



8x8 DVI Dual Link Matrix

GEF-DVI-848DL

User Manual

www.gefenpro.com

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INTRODUCTION

Congratulations on your purchase of the GefenPRO 8x8 DVI 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 build-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 DVI Dual Link Matrix

This product simplifies the process of routing up to eight DVI sources to any of eight DVI monitors without losing quality or resolution. The GefenPRO 8x8 DVI Dual Link Matrix provides a simple, reliable, and highly effective method of streamlining any installation using multiple sources and outputs, taking the hassle out of managing multiple connections. Each DVI source is accessible from any monitor by using the front-panel buttons, IR remote unit, built-in RS-232, or using IP Control.

How It Works

The GefenPRO 8x8 DVI Dual Link Matrix has eight DVI inputs and eight DVI outputs. Using the supplied DVI dual link cables, connect 8 sources to the DVI input ports on the GefenPRO 8x8 DVI Dual Link Matrix. Connect the GefenPRO 8x8 DVI Dual Link Matrix to the monitors. Plug in the power cord and power-on the GefenPRO 8x8 DVI Dual Link Matrix. The connected monitors will show video according to the routing selection.

NOTE: The GefenPRO 8x8 DVI Dual Link Matrix only supports DVI-D. The DVI connectors on the 8x8 DVI Dual Link Matrix have all 29 pins.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE GEFENPRO 8X8 DVI DUAL LINK MATRIX

- The 8x8 DVI Dual Link Matrix does not support HDCP content.
- When the Matrix is used for the first time, make sure that a DVI monitor is powered and connected to one of the DVI outputs on the 8x8 DVI Dual Link Matrix before applying power. By default, the Local EDID is read from the connected monitor and is copied to all 8 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 through RS-232 control. See page 20 for more information.
- There is no internal scaling in the 8x8 DVI Dual Link 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 through the RS-232 serial command set or using IP Control.
- **IMPORTANT:** If the unit is installed in a closed or multi-rack assembly, do not block the ventilation holes of the enclosure.

FEATURES

Features

- Increases productivity
- Supports resolutions up to 1920x1200 (Single Link) and 3840x2400 (Dual Link)
- Front panel control buttons for local switching
- Serial RS-232 interface for remote control via a computer or control automation devices
- IP Control
- Discrete IR remote control switching
- Advanced EDID management permits upload of custom internal or external EDID settings
- Supports DDWG standards for DVI
- Built-in power supply
- Output masking command
- Standby mode
- Grounding pin
- IR Sensor
- IR Extender
- Status LCD (shows routing status)
- Firmware upgrade via RS-232
- Power On/Off switch
- Rack-mountable

Package Includes

- (1) GefenPRO 8x8 DVI Dual Link Matrix
- (8) 6 ft. DVI Dual Link cables (M-M)
- (1) IR Remote Control Unit
- (1) AC Power Cord
- (1) Set of Rack Ears
- (1) User Manual

PANEL LAYOUT

Front Panel



PANEL DESCRIPTIONS

Front Panel

1 Control Buttons

These buttons are used to navigate the LCD menu system. See pages 9 and 10 for more information.

- ◀ - Left
- ▶ - Right
- Select - Select

2 Cancel Button

This button is used to cancel a routing change in progress.

3 IR Window

Receives signals from the IR Remote Control unit.

4 Power Indicator

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

5 Power Switch

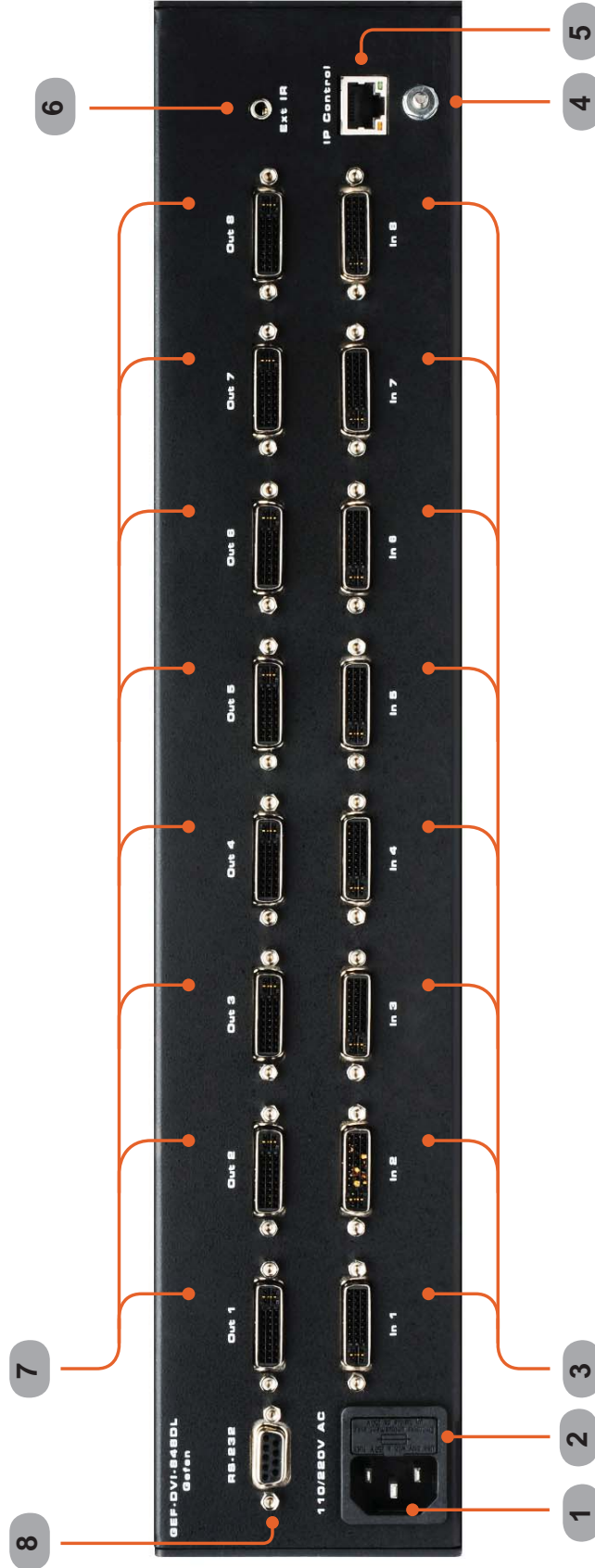
Turn the power on or off using this switch.

6 LCD Display

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

PANEL LAYOUT

Back Panel



PANEL DESCRIPTIONS

Back Panel

- 1 110 / 220 V AC (50/60 Hz) Power Receptacle**
Connect the included AC power cord from this receptacle to an available electrical outlet.
- 2 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.
- 3 DVI Input Ports 1-8**
Connect DVI source devices to these ports.
- 4 Grounding Terminal**
Provides a discharge path to ground in case a short circuit occurs between the “hot” lead of the power supply and the enclosure of the Matrix. The grounding wire should be attached from the grounding terminal to an approved ground path.
- 5 IP Control Interface**
Connect to this port to control the 8x8 DVI Dual Link Matrix using IP Control. See page 31 for details.
- 6 IR Extender Port**
Connect an IR extender cable to this port (Gefen part no. EXT-RMT-EXTIR).
- 7 DVI Output Ports 1-8**
Connect DVI monitors to these ports.
- 8 RS-232 Serial Port**
Connects to the RS-232 control device. The 8x8 DVI Dual Link Matrix may be switched remotely using this port. See page 16 for more information.

CONNECTING THE 8X8 DVI DUAL LINK MATRIX

How to Connect the 8x8 DVI Dual Link Matrix

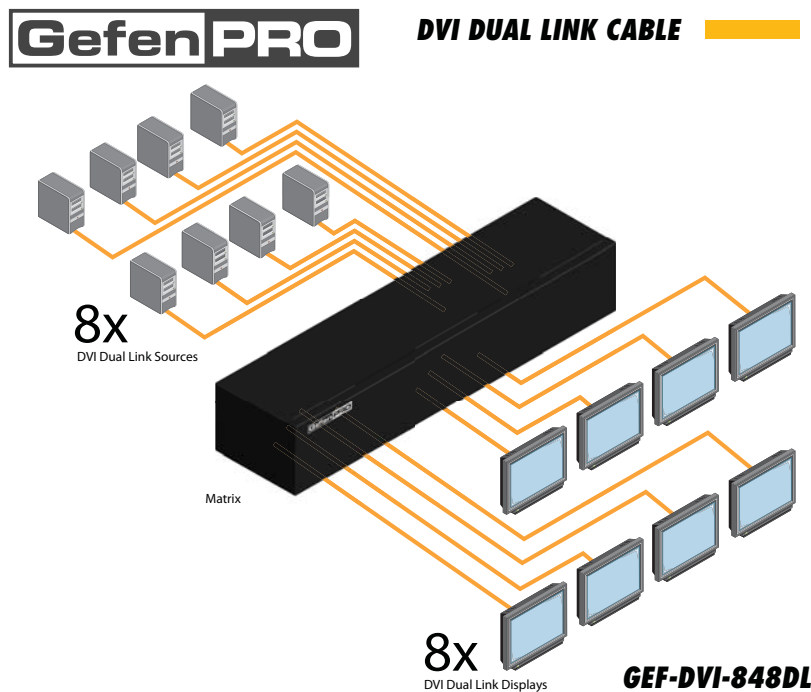
1. Connect up to 8 DVI Dual Link source devices to the inputs on the rear panel of the 8x8 DVI Dual Link Matrix using the supplied DVI dual link cables.
2. Connect up to 8 DVI Dual Link monitors to the outputs on the rear panel of the 8x8 DVI Dual Link Matrix with user-supplied DVI dual link cables.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

How to Operate the 8x8 DVI Dual Link Matrix

The 8x8 DVI Dual Link Matrix offers a number of control options. The following methods can be used to control basic routing functions:

1. Front Panel Control Buttons - Pages 9 and 10
2. IR Remote Control - Pages 11 - 14
3. RS-232 Serial Control - Pages 16 - 30
4. IP Control - Pages 31 - 38

Wiring Diagram for the GefenPRO 8x8 DVI Dual Link Matrix



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

FRONT PANEL DISPLAY

Main Display

The **Main Display** of the GefenPRO 8x8 DVI Dual Link Matrix is a 16 character 2 line display. This display will show the standby screen and will also be used to aid in performing routing commands. When the unit is powered on, the following screen is displayed:



```
EDID LOADING  
PLEASE WAIT
```

After a few moments, the Standby Screen is displayed. The Standby Screen is shown below:



```
GEFEN  
8X8DL DVI MATRIX
```

Displaying the Firmware Version

Pressing the ◀ button on the front panel will display the current firmware version:



```
MATRIX FIRMWARE  
1.11
```

Displaying the Bootloader Version

Press the ◀ button to display the bootloader version:



```
BOOT LOADER  
1.5
```

Press the ◀ button once more to return to the Standby Screen.

NOTE: The Cancel button can be pressed at any time to return to the Standby Screen.

FRONT PANEL DISPLAY

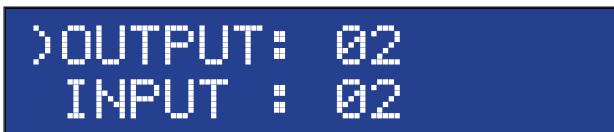
Displaying the Routing Status

From the main screen, press the **Select** button. When the arrow cursor is next to OUTPUT, pressing the ◀ or ▶ buttons on the front panel will show the current routing state of each input and output. The illustration below shows the routing state of output 1.



```
>OUTPUT: 01
INPUT : 01
```

Pressing the ▶ button again will display the routing state of output 2 and so on.



```
>OUTPUT: 02
INPUT : 02
```

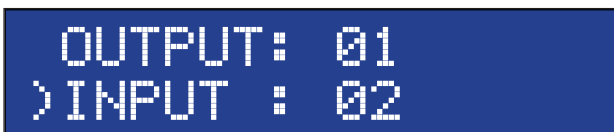
Note that the number displayed next to INPUT may be different than the illustration above, depending upon the current routing state.

Routing Sources

Example:

Route the source device connected to In 2 to the monitor connected to Out 1.

1. From the Standby Screen, press the **Select** button on the front panel to display the routing status screen.
2. Press the **Select** button again to move the cursor to INPUT.
3. Press the ▶ button to set the source to Input 2. The source device connected to In 2 is now routed to the monitor connected to Out 1.



```
OUTPUT: 01
>INPUT : 02
```

4. Press the **Cancel** button to return to the standby screen.

NOTE: The **Cancel** button can be used to return to the standby screen at any time.

IR REMOTE DESCRIPTION

RMT-16IR Remote Control Unit



1 Activity Indicator

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

2 Monitor and Source Selection Buttons (1 - 16)

These buttons are used to select which source is routed to a monitor.

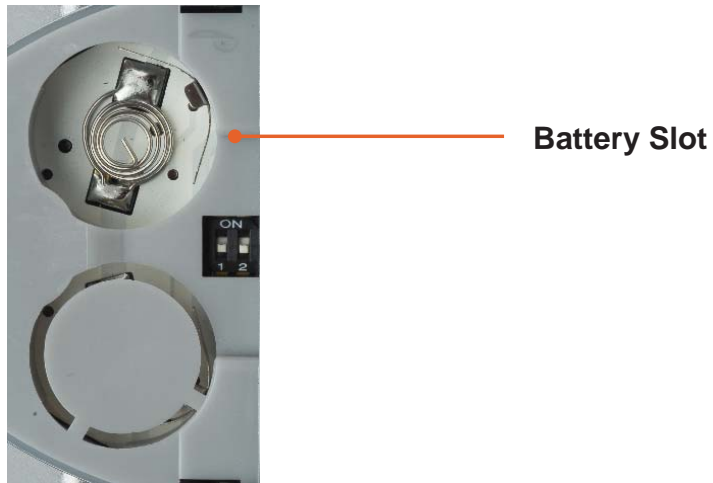
See page 14 for information on using the IR Remote Control unit.

IR REMOTE INSTALLATION

Installing the RMT-16416IR 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.



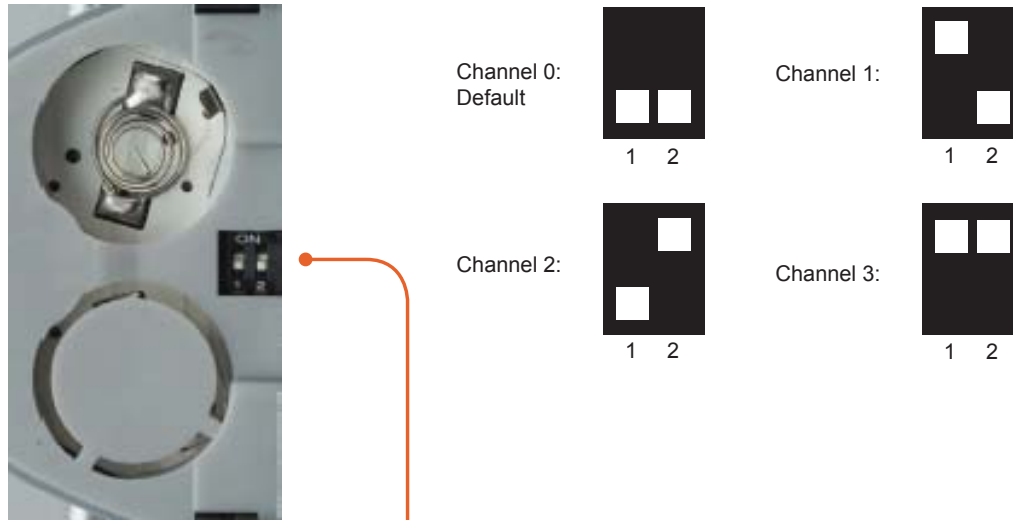
CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

IR REMOTE CONFIGURATION

Setting the IR Remote Control Channel

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.



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 DVI 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 DVI Dual Link Matrix must also be set to IR channel 0. See page 28 on how to change the IR channel on the 8x8 DVI Dual Link Matrix.

USING THE IR REMOTE CONTROL UNIT

IR Remote Control Key Mapping

Each input and output on the 8x8 DVI Dual Link Matrix 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.

EDID MANAGEMENT

EDID. What is it and what is it used for?

Under normal circumstances, a source device (digital and analog) will require information about a connected device/monitor to assess what resolutions and features are available. The source can then tailor its output to send only resolutions and features that are compatible with the attached device/monitor. This information is called EDID (Extended Display Information Data) and a source device can only accept and read one EDID from a connected device/monitor. Likewise, the source can only output one resolution for use by a connected device/monitor.

Why is EDID so important with the 8x8 DVI Dual Link Matrix?

The 8x8 DVI Dual Link Matrix is a complex piece of technology that replicates and switches between multiple inputs and outputs. Each connected source device will require one EDID to read. EDID management is carefully handled by the 8x8 DVI Dual Link Matrix to provide a single EDID for each source to read.

What options do I have to manage the EDID in the 8x8 DVI Dual Link Matrix?

First, it is important to note that each source device can only output one video/audio signal type. This includes resolutions and timings. When multiple devices/monitors are used, such as with the 8x8 DVI Dual Link Matrix, it is important to use devices/monitors that have similar or compatible resolutions and features. This will ensure that the single video/audio signal produced by the source device is accepted by all of the connected output devices/monitors.

The user has the option, through utilization of the RS-232 serial interface, to choose how the unit will manage the EDID from multiple DVI devices/monitors. Therefore the user has some control over the resolutions and features that the source devices will output. The 8x8 DVI Dual Link Matrix has a Local EDID management mode that will control how the EDID information is handled.

How do I change EDID modes in the 8x8 DVI Dual Link Matrix?

EDID modes are managed via the RS-232 serial communications port. See page 17 for more information on the RS-232 serial communication features.

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 bits 1

Flow Control None

RS-232 SERIAL CONTROL

RS-232 Features

RS-232 remote functions are used to control of this product's features. Features include input to output routing, EDID storage, EDID management, etc. These functions are available only through the use of the serial port.

Functions Syntax

The syntax for each function is always the same:

Character as the start flag → Function name → Space (_) as function name end flag → Parameter 1 → Space → Parameter n → Carriage Return (\r) →

Sample:

```
#FunctionName_param1_param2_param3_param4...\r
```

Syntax is NOT case sensitive.

EDID Management

Function	Description
#EDIDDSTOLO	Read downstream EDID and stores into a Local EDID
#EDIDDSTOBA	Read downstream EDID and stores in EDID Bank
#EDIDBATOLO	Read downstream EDID and stores in any Local Input
#EDIDDETOLO	Sets Local EDID to Default EDID
#LOCKEDID	Secures Local EDID
#LOEDIDTOLO	Load EDID file using serial port to one of the local memories
#PRLOEDID	Read Input Local EDID and sends to serial port
#PRDSEDID	Read downstream EDID and sends to serial port
#PRBAEDID	Read EDID from an EDID bank and sends to serial port
#PREDIDST	Prints EDID details

RS-232 SERIAL CONTROL

#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 1 2 3 4 5    inputs 1-5 use display 2 EDID
#EDIDDSTOLO 3 0           all inputs use display 3 EDID
```

#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]

#EDIDBATOLO Function

The #EDIDBATOLO function reads the downstream EDID and stores it to any local input.

Syntax:

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

Parameters:

<i>param1</i>	EDID bank offset	[1 - 5]
<i>param2</i>	Input	[1 - 8]

Notes:

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

#EDIDDETOLO Function

The #EDIDDETOLO function stores the Default EDID (640x480) in the specified Local EDID inputs.

Syntax:

```
#EDIDDETOLO param1 param2 param3...param9
```

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

Notes:

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

RS-232 SERIAL CONTROL

#LOCKEDID Function

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

Syntax:

#LOCKEDID param1

Parameters:

param1 Input [0 - 1]

Value	Meaning
0	Disable
1	Enable

#LOEDIDTOLO Function

The #LOEDIDTOLO function loads an external EDID via RS-232 to any Local EDID input bank.

Syntax:

#LOEDIDTOLO param1 param2 param3

Parameters:

param1 Input [1 - 8]

param2 EDID size [1 - 2]

Value	Meaning
1	128 byte EDID
2	256 byte EDID

param3 eco [0 - 1]

Notes:

Set *param1* to a value of 0 in order to specify all inputs. When using HyperTerminal, *param3* must be set to 1.

#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]
---------------	----------------------	---------

#PRLOEDID Function

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

Syntax:

```
#PRLOEDID param1
```

Parameters:

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

#PRBAEDID Function

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

Syntax:

```
#PRBAEDID param1
```

Parameters:

<i>param1</i>	Input	[1 - 5]
---------------	-------	---------

RS-232 SERIAL CONTROL

#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

IP Configuration

Function	Description
#PRWEBADD	Displays the Web configuration
#RSTIP	Set IP configuration to default
#SIPADD	Specifies a new IP address
#SNETMASK	Specifies a new net mask
#SGATEWAY	Specifies the new gateway
#SPORT	Specifies a new port

#PRWEBADD Function

The #PRWEBADD displays the IP address, net mask, gateway, MAC address, and port on the screen.

Syntax:

#PRWEBADD

Parameters:

None

#RSTIP Function

The #RSTIP function sets the IP configuration to the default settings.

Syntax:

```
#RSTIP
```

Parameters:

None

Notes:

A reboot is required after restoring the default IP settings.

#SIPADD Function

The #SIPADD function specifies a new IP address.

Syntax:

```
#SIPADD param1 param2 param3 param4
```

Parameters:

<i>param1</i>	IP address	[0 - 255]
<i>param2</i>	IP address	[0 - 255]
<i>param3</i>	IP address	[0 - 255]
<i>param4</i>	IP address	[0 - 255]

Notes:

A reboot is required after the new IP address is set.

RS-232 SERIAL CONTROL

#SNETMASK Function

The #SNETMASK function specifies a new net mask.

Syntax:

```
#SNETMASK param1 param2 param3 param4
```

Parameters:

<i>param1</i>	IP address	[0 - 255]
<i>param2</i>	IP address	[0 - 255]
<i>param3</i>	IP address	[0 - 255]
<i>param4</i>	IP address	[0 - 255]

Notes:

A reboot is required after the new net mask has been set.

#SGATEWAY Function

Specifies the new IP gateway.

Syntax:

```
#SGATEWAY param1 param2 param3 param4
```

Parameters:

<i>param1</i>	Gateway address	[0 - 255]
<i>param2</i>	Gateway address	[0 - 255]
<i>param3</i>	Gateway address	[0 - 255]
<i>param4</i>	Gateway address	[0 - 255]

Notes:

A reboot is required after the gateway address has been assigned.

RS-232 SERIAL CONTROL

#SPORT Function

Specifies a new port.

Syntax:

```
#SPORT param1
```

Parameters:

<i>param1</i>	Port	[0 - 255]
---------------	------	-----------

Notes:

A reboot is required after the new port has been created.

RS-232 SERIAL CONTROL

General Functions

Function	Description
#ACTIVEBOLO	Enables the boot loader
#FADEFAULT	Set matrix to default settings
#LOCKPOWER	Toggles the lock power state
#MASKOUT	Blanks selected outputs
#RMTIRADD	Set the remote IR channel
#STBYMODE	Sets the Matrix to Standby Mode

#ACTIVEBOLO Function

The #ACTIVEBOLO function enables the boot loader allowing the Matrix to be updated with firmware using RS-232.

Syntax:

#ACTIVEBOLO

Parameters:

None

Notes:

The #ACTIVEBOLO command must be typed twice in order to activate the boot loader.

#FADEFAULT Function

The #FADEFAULT function sets all Local EDIDs and routing settings to default, turns off all FO 5V to inputs, sets IR address to 0, and disables #LOCKPOWER, and #LOCKEDID.

Syntax:

#FADEFAULT

Parameters:

None

#LOCKPOWER Function

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

Syntax:

#LOCKPOWER param1

Parameters:

param1 State [0 - 1]

Value	Meaning
0	Disable Power Lock
1	Enable Power Lock

#MASKOUT Function

The #MASKOUT function allows blanking or selected outputs.

Syntax:

#MASKOUT param1 param2

Parameters:

param1 Output [1 - 8]

param2 Output [1 - 8]

Notes:

The current masking state will be lost if power is lost.

RS-232 SERIAL CONTROL

#RMTIRADD Function

The #RMTIRADD function set the remote IR channel.

Syntax:

```
#RMTIRADD param1
```

Parameters:

param1 IR channel [0 - 3]

#STBYMODE Function

The #STBYMODE function disables / enables standby power mode.

Syntax:

```
#STBYMODE param1
```

Parameters:

param1 Disable / Enable [0 - 1]

Value	Meaning
0	Disable Standby Mode
1	Enable Standby Mode

RS-232 SERIAL CONTROL

Commands

Command	Description
<i>R</i>	Routing command
<i>S</i>	Routes a single input to all outputs
<i>M</i>	Returns the current routing status of matrix
<i>F</i>	Toggle 5V fiber optic extender feature

R Command

The R command allows specific routing of inputs and outputs.

Syntax:

```
r param1 param2
```

Parameters:

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

S Command

The S command routes a single input to all 8 DVI outputs.

Syntax:

```
s param1
```

Parameters:

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

Notes:

Setting *param1* to a value of 0 will place the matrix in *one-to-one mode*. This means that Input1 will be routed to Output1, Input2 will be routed to Output2, and so on.

M Command

The M command displays the current routing status of the matrix.

Syntax:

m

Parameters:

None

F Command

The F command returns the state of pin 14 of the DVI inputs.

Syntax:

f param1 param2

Parameters:

<i>param1</i>	DVI input	[1 - 8]
<i>param2</i>	State	[0 - 1]

Notes:

“High” is returned if +5V is enabled on the DVI input. “Low” is returned if +5V is disabled on the DVI input.

IP CONTROL

The 8x8 DVI Dual Link Matrix supports IP-based control using an integrated Web interface. To access this feature, an IP address, subnet, gateway, and port number need to be set on the 8x8 DVI Dual Link Matrix (**Default IP: 192.168.0.70 Subnet: 255.255.255.0 Gateway: 192.168.0.1 Port: 80**). Consult the network administrator to obtain the proper IP address and settings for this product to properly communicate on the network.

The IP control setting can be configured via the RS-232 control interface. Once this has been accomplished, access to the Web Interface is possible.

Simply type the IP address that was assigned to the product in a web browser to access the **Matrix Status Page**. It should look like the image below.

View Matrix Status

The screenshot shows the Gefen 8x8 DL DVI Manager web interface. At the top, there is a navigation bar with buttons for VIEW MATRIX STATUS (highlighted), MANAGE EDID, MASKING, IP CONFIGURATION, BACKUP/RESTORE, and POWER MANAGEMENT. Below the navigation bar, there is a 'Refresh' button and a 'Matrix Status' table. The table has three columns: Output, Input, and Status. All eight rows show 'Active' status. To the right of the table, there is a 'Switch Outputs' section with 'Outputs' (checkboxes for Output 1-8) and 'Inputs' (radio buttons for Input 1-8). A 'Switch' button is located below the input selection. Another 'Refresh' button is at the bottom left of the interface.

Output	Input	Status
1	1	Active
2	2	Active
3	3	Active
4	4	Active
5	5	Active
6	6	Active
7	7	Active
8	8	Active

The **View Matrix Status** will display the current status and can also be used to create routes.

To create a new route, follow the steps below:

1. Select which outputs will display the source by clicking on each check box.
2. Select the radio button of the input that will be routed to each output.
3. Click the SWITCH button to update the new routing configuration.

This page will automatically refresh every minute. However, at anytime the "Refresh" button can be pressed to refresh the status of the Matrix.

Manage EDID

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

Refresh

Input	EDID Source	Name
1	Default	GEFEN_XPT_DL
2	Default	GEFEN_XPT_DL
3	Default	GEFEN_XPT_DL
4	Default	GEFEN_XPT_DL
5	Default	GEFEN_XPT_DL
6	Default	GEFEN_XPT_DL
7	Default	GEFEN_XPT_DL
8	Default	GEFEN_XPT_DL

Refresh

The **Manage EDID** page is used to see the status of the EDID saved in the local storage location for each input. This section has additional tabs for advanced EDID functions. These tabs are:

- SET INPUT TO DEFAULT EDID
- UPLOAD EDID (Future Implementation)
- DOWNLOAD EDID (Future Implementation)
- COPY EDID
- EDID LOCK STATE

This page will automatically refresh every minute. However, at anytime the REFRESH button can be pressed to return the current status of the Matrix.

Manage EDID - Set Input to Default EDID

Pressing the SET INPUT TO DEFAULT EDID button will display additional options. The following page will open.

The screenshot shows the 'Gefen 8x8 DL DVI Manager' web interface. At the top, there are navigation buttons: VIEW MATRIX STATUS, MANAGE EDID (highlighted), MASKING, IP CONFIGURATION, BACKUP/RESTORE, and POWER MANAGEMENT. Below these are more specific buttons: SET INPUT TO DEFAULT EDID (highlighted), UPLOAD EDID, DOWNLOAD EDID, COPY EDID, and EDID LOCK STATE. The main content area features a 'Refresh' button, a table titled 'EDID Status - Lock State:OFF', and a section titled 'Select Input(s) to Set to Default:' with checkboxes for Input 1 through Input 8. A 'Set Default EDID' button is located below the checkboxes. The table contains the following data:

Input	EDID Source	Name
1	Default	GEFEN_XPT_DL
2	Default	GEFEN_XPT_DL
3	Default	GEFEN_XPT_DL
4	Default	GEFEN_XPT_DL
5	Default	GEFEN_XPT_DL
6	Default	GEFEN_XPT_DL
7	Default	GEFEN_XPT_DL
8	Default	GEFEN_XPT_DL

Below the table is another 'Refresh' button.

On this page, local memory locations can be selected to receive the built-in EDID stored in the 16x16 DVI Matrix. To set an input's local memory location to the default EDID follow the steps below.

1. Select any number of inputs by clicking on the desired checkboxes.
2. Click on the **Set Default EDID** button to update the change(s).

Note: After this command is complete the Web Interface will return to the VIEW MATRIX STATUS page.

This page will automatically refresh every minute. However, the REFRESH button can be pressed at any time to return the current status of the Matrix.

Manage EDID - Copy EDID

Pressing the COPY EDID button will display additional options. The following page will open.

The screenshot shows the 'Gefen 8x8 DL DVI Manager' interface. At the top, there are navigation tabs: 'VIEW MATRIX STATUS', 'MANAGE EDID' (selected), 'MASKING', 'IP CONFIGURATION', 'BACKUP/RESTORE', and 'POWER MANAGEMENT'. Below these are sub-tabs: 'SET INPUT TO DEFAULT EDID', 'UPLOAD EDID', 'DOWNLOAD EDID', 'COPY EDID' (selected), and 'EDID LOCK STATE'. The main area contains a 'Refresh' button, a table titled 'EDID Status - Lock State:OFF', and two selection sections. The table has columns for 'Input', 'EDID Source', and 'Name'. The 'Select Source to Copy from:' section has radio buttons for 'Output 1' through 'Output 8' and 'Input 1' through 'Input 8'. The 'Select Input(s) to Copy to:' section has checkboxes for 'Input 1' through 'Input 8'. A 'Set EDID' button is located below the checkboxes.

Input	EDID Source	Name
1	Default	GEFEN_XPT_DL
2	Default	GEFEN_XPT_DL
3	Default	GEFEN_XPT_DL
4	Default	GEFEN_XPT_DL
5	Default	GEFEN_XPT_DL
6	Default	GEFEN_XPT_DL
7	Default	GEFEN_XPT_DL
8	Default	GEFEN_XPT_DL

On this page, the user can select an EDID from either the local memory locations (Input) or from a monitor that is currently attached to any output and copy that EDID to any other LOCAL memory location. This will permit control of what EDID information will be passed to each source connected to the 16x16 DVI Matrix.

To copy an EDID follow the steps below.

1. Select an EDID from the **Select Source to Copy from** section. An EDID can be selected from a monitor connected to one of the outputs or from an EDID already loaded into one of the local memory locations (Input). It should be noted that only one EDID can be selected for copying.
2. Select the local memory locations that will receive the selected EDID under the **Select Input(s) to Copy to** section. Multiple local memory locations can be specified during this step.
3. Click on the **Set EDID** button to initiate the change(s).

This page will automatically refresh every minute. However, at anytime the **Refresh** button can be pressed to refresh the status of the Matrix.

NOTICE: UPLOAD EDID and DOWNLOAD EDID features are not supported at the time of this writing.

Manage EDID - EDID Lock State

The 8x8 DVI Dual Link Matrix allows the Local EDID to be preserved after the unit has been powered off. Once enabled, this will function will prevent the 8x8 DVI Dual Link Matrix from reading the EDID of a monitor, when the matrix is powered on.

The screenshot shows the Gefen 8x8 DL DVI Manager web interface. At the top, there is a navigation bar with buttons for VIEW MATRIX STATUS, MANAGE EDID (highlighted), MASKING, IP CONFIGURATION, BACKUP/RESTORE, and POWER MANAGEMENT. Below this, there is a secondary navigation bar with buttons for SET INPUT TO DEFAULT EDID, UPLOAD EDID, DOWNLOAD EDID, COPY EDID, and EDID LOCK STATE (highlighted). The main content area is titled "EDID Lock State" and features a "Refresh" button, a table, and a radio button control. The table shows the EDID Status as "Lock State:OFF" and lists 8 inputs, all with "Default" sources and "GEFEN_XPT_DL" names. To the right of the table is a "Update EDID Lock State" button and two radio buttons, "Off" (selected) and "On". A second "Refresh" button is located at the bottom left of the table area.

Input	EDID Source	Name
1	Default	GEFEN_XPT_DL
2	Default	GEFEN_XPT_DL
3	Default	GEFEN_XPT_DL
4	Default	GEFEN_XPT_DL
5	Default	GEFEN_XPT_DL
6	Default	GEFEN_XPT_DL
7	Default	GEFEN_XPT_DL
8	Default	GEFEN_XPT_DL

The EDID Lock State can be enabled (ON) or disabled (OFF). The EDID Lock State is used.

1. Once the Local EDID has been stored, press the EDID LOCK STATE web button.
2. Select the ON radio button from the dialog and press Update EDID Lock State.

The 8x8 DVI Dual Link Matrix can be powered-down and the Local EDID will be preserved. To disable the EDID LOCK STATE feature, select the OFF radio button in the Web interface and press the Update EDID Lock State button. Once the EDID LOCK STATE has been disabled (OFF), the 8x8 DVI Dual Link Matrix will read and use the EDID of the monitor connected to the matrix.

Masking

Gefen 8x8 DL DVI Manager

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

Refresh

Output	Input	Status
1	1	Masked
2	2	Active
3	1	Active
4	4	Active
5	5	Active
6	6	Active
7	7	Active
8	8	Active

Refresh

Mask Outputs

Outputs

Output 1 Active Mask Output 2 Active Mask Output 3 Active Mask Output 4 Active Mask

Output 5 Active Mask Output 6 Active Mask Output 7 Active Mask Output 8 Active Mask

Submit

The **Masking** page is used to hide an output from displaying any video. From this page, all outputs can be set to “Active” or “Mask”. When an output is set to “Active”, it will function normally. When an output is set to “Mask”, it will not output any video. To set the “Active” or “Mask” mode, follow the steps below.

1. Select either “Active” or “Mask” for any number of desired outputs.
2. Press the “Submit” button to initiate the change(s).

After this command is complete the user will be returned to the **Main Page**.

This page will automatically refresh every minute, however, at anytime the “Refresh” button can be pressed to refresh the status of the matrix.

NOTE: All masked outputs will become active if the unit is power-cycled.

IP CONTROL

IP Configuration

Gefen 8x8 DL DVI Manager

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

MAC Address	IP Address	Subnet	Gateway	Port
0:1C:91:1:20:0	192.168.2.26	225.225.225.0	192.168.0.1	80

Refresh

Change IP Settings

IP Address: (default: 192.168.0.70)
Subnet: (default: 255.255.255.0)
Gateway: (default: 192.168.0.1)
Port: (default: 80)

Save

Reset IP Configuration to Defaults:

The **IP Configuration** page is used to set the IP settings that will be used to access the Web interface. The following items can be configured from this menu.

- IP Address (Default: 192.168.0.70)
- Subnet (Default: 255.255.255.0)
- Gateway (192.168.0.1)
- Port (Default: 80)

To change these settings follow the steps below.

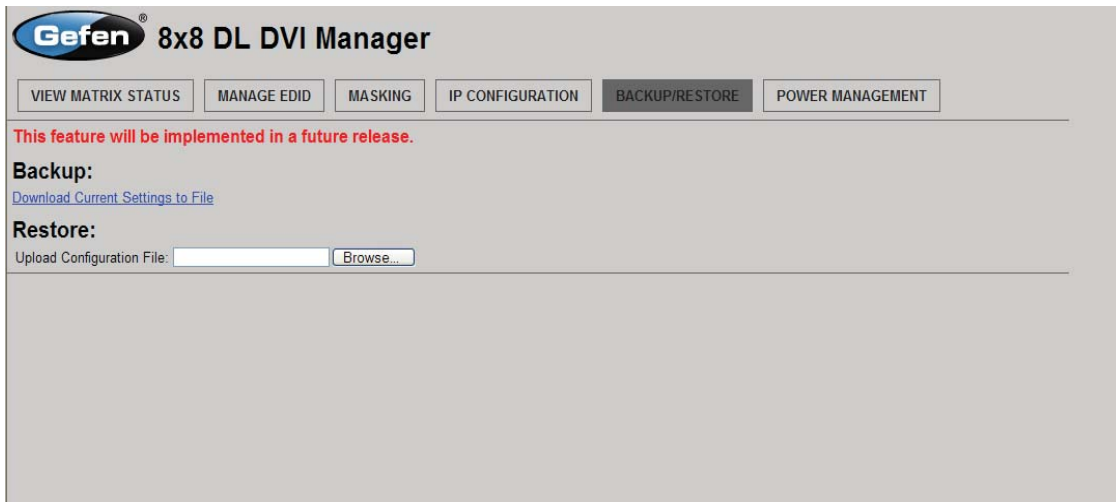
1. Enter the desired network information into the fields provided.
2. Press the “Save” button to initiate the change(s).

Note: After this command is complete the user will be returned to the **Main Page**. Setting made on this page will not take effect until the unit is restarted. Please disconnect power from the unit and reconnect power for changes to take effect.

At anytime, the “Reset” button can be pressed to return the IP settings to their defaults.

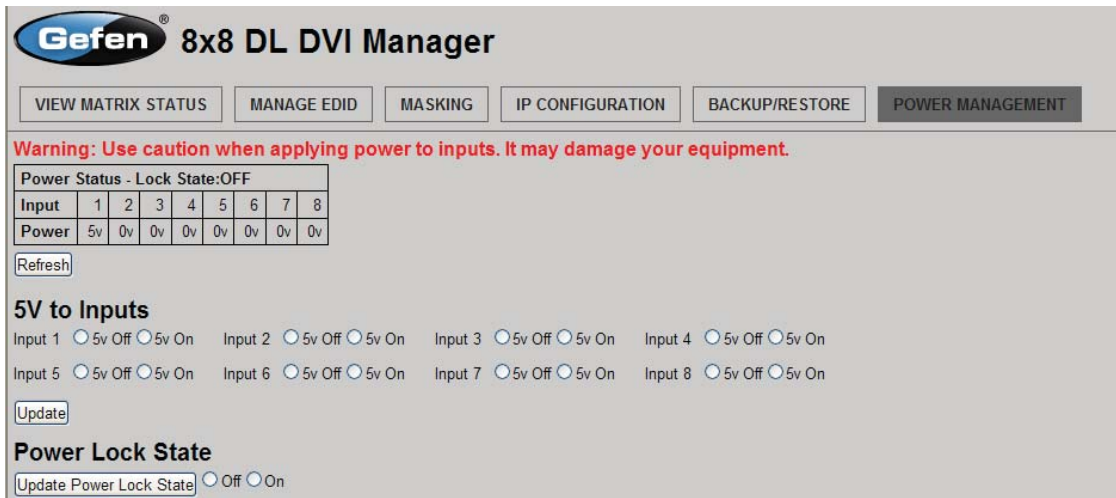
IP CONTROL

Backup / Restore



The **Backup/Restore** page is used to backup and restore complete setup configurations. This feature will be implemented in a future release.

Power Management



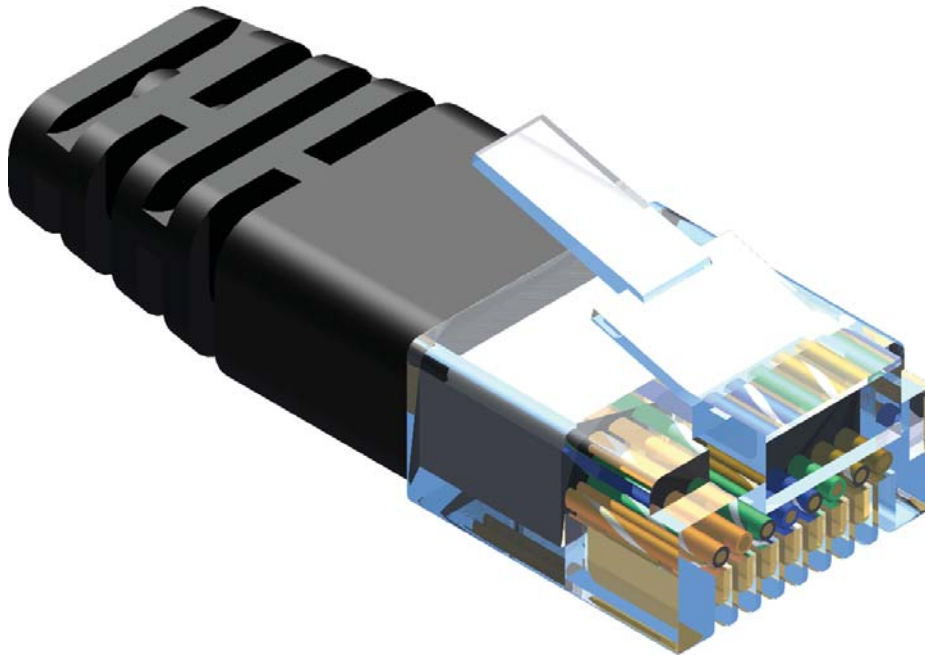
The **Power Management** page is used to set optional +5V power on an input to power specific optional devices. The current status of this feature for each input can be viewed on this page. To set this feature for each input follow the steps below.

1. Select the +5V option, either “On” or “Off” for each desired input.
2. Click on the “Update” button to initiate the change(s).

Note: After this command is complete the user will be returned to the **Main Page**.

This page will automatically refresh every minute, however, at anytime the “Refresh” button can be pressed to refresh the status of the matrix.

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

Follow the on-screen instructions to complete the firmware update process:

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

2. A message will appear in Hyperterminal:

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

3. In Hyperterminal, click Transfer > Send File...

4. Click Browse... and select the .BIN file to be uploaded (e.g. DVI8X8_uIP_1_11.bin)

5. Select Ymodem for the protocol.

6. Press Send on the Send File dialog box.

7. A message will appear in Hyperterminal:

```
Programming Completed Successfully!
```

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
DVI Connector	DVI-I 29 Pin Female (digital only)
RS-232 connector.....	DB-9 serial (F)
IR Extender.....	3.5mm Mini-Stereo
IP Control Connector.....	RJ-45
Input Video Signal	1.2 Volts p-p
Power Supply.....	100 ~ 240 V AC (IEC connector)
Power Consumption	90 Watts (max.)
Operating Temperature.....	0 °C ~ 45 °C / 32 °F ~ 104 °F
Storage Temperature.....	-20 °C ~ 60 °C / -4 °F ~ 140 °F
Relative Humidity.....	20% ~ 90% RH (no condensation)
Dimensions	17.25" W x 3.5" H x 12" D
Shipping Weight	21 lbs.

WARRANTY

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

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

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

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

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

For the latest warranty coverage information, 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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