Integration Note

Manufacturer:	Gefen
Model Number(s):	**EXT-HDFST-848CPN, GTB-HDFST-848, GEF-HDFST-848-4ELR, GEF-HDFST-848-8ELR, GEF-HDFST-444**
Minimum Core Module Version:	g! 6.4.200
Comment:	Device tested: GTB-HDFST-848 Matrix Firmware: 3.1g or greater required.
Document Revision Date:	8/5/2013

OVERVIEW AND SUPPORTED FEATURES

Gefen ToolBox HDMI Matrixes route video from multiple HDMI video sources to multiple HDMI video displays. The Gefen matrixes contain ports built in for Ethernet or RS232 that can be used to connect to the **g!** system to allow reliable 2-way communication.

THE FOLLOWING FEATURES ARE SUPPORTED:

Matrix Source Selection: The g! Viewer interface, zone slaving, or Event Maps can be used to select sources by zone from the g! system. Feedback is provided to keep the g! Viewer in sync with any changes made via IR or the unit front panel on a standard query cycle. Any input may be sent to any output.

Presets: Saving and restoring presets are supported via Event Maps.

THE FOLLOWING FEATURES ARE NOT SUPPORTED:

Control from HomeBrick/MultiBrick: Gefen devices cannot be controlled from HomeBrick/MultiBrick controllers.

Control Via SerialBrick: The Gefen is not compatible with control via the Elan Serial Brick.

Notable Common Video Switch features not available on the Gefen devices: The following features are not available on the Gefen chassis itself:

- **Audio Control:** Gefen devices do not support audio.
- **Multiple Chassis Configuration:** Gefen devices do not support multi-stack chassis configuration.

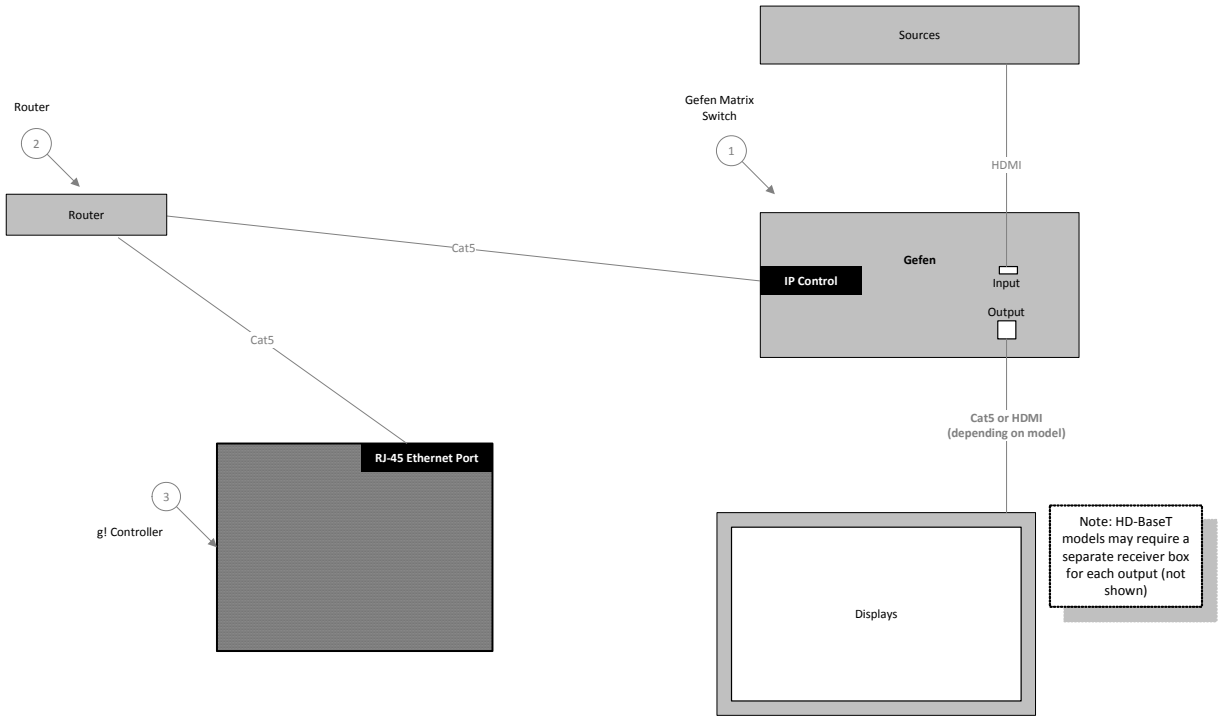
Any feature not specifically noted as “supported” is not supported.

Installation Overview

1. During the rough-in phase, install wires for the sources and displays for each zone.
2. Also during the rough-in phase, run a Cat5 wire from the location of the switch back to the g! Controller for RS-232 Communications. For TCP-IP control, run a Cat5 wire from the location of the switch back to the Router.
3. Install the switch, the sources, and displays.
4. Confirm proper video switching as a stand alone system.
5. Connect the **g!** system to the switch electrically. See the connection diagrams for more information.
6. Configure the **g!** system for the switch and confirm communication between the switch and the **g! Controller**. See **g! Configuration Details**.
7. Test the system by changing sources in a zone to confirm the correct source plays. Test source control for any sources that are to be controlled from the **g!** interface.

CONNECTION DIAGRAM

Option 1: Control via IP



BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	Gefen HDMI Switch	Gefen	Various, see Int Note title for supported models	HDMI	HDMI Female / RJ-45 Female	
2	Router	Various	N/A	TCP-IP	RJ-45 Female	
3	g! Controller	Elan	Various (ex. HC-12)	TCP-IP	RJ-45 Female	
	ELR-POR Reciever	Gefen	GEF-HD-2IR-ELRPOL-R	HDMI/HD-BaseT	RJ-45 Female/HDMI Female	IF NEEDED (Not shown) See Gefen Doc's
	HDMI Cables	Various	n/a	HDMI	HDMI Male	As needed
	Cat5 Cables	Various	n/a	IP	RJ-45 Male	As needed

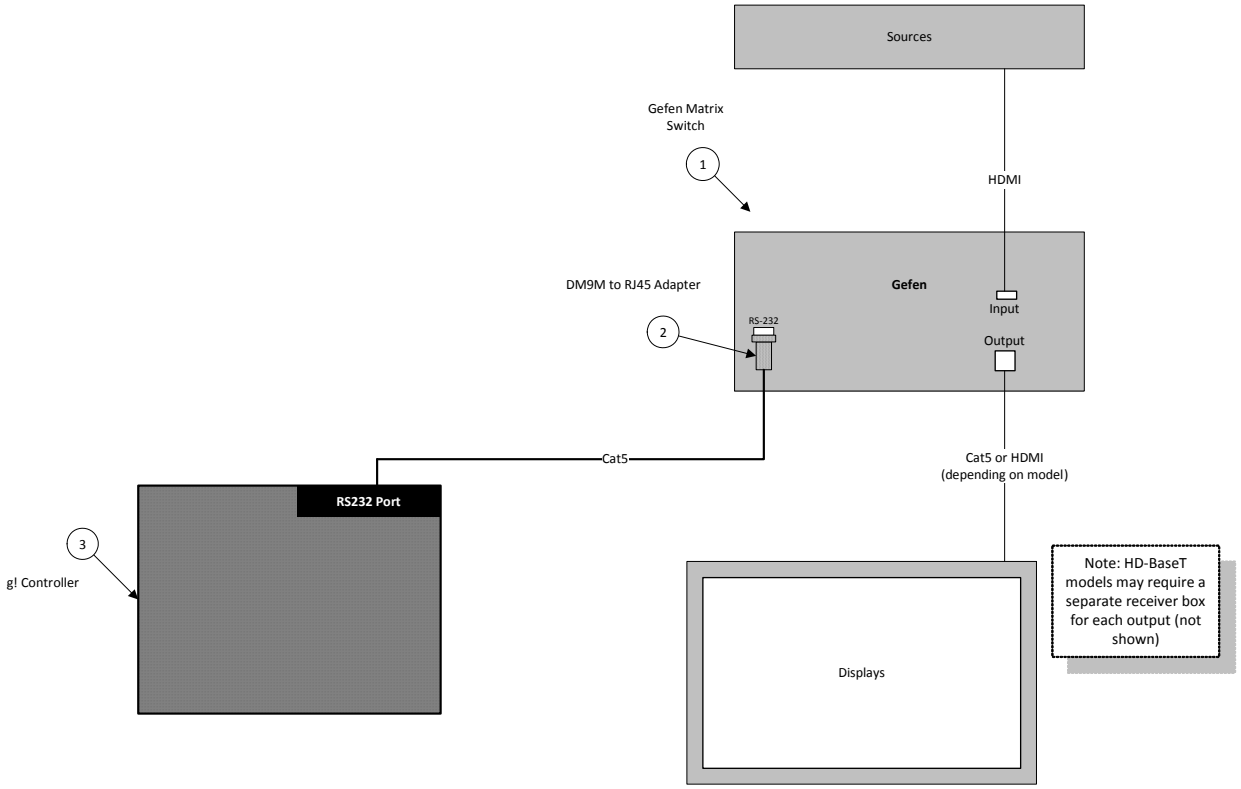
Gefen Switch IP Configuration:

To setup IP control, the network settings must be configured via RS-232. The default network settings for the Gefen 8x8 Matrix is as follows:

IP Address: `192.168.1.72` UDP Port: `23`
Subnet: `255.255.255.0` Local UDP Port: `50008`
Gateway: `192.168.1.254` Remote UDP IP: `192.168.1.80`
HTTP Port: `80` Remote UDP Port: `50007` Telnet Port: `23`

1. Connect an RS-232 cable from the PC to the matrix. Also make sure to connect an Ethernet cable between the LAN and the matrix P.
2. Launch a terminal emulation program (e.g. HyperTerminal) and use the RS-232 settings listed below on the RS-232 Control Option page. **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. For example, #sipadd 192.168.0.22.
4. Set the subnet mask using the `#snetmask` command (#snetmask 255.255.255.0).
5. Set the gateway (router) IP address using the `#sgateway` command (#sgateway 192.168.2.1).
6. Set the Telnet listening port using the `#set_telnet_port` command (#set_telnet_port 20).
7. Set the HTTP listening port using the `#set_http_port` command (#set_http_port 80).
8. Power-cycle the matrix to reboot and complete all IP setting changes.

Option 2: RS-232 Control.



#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	Gefen HDMI Switch	Gefen	Various, see Int Note title for supported models	HDMI	HDMI Female	
2	DB9M to RJ45 Adapter	Elan	HA-CB-307	RS-232	DB-9 Male X RJ-45 Female	
3	g! Controller	Elan	Various (ex. HC-12)	RS-232	RJ-45 Female	
	ELR-POR Reciever	Gefen	GEF-HD-2IR-ELRPOL-R	HDMI/HD-BaseT	RJ-45 Female/HDMI Female	IF NEEDED (Not shown) See Gefen Doc's
	HDMI Cables	Various	n/a	HDMI	HDMI Male	As needed

Note: RS-232 Settings are the following:
Baud rate: 19200 Data bits: 8
Parity bits: None Stop bits: 1
Flow Control: None

g! CONFIGURATION DETAILS

The following table provides settings used in the g! Configurator. Please refer to the ***g!** Configurator Reference Guide* for more details.

In the table below:

- o "<Select>" Select the appropriate item from the list (or drop-down) in the Configurator.
- o "<User Defined>", etc. Type in the desired name for the item.

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default: New Device)	Elan recommends altering the name to be device specific.
(IP-Control)	**Type**	**Ethernet**	
	Communication Type	**Gefen HD-FST Matrix (TCP/IP)**	
	IP Address	<User Defined>	
	Port	<User Defined>	
Communication Devices	**Name**	<User Defined> (Default: New Device)	Elan recommends altering the name to be device specific.
(RS-232 Control)	**Type**	**Serial Port**	
	Communication Type	**Gefen HD-FSTMatrix (RS232)**	
	COM Port	<Select>	
Audio Zone Controllers	**Name**	**<User Defined> (Default: Gefen *MODEL*)**	Where *MODEL* equals the device model # integrated
	Device Type	Gefen *MODEL*	Where *MODEL* equals the device model # integrated
	Comm Device	<Select> (Default: New Device)	
Sources	**Name**	<User Defined>	
	Source Device	<Select>	Sources must be previously configured in order to allow selection.
	Source Volume	<Select>	
	Display Icon	<Select>	This icon appears on the source button in the Viewer Interface
	Display Name	<User Defined>	This text appears on the source button in the Viewer Interface
Zones	Name	<User Defined>	
	Display	<Select>	
	Universal Receiver	<Select>	
	Configuration Interface	<Select>	
Tab Layout	Interface Tabs	<Select>	Move any unused zones to the left into Available Zones to remove from the viewer

COMMON MISTAKES

1. Trying to change sources for a zone when the switch is locked. The front panel of the Gefen Switch has a Lock Button. No changes can be made when the switch is locked. Unlock the switch by toggling the Lock button located on the front panel of the switch.
2. Setting wrong IP Address, Subnet Mask, or gateway on Gefen Matrix. Connect a com cable from the Matrix to your PC, launch a terminal emulator program (Hyper terminal) and use #show_ip, #show_netmask, and #show_gateway to verify the IP configuration is correct.
3. Setting the wrong COM Port in g!. Verify the COM port selected in g! is correct.