

Gefen PRO[®]

16 x 16 Modular Matrix for HDMI with HDCP

Route any 16 HDMI sources to any 16 outputs

The Gefen Pro 16x16 Modular Matrix with HDMI with HDCP and Gefen FST provides system integrators with a professional solution that routes 16 HDMI sources to any of the 16 outputs, supporting resolutions up to 1080P Full HD. The additional single HDMI output offers convenient local monitoring of any of the 16 sources. The modular design of the matrix provides two output slots to accommodate a combination of HDMI and ELR output cards. This feature allows the Gefen Pro 16x16 Modular Matrix to function as a matrix as well as an HDBaseT[®] extender with the use of Gefen's ELR output cards. With the ELR output cards, the matrix has a Bi-Directional IR feature that can route IR to and from the display locations to the rack. This feature allows the control of the sources from each display location as well as each display from the rack location. The front panel LCD displays the routing status for each HDCP-compliant HDMI source. You can control the matrix by using the front panel push-buttons, IR remote control, RS-232 interface devices, or with IP control using the built-in web server, Telnet, and UDP. Hot-swappable dual redundant power supplies provide the matrix with 24/7 operation, ease of servicing, and zero down-time required for professional applications

How It Works

Connect the 16 Hi-Def sources with HDMI cable to the 16 inputs of the matrix. From the HDMI output cards connect directly to 16 HDTV displays using HDMI cables. From the ELR output cards, run 16 CAT-5e cables up to 330 feet (100 meters) and connect them to the Receiver units. The power for the ELR-POL Receivers comes from the matrix over the same CAT-5e cable. No external power supply is required. The Bi-Directional IR feature allows the user to control the Matrix and the sources in the rack (head-end) using IR from the display location, and allows the IR control of each display from the matrix location. To control your matrix and sources from the display location, insert the Gefen EXT-RMT-EXTIRN IR extender into the IR Ext jack of the receiver and connect a Gefen EXT-IREMIT IR emitter from the matrix IR Out, and affix the emitter to the IR window of the source. You can also control the matrix by pointing the IR remote control to the IR window of the matrix. If the Matrix is in a cabinet or out of line-of-sight from the IR remote, install a Gefen EXT-RMT-EXTIRN IR extender in a suitable location, and connect it to the IR Ext port of the matrix. To control a display or a local component in the remote viewing location using IR, connect an EXT-PACS or GTB-MINI-PACS's IR outputs to IR In ports on the matrix's ELR output boards, and connect EXT-IREMIT IR emitters to each Receiver unit. Attach the emitter to the IR sensor window of the component to be controlled. To control your matrix and display using the Gefen GAVA home automation system, connect an EXT-GAVA to the LAN (Local Area Network) using CAT-5e cable. Connect an EXT-PACS or GTB-MINI-PACS to the same LAN. Control your components by connecting the IR output or the RS 232 interface from the PACS or MINI-PACS directly to the devices you want to control. If the component has an IP Control port, connect it directly to the same LAN. To use the built-in web server (using a web browser), Telnet, or UDP capability to control routing, EDID management, and other functions, connect an Ethernet cable from your LAN to the IP Control port. Connect the supplied AC power cords to the dual-redundant power supplies of the matrix and to separate electrical outlets. Power on all the equipment in the system and the HDMI sources will be routed as selected.

Gefen FST

Fast Switching Technology (FST) is a Gefen software implementation for HDMI products. FST was created to improve the lengthy HDMI authentication process, based on the HDMI and HDCP specifications.



**HDCP
COMPLIANT**



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GEF-HDFST-MOD-16416-HD
GEF-HDFST-MOD-16416-HDELR

Features*

- Supports resolutions up to 1080p Full HD
- HDMI Features Supported:
 - HDCP compliant
 - 12-bit Deep Color
 - LPCM 7.1, Dolby[®] TrueHD, Dolby Digital[®] Plus, and DTS-HD[®] Master Audio[™]
 - 3DTV pass-through
 - Lip-Sync pass-through
- ELR and HDBaseT[®] technologies allow extension up to 330 feet (100 meters)
- POL feature provides power to each ELR receiver through the CAT-5e cable
- Gefen FST speeds up the HDCP authentication process
- Fast and Slow FST Modes
- Advanced EDID management for rapid integration of sources and displays
- Front-panel LCD display for status feedback
- Front-panel push buttons for local switching
- IP controlled via built-in web server, Telnet, and UDP
- RS-232 Serial interface for remote control via an automation control system
- IR control of the matrix via front panel sensor and from each Receiver location
- Broadcast of IR commands from the matrix side to all viewing locations, and from each receiver location to the matrix all sources
- Routing states can be stored and recalled at the touch of a button
- Output masking command
- Optional IR remote control (RMT-MOD-IRN)
- Stand-by mode
- Field upgradable firmware via USB or IP
- Dual redundant hot-swappable power supplies
- Rack-mountable

Specifications*

- Maximum Pixel Clock: 225 MHz
- Video Input Connectors: (16) HDMI Type A, 19-pin, female, locking
- Video Output Connectors:
 - Matrix: (1) Local Output: HDMI Type A, 19-pin, female, locking
(16) total, (2) output cards, (8) per output card:
HDMI output: HDMI Type A, 19-pin, female, locking
ELR output: RJ-45, female
 - Receivers: (1) per Receiver: HDMI Type A, 19-pin, female, locking
- USB port: (1) Mini-B, female (firmware update only)
- RS-232 serial port: DB-9, female
- Ethernet (IP Control) port: RJ-45, female
- IR Sensor: (1) optical, front panel
- IR Extender ports: Matrix: (1) 3.5mm mini-stereo jack
Receivers: (1) 3.5mm mini-stereo jack (per Receiver)
- IR Input ports: Matrix: (1) All In, 3.5mm mini-mono jack
(8) per ELR output card, 3.5mm mini-mono jack
- IR Output ports: Matrix: (1) All Out, 3.5mm mini-mono jack
(8) per ELR output card, 3.5mm mini-mono jack
Receivers: (1) 3.5mm mini-mono jack (per Receiver)
- Power Supplies: (2) 100 - 240V AC (hot-swappable)
- Rack-Mountable: 3U rack height, rack ears included
- Dimensions (W x H x D):
 - Matrix: 17.4" x 5.1" x 16.8" (440mm x 130mm x 427mm), without feet
 - Receivers: 4.3" x 1" x 3.3" (108mm x 26mm x 83mm)
- Shipping Weight:
 - GEF-HDFST-MOD-16416-HD: 30 lbs. (13.7 kg)
 - GEF-HDFST-MOD-16416-HDELR: 40 lbs. (18.2 kg), includes 16 Receivers