask the specified outputs. If *param1* = 0, then all outputs will be unmasked.

Syntax:

```
#unmaskout param1...param8
```

Parameters:

<i>param1</i>	Output	[1 - 8]
---------------	--------	---------

Examples:

```
#unmaskout 3 5 7
```

Activate outputs: 3 5 7

```
#unmaskout 0
```

Activate all outputs

Miscellaneous

Command	Description
<i>#activebolo</i>	Activates the boot loader
<i>#audswitch</i>	Enables / disables independent audio routing
<i>#fadefault</i>	Resets the matrix to factory default routing
<i>#help</i>	Displays all available commands
<i>#lock_fo</i>	Toggles the +5V lock power state
<i>#prpreset</i>	Prints the routing preset table
<i>#set_input_name</i>	Specifies a name for an input
<i>#set_ir</i>	Sets the IR channel of the matrix
<i>#set_output_name</i>	Specifies a name for an output
<i>#show_temp</i>	
<i>#show_voltage</i>	
<i>f</i>	Toggles / displays +5V input
<i>l</i>	Displays the dual-link / single-link status table
<i>m</i>	Displays the current routing status

#activebolo Command

The #activebolo command activates the boot loader. This command is used when updating the matrix firmware. See page 69 for details on this procedure.

Syntax:

#activebolo

Parameters:

None

Example:

#activebolo

To download the file DVI8x8DL please type the command
'activebolo 0'

To download the file USB AUD8x8 please type the command
'activebolo 2'

#audswitch Command

The #audswitch command enables / disables independent audio routing.

Syntax:

#audswitch param1

Parameters:

param1

Output

[0 - 1]

Value	Meaning
0	Disable
1	Enable

Examples:

#audswitch 0

Disable independent audio routing

#audswitch 1

Enable independent audio routing

#fadefault Command

The #fadefault command disables the EDID lock state, sets the default routing state (1-1, 2-2, 3-3, etc.) and resets the input and output names to the default names (e.g. Output 1, Input 1).

Syntax:

#fadefault

Parameters:

None

Example:

#fadefault

Return to factor default

Loading default EDID

Routed 1-1, 2-2..

Finished loading EDID to local 1

Finished loading EDID to local 2

Finished loading EDID to local 3

Finished loading EDID to local 4

Finished loading EDID to local 5

Finished loading EDID to local 6

Finished loading EDID to local 7

Finished loading EDID to local 8

#help Command

The #help command displays help on the specified command. If *param1* is not specified, then the full list of commands is displayed.

Syntax:

#help [*param1*]

Parameters:

param1 Command name

Example:

#help #callpreset

Cmd #callpreset: Recall a routing and mask state preset

Syntax: #callpreset *param1*

Param1 = 1-16 (preset)

e.g: #callpreset 2

#lock_fo Command

The #lock_fo enables/disables the power lock state. Enabling this feature will store the +5V status for each input prior to shutting down the matrix. This preserves the +5V state when the unit is restarted.

Syntax:

#lock_fo *param1*

Parameters:

param1 State [0 - 1]

Value	Meaning
0	Disable power lock
1	Enable power lock

Example:

#lock_fo

Disable Lock power mode

#prpreset Command

The #prpreset command displays the routing preset table.

Syntax:

#prpreset

Parameters:

None

Example:

#prpreset

```
PreSet|Out1| 2 | 3 | 4 | 5 | 6 | 7 | 8
-----|-----|-----|-----|-----|-----|-----|-----
  1   |M 0 |M 0|M 0|M 0|M 0|M 0|M 0|M 0
  2   |M 0 |M 0|M 0|M 0|M 0|M 0|M 0|M 0
  3   |M 0 |M 0|M 0|M 0|M 0|M 0|M 0|M 0
  4   |M 0 |M 0|M 0|M 0|M 0|M 0|M 0|M 0
  5   |M 0 |M 0|M 0|M 0|M 0|M 0|M 0|M 0
  6   |M 0 |M 0|M 0|M 0|M 0|M 0|M 0|M 0
  7   |M 0 |M 0|M 0|M 0|M 0|M 0|M 0|M 0
  8   |M 0 |M 0|M 0|M 0|M 0|M 0|M 0|M 0
-----|-----|-----|-----|-----|-----|-----|-----
```

#set_input_name Command

The #set_input_name command provides a name to the selected input. For example, "Input 1" could be renamed as "Computer 1". The maximum string length for *param2* is 15 characters. Special characters and spaces are not permitted. If required, use the underscore character ("_") to separate characters.

Syntax:

```
#set_input_name param1 param2
```

Parameters:

<i>param1</i>	Input	[1 - 16]
<i>param2</i>	Name	

Example:

```
#set_input_name 5 computer1  
computer1 is assigned to input 5
```

#set_ir Command

The #set_ir set the IR channel for the matrix. The associated DIP switch settings for the IR remote control unit are returned. See page 12 for details on setting the IR channel for the IR remote control.

Syntax:

```
#set_ir param1
```

Parameters:

<i>param1</i>	Channel	[0 - 3]
---------------	---------	---------

Example:

```
#set_ir 2  
RMT_IR - SW1=0, SW2=1
```

#set_output_name Command

The #set_output_name command provides a name to the selected output. For example, "Output 1" could be renamed as "HDDisplay". The maximum string length for *param2* is 15 characters. Special characters and spaces are not permitted. If required, use the underscore character ("_") to separate characters.

Syntax:

```
#set_output_name param1 param2
```

Parameters:

<i>param1</i>	Output	[1 - 16]
<i>param2</i>	Name	

Example:

```
#set_output_name 3 display_3  
display_3 is assigned to output 3
```

#show_temp

The #show_temp command provides temperature information for the matrix.

Syntax:

```
#show_temp
```

Parameters:

None

Example:

```
#show_temp
```

```
Temperature near main power supply is 45  
Temperature near cross point is 53  
Temperature near power supply input board is 47
```

#show_voltage

The #show_voltage command provides voltage information for the matrix.

Syntax:

#show_voltage

Parameters:

None

Example:

#show_voltage

```
Voltage 3.3 , measured 3344 mV
Voltage 5   , measured 5036 mV
Voltage 12  , measured 11905 mV
Voltage 1.2 , measured 1200 mV
Voltage 1.8 , measured 1800 mV
Voltage 3.3 , measured 3265 mV
```

f Command

Enables / disables 5V on pin 14 of the specified DVI input. This command is used when connecting the Receiver module of fiber optic extenders, which require 5V.



WARNING: Before connect a computer to the DVI input, make sure to disable the 5V on the DVI input. Otherwise, the video card on the computer may become damaged.

Syntax:

f param1 param2

Parameters:

param1 Input [1 - 8]

param2 State [0 - 1]

State	Meaning
0	Disable 5V
1	Enable 5V

Example:

f 1 1

Enable F0 1

I Command

The I (lower-case “l”) command displays the link status of each input. If the input is receiving a dual-link signal, then the Link status will be set to “Dual”. If a single-link source is used, then the Link status will be set to “Single”.

Syntax:

l

Parameters:

None

Example:

l

Input	Signal	Link
-----	-----	-----
1	NONE	Single
2	NONE	Single
3	NONE	Single
4	NONE	Single
5	NONE	Single
6	NONE	Single
7	NONE	Single
8	NONE	Single
-----	-----	-----

m Command

The m command displays the current matrix status and routing information.

Syntax:

III

Parameters:

None

Example:

III

Output	Input	HPD	Status	AUDIOin
Output_1	Input_1	LOW	ACTIVE	1
Output_2	Input_2	HIGH	ACTIVE	1
Output_3	Input_3	LOW	ACTIVE	1
Output_4	Input_4	LOW	ACTIVE	1
Output_5	Input_5	LOW	ACTIVE	1
Output_6	Input_6	LOW	ACTIVE	1
Output_7	Input_7	LOW	ACTIVE	1
Output_8	Input_8	LOW	ACTIVE	1

RMT_IR - SW1=0, SW2=1

Configuring the IP Address

The 8x8 DVIKVM Dual Link Matrix supports IP-based control using a built-in Web server or via Telnet. Before using the built-in Web server or Telnet control, the network settings for the 8x8 DVIKVM Dual Link Matrix must be configured via RS-232. The default network settings for the matrix are as follows:

IP Address: 192.168.0.70
Subnet: 255.255.255.0
Gateway: 192.168.0.1
Port: 80

To access the 8x8 DVIKVM Dual Link Matrix, make sure that the computer and the matrix are within the same subnet. Otherwise use the following procedure to change the address to match your network:

1. Connect an RS-232 cable from the PC to the matrix.
2. Launch a terminal emulation program (e.g. HyperTerminal) and use the following settings:

Baud Rate: 19200
Data Bits: 8
Parity: None
Stop Bits: 1

3. Enter the following command with the IP address to be assigned to the matrix. See page 35 for details on the `#sipadd` command. Dot-decimal notation must be used when specifying the IP address.

Example: `#sipadd 192.168.1.236`



NOTE: If the subnet, gateway, and/or netmask need to be changed, refer to pages 33 and 35. Consult the network administrator to obtain the proper IP address and settings for this product to properly communicate on the network.

4. Power -cycle the matrix to reboot and complete the IP address change.
5. After the matrix has rebooted, the Web interface can be accessed by typing in the IP address that was specified in step 3.

Pages 52 - 67 describe the layout and operation of each function of the built-in Web server.

View Matrix Status

Matrix Status

Displays the current routing status of each input and output on the matrix.

Gefen 8x8 DL DVI Manager

VIEW MATRIX STATUS | MANAGE EDID | MASKING | IP CONFIGURATION | BACKUP/RESTORE | POWER MANAGEMENT

Matrix Status

Output	Input	Status	Audio
Output_1	Input_1	Active	Input_1
Output_2	Input_2	Active	Input_1
Output_3	Input_3	Active	Input_1
Output_4	Input_4	Active	Input_1
Output_5	Input_5	Active	Input_1
Output_6	Input_6	Active	Input_1
Output_7	Input_7	Active	Input_1
Output_8	Input_8	Active	Input_1

Refresh ☐ Auto Refresh

Refresh

Click to refresh the Matrix Status screen

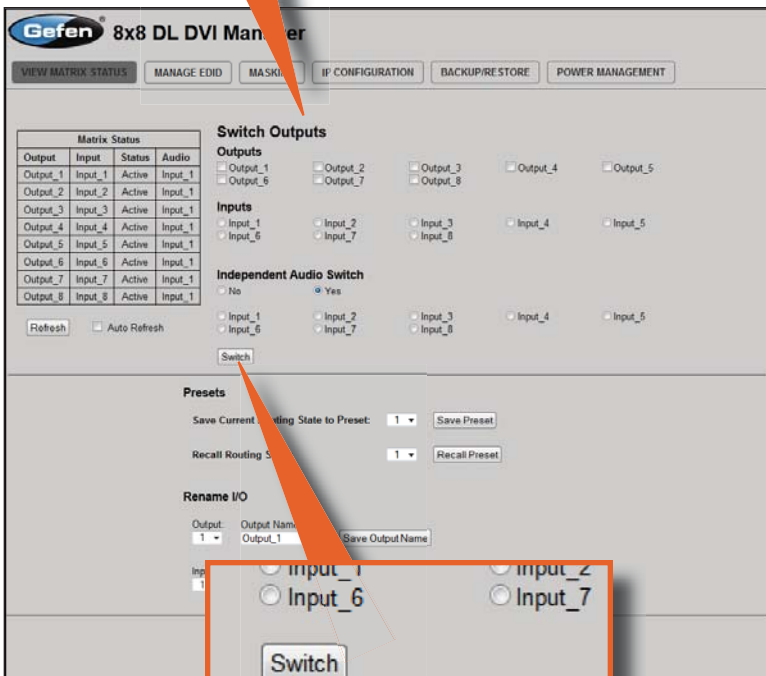
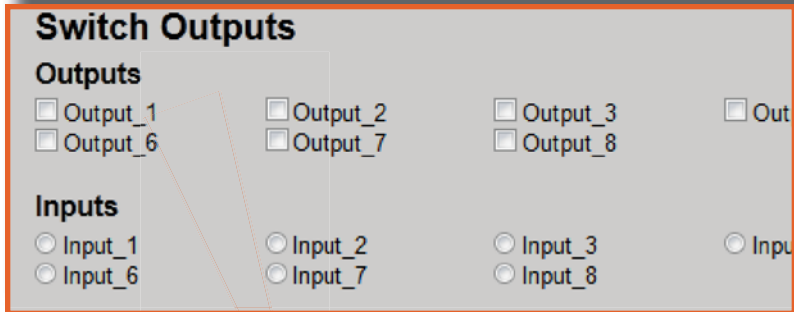
Auto Refresh

Check this box to enable Auto Refresh. The Auto Refresh function automatically refreshes the interface every 10 seconds.

Switch Outputs

Used to route the specified input to the selected output(s). To route a source, place a check mark next to each Output. Next, click the radio button next to the desired Input. Press the Switch button to apply the routing change.

Audio switching can also be managed through this panel. See page 54 for details.



Switch

Click this button to apply the routing change.

Independent Audio Switch

Enables / disables independent audio switching. Click the “Yes” radio button to enable independent audio switching. To disable, click the “No” radio button.

Once independent audio switching is enabled, click the radio button next to the Input which will provide this function. Each input can be independently enabled or disabled.

Click the Switch button to apply the changes.

Switch

Click this button to apply the routing change.

Independent Audio Switch

☐ No
 ☒ Yes

☐ Input_1
 ☐ Input_2
 ☐ Input_3
 ☐ Input_4

☐ Input_6
 ☐ Input_7
 ☐ Input_8

Switch

8x8 DL Manager

VIEW MATRIX STATUS | MANAGE | MASKING | IP CONFIGURATION | BACKUP/RESTORE | POWER MANAGEMENT

Output	Input	Status	Audio
Output_1	Input_1	Active	Input_1
Output_2	Input_2	Active	Input_1
Output_3	Input_3	Active	Input_1
Output_4	Input_4	Active	Input_1
Output_5	Input_5	Active	Input_1
Output_6	Input_6	Active	Input_1
Output_7	Input_7	Active	Input_1
Output_8	Input_8	Active	Input_1

Refresh ☐ Auto Refresh

Switch Outputs

☐ Output_1
 ☐ Output_2
 ☐ Output_3
 ☐ Output_4
 ☐ Output_5

☐ Output_6
 ☐ Output_7
 ☐ Output_8

Inputs

☒ Input_1
 ☐ Input_2
 ☐ Input_3
 ☐ Input_4
 ☐ Input_5

☐ Input_6
 ☐ Input_7
 ☐ Input_8

Independent Audio Switch

☐ No
 ☒ Yes

☐ Input_1
 ☐ Input_2
 ☐ Input_3
 ☐ Input_4
 ☐ Input_5

☐ Input_6
 ☐ Input_7
 ☐ Input_8

Switch

Presets

Save Current Routing State to Preset: 1 Save Preset

Recall Routing State: 1 Recall Preset

Rename I/O

Output: 1
 Output Name: Output_1
 Save Output Name

Input: 1
 Input Name: Input_1
 Save Input Name

Gefen 8x8 DL DVI Manager

VIEW MATRIX STATUS | MANAGE EDID | MASKING | IP CONFIGURATION | BACKUP/RESTORE | POWER MANAGEMENT

Matrix Status			
Output	Input	Status	Audio
Output_1	Input_1	Active	Input_1
Output_2	Input_2	Active	Input_1
Output_3	Input_3	Active	Input_1
Output_4	Input_4	Active	Input_1
Output_5	Input_5	Active	Input_1
Output_6	Input_6	Active	Input_1
Output_7	Input_7	Active	Input_1
Output_8	Input_8	Active	Input_1

Switch Outputs

Outputs

☐ Output_1 ☐ Output_2 ☐ Output_3 ☐ Output_4 ☐ Output_5

☐ Output_6 ☐ Output_7 ☐ Output_8

Inputs

☐ Input_1 ☐ Input_2 ☐ Input_3 ☐ Input_4 ☐ Input_5

☐ Input_6 ☐ Input_7 ☐ Input_8

Independent Audio Switch

☐ No ☒ Yes

☐ Input_1 ☐ Input_2 ☐ Input_3 ☐ Input_4 ☐ Input_5

☐ Input_6 ☐ Input_7 ☐ Input_8

Presets

Save Current Routing State to Preset: 1

Recall Routing State: 1

Renaming I/O

Output: Output Name: 1

Input: Input Name: 1

Presets

Provides saving and recalling of routing states.

Save Preset

Click the down-arrow on the pull-down list to select the preset location (1-16). Click the Save Preset button to save the preset.

Pull-down list

Presets

Save Current Routing State to Preset: 1

Recall Routing State: 1

Recall Preset

Click the down-arrow on the pull-down list to select the routing state (1-16) to recall. Click the Recall Preset button to recall the preset.

Rename I/O

Provides custom naming of each input and output on the matrix.

Pull-down list

Save Input Name

Select the DVI input to rename from the pull-down list. Type the name of the input in the Input Name field. Click the Save Input Name button to save changes. See page 47 for naming restrictions.

Save Output Name

Select the DVI output to rename from the pull-down list. Type the name of the output in the Output Name field. Click the Save Output Name button to save changes. See page 48 for naming restrictions.

Manage EDID

Set Input to Default EDID

EDID Status

Displays the current EDID status for each input on the matrix and indicates the current Lock State.

Gefen 8x8 DL DVI Manager

VIEW MATRIX STATUS **MANAGE EDID** MASKING IP CONFIGURATION BACKUP/RESTORE POWER MANAGEMENT

Set Input to Default EDID Upload EDID Download EDID Copy EDID EDID Lock State

EDID Status - Lock State: OFF

Input	EDID Source	Name
Input_1	Default	GEFEN_XPT_DL
Input_2	Default	GEFEN_XPT_DL
Input_3	Default	GEFEN_XPT_DL
Input_4	Default	GEFEN_XPT_DL
Input_5	Default	GEFEN_XPT_DL
Input_6	Default	GEFEN_XPT_DL
Input_7	Default	GEFEN_XPT_DL
Input_8	Default	GEFEN_XPT_DL

Refresh ☐ Auto Refresh

Select Input(s) to Set to Default:

Input 1 Input 2 Input 3 Input 4 Input 5

Set Input to Default EDID **Upload EDID**

EDID Status - Lock State: OFF

Input	EDID Source	Name
Input_1	Default	GEFEN_XPT_DL
Input_2	Default	GEFEN_XPT_DL
Input_3	Default	GEFEN_XPT_DL
Input_4	Default	GEFEN_XPT_DL
Input_5	Default	GEFEN_XPT_DL
Input_6	Default	GEFEN_XPT_DL
Input_7	Default	GEFEN_XPT_DL
Input_8	Default	GEFEN_XPT_DL

Refresh ☐ **Auto Refresh**

Refresh

Click to refresh the Matrix Status screen

Auto Refresh

Check this box to enable Auto Refresh. Auto Refresh will automatically update the screen every 10 seconds.

Set Input to Default EDID

Press this button from the Manage EDID screen to access this menu system.

Set Input to Default EDID

The screenshot shows the 'Gefen 8x8 DVI Manager' web interface. At the top, there are tabs: 'VIEW MATRIX STATUS', 'MANAGE EDID' (selected), 'MASKING', 'IP CONFIGURATION', 'BACKUP/RESTORE', and 'POWER MANAGEMENT'. Below the tabs, there are buttons: 'Set Input to Default EDID', 'Upload EDID', 'Download EDID', 'Copy EDID', and 'EDID Lock State'. The 'Set Input to Default EDID' button is highlighted with an orange box and an arrow pointing to it. Below the buttons, there is a table with the following data:

Input	EDID Source	Name
Input_1	Default	GEFEN_XPT_DL
Input_2	Default	GEFEN_XPT_DL
Input_3	Default	GEFEN_XPT_DL
Input_4	Default	GEFEN_XPT_DL
Input_5	Default	GEFEN_XPT_DL
Input_6	Default	GEFEN_XPT_DL
Input_7	Default	GEFEN_XPT_DL
Input_8	Default	GEFEN_XPT_DL

Below the table, there is a 'Refresh' button and an 'Auto Refresh' checkbox. To the right of the table, there is a section titled 'Select Input(s) to Set to Default:' with checkboxes for Input_1 through Input_8. The 'Set Default EDID' button is highlighted with an orange box and an arrow pointing to it. Below this, there is a larger dialog box titled 'Select Input(s) to Set to Default:' with checkboxes for Input_1 through Input_8 and a 'Set Default EDID' button.

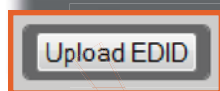
Set Default EDID

Place a check mark next to the input(s) that should be set to the default EDID. Click the Set Default EDID button to apply the default EDID to the selected inputs.

Upload EDID

Upload EDID

Press this button from the Manage EDID screen to access this menu system.

The screenshot shows the 'Gefen 8x DVI Manager' web interface. At the top, there are tabs for 'VIEW MATRIX STATUS', 'MANAGE EDID', 'MASKING', 'IP CONFIGURATION', 'BACKUP/RESTORE', and 'POWER MANAGEMENT'. The 'MANAGE EDID' tab is active. Below the tabs are buttons: 'Set Input to Default EDID', 'Upload EDID', 'Download EDID', 'Copy EDID', and 'EDID Lock State'. The 'Upload EDID' button is highlighted with an orange arrow. Below these buttons is a table with columns 'Input', 'EDID Source', and 'Name'. The table lists inputs 1 through 8, all with 'Default' as the source and 'GEFEN_XPT_DL' as the name. To the right of the table is a section titled 'Select Input(s) to Upload to:' with checkboxes for Input_1 through Input_8. Below this is the 'Upload EDID File' section, which includes a text input field, a 'Browse...' button, and a 'Load EDID file' button. An orange arrow points from the 'Load EDID file' button to the 'Load EDID file' label in the text below the screenshot. A larger orange-bordered box highlights the 'Select Input(s) to Upload to:' and 'Upload EDID File' sections, with an orange arrow pointing from the 'Upload EDID' button in the top navigation bar to this box.

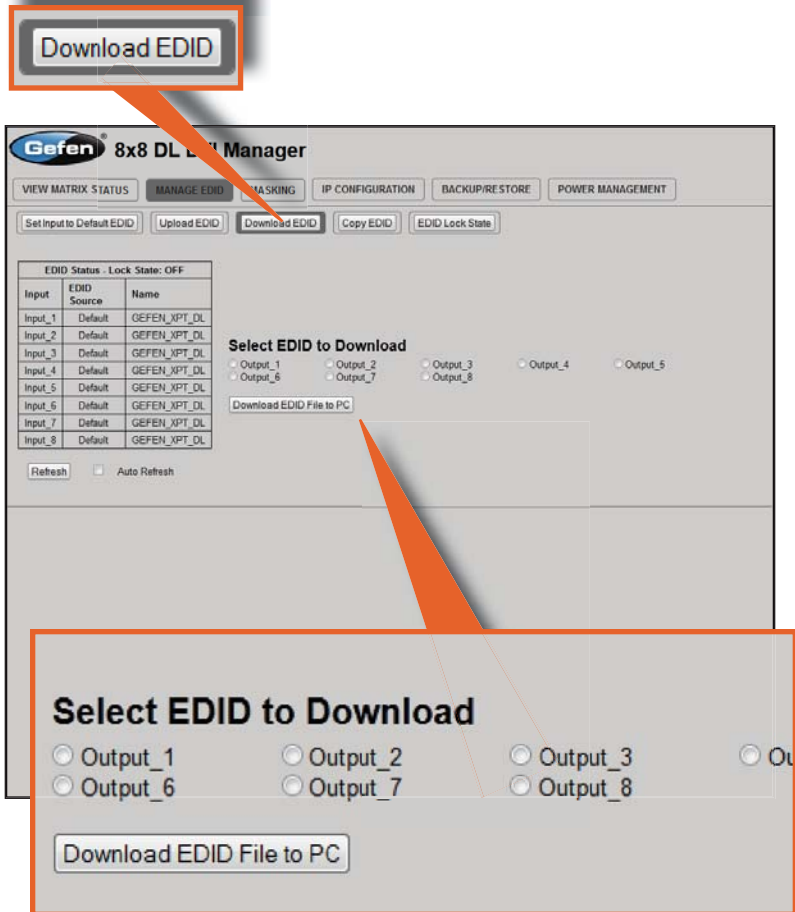
Load EDID file

Place a check mark next to the input(s) that will receive the EDID data from the file. The EDID file must be in .bin format. Click the Browse button to locate the EDID on the computer. Click the Load EDID file button to upload the EDID file to the matrix.

Download EDID

Download EDID

Press this button from the Manage EDID screen to access this menu system.



Download EDID File to PC

Select the radio button next to the output, containing the EDID to be downloaded. Click the Download EDID File to PC button to confirm the change. The downloaded EDID file will be in .bin format.

Copy EDID

Copy EDID

Press this button from the Manage EDID screen to access this menu system.

Copy EDID

The screenshot shows the 'Gefen 8x8 DL DVI Manager' web interface. At the top, there are tabs: 'VIEW MATRIX STATUS', 'MANAGE EDID', 'MASKING', 'IP CONFIGURATION', 'BACKUP/RESTORE', and 'POWER MANAGEMENT'. Below these are buttons: 'Set Input to Default EDID', 'Upload EDID', 'Download EDID', 'Copy EDID', and 'EDID Lock State'. The 'Copy EDID' button is highlighted with an orange box and a red arrow pointing to a larger, detailed view of the dialog box.

EDID Status - Lock State: OFF

Input	EDID Source	Name
Input_1	Default	GEFEN_XPT_DL
Input_2	Default	GEFEN_XPT_DL
Input_3	Default	GEFEN_XPT_DL
Input_4	Default	GEFEN_XPT_DL
Input_5	Default	GEFEN_XPT_DL
Input_6	Default	GEFEN_XPT_DL
Input_7	Default	GEFEN_XPT_DL
Input_8	Default	GEFEN_XPT_DL

Select Source to Copy from:

Output(s):

☐ Output_1 ☐ Output_2 ☐ Output_3 ☐ Output_4 ☐ Output_5
☐ Output_6 ☐ Output_7 ☐ Output_8

Input(s):

☐ Input_1 ☐ Input_2 ☐ Input_3 ☐ Input_4
☐ Input_6 ☐ Input_7 ☐ Input_8

Select Input(s) to Copy to:

☐ Input_1 ☐ Input_2 ☐ Input_3 ☐
☐ Input_6 ☐ Input_7 ☐ Input_8

Select Source to Copy from:

Output(s):

☐ Output_1 ☐ Output_2 ☐ Output_3
☐ Output_6 ☐ Output_7 ☐ Output_8

Input(s):

☐ Input_1 ☐ Input_2 ☐ Input_3
☐ Input_6 ☐ Input_7 ☐ Input_8

Select Input(s) to Copy to:

☐ Input_1 ☐ Input_2 ☐ Input_3
☐ Input_6 ☐ Input_7 ☐ Input_8

Set EDID

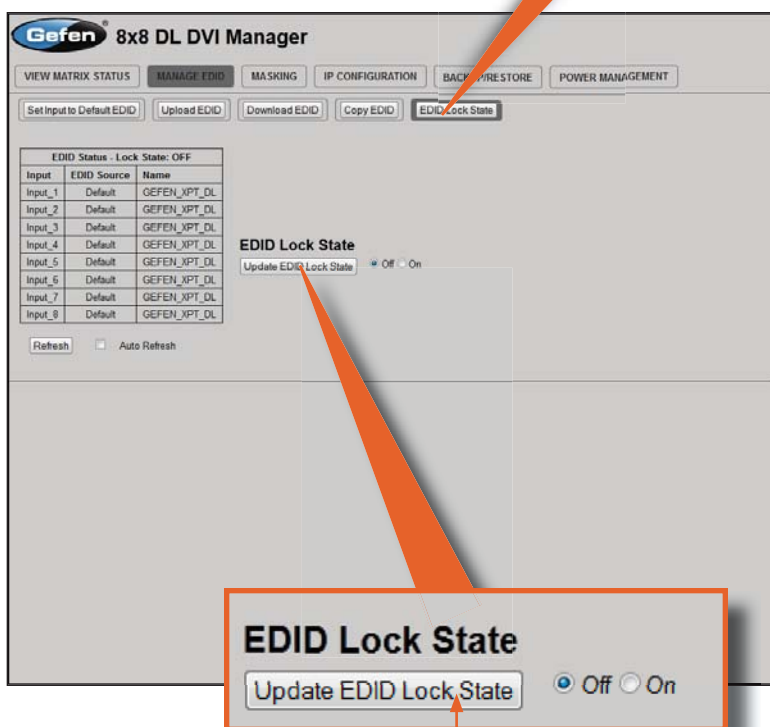
Select Source to Copy from / Select Input(s) to Copy to

Click the radio button next to the input or output containing the EDID to copy. Note that only a single input or output can be selected at a time. Place a check mark next to the input(s) where the EDID will be copied. Click the Set EDID button to confirm the operation.

EDID Lock State

EDID Lock State

Press this button from the Manage EDID screen to access this menu system.



Update EDID Lock State

Secures the Local EDID and disables the automatic loading of the downstream EDID after the Matrix is powered on. Select the radio button next to the Off or On option then click the Update EDID Lock State button to apply the change.

The EDID Lock State has no effect when the Dynamic EDID function is activated.

Masking

Matrix Mask Status / Change

Displays the current masking status for each output.

The screenshot shows the Gefen 8x8 DL DVI Manager web interface. The 'MASKING' tab is selected. A dialog box titled 'Matrix Mask Status/Change' is open, displaying a table of output masking status. The table has four columns: Output, Input, Status, and Click to:. The Status column shows 'Active' for all outputs. The Click to: column contains 'Mask' buttons for each output. An orange arrow points from the 'Mask' button for Output_1 to the 'Mask' button for Output_8. Below the table are 'Refresh' and 'Auto Refresh' (checkbox) buttons, and a 'Save Changes' button.

Output	Input	Status	Click to:
Output_1	Input_1	Active	Mask
Output_2	Input_2	Active	Mask
Output_3	Input_3	Active	Mask
Output_4	Input_4	Active	Mask
Output_5	Input_5	Active	Mask
Output_6	Input_6	Active	Mask
Output_7	Input_7	Active	Mask
Output_8	Input_8	Active	Mask

Refresh ☐ Auto Refresh

Save Changes

Mask

Click the Mask button to mask the selected output. If the output is already masked then the button will read "Active" (enabled). Click the ("Active") button again to toggle the masking state to "Mask" (disabled).

IP Configuration

IP Settings

Assigns IP address, subnet, gateway, HTTP listening port, and Telnet port. Note that the MAC address can not be changed. Click the Save button to apply changes. The matrix must be rebooted for the changes to take effect.

Gefen® 8x8 DL DVI Manager

VIEW MATRIX STATUS MANAGE EDIT MASKING **IP CONFIGURATION** BACKUP/RESTORE POWER MANAGEMENT

IP Settings

MAC Address: 00:1C:91:01:50:07

IP Address: 192.168.2.236 (default: 192.168.1.72)

Subnet: 255.255.255.0 (default: 255.255.255.0)

Gateway: 192.168.2.1 (default: 192.168.1.254)

HTTP Port: 80 (default: 80)

Telnet Port: 23 (default: 23)

Save

Reset IP Configuration to Defaults: Reset

Telnet Login Settings

User Name: Admin (default: Admin)

Password: Admin (default: Admin)

Force Login: ☒

Welcome message: ☐

Save

IP Settings

MAC Address: 00:1C:91:01:50:07

IP Address: 192.168.2.236 (default: 192.168.1.72)

Subnet: 255.255.255.0 (default: 255.255.255.0)

Gateway: 192.168.2.1 (default: 192.168.1.254)

HTTP Port: 80 (default: 80)

Telnet Port: 23 (default: 23)

Save

Reset IP Configuration to Defaults: Reset

Telnet Login Settings

User Name: Admin (default: Admin)

Password: Admin (default: Admin)

Force Login: ☒

Welcome message: ☐

Save

Telnet Login Settings

Sets the user name and password for Telnet sessions to the matrix. Click the Save button to apply changes.

Backup / Restore

The Backup / Restore feature for the 8x8 DVIKVM Dual Link Matrix is not currently implemented and will be available in a future release of the firmware.



Power Management

Power Status

Enabling this feature will store the +5V status for that input prior to shutting down the matrix. This preserves the +5V state when the unit is restarted.

Input	5 volt	Click to:
Input_1	OFF	ON
Input_2	OFF	ON
Input_3	OFF	ON
Input_4	OFF	ON
Input_5	OFF	ON
Input_6	OFF	ON
Input_7	OFF	ON
Input_8	OFF	ON

Refresh ☐ Auto Refresh

Save Changes

Refresh

Click to refresh the Power Status screen

Auto Refresh

Check this box to automatically update the screen every 10 seconds.

Save Changes

Click to save the power lock status.

Power State

The current power state is listed under the column titled "5 Volt". Click these buttons to toggle the input power state.

Input	5 volt	Click to:
Input_1	OFF	ON
Input_2	OFF	ON
Input_3	OFF	ON
Input_4	OFF	ON
Input_5	OFF	ON
Input_6	OFF	ON
Input_7	OFF	ON
Input_8	OFF	ON

Refresh ☐ Auto Refresh

Save Changes

Power Lock State

Update Power Lock State ☒ Off ☐ On

Power Lock State

Update Power Lock State ☒ Off ☐ On

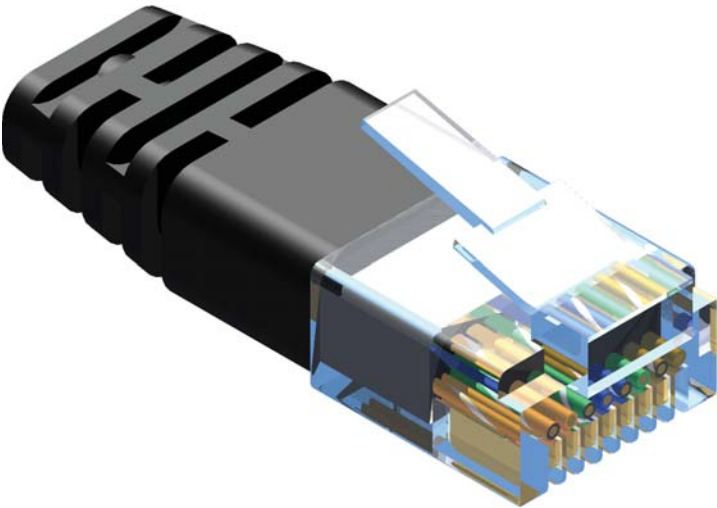
Power Lock State

In the case of an accidental power loss to the matrix, the +5V state for each input can be preserved.

Set the specified Power Status buttons (see previous page) and click the radio button next to ON. Click the Update Power Lock State button to apply changes.

By default, this option is set to Off.

NETWORK CABLE WIRING DIAGRAM



Gefen recommends the TIA/EIA-568-B wiring option. Please adhere to the table below when field-terminating the cable for use with Gefen products.

Pin	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown

Cabling comes in stranded and solid core types. Gefen recommends using solid core cabling.

It is recommended to use one continuous run from one end to the other. Connecting through a patch is not recommended.

Firmware Update Procedure

The following items are required to update firmware:

- RS-232 Terminal (e.g. Windows-based PC running HyperTerminal).
- RS-232 cable (do not use a null-modem cable)
- Firmware files: DVI8x8 and GEFMTXFP

To begin the update procedure the matrix Boot Loader must be activated. To activate the Boot Loader please follow the procedure below:

1. Power-on the matrix.
2. Connect an RS-232 cable to the PC and open the terminal program using the following settings:

Baud rate: 19200
Stop bits: 1
Data bits: 8
Flow control: None

3. Type the command: `#activebolo`

Two options will be provided:

To download the file DVI8x8 please type the command 'activebolo 0'
To download the file GEFMTXFP please type the command 'activebolo 1'

4. Type the command: `#activebolo 0`

This will begin the update process of the main board.

5. Once the Boot Loader is activated the following message should appear:
6. Press [1] on the computer keyboard to begin downloading program to the temporary memory

```
DVI8x8 Boot Loading
===== Main Menu =====
Download new program ----- 1
Cancel ----- 2
=====
```

7. Press [1] on the computer keyboard to begin downloading program to the temporary memory.

8. A message will appear in the terminal program:

Waiting for the file to be sent ... (press 'a' to abort)

9. In Hyperterminal, click Transfer > Send file...
10. Click Browse... and select the .BIN file corresponding to the boot loader which was activated. In this first case, the file should start with DVI8x8.
11. Select Ymodem for the protocol.
12. Press Send on the Send File dialog box.
13. A message will appear in Hyperterminal:

Programming Completed Successfully!
14. The unit will exit the boot loader screen and return to the standard Hyperterminal window.
15. Repeat steps 3 - 12 for the file GEFMTXFP.

RACK MOUNT SAFETY INFORMATION

- a. Maximum recommended ambient temperature: 45 °C (104 °F).
- b. Increase the air flow as needed to maintain the recommended temperature inside the rack.
- c. Do not exceed maximum weight loads for the rack. Install heavier equipment in the lower part of the rack to maintain stability.
- d. Connect a bonding wire between an approved safety ground and the grounding screw on the chassis.

SPECIFICATIONS

Video Amplifier Bandwidth.....	2 x 165 MHz
Input Video Signal.....	1.2 volts p-p
Input DDC Signal.....	5 volts p-p (TTL)
DVI Input Connectors.....	(8) DVI-I 29 pin female
DVI Output Connectors.....	(8) DVI-I 29 pin female
USB Input Connectors.....	(8) USB 2.0 type "B"
USB Output Connectors.....	(16) USB 2.0 type "A"
Audio Output Connectors.....	(8) 3.5 mm mini-stereo
Audio Input Connectors.....	(8) 3.5 mm mini-stereo
Frequency Response.....	< 0.1dB 20Hz - 100 kHz
THD.....	0.002% @ 20 kHz
IR Extender.....	3.5 mm mini-stereo
RS-232 Interface.....	DB-9 female
IP Interface.....	RJ-45
Power Supply.....	100 ~ 240 V AC (IEC connector)
Power Consumption.....	70 Watts (max.)
Operating Temperature.....	0 °C ~ 45 °C / 32 °F ~ 113 °F
Storage Temperature.....	-20 °C ~ 60 °C / -4 °F ~ 140 °F
Humidity Range.....	20% ~ 90% RH (no condensation)
Power Consumption (Standby Mode).....	600 mW
Rack Size.....	2U
Dimensions.....	19.0" W x 3.5" H x 4.2" D
Shipping Weight.....	28.1 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.

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For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at www.gefen.com.

PRODUCT REGISTRATION

Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.

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