



16x16 DVI Matrix

EXT-DVI-16416
User Manual



1080P
PROGRESSIVE



www.gefen.com

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INTRODUCTION

Congratulations on your purchase of the 16x16 DVI Matrix. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative computer and electronic 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 16x16 DVI Matrix

Simplify the process of routing multiple DVI sources giving the ability to route sources without losing quality or resolution. Route 16 sources to 16 digital monitors using the Gefen 16x16 DVI Matrix. The Matrix provides a simple, reliable, and highly effective method of streamlining any installation using multiple sources and outputs. It takes the hassle out of multiple wiring schemes. Four methods are available for controlling the Gefen 16x16 DVI Matrix: Front panel buttons, IR remote, RS-232 interface, or using IP control.

How It Works

The 16x16 DVI Matrix has sixteen DVI inputs and sixteen DVI outputs. Connect your sixteen computers to the DVI input ports on the Matrix's input side. Connect the Matrix's sixteen DVI outputs to the displays. Connect the power supply to the Matrix and connect the power cord to an available wall outlet. The connected displays will show video according to the selection.

NOTE: This device only supports DVI-D.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 16X16 DVI MATRIX

- The 16x16 DVI Matrix does not support HDCP content.
- Make sure that a DVI monitor is powered and connected to one of the DVI outputs on the 16x16 DVI Matrix before applying power. By default, the Local EDID is read from the connected monitor and is copied to all 16 DVI inputs once the Matrix has been turned on. If a monitor is not detected by the Matrix at power-on, a default (internal) EDID of 640x480 will be used. This functionality can be disabled using the Secure Local EDID function using RS-232, Telnet, UDP, or the built-in Web interface.
- There is no internal scaling in the 16x16 DVI Matrix. Each monitor attached to the Matrix must be able to display the resolutions output by the source device(s). For maximum compatibility it is recommended that only one common resolution be used by each source device.
- Advanced EDID features are accessible using RS-232, Telnet, UDP, or the built-in Web interface.
- Routing and EDID features can be managed using the built-in IP control features.
- This matrix supports Dynamic EDID. See pages 17 and 44 for details.
- The Gefen Syner-G Software Suite is a free downloadable application from Gefen that provides automatic download and installation of firmware upgrades for this product.

Download the application here: <http://www.gefen.com/support/download.jsp>

- The Gefen Matrix Switcher Keyboard Controller is a free downloadable application from Gefen that allows a computer keyboard to be used to switch between sources. This application uses the Telnet protocol to control any Gefen switcher or matrix that uses IP control.

Download the application here: <http://www.gefen.com/support/download.jsp>

FEATURES

Features

- Supports resolutions up to 1920 x 1200
- Status LCD (shows routing status)
- Advanced EDID management provides rapid integration of sources and displays
- Dynamic EDID support
- Serial RS-232 interface for remote control via a computer or control automation devices
- IP Control (Telnet, UDP, and Web interface)
- Output masking command
- IR Remote Control
- IR Extender
- Standby mode
- Supports DDWG standards for DVI
- Rack-mountable

Package Includes

- (1) 16x16 DVI Matrix
- (16) 6 ft. DVI cables (M-M)
- (1) 6 ft. DB-9 cable
- (1) IR Remote control unit
- (1) 24V DC power supply
- (1) AC power cord
- (1) Quick-Start Guide

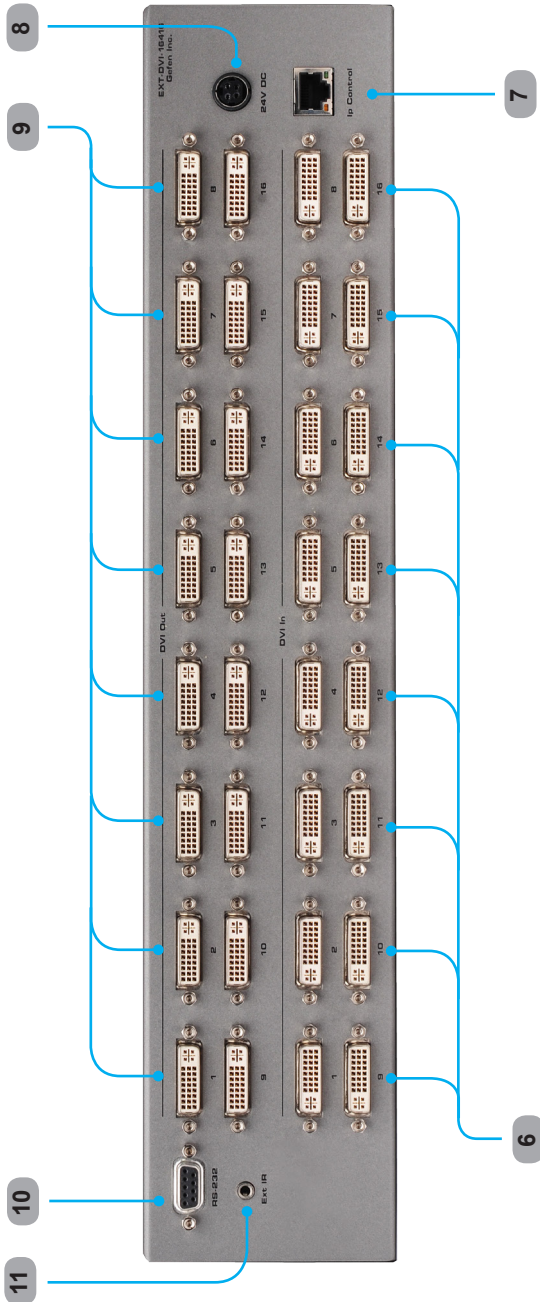
PANEL LAYOUT

Front Panel



PANEL LAYOUT

Back Panel



PANEL DESCRIPTIONS

1 Control Buttons

These buttons are used to navigate the functions of the 16x16 DVI Matrix. For complete details on these controls and how they are used, see pages 10 - 13.

2 Infrared (IR) Receiver

This IR receiver will accept commands from the RMT-16416IR remote control. Line-of-sight between this receiver and the remote controls needs to be preserved for proper operation.

3 Power LED Indicator

This LED indicator will be active when the included 24V DC power supply is properly connected to the unit.

4 Cancel Button

This button is used to return the user to the main status screen once a routing change has been initiated and the user decides to not continue with the change.

5 Main LCD Display

This 2 line 16 character display will display status information and is also used to manage the display/source routes.

6 DVI Input Ports 1-16

These inputs are used to connect up to 16 DVI-capable sources.

7 10/100 Ethernet Control Interface

This port is used to connect the 16x16 DVI Matrix to a network for IP control. See page 16 for more information.

8 24V DC Power Receptacle

The port will accept power from the included 24V DC power supply.

9 DVI Output Ports 1-16

These outputs are used to connect up to 16 DVI-capable displays.

10 RS-232 Serial Communications Interface

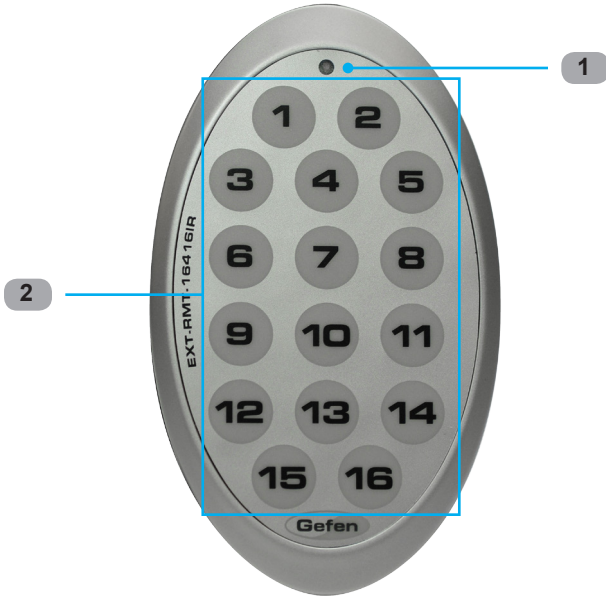
This interface was designed to accept commands from an external control system. This port will allow switching commands as well as EDID management and configuration operations. See page 15 for more information.

11 IR Extender Jack

Accepts an optional IR Extender which allows relocation of the IR receiver up to 6 feet away from the Matrix.

IR REMOTE CONTROL

RMT-16416IR Layout and Description



- 1 Activity Indicator**
This LED will be activated momentarily each time a button is pressed.
- 2 Display and Source Selection Buttons (1 - 16)**
These buttons are used to select which source is routed to a monitor.



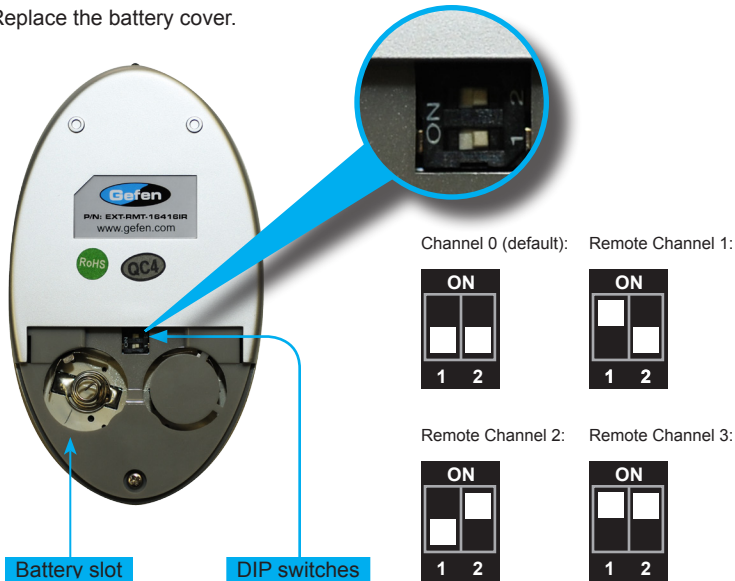
NOTE: An Activity Indicator that flashes quickly while holding down any one of the 16 buttons indicates a low battery. Replace the IR Remote Control battery as soon as possible.

IR REMOTE CONTROL

Installing the Battery

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

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.



Setting the IR Channel

The IR channel on the IR Remote Control must match the IR channel used by the *DVI 16x16 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 16x16 DVI Matrix must also be set to IR channel 0. See page 37 for information on how to change the IR channel on the *DVI 16x16 Matrix*.



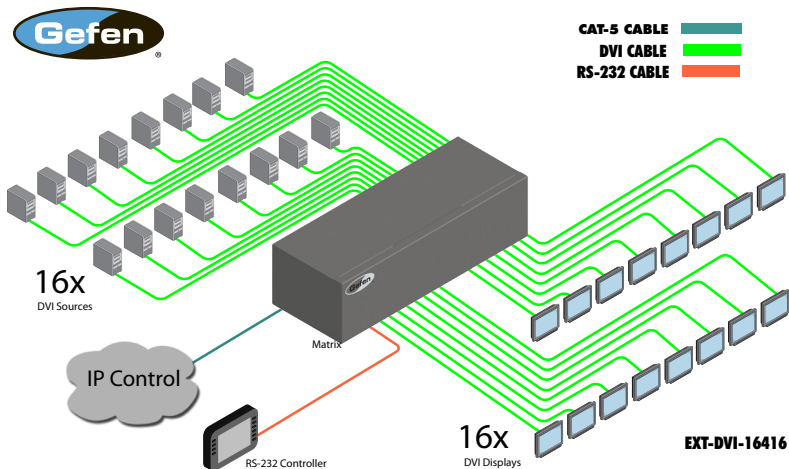
WARNING: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

CONNECTING THE 16X16 DVI MATRIX

How to Connect the 16x16 DVI Matrix

1. Connect up to 16 DVI source devices to the DVI inputs on the rear panel of the 16x16 DVI Matrix using the supplied DVI cables.
2. Connect up to 16 DVI monitors to the DVI outputs on the rear panel of the 16x16 DVI Matrix with DVI cables.
3. Connect the included 24V DC power supply to the power receptacle on the rear panel of the 16x16 DVI Matrix.
4. Connect the included AC power cord between the power supply and an available electrical outlet.

Wiring Diagram for the 16x16 DVI Matrix



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

OPERATING THE 16X16 DVI MATRIX

Status Screen

The status screen is a 16-character 2-line LCD display. This display shows the current status of the matrix and is also used to perform routing and other functions. When the unit is powered on, the following screen is displayed:



```
EDID LOADING  
PLEASE WAIT
```

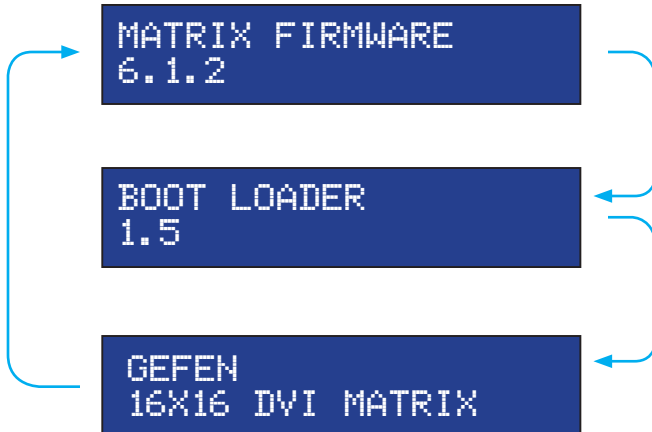
After a few moments, the following is displayed in the status screen:



```
GEFEN  
16X16 DVI MATRIX
```

Displaying Additional Information

Pressing the ◀ button consecutively, will cycle through other screens such as firmware and boot loader version:



OPERATING THE 16X16 DVI MATRIX

Routing Sources

- 1 Press the Select button to display the routing screen.



- 2 Use the ◀ or ▶ buttons to select the display that will receive the source signal.
- 3 Press the Select button to confirm the output selection. Otherwise, press the Cancel button.



- 4 Use the ◀ or ▶ buttons to select the desired source to be routed to the display, which was selected in Step 2.
- 5 Press the Select button to confirm the input selection. Otherwise, press the Cancel button.
- 6 Press the Cancel button to return to the Standby screen.

OPERATING THE 16X16 DVI MATRIX

Entering Standby Mode

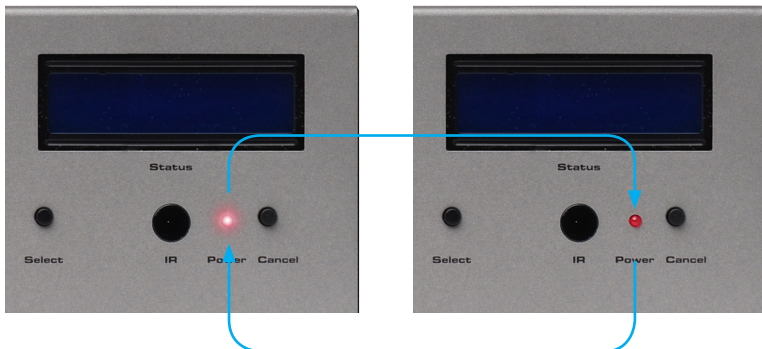
Entering Standby mode will place the matrix in a low power-consumption state.

1. Simultaneously press and hold the Select and Cancel buttons.



2. The matrix will power-down and go into standby mode.

When the matrix is in standby mode, the power indicator on the front-panel will flash bright red until standby mode is disabled.



OPERATING THE 16X16 DVI MATRIX

Exiting Standby Mode

1. Press and hold any button on the front panel until the front-panel LCD comes on.



2. Once the matrix turns on, release the button.

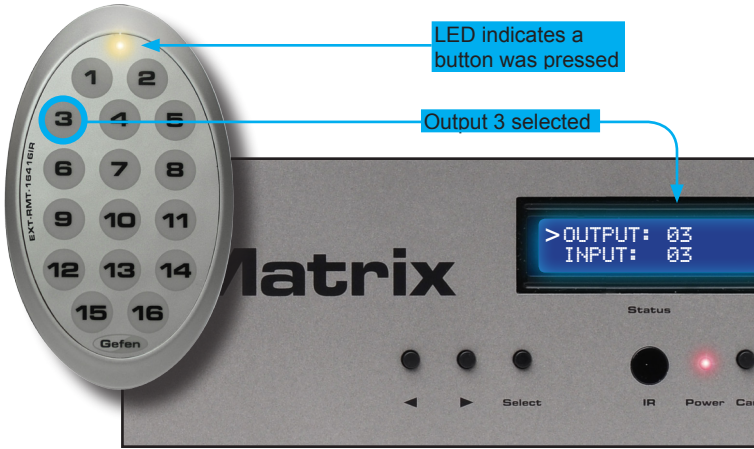
OPERATING THE 16X16 DVI MATRIX

Routing Sources using the IR Remote Control

To route sources using the IR Remote Control, select the output first, then the input.

Routing Example: Route Input 12 to Output 3

1. Select Output 3 by pressing button **3** on the IR Remote Control. The number 03 will appear next to OUTPUT, in the display:

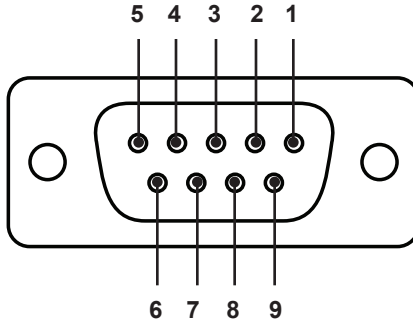


2. The cursor will automatically advance to the input selection.
3. Select Input 12 by pressing button **12** on the IR Remote Control. The number 12 will appear next to INPUT, in the display.
4. Input 12 is now routed to Output 3, as shown on the display.
5. After the input is selected, the cursor will automatically return to the output selection.



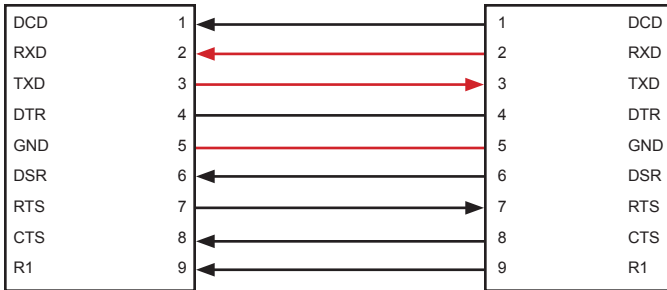
RS-232 / IP CONTROL

RS-232 Interface



RS-232 Controller

Matrix



Only TXD, RXD, and GND are used.

RS232 Settings

Baud rate19200
 Data bits 8
 Parity bits None
 Stop bits1
 Flow Control None



IMPORTANT: When sending RS-232 commands, a carriage return must be included at the end of the command. A space *must* be included between the command and the parameter.

IP Configuration

The *16x16 DVI Matrix* supports IP-based control using Telnet, UDP, or the built-in Web-based GUI. To set up IP control, the network settings for the *16x16 DVI Matrix* must be configured via RS-232. The default network settings for the matrix are as follows:

IP Address:	192.168.1.72
Subnet:	255.255.255.0
Gateway:	192.168.1.254
HTTP Port:	80
Telnet Port:	23

1. Connect an RS-232 cable from the PC to the *16x16 DVI Matrix*. Also make sure that an Ethernet cable is connected between the matrix and the network.
2. Launch a terminal emulation program (e.g. HyperTerminal) and use the RS-232 settings listed on page 15.



NOTE: Depending upon the network, all related IP, Telnet, and UDP settings will need to be assigned. Consult your network administrator to obtain the proper settings.

3. Set the IP address for the matrix using the `#sipadd` command (see page 28 for details).
4. Set the subnet mask using the `#snetmask` command (see page 28 for details).
5. Set the gateway (router) IP address using the `#sgateway` command (see page 27 for details).
6. Set the Telnet listening port using the `#set_tcp_term_port` command (see page 25 for details).
7. Set the HTTP listening port using the `#set_http_port` command (see page 24 for details).
8. Power-cycle the matrix to reboot and complete all IP setting changes.
9. Type the IP address that was specified in step 3, in a web browser to access the Web GUI or use the same IP address to Telnet to the matrix.

UDP Configuration

1. Set the UDP remote IP address for the matrix using the `#set_udp_rip` command (see page 26 for details).
2. Set the UDP listening port for the matrix using the `#set_udp_port` command (see page 25 for details).
3. Set the UDP remote port for the matrix using the `#set_udp_rport` command (see page 26 for details).

RS-232 / TELNET / UDP COMMANDS

EDID Management

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

Default:

Disabled

#edidbatolo Command

The #edidbatolo command reads the downstream EDID and stores it to any local input.

Syntax:

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

Parameters:

<i>param1</i>	EDID bank	[1 ... 3]
<i>param2</i>	Input	[1 ... 16]

Notes:

If *param2* = 0, then the EDID in the specified bank is copied to all 16 inputs.

#ediddetolo Command

The #ediddetolo command stores the Default EDID (640x480) in the specified Local EDID inputs.

Syntax:

```
#ediddetolo param1 param2 param3...param9
```

<i>param1</i>	Input	[1 ... 16]
---------------	-------	------------

Notes:

If *param1* = 0, then all 16 DVI inputs will be set to the Default EDID.

#ediddstoba Command

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

Syntax:

```
#ediddstoba param1 param2
```

Parameters:

<i>param1</i>	A downstream monitor	[1 ... 16]
<i>param2</i>	EDID bank offset	[1 ... 3]

#ediddstolo Command

The #ediddstolo command 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 ... 16]
<i>param2</i>	Input list	[1 ... 16]

Notes:

If *param2* = 0, then the downstream EDID is stored to all 16 DVI inputs.

If more than eight inputs need to be specified in order to receive the downstream EDID, then the #ediddstolo command must be executed twice.

Example:

```
#ediddstolo 2 1 2 3 4 5 6 7 8 9 10 11 (not permitted!)
```

Instead, run the function twice:

```
#ediddstolo 2 1 2 3 4 5 6 7 8
```

```
#ediddstolo 2 10 11
```

#lock_edid Command

The #lock_edid command secures the Local EDID and disables the automatic loading of the downstream EDID after the matrix is powered on. This feature can also be controlled using the Web Interface (see page 52).

Syntax:

```
#lock_edid param1
```

Parameters:

param1 Input [0 ... 1]

Value	Meaning
0	Disable
1	Enable

#prbaedid Command

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

Syntax:

```
#prbaedid param1
```

Parameters:

param1 EDID bank [1 ... 3]

#prdsedid Command

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

Syntax:

```
#prdsedid param1
```

Parameters:

param1 A downstream monitor [1 ... 16]

#predidst Command

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

Syntax:

#predidst

Parameters:

None

#prloedid Command

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

Syntax:

#prloedid param1

Parameters:

param1

Input

[1 ... 16]

IP / Telnet Configuration

Command	Description
<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_tcp_term_pass</i>	Sets the TCP terminal password
<i>#set_tcp_term_port</i>	Sets the Telnet listening port
<i>#set_udp_port</i>	Sets the local UDP listening port
<i>#set_udp_rip</i>	Sets the remote UDP IP address
<i>#set_udp_rport</i>	Sets the remote UDP port
<i>#sgateway</i>	Sets the IP gateway address
<i>#show_tcp_term_pass</i>	Displays the current TCP password for login
<i>#sipadd</i>	Sets the IP address of the matrix
<i>#snetmask</i>	Sets the IP network mask
<i>#use_tcp_term_pass</i>	Enables / disables password prompt for TCP sessions
<i>#use_udp_access</i>	Enables / disables UDP listening

#ipconfig Command

The #ipconfig command displays all TCP/IP settings on the matrix.

Syntax:

```
#ipconfig
```

Parameters:

None

Example:

```
#ipconfig

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

MAC add   = 00:1C:91:01:01:01
IP add    = 192.168.1.72
Net Mask  = 255.255.255.0
Gateway   = 192.168.1.254
Web Server Port = 80
TCP Terminal Server Port = 23
TCP Terminal password at login is set to ON
UDP Server Port = 25665
UDP Remote IP = 110.0.255.255
UDP Remote Port = 26989
UDP Access = Disabled
```

#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.

#set_http_port Command

The #set_http_port command sets the Web server listening port. The default port is 80.

Syntax:

```
#set_http_port param1
```

Parameters:

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

Notes:

The matrix must be rebooted after executing this command.

#set_tcp_term_pass Command

The #set_tcp_term_pass command sets the TCP password. The maximum length of the password is 20 characters and is case-sensitive. The default password is *Admin*.

Syntax:

```
#set_tcp_term_pass param1
```

Parameters:

<i>param1</i>	Current password
<i>param2</i>	New password
<i>param3</i>	New password (confirm)

Notes:

The matrix must be rebooted after executing this command.

Example:

```
#set_tcp_term_pass Admin reindeer reindeer  
TCP Terminal password updated to: reindeer
```

#set_tcp_term_port Command

The #set_tcp_term_port command sets the Telnet listening port. The default port value is 23.

Syntax:

```
#set_tcp_term_port param1
```

Parameters:

<i>param1</i>	Port	[1 ... 65535]
---------------	------	---------------

Notes:

The matrix must be rebooted after executing this command.

Example:

```
#set_tcp_term_port 20  
New TCP Terminal port set to: 20
```

#set_udp_port Command

The #set_udp_port command sets the local UDP listening port. The default port value is 8.

Syntax:

```
#set_udp_port param1
```

Parameters:

<i>param1</i>	Port	[1 ... 65535]
---------------	------	---------------

Notes:

The matrix must be rebooted after executing this command.

Example:

```
#set_udp_port 10  
New UDP listening port set to: 10
```

#set_udp_rip Command

The #set_udp_rip command sets the remote UDP IP address. The default port value is 8.

Syntax:

```
#set_udp_rip param1
```

Parameters:

param1 IP Address

Notes:

The matrix must be rebooted after executing this command.

Example:

```
#set_udp_rip 192.168.1.20
```

New remote UDP IP address set to: 192.168.1.20

#set_udp_rport Command

The #set_udp_rport command sets the remote UDP port.

Syntax:

```
#set_udp_rport param1
```

Parameters:

param1 Port

Notes:

The matrix must be rebooted after executing this command.

Syntax:

```
#set_udp_rport 4096
```

New remote UDP port set to: 4096

#sgateway Command

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

Syntax:

```
#sgateway param1
```

Parameters:

```
param1                IP gateway
```

Notes:

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_tcp_term_pass Command

The #show_tcp_term_pass command displays the current TCP password for login (if required).

Syntax:

```
#show_tcp_term_pass
```

Example:

```
#show_tcp_term_pass  
TCP Terminal password: reindeer
```

#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 192.168.1.239  
New IP set to: 192.168.1.239
```

#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 matrix must be rebooted after executing this command.

Example:

```
#snetmask 255.255.255.0  
New IP Mask set to: 255.255.255.0
```


#use_tcp_term_pass Command

The #use_tcp_term_pass command enables / disables the password prompt at the beginning of a session. The default setting is *disabled*. This feature can also be enabled or disabled through the Web GUI (see page 54).

Syntax:

```
#use_tcp_term_pass param1
```

Parameters:

param1 State [0 ... 1]

Value	Meaning
0	Disable password
1	Enable (force) password

Example:

```
#use_tcp_term_pass 1
```

TCP Terminal password at login is set to ON

#use_udp_access Command

The #use_udp_access command enables / disables UDP listening.

Syntax:

```
#use_udp_access param1
```

Parameters:

param1 State [0 ... 1]

Value	Meaning
0	Disable password
1	Enable (force) password

Example:

```
#use_udp_access 1
```

UDP access is set to ON

r Command

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

Syntax:

```
r param1 param2[...param17]
```

Parameters:

<i>param1</i>	Input	[1 ... 16]
<i>param2</i>	Outputs	[1 ... 16]

Notes:

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

Examples:

```
r 7 3 4 5 6 10 12
```

Input 7 is routed to outputs: 3 4 5 6 10 12

```
r 2 0
```

All outputs are routed to Input 2

s Command

The s command routes the specified input to all outputs.

Syntax:

```
s param1
```

Parameters:

<i>param1</i>	Input	[1 ... 16]
---------------	-------	------------

Example:

```
s 1
```

All outputs are routed to Input 1

Masking

Command	Description
<code>#maskout</code>	Masks the selected (video) output(s)
<code>#unmaskout</code>	Unmasks the selected output(s)

#maskout Command

The `#maskout` command allows blanking of the specified outputs.

Syntax:

```
#maskout param1 param2
```

Parameters:

`param1` Output [1 ... 16]

`param2` State [0 ... 1]

Value	Meaning
0	Unmask
1	Mask

Notes:

If `param1 = 0`, then all outputs will be masked.

The current masking state will be lost if power is interrupted or if the masking state is not saved (see `#savepreset` on page 31).

#unmaskout Command

The #unmaskout command unmask the specified outputs.

Syntax:

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

Parameters:

<i>param1</i>	Output	[1 ... 16]
---------------	--------	------------

Notes:

If *param1* = 0, then all outputs will be unmasked.

Examples:

```
#unmaskout 3 8 10  
Activate outputs: 3 8 10  
  
#unmaskout 0  
Activate all outputs
```

Miscellaneous

Command	Description
<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>#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>	Displays the board temperatures
<i>#show_user_name</i>	Displays the TCP user name
<i>#show_ver_data</i>	Displays the current hardware
<i>#show_voltage</i>	Displays the board voltages
<i>f</i>	Toggles / displays +5V input
<i>m</i>	Displays the current routing status in tabular form

#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

#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 8 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 Command

The #show_temp command displays the board temperatures to the screen.

Syntax:

```
#show_temp
```

Parameters:

None

Example:

```
#show_temp  
Temperature near cross point top side is 50  
Temperature near cross point bottom side is 44 C degree  
Temperature on input board is 43 C degree
```

#show_user_name Command

The #show_user_name command displays the current TCP terminal user name.

Syntax:

```
#show_user_name
```

Parameters:

None

Example:

```
#show_user_name  
TCP Terminal login: Administrator
```

#show_ver_data Command

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

Syntax:

```
#show_ver_data
```

Parameters:

None

Example:

```
#show_ver_data  
Hardware version 2  
Firmware Release version 6.1.2  
Release date: Jan 21 2013  
Release time: 16:38:56  
Boot loader version 1.5
```

#show_voltage Command

The #show_voltage command displays board voltages to the screen.

Syntax:

```
#show_voltage
```

Parameters:

None

Example:

```
#show_voltage
```

```
Analog voltage 3.3 , measured 3262 mV
```

```
Analog voltage 1.8 , measured 1781 mV
```

```
Analog voltage 1.2 , measured 1180 mV
```

f Command

The `f` command enables / disables the +5V on the specified input. Do not precede this command with the “#” symbol.



WARNING: Use caution when applying power to inputs. If the source device supplies +5V on the input, then enabling the +5V may cause damage to the source and/or the 16x16 DVI Matrix.

Syntax:

```
f param1 param2
```

Parameters:

param1 Input [1 ... 16]
param2 State [0 ... 1]

Value	Meaning
0	Disable
1	Enable

Notes:

If *param1* = 0, then all inputs will be affected.

Examples:

```
f 15 1  
Enable F0 15
```

```
f 0 1  
Enable All FO
```

m Command

The m command displays the routing status in tabular form. Do not precede this command with the “#” symbol.

Syntax:

m

Parameters:

None

Example:

m

Output	Input	HPD	Status
Output_1	Input_1	LOW	ACTIVE
Output_2	Input_1	LOW	ACTIVE
Output_3	Input_1	LOW	ACTIVE
Output_4	Input_1	LOW	ACTIVE
Output_5	Input_1	LOW	ACTIVE
Output_6	Input_1	LOW	ACTIVE
Output_7	Input_1	LOW	ACTIVE
Output_8	Input_1	LOW	ACTIVE
Output_9	Input_1	LOW	ACTIVE
Output_10	Input_1	LOW	ACTIVE
Output_11	Input_1	LOW	ACTIVE
Output_12	Input_1	LOW	ACTIVE
Output_13	Input_1	LOW	ACTIVE
Output_14	Input_1	LOW	ACTIVE
Output_15	Input_1	LOW	ACTIVE
Output_16	Input_1	LOW	ACTIVE

GEFEN PRO

Dynamic EDID mode

RMT_IR - SW1=0,SW2=0

View Matrix Status

Matrix Status

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

The screenshot shows the 'Gefen 16x16 DVI Manager' web interface. At the top, there are navigation tabs: 'VIEW MATRIX STATUS', 'MANAGE EDID', 'MASKING', 'IP CONFIGURATION', 'BACKUP/RESTORE', and 'POWER MANAGEMENT'. The 'VIEW MATRIX STATUS' tab is active. Below the tabs is a 'Matrix Status' table with columns for 'Output', 'Input', and 'Status'. The table contains 16 rows, each representing an output and its corresponding input, all showing an 'Active' status. To the right of the table, there are sections for 'Dynamic Update', 'Switch Output', and 'Input' with various checkboxes and radio buttons. At the bottom left of the table area, there is a 'Refresh' button and an 'Auto Refresh' checkbox.

Output	Input	Status
Output_1	Input_1	Active
Output_2	Input_1	Active
Output_3	Input_1	Active
Output_4	Input_1	Active
Output_5	Input_1	Active
Output_6	Input_1	Active
Output_7	Input_1	Active
Output_8	Input_1	Active
Output_9	Input_1	Active
Output_10	Input_1	Active
Output_11	Input_1	Active
Output_12	Input_1	Active
Output_13	Input_1	Active
Output_14	Input_1	Active
Output_15	Input_1	Active
Output_16	Input_1	Active

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.

Dynamic EDID Mode

Routes any downstream EDID to any input. See #dynamic_edid on page 17 for details on this feature. Options: On, Off. Click the Update Dynamic EDID State button after selecting either On or Off.

The screenshot shows a web interface with two main sections highlighted by blue callouts. The top section, titled "Dynamic EDID Mode", contains a button labeled "Update Dynamic EDID State" and two radio buttons for "Off" and "On", with "On" selected. Below this is a "Matrix Status" table and a "Switch Outputs" section. The "Switch Outputs" section has a sub-section for "Outputs" with checkboxes for Output_1 through Output_16, and a sub-section for "Inputs" with radio buttons for Input_1 through Input_16. A "Switch" button is located at the bottom of the "Switch Outputs" section.

Output	Input	Status
Output_1	Input_1	Active
Output_2	Input_1	Active
Output_3	Input_1	Active
Output_4	Input_1	Active
Output_5	Input_1	Active
Output_6	Input_1	Active
Output_7	Input_1	Active
Output_8	Input_1	Active
Output_9	Input_1	Active
Output_10	Input_1	Active
Output_11	Input_1	Active
Output_12	Input_1	Active
Output_13	Input_1	Active
Output_14	Input_1	Active
Output_15	Input_1	Active
Output_16	Input_1	Active

Dynamic EDID Mode
Update Dynamic EDID State Off On

Switch Outputs
Update Dynamic EDID State Off On

Outputs

Output_1 Output_2 Output_3 Output_4 Output_5 Output_6
 Output_7 Output_8 Output_9 Output_10 Output_11 Output_12
 Output_13 Output_14 Output_15 Output_16

Inputs

Input_1 Input_2 Input_3 Input_4 Input_5 Input_6
 Input_7 Input_8 Input_9 Input_10 Input_11 Input_12
 Input_13 Input_14 Input_15 Input_16

Switch

Switch Outputs
Outputs

Output_1 Output_2 Output_3 Output_4
 Output_7 Output_8 Output_9 Output_10
 Output_13 Output_14 Output_15 Output_16

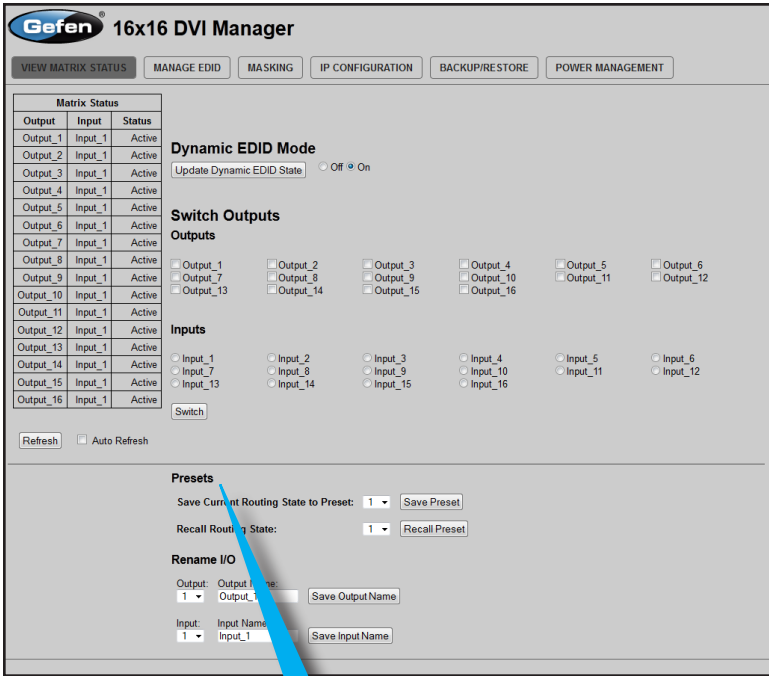
Inputs

Input_1 Input_2 Input_3 Input_4
 Input_7 Input_8 Input_9 Input_10
 Input_13 Input_14 Input_15 Input_16

Switch

Switch Outputs

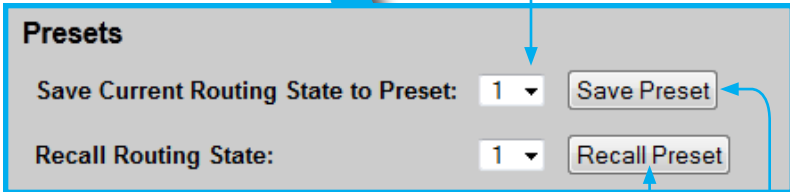
Used to route the specified input to the selected output(s). To route a source, place a check mark next to each Output. Next, click the radio button next to the desired Input. Press the Switch button to apply the routing change.



Presets

Provides saving and recalling of routing states.

Pull-down list

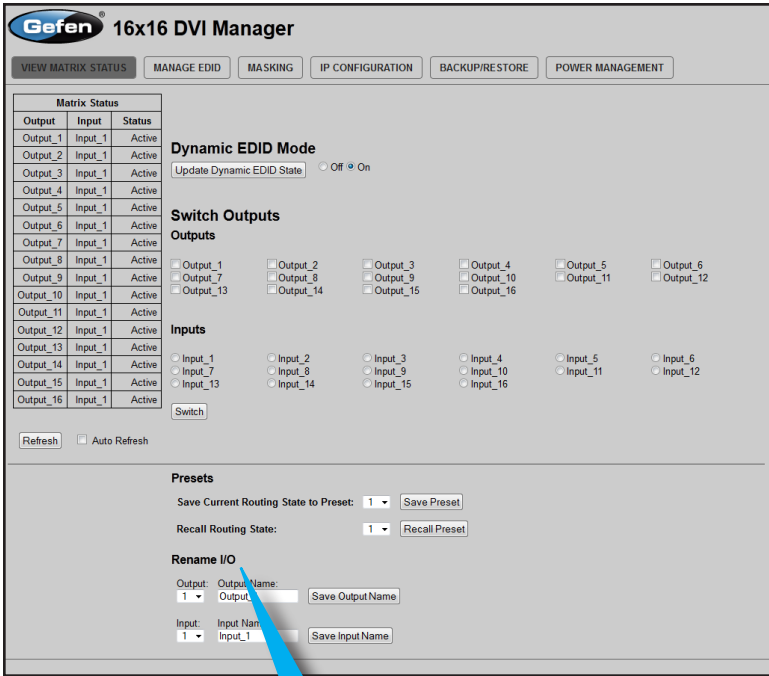


Recall Preset

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.

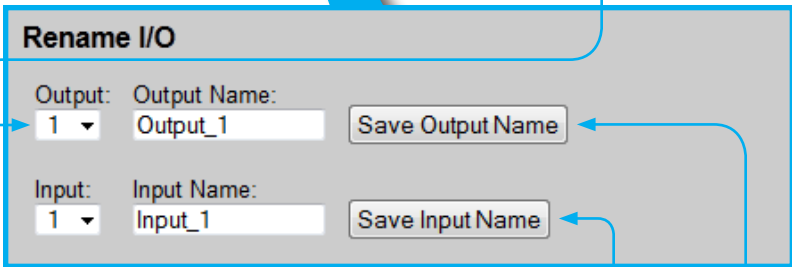
Save Preset

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.



Rename I/O

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



Input

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 37 for naming restrictions.

Output

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 38 for naming restrictions.

Manage EDID

EDID Status

Displays the current EDID status for each input on the matrix and indicates the current Lock State (page 20).

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
Input_9	Default	GEFEN_XPT_DL
Input_10	Default	GEFEN_XPT_DL
Input_11	Default	GEFEN_XPT_DL
Input_12	Default	GEFEN_XPT_DL
Input_13	Default	GEFEN_XPT_DL
Input_14	Default	GEFEN_XPT_DL
Input_15	Default	GEFEN_XPT_DL
Input_16	Default	GEFEN_XPT_DL

Refresh Auto Refresh

Refresh
Click to refresh the Matrix Status screen

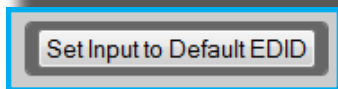
Auto Refresh

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

Set Input to Default EDID

Set Input to Default EDID

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



Gefen 16x4 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
Input_9	Default	GEFEN_XPT_DL
Input_10	Default	GEFEN_XPT_DL
Input_11	Default	GEFEN_XPT_DL
Input_12	Default	GEFEN_XPT_DL
Input_13	Default	GEFEN_XPT_DL
Input_14	Default	GEFEN_XPT_DL
Input_15	Default	GEFEN_XPT_DL
Input_16	Default	GEFEN_XPT_DL

Select Input(s) to Set to Default:

Input_1 Input_2 Input_3 Input_4 Input_5
 Input_6 Input_7 Input_8 Input_9 Input_10
 Input_11 Input_12 Input_13 Input_14 Input_15
 Input_16

Set Default EDID

Refresh Auto Refresh

Select Input(s) to Set to Default:

Input_1 Input_2 Input_3 Input_4
 Input_6 Input_7 Input_8 Input_9
 Input_11 Input_12 Input_13 Input_14
 Input_16

Set Default EDID

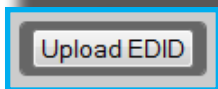
Set Default EDID

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.



Gefen 16x6 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
Input_9	Default	GEFEN_XPT_DL
Input_10	Default	GEFEN_XPT_DL
Input_11	Default	GEFEN_XPT_DL
Input_12	Default	GEFEN_XPT_DL
Input_13	Default	GEFEN_XPT_DL
Input_14	Default	GEFEN_XPT_DL
Input_15	Default	GEFEN_XPT_DL
Input_16	Default	GEFEN_XPT_DL

Select Input(s) to Upload to:

Input_1 Input_2 Input_3 Input_4 Input_5
 Input_6 Input_7 Input_8 Input_9 Input_10
 Input_11 Input_12 Input_13 Input_14 Input_15
 Input_16

Upload EDID File

Select Input(s) to Upload to:

Input_1 Input_2 Input_3 Input_4
 Input_6 Input_7 Input_8 Input_9
 Input_11 Input_12 Input_13 Input_14
 Input_16

Upload EDID File

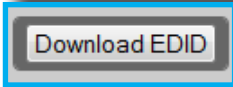
Load EDID file

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.



Gefen 16x16 D 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
Input_9	Default	GEFEN_XPT_DL
Input_10	Default	GEFEN_XPT_DL
Input_11	Default	GEFEN_XPT_DL
Input_12	Default	GEFEN_XPT_DL
Input_13	Default	GEFEN_XPT_DL
Input_14	Default	GEFEN_XPT_DL
Input_15	Default	GEFEN_XPT_DL
Input_16	Default	GEFEN_XPT_DL

Select EDID to Download

Output_1 Output_2 Output_3 Output_4 Output_5
 Output_6 Output_7 Output_8 Output_9 Output_10
 Output_11 Output_12 Output_13 Output_14 Output_15
 Output_16

Download EDID File to PC

Select EDID to Download

Output_1 Output_2 Output_3 Output_4
 Output_6 Output_7 Output_8 Output_9
 Output_11 Output_12 Output_13 Output_14
 Output_16

Download EDID File to PC

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 16x16 DVI Manager' web interface. At the top, there are navigation buttons: VIEW MATRIX STATUS, MANAGE EDID, MASKING, IP CONFIGURATION, BACKUP/RESTORE, and POWER MANAGEMENT. Below these are buttons for Set Input to Default EDID, Upload EDID, Download EDID, Copy EDID (highlighted with a blue callout), and EDID Lock State.

The main content area includes a table for EDID Status and a 'Select Source to Copy from:' section. The table has columns for Input, EDID Source, and Name. The 'Select Source to Copy from:' section has radio buttons for Output(s) and Input(s).

The 'Copy EDID' dialog box is open, showing the following options:

Select Source to Copy from:

Output(s):

- Output_1
- Output_2
- Output_3
- Output_4
- Output_5
- Output_6
- Output_7
- Output_8
- Output_9
- Output_10
- Output_11
- Output_12
- Output_13
- Output_14
- Output_15
- Output_16

Inputs(s):

- Input_1
- Input_2
- Input_3
- Input_4
- Input_6
- Input_7
- Input_8
- Input_9
- Input_11
- Input_12
- Input_13
- Input_14
- Input_16

Select Input(s) to Copy to:

- Input_1
- Input_2
- Input_3
- Input_4
- Input_6
- Input_7
- Input_8
- Input_9
- Input_11
- Input_12
- Input_13
- Input_14
- Input_16

At the bottom of the dialog box is a 'Set EDID' button.

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.

EDID Lock State

The screenshot shows the Gefen 16x16 DVI Manager web interface. At the top, there are navigation tabs: VIEW MATRIX STATUS, MANAGE EDID, MASKING, IP CONFIGURATION, BACKUP/RESTORE, and POWER MANAGEMENT. Below these are buttons for Set Input to Default EDID, Upload EDID, Download EDID, Copy EDID, and EDID Lock State. The main content area is titled "EDID Status - Lock State: OFF" and contains a table with 16 rows of input sources and names. Below the table is the "EDID Lock State" section, which includes an "Update EDID Lock State" button and two radio buttons labeled "Off" and "On". A callout box highlights the "Update EDID Lock State" button and the radio buttons, with the text "EDID Lock State" above it.

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
Input_9	Default	GEFEN_XPT_DL
Input_10	Default	GEFEN_XPT_DL
Input_11	Default	GEFEN_XPT_DL
Input_12	Default	GEFEN_XPT_DL
Input_13	Default	GEFEN_XPT_DL
Input_14	Default	GEFEN_XPT_DL
Input_15	Default	GEFEN_XPT_DL
Input_16	Default	GEFEN_XPT_DL

EDID Lock State
Update EDID Lock State Off On

Refresh Auto Refresh

EDID Lock State

Update EDID Lock State Off On

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.

Gefen® 16x16 DVI Manager

VIEW MATRIX STATUS MATRIX ELEMENT

Matrix Mask Status/Change			
Output	Input	Status	Click to:
Output_1	Input_1	Mask	Active
Output_2	Input_2	Active	Mask
Output_3	Input_3	Mask	Active
Output_4	Input_2	Active	Mask
Output_5	Input_2	Active	Mask
Output_6	Input_2	Active	Mask
Output_7	Input_2	Mask	Active
Output_8	Input_2	Active	Mask
Output_9	Input_2	Active	Mask
Output_10	Input_2	Active	Mask
Output_11	Input_2	Active	Mask
Output_12	Input_2	Active	Mask
Output_13	Input_2	Active	Mask
Output_14	Input_2	Active	Mask
Output_15	Input_2	Active	Mask
Output_16	Input_2	Active	Mask

Refresh Auto Refresh

Save Changes

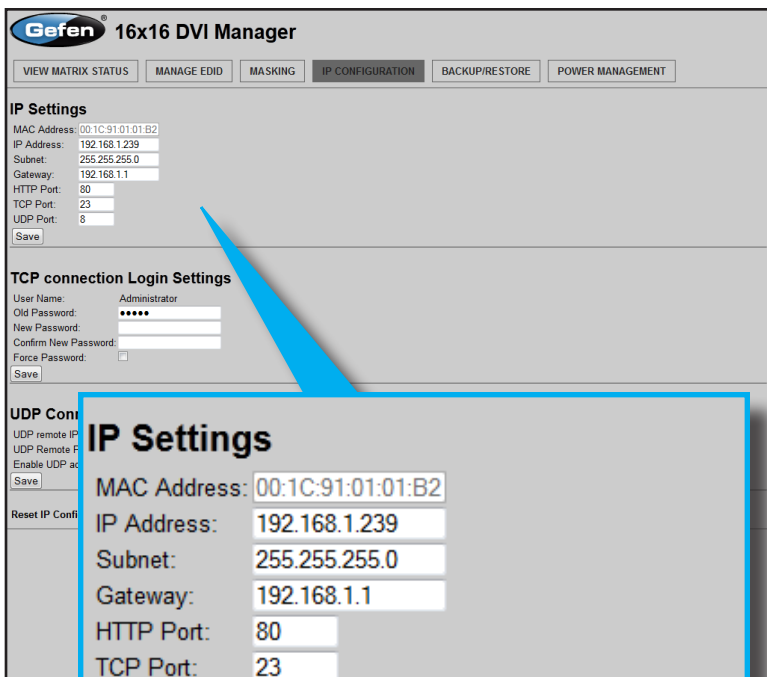
Mask

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.



Gafen 16x16 DVI Manager

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

IP Settings

MAC Address: 00:1C:91:01:01:B2
IP Address: 192.168.1.239
Subnet: 255.255.255.0
Gateway: 192.168.1.1
HTTP Port: 80
TCP Port: 23
UDP Port: 8

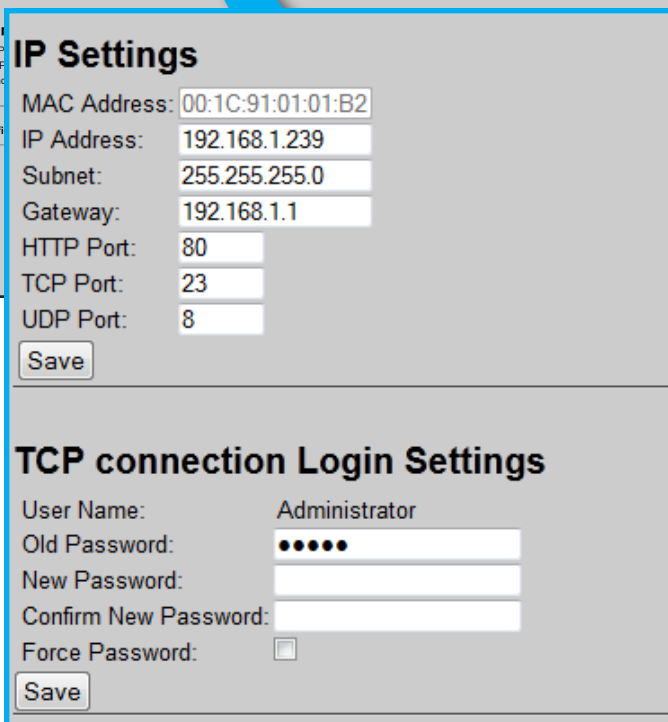
TCP connection Login Settings

User Name: Administrator
Old Password: ●●●●●●
New Password:
Confirm New Password:
Force Password:

UDP Connection Settings

UDP remote IP:
UDP Remote Port:
Enable UDP as:

Reset IP Configuration:



IP Settings

MAC Address: 00:1C:91:01:01:B2
IP Address: 192.168.1.239
Subnet: 255.255.255.0
Gateway: 192.168.1.1
HTTP Port: 80
TCP Port: 23
UDP Port: 8

TCP connection Login Settings

User Name: Administrator
Old Password: ●●●●●●
New Password:
Confirm New Password:
Force Password:

Telnet Login Settings

Sets / forces the password for Telnet sessions to the matrix. Click the Save button to apply changes.

WEB INTERFACE

Gefen® 16x16 DVI Manager

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

IP Settings

MAC Address: 00:1C:91:01:01:B2
IP Address: 192.168.1.239
Subnet: 255.255.255.0
Gateway: 192.168.1.1
HTTP Port: 80
TCP Port: 23
UDP Port: 8

TCP connection Login Settings

User Name: Administrator
Old Password: *****
New Password:
Confirm New Password:
Force Password:

UDP Connection Settings

UDP remote IP: 192.168.1.20
UDP Remote Port: 4096
Enable UDP access:

Reset IP Configuration to Defaults:

UDP Connection Settings

UDP remote IP: 192.168.1.20
UDP Remote Port: 4096
Enable UDP access:

Reset IP Configuration to Defaults:

UDP Connection Settings

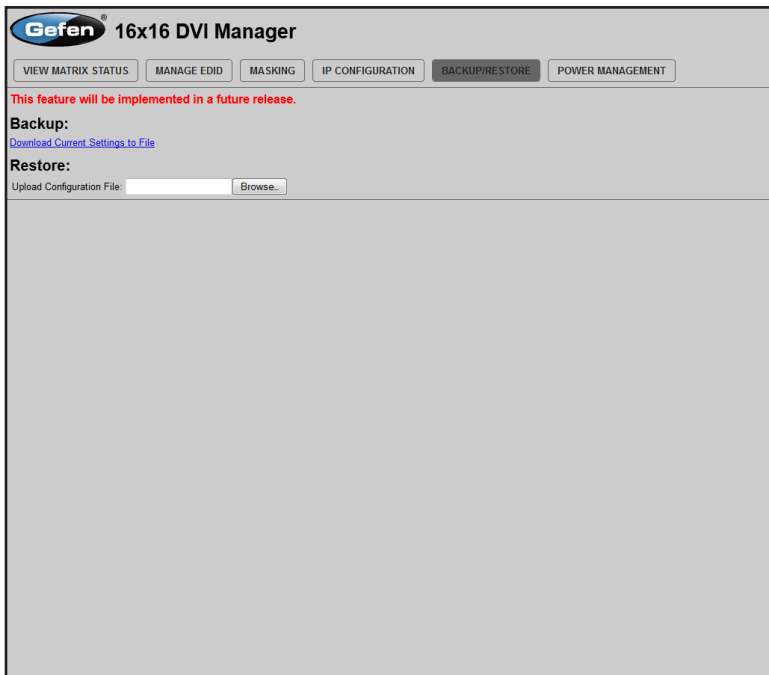
Sets UDP remote IP and remote port. Also enables or disables UDP access to the matrix. Click the Save button to apply changes.

Reset

Click the Reset button to restore the factory-default IP settings.

Backup / Restore

The Backup / Restore feature for the 16x16 DVI 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.

Gefen® 16x16 DVI Manager

VIEW MATRIX STATUS | MANAGE

Warning: Use caution when a

Power Status - Lock State: OFF

Input	5 volt	Click to:
Input_1	ON	OFF
Input_2	ON	OFF
Input_3	OFF	ON
Input_4	ON	OFF
Input_5	ON	ON
Input_6	OFF	ON
Input_7	OFF	ON
Input_8	OFF	ON
Input_9	OFF	ON
Input_10	OFF	ON
Input_11	OFF	ON
Input_12	OFF	ON
Input_13	OFF	ON
Input_14	OFF	ON
Input_15	OFF	ON
Input_16	OFF	ON

Refresh Auto Refresh

Save Changes

Power Lock State

Update Power Lock State ON

Refresh
Click to refresh the Power Status screen

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.

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

Gefen® 16x16 DVI Manager

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

Warning: Use caution when applying power to inputs. It may damage your equipment.

Power Status - Lock State: OFF

Input	5 volt	Click to:
Input_1	ON	OFF
Input_2	ON	OFF
Input_3	OFF	ON
Input_4	ON	OFF
Input_5	OFF	ON
Input_6	OFF	ON
Input_7	OFF	ON
Input_8	OFF	ON
Input_9	OFF	ON
Input_10	OFF	ON
Input_11	OFF	ON
Input_12	OFF	ON
Input_13	OFF	ON
Input_14	OFF	ON
Input_15	OFF	ON
Input_16	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.

WARNING MESSAGES

Fan Failure

The 16x16 DVI Matrix uses an internal fan to maintain a stable operating temperature in various environments. In the case that the fan fails to start, an alert will appear on the LCM:



FAN FAILURE!

If the 16x16 Matrix is connected to a PC using a terminal program, the following message will appear on the display:

Fan failure !!!

This message will continue to be displayed at regular intervals until the fan is functioning.

Although the DVI 16x16 Matrix is still functional, it is recommended that Gefen Technical Support be notified of the issue. See **Asking for Assistance** at the beginning of this manual.

System Failure

In the case of a critical malfunction, the following warning message will be displayed on the LCM:



SYSTEM FAILURE!

If the 16x16 Matrix is connected to a PC using a terminal program, the following message will appear on the display:

System failure !!!

The Matrix should be powered-down immediately and contact Gefen Technical Support. See **Asking for Assistance** at the beginning of this manual.

WARNING MESSAGES

Critical Malfunctions

Temperature Failure

If the measured system temperature exceeds 85° C, the following message will be displayed on the LCM:



SYSTEM FAILURE!

Power Failure

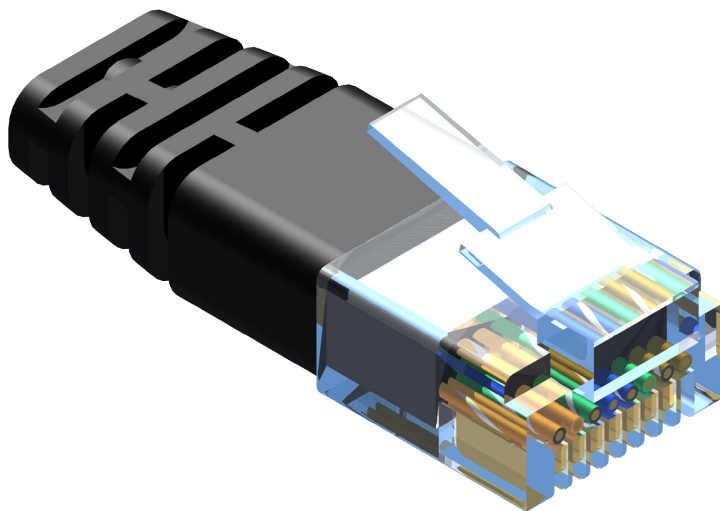
If the power reading exceeds the tolerance rating (greater than 120% or less than 80%), the following message will be displayed on the LCM:



SYSTEM FAILURE!

In both cases, the Matrix will stop working and should be powered-down immediately and contact Gefen Technical Support under the **Asking for Assistance** section, at the beginning of this manual.

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.

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

Maximum Pixel Clock	165 MHz
Input Video Signal	1.2 Volts p-p
Video Input Connectors.....	(16) DVI-I 29-pin, female (digital only)
Video output Connectors.....	(16) DVI-I 29-pin, female (digital only)
IR Extender.....	3.5 mm mini-stereo
RS-232 Interface.....	DB-9 serial, female
Ethernet (IP control) port.....	RJ-45 (100BaseT)
Power Supply.....	24V DC
Power Consumption	60 Watts (max.)
Operating Temperature.....	+32 to +104 °F (0 to +45 °C)
Storage Temperature.....	-4 to +140 °F (-20 to +60 °C)
Relative Humidity.....	20% ~ 90% (no condensation)
Dimensions (W x H x D)	17.25" x 3.5" x 12" (438mm x 89mm x 305mm)
Rack-mountable	2U rack space, rack ears included
Shipping Weight	30 lbs. (13.6 kg)

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, 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.

LICENSING

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This product uses UL or CE listed power supplies.