Seamless Performance Through Software
Gefen Syner-G™ Software introduces powerful new management features, enabling a level of performance and control not typically found on standard video distribution systems.

What’s new in Gefen Syner-G™ 2.0?
• New and Improved user interface for quick access to Discover and Configure IP, Manage a Product, and EDID Editor
• Added 4K60 4:2:0 Support
• New Firmware Update Detection for supported products
• And more….see Release Notes for details

Discover
• Automatically discover all supported Gefen products on your IP network no matter how it’s configured.
• Remotely manage the network settings of your Gefen device.
• The Show Me feature makes finding any Gefen product in your rack a snap.

Configure
• Change product settings on-the-fly without the need of an OSD or remote control.
• The layout mirrors the OSD or WEB interface of a Gefen product to make settings discovery quick and easy.
• Advanced configuration options are a click away with built-in shortcuts.

Manage
• Unleash the power of Gefen’s EDID tool to control what EDID is passed to a source device.
• The built-in EDID creation tool is a powerful application that will allow the build an EDID from scratch.
• Instantly view and modify any EDID that is stored in a Gefen product, along with any EDID storage banks.

Update
• Firmware updating has never been easier.
• Checking for the latest firmware update on a Gefen product is a click away.
• Remotely install firmware on any connected Gefen device.

Monitor
• View the status of Gefen connected devices for easy troubleshooting.
• Changes to a device’s setting will be updated live in the software interface.
• The Show Me feature makes finding any Gefen product in your rack a snap.

For a list of compatible products, visit gefen.com/synerg
Video over IP Solutions

Create a Scalable Virtual Matrix of Any Size - up to 65,000 units

Available for HDMI, DVI and VGA
EXT-HD2IRS-LAN: HDMI over IP w/ RS-232 and 2 Way IR
EXT-HDKVM-LAN: HDMI KVM over IP
EXT-DVIKVM-LAN: DVI KVM over IP
EXT-DVIKVM-LAN-L: DVI KVM over IP w/ Local DVI Out
EXT-VGAKVM-LAN: VGA KVM over IP

Ext-CU-LAN: Matrix Controller
Features:
• Hardware Controller for Video over IP Products
• Unique and versatile solution that sits in your equipment rack or on your meeting table
• Comprehensive User Access Control
  • Designed to monitor and control source access
  • Group and user level access management
  • Isolated control and video networks
How Easy is it Really?
• One button auto IP assignment
• Automatic device detection using Gefen Syner-G™ Discovery service
• Flexible control options including front panel, IR remote, third-party automation control devices using Telnet/UDP, and a powerful and intuitive web server interface

Visit gefen.com for product specs and features
Features and specifications are subject to change without notice. Gefen, LLC is not responsible for typographical errors. All trademarks and registered trademarks are the property of their respective owners. Copyright © 2015 Gefen LLC
Version: A2

Wireless Extenders for HDMI
1080p Full HD

NEW!
Wireless Extender for HDMI 5 GHz w/ Dual Inputs and Local Output - Long Range
Sends high definition audio and video to any HDTV display up to 100ft/30m
• Uncompressed A/V from source to display with less than 2 frames latency
• Transmits through walls and obstacles – does not require line-of-sight
• Long range performance makes it ideal for multi-room use
• Supports 7.1-channels of LPCM digital audio & 5.1 channels of Dolby® or DTS®
• 2 HDMI Inputs and a local HDMI output
• IR back channel for source control
• CEC pass-through
• Ideal for control and distribution of 2 sources in a home theater installation
• Up to eight Senders can be accessed by one Receiver
• Compact Receiver unit with IR Extender module can be hidden away
• Flexible mounting options for Sender and Receiver
• Field updatable via USB port, using Gefen Syner-G™ software
• No set up required

NEW!
Wireless Extender for HDMI 5 GHz w/ Compact Sender - Short Range
Sends high definition audio and video to any HDTV display up to 30ft/10m
• Uncompressed A/V from source to display with less than 2 frames latency
• Transmits through obstacles, does not require line-of-sight
• Supports 7.1-channels of LPCM digital audio & 5.1 channels of Dolby® or DTS®
• Compact Sender connects directly to the HDMI port
• Sender can be powered from any USB port or the included power supply
• Ideal for temporary connection of mobile devices, laptops, cameras, etc.
• Up to eight Senders can be accessed by one Receiver
• Compact Receiver with IR Extender can be hidden away
• Flexible mounting options for Receiver unit
• Field updatable via USB port, using Gefen Syner-G™ software
• No set up required

Wireless Extender for HDMI 60 GHz
High Resolution - In-Room solution
Sends high definition audio and video to any HDTV display up to 30ft/10m
• Uncompressed A/V from source to display with less than 1 frame latency
• Supports HBR (High Bit Rate) Dolby® TrueHD, DTS-HD Master Audio™, and LPCM digital audio streams up to 7.1 channels
• Specifically designed for in-room operation only and near zero latency - great for high-end home theater, gaming, and secure environments
• Operates in the uncluttered 60 GHz frequency region, minimizing possible interference from WiFi and household appliances such as cordless phones
• CEC pass-through
• Compact Sender and Receiver units for easy installation
• No set up required

Visit gefen.com for product specs and features
Features and specifications are subject to change without notice. Gefen, LLC is not responsible for typographical errors. All trademarks and registered trademarks are the property of their respective owners. Copyright © 2015 Gefen LLC
Version: A2
Matrix and Switcher Solutions
4K Ultra HD 8x8 Matrix for HDMI w/ HDCP 2.2

The Gefen 8x8 Matrix for HDMI routes eight 4K sources to any combination of up to eight 4K displays. Resolutions up to 4K Cinema-DCI (4096 x 2160 at 24 or 30 Hz, 4:4:4) and 4K Ultra HD (3840 x 2160 at 60 Hz, 4:2:0 or 30 Hz, 4:4:4) are supported. The product is compliant with the latest HDCP 2.2 protocol as well as HDCP 1.4. The Gefen 8x8 Matrix also supports 1080p Full HD, 1920 x 1200 (WUXGA), 3DTV, and Deep Color (up to 1080p resolution). Multichannel digital audio including 7.1 channels of LPCM and HBR (High Bit Rate) digital audio formats such as Dolby® TrueHD and DTS-HD Master Audio™ are also passed through. This Gefen Synergize™ software’s Discovery and Show-Me features simplify initial IP configuration. Each source can be routed to any or all displays, using the front-panel push buttons or the included handheld IR Remote Control. The matrix can also be controlled via RS-232, Telnet, UDP, and Gefen’s intuitive and easy-to-use web server interface. An easy-to-read, super-bright OLED front panel display indicates routing status and IP settings.

Specifications:

- Maximum Pixel Clock: 300 MHz
- HDMI Input Connectors: (8) Type A 19-pin female, locking
- HDMI Output Connectors: (8) Type A 19-pin female, locking
- RS-232 serial port: (1) DB-9, female
- Ethernet (IP Control) Port: (1) RJ-45
- Display: OLED, 2 rows, 20 characters per row
- Power Button/Indicator: (1) tact-type, bi-color blue/orange backlight
- Control Buttons/Indicators: (7) tact-type, blue backlight
- IR Sensor: (1), located on front panel
- IR In/Ext Port: (1) 3.5mm mini-stereo jack
- IR Extender type: EXT-RMT-EXTIRN (not included)
- DC Power Connector: (1) 4-pin, locking
- Power Supply: 24V DC
- Power Consumption: 39W maximum
- Operating Temperature: +32 to +122 °F (0 to +50 °C)
- Storage Temperature: -4 to +140 °F (-20 to +60 °C)
- MTBF: 50000 hours
- Rack mounting requirements: Standard 19” rack, 2U high
- Dimensions (excluding rack ears and connectors, W x H x D): 17.25" x 3.5" x 15.75" (440mm x 89mm x 400mm)
- Net Unit Weight: 20 lbs. (9.0 kg)
- Shipping Weight: 28 lbs. (12.75 kg)

Features:

- Routes eight 4K sources to eight displays
- Supports resolutions up to 4K Cinema-DCI (4096 x 2160) at 24 or 30 Hz, 4K Ultra HD (3840 x 2160 at 60 Hz, 4:2:0 color space), 1080p Full HD, and 1920 x 1200 (WUXGA)
- HDCP 2.2 and 1.4 compliant
- Supports 12-bit Deep Color (up to 1080p Full HD)
- 3D pass-through
- Lip Sync pass-through
- Push button controls for Routing and Status
- Advanced EDID Management for rapid integration of sources and displays
- Supports LPCM 7.1, Dolby® TrueHD, Dolby Digital® Plus, and DTS-HD Master Audio™
- Supports the use of DVI sources and DVI displays with HDMI-to-DVI adapters (not included)
- RS-232 Serial interface for use with an automation control system
- IP control via Telnet, UDP, and the built-in web server interface
- IR Remote control
- Gefen Synergize™ software’s Discovery and Show-Me feature simplify initial IP configuration
- Field-upgradeable firmware via web server interface
- Can be placed on a shelf or mounted in a standard 19” wide rack

All trademarks and registered trademarks are properties of their respective owners.
Route four Hi-Def sources to two Ultra HD displays with FST, 3DTV, and 4K x 2K Ultra High-Definition support

The GefenToolBox 4x2 Matrix for HDMI 4K x 2K is a compact and lightweight alternative to rack-mounted matrixes. It allows up to four Ultra High Definition 4K or 1080p Full HD sources to be routed to up to two Ultra HD displays. This product supports resolutions up to 4K (3840 x 2160 @ 60Hz 4:2:0 or 30Hz 4:4:4) and 4K Cinema (DCI) (4096 x 2160 @ 24 or 30Hz 4:4:4). HDCP, Deep Color, 3DTV pass-through, and broadcast audio formats such as Dolby® TrueHD and DTS-HD Master Audio™ are also supported. Each Hi-Def source can be routed to either of the connected displays using the front panel push-button controls, the included IR remote, EXT-PACS control interface, or through IP, using Telnet, UDP, and the built-in web server. LED indicators on the top panel display the current routing status, FST mode, audio configuration, and EDID settings.

FST

Fast Switching Technology (FST) is a Gefen software implementation for HDMI products. FST eliminates the lengthy HDMI authentication process, and allows connecting/disconnecting or turning ON / OFF of HDTV displays without these activities affecting other displays in the same distribution system.

How It Works

Connect up to four Ultra Hi-Def sources to the HDMI inputs on the matrix using HDMI cables. Connect up to two Ultra HD displays to the HDMI outputs. Connect an Ethernet cable from the network to the RJ-45 connector to use the built-in web server or Telnet/UDP capability to control routing, EDID management, and other features. Connect an RS-232 cable between an automation control device such as Gefen EXT-PACS and GTB-HD4K2K-442-BLK and the matrix. Connect the included locking power supply to the matrix and to an available electrical outlet. Apply power to the sources and displays. The HD sources can now be routed to the displays using the front panel push-buttons, IR remote control, RS-232, Telnet, UDP, or web server interface.

Features*

• Routes four Ultra Hi-Def sources to two Ultra HD displays
• Supports resolutions up to Ultra HD 4K (3840 x 2160 @ 60Hz 4:2:0 or 30Hz 4:4:4), 4K Cinema (DCI) (4096 x 2160 @ 24 or 30Hz 4:4:4), and 1080p Full HD
• HDMI 2.0 compliant
• HDCP 1.4 compliant
• Supports 12-bit Deep Color (up to 1080p Full HD)
• 3DTV pass-through
• Lip Sync pass-through
• Push button controls for Routing, FST Mode, Audio, and EDID management
• Advanced EDID Management for rapid integration of sources and displays
• Supports LPCM 7.1, Dolby® TrueHD, Dolby® Digital Plus, and DTS-HD Master Audio™
• Supports the use of DVI sources and DVI displays with HDMI-to-DVI adapters (not included)
• RS-232 Serial interface for remote control via a computer or automation control system
• IR control on Telnet, UDP, and the built-in web server interface
• IR remote control
• Field-upgradeable firmware via USB and IP ports
• Power Indicator: (1) LED, blue
• FST Indicators: (2) LED, green
• Audio Indicators: (2) LED, green
• EDID Indicators: (2) LED, green
• Routing Indicators: (8) LED, green
• IR Sensor: (1), on front panel
• IR Extender Port: (1) 3.5mm mini-stereo jack
• DC Power Connector: (1) Locking type
• Power Supply: 5V DC
• Power Consumption: 13 Watts (max.)
• Operating Temperature: +32 to 104 °F (0 to +40 °C)
• Dimensions (W x H x D): 6.9” x 5.8” x 1.0” (175mm x 147mm x 26mm)
• Shipping Weight: 5 lbs. (2.3 kg)

Specifications*

• Maximum Pixel Clock: 300 MHz
• HDMI Input Connectors: (4) Type A 19-pin female, locking
• HDMI Output Connectors: (2) Type A 19-pin female, locking
• USB Port: (1) micro-B
• RS-232 serial port: (1) DB-9, female
• RS-232 serial port: (1) DB-9, male
• USB port: (1) micro-B
• FST selector: (1) tact-type, recessed push-button
• Audio selector: (1) tact-type, recessed push-button
• EDID selector: (1) tact-type, recessed push-button
• Routing selector: (2) tact-type push-buttons
• Power Indicator: (1) LED, green
• FST Indicators: (2) LED, green
• Audio Indicators: (2) LED, green
• EDID Indicators: (2) LED, green
• Routing Indicators: (8) LED, green
• DC Power Connector: (1) Locking type
• Power Supply: 5V DC
• Power Consumption: 13 Watts (max.)
• Operating Temperature: +32 to 104 °F (0 to +40 °C)
• Dimensions (W x H x D): 6.9” x 5.8” x 1.0” (175mm x 147mm x 26mm)
• Shipping Weight: 5 lbs. (2.3 kg)
Ultra HD 4x4 Matrix for HDMI

Route four Hi-Def sources to four Ultra HD displays with FST, 3DTV, and 4K x 2K Ultra High-Definition support.

The GefenToolBox 4x4 Matrix for HDMI 4K x 2K is a compact and lightweight alternative to rack-mounted solutions. It allows up to four Ultra High Definition 4K or 1080p Full HD sources to be routed to up to four Ultra HD displays. The product supports resolutions up to 4K (3840 x 2160) or 30Hz (4:4:4 or 4:2:0) and 4K Cinema (DCI) (4096 x 2160) at 30Hz (4:4:4). When connected through RS-232, it supports the RS-232 command set and Ext-PACS for enhanced control through IP, using Telnet, UDP, and the built-in web server interface. LEDs indicators on the top panel display the current routing status, FST mode, audio configuration, and EDID settings.

FST

Fast Switching Technology (FST) is a Gefen software implementation for HDMI products. FST minimizes the lengthy HDMI authentication process, and allows connecting/disconnecting or turning ON / OFF of HDTV displays without having these activities affect other displays in the same distribution system.

How It Works

Connect up to four Ultra Hi-Def sources to the HDMI inputs on the matrix, using HDMI cables. Connect up to four Ultra HD displays to the HDMI outputs. Connect an Ethernet cable from the network to the RJ-45 connector to use the built-in web server or Telnet/UDP capability to control routing, EDID management, and other functions. Connect an RS-232 cable between an automation control device such as Gefen EXT-PACS or GTB-MINI-PACS and the matrix. Connect the included locking power supply to the matrix and to an available electrical outlet. Apply power to the sources and displays. The HD sources can now be routed to the displays using the front-panel push buttons, IR remote control, RS-232, Telnet, UDP or web server interface.

Features*

- Routes four Ultra Hi-Def sources to four Ultra HD displays
- Supports resolutions up to Ultra HD 4K (3840 x 2160) or 30Hz (4:4:4 or 4:2:0), 4K Cinema (DCI) at 30Hz (4:4:4), and 1080p Full HD
- HDCP 2.2 compliant
- Supports 12-bit Deep Color (up to 1080p Full HD)
- Seamless pass-through
- Push button controls for routing, FST modes, audio, and EDID management
- FST Technology speeds up HDCP authentication process
- Advanced EDID management for rapid integration of sources and displays
- Supports UPnP 1.1, Dlna 1.5, Vorbis, FLAC, and DDCI 1.0
- Supports the use of DVI drivers and DVI displays with HDMI to DVI adapters
- RS-232 Serial interface for remote control via a computer or automation control system
- IP control on Telnet, UDP, and the intuitive web server interface
- IR remote control
- Field-upgradeable firmware via Mini-USB and IP ports.
- Locking Power Supply
- Surface-mountable

Specifications*

- Maximum Pixel Clock: 300 MHz
- HDMI Input Connectors: (4) Type A 19-pin female, locking
- HDMI Output Connectors: (4) Type A 19-pin female, locking
- USB Port: (1) Micro-B
- RS-232 port (1) DB-9, female
- Ethernet IP Control Port: (1) RJ-45
- Power Indicator: (1) LED, green
- LED Indicators: (6) LED, green
- EDID Indicators: (3) LED, green
- Front-Pannel Indicators: (16) LED, green
- FST Selector: (1) latch-type, momentary push-button
- Audio Selector: (1) latch-type, momentary push-button
- EDID Selector: (1) latch-type, momentary push-button
- FST Selectors: (1) latch-type, momentary push-button
- IR Sensor: (1) infrared
- IR Extender Port: (1) IR-stereo jack
- Power Supply: 5V DC
- Power Consumption: 12 Watts max.
- Operating Temperature: +32 to 104 °F (0 to +40 °C)
- Dimensions (W x H x D): 6.9” x 11.9” x 1.0” (175mm x 302mm x 25mm)
- Shipping Weight: 6 lbs. (2.7 kg)

GTB-HD4K2K-444

All trademarks and registered trademarks are properties of their respective owners. Copyright© 2015 Gefen LLC.
GefenToolbox 6x2 Matrix for HDMI

Ultra HD 6x2 Matrix for HDMI

Route six Ultra HD sources to two displays with FST, 3DTV, and Ultra HD 4K x 2K support

How It Works

Connect up to six Ultra Hi-Def sources to the HDMI inputs on the matrix using HDMI cables. Connect up to two Ultra HD displays to the HDMI outputs. Using TOOLSINK, connect a computer to the network to the RJ-45 connector to use the built-in web server or Telnet /UDP capability to control routing, EDID management, and other functions. Connect an RS-232 cable between an automation control device such as Gefen EXT-PACS and GTB-MINI-PACS and the network to control the device remotely. Apply power to the source and display. The HD sources can now be routed to the displays using the front panel push-button controls, the included IR, RS-232 serial control interface, or through IP, using Telnet, UDP, and the built-in web server interface. LED indicators on the top panel display the current routing status, FST mode, audio configuration, and EDID settings.

Features*

- FST Technology speeds up HDCP authentication process
- Lip Sync pass-through
- 3DTV pass-through
- Supports 12-bit Deep Color (up to 1080p Full HD)
- Advanced EDID Management for rapid integration of sources and displays
- Supports LPCM 7.1, Dolby® TrueHD, and DTS-HD Master Audio™
- Supports HDCP 1.4 compliant

Specifications*

- Maximum Pixel Clock: 300 MHz
- HDMI Input Connectors: 6 Type A 19-pin female, locking
- HDMI Output Connectors: 2 Type A 19-pin female, locking
- Digital Audio Outputs: 1 TOSLINK
- Digital Audio Connectors: (6) 3.5mm mini-stereo jack
- RS-232 serial port: (1) 9-pin, male, and (1) 4-pin, female
- Ethernet (IP Control) Port: (1) RJ-45 jack
- Power Consumption: 20 Watts (max)
- Power Supply: 5V DC
- DC Power Connector: (1) Locking type
- EDID Selector: (1) recessed push-button
- Audio Selector: (1) recessed push-button
- Routing Selector: (1) recessed push-button
- FST Indicators: (2) LED, green
- IR remote control
- Power Indicator: (1) LED, blue
- Audio Indicators: (2) LED, green
- IP-based Automation Control Device
- Locking Power Supply
- Surface mountable
- Locking Power Supply
- Field-upgradeable firmware via Mini-USB and IP ports
- Supports the use of DVI sources and DVI displays with HDMI-to-DVI adapters
- Supports LPCM 7.1, Dolby® TrueHD, and DTS-HD Master Audio™
- Supports 12-bit Deep Color (up to 1080p Full HD)
- Routes six Ultra Hi-Def sources to two Ultra HD displays
- Supports resolutions up to Ultra HD 4K (3840 x 2160) (24 or 30Hz 4:4:4), 4K Cinema (DCI) (4096 x 2160 @ 24 or 30Hz 4:4:4), and 1080p Full HD
- HDCP 2.0 compliant
- TCP 5.0 compliant
- Supports 12-bit Deep Color (up to 1080p FullHD)
- 3D Ready
- Push button controls for Routing, FST Mode, Audio, and EDID management
- IP-based Automation Control Device
- Locking Power Supply
- Surface mountable

GTB-HD4K2K-642

Gefen, LLC | 20600 Nordhoff Street, Chatsworth CA 91311 | Tel. (818) 772-9100 (800) 545-6900 | Fax (818) 772-9120

All trademarks and registered trademarks are properties of their respective owners

© 2015 Gefen LLC. All rights reserved.
Route eight 4K Ultra HD sources to eight displays with HDCP, 3D, and 7.1 channel LPCM and HBR Audio support.

The Gefen ToolBox 8x8 Matrix is a compact and lightweight alternative to rack-mounted matrixes. This HDCP 1.4 compliant matrix routes eight Ultra HD sources to any eight 4K Ultra HD displays with HDMI inputs. Resolutions up to 4K DCI (4096 x 2160 @ 24 or 30 Hz 4:4:4), 4K Ultra HD (3840 x 2160 @ 60 Hz), 1080p Full HD, and 1080i/720p (HDCP are supported). 3D, Deep Color, and multi-channel digital audio including 7.1 channel LPCM and DTS-HD Master Audio™ can also pass through. The Gefen Syner-G™ software’s Discovery and Show-Me features simplify initial IP configuration of the matrix. Each source can be routed to any display location, using the front panel push buttons or the included handheld IR Remote Control. The matrix can also be controlled via RS-232, Telnet, UDP, and Gefen’s intuitive and easy-to-use web server interface. An easy-to-read built-in front panel display indicates the current routing status and IP settings.

How It Works

Use HDMI cables to connect up to eight sources with HDMI outputs to the inputs of the matrix. Connect up to eight displays with HDMI inputs to the outputs of the matrix, using HDMI cables. Connect an Ethernet cable from the network to the RJ-45 connector to set the back to web server or Telnet/UDP capability to control routing, EDID management and other functions. Connect an IR-232 cable between an automation control device and the matrix. Connect the included power supply to the 24V DC connector to provide power to the matrix. Plug the IEC AC power cord to the power supply and to an available AC outlet. To control the matrix via IR, point the included IR remote control towards the unit. If matrix is not located in the line of sight, attach a Gefen EXT-RMT-EXTIRN IR Extender to the IR Ext port of the matrix and install it in a location where it can receive the IR commands. If this matrix is going to be part of an IP-controlled infrastructure, use Gefen Syner-G™ to perform the initial IP configuration and setup.

Features*

- Routes eight 4K Ultra HD sources to eight displays
- Supports resolutions up to 4K DCI, 4096 x 2160 (34 or 2096 x 4:4:4), 4K Ultra HD (3840 x 2160 @ 24 or 30 Hz 4:4:4), 1080p Full HD, and 1920x1200 (WUXGA)
- HDCP 1.4 compliant
- Supports 12-bit Deep Color (up to 1080p Full HD)
- 3D pass-through
- 12-bit DVI pass-through
- Full back controls for routing and status
- Easy integration of audio and video sources and displays
- Supports HDMI 1.4, DVI, DisplayPort, DVI DigitalLink Plus, and DVI-D Master Audio
- Supports the use of DVI sources and DVI displays with HDMI to DVI adapters (not included)
- 8x232 Serial interface for remote control via a computer or automation control system
- RS-232 Serial interface
- IR remote control
- Gefen Syner-G™ software’s Discovery and Show-Me features simplify initial IP configuration
- Total programmable firmware via web server interface
- Front-mountable

Specifications*

- Maximum Pixel Clock: 300 MHz
- HDMI Input Connectors: 8 Type A 19-pin female locking
- HDMI Output Connectors: 8 Type A 19-pin female locking
- EDID: 1.3 (Type A)
- 1080p Full HD: 1080珍惜 3:2 pull-down
- Ethernet IP Control Port: (1) RJ-45
- Power Input: (1) 24V DC, 3A
- Power Consumption: 27W Maximum
- Operating Temperature: +32 to +122 °F (+0 to +50 °C)
- Storage Temperature: -4 to +140 °F (-20 to +60 °C)
- Storage Humidity: 5% to 95% RH, non-condensing
- MTBF: 50000 hours
- Dimensions (excluding connectors, W x H x D): 9.3” x 17.9” x 1.75” (236mm x 454mm x 44mm)
- Net Unit Weight: 3.9 lbs. (1.8 kg)

* Features and specifications are subject to change without notice.

All trademarks and registered trademarks are properties of their respective owners. Copyright © 2015 Gefen LLC.
Switch four Hi-Def sources to one Ultra HD display with 3DTV and 4K x 2K Ultra High-Definition support

The GefenToolBox 4x1 Switcher for HDMI 4K x 2K is a compact and lightweight alternative to rack-mounted matrixes. It allows up to four Ultra High Definition 4K or 1080p Full HD sources to be routed to one Ultra HD display. This product supports resolutions up to 4K (3840 x 2160 @ 60Hz 4:2:0) and 4K Cinema (DCI) (4096 x 2160 @ 24 or 30Hz 4:4:4). HDCP, Deep Color, 3DTV pass-through, and boosted audio formats such as LPCM 7.1, Dolby® TrueHD, and DTS-HD Master Audio™ can be switched to the display using the front panel push button control, the included IR remote, RS-232 serial control interface, or through IP, using Telnet, UDP, and the built-in web server interface. LED indicators on the top panel display the current switching status.

How It Works
Connect up to four Ultra HD sources to the HDMI inputs on the switcher using HDMI cables. Connect an Ultra HD display to the HDMI output. Connect an Ethernet cable from the network to the RJ-45 connector to use the built-in web server or Telnet/UDP capability to control switching. Connect an RS-232 cable between an automation control device such as Gefen EXT-PACS or GTB-HD4K2K-441 and the switcher. Connect the included locking power supply to the switcher and to an available electrical outlet. Apply power to the sources and display. The Ultra HD source can now be routed to the display using the front panel push button, IR remote control, RS-232, Telnet, UDP, or web server interface.

Features*
• Switches between four Ultra Hi-Def sources to one Ultra HD display
• Supports resolutions up to Ultra HD 4K (3840 x 2160 @ 60Hz 4:2:0) and 4K Cinema (DCI) (4096 x 2160 @ 24 or 30Hz 4:4:4), and 1080p Full HD
• HDCP 2.2 compliant
• HDR 10 compliant
• Supports 12-bit Deep Color (up to 1080p Full HD)
• 3DTV pass-through
• 4K Sync pass-through
• Push button control for routing sources to display
• Supports HDCP 2.2, Dolby® TrueHD, Dolby® Digital® Plus, and DTS-HD Master Audio™
• Supports source of DVI sources and DVI displays with HDMI to DVI adapters
• IP control via Telnet, UDP, and the built-in web server interface
• If control via Telnet, UDP, and the built-in web server interface
• RS-232 control
• IR Extender port allows the unit to be mounted in a hidden location
• Field-upgradable firmware via Mini-USB and IP ports
• Locking Power Supply
• Surface-mountable

Specifications*
• Maximum Pixel Clock: 300 MHz
• HDMI Input Connectors: (4) Type A 19-pin female, locking
• HDMI Output Connectors: (1) Type A 19-pin female, locking
• USB Port: (1) Mini-B
• RS-232 serial port: (1) DB-9, female
• Ethernet (IP Control) port: (1) RJ-45
• Switching Selector: (1) tact type push-button
• Switching Indicators: (4) LED, green
• Power Indicator: (1) LED, blue
• IR Sensor: (1), on front panel
• IR Extender Port (Receiver): (1) 3.5mm mini-stereo jack
• DC Power Connector: (1) Locking type
• Power Supply: 5V DC
• Power Consumption: 13 Watts (max.)
• Operating Temperature: 0°C to 40°C (-18°C to 104°F)
• Storage Temperature: -20°C to 60°C (-4°F to 140°F)
• Dimensions: 4.9” x 3.5” x 1” (124mm x 89mm x 26mm)
• Shipping Weight: 4 lbs. (1.8 kg)
KVM and Video Over IP Extension
HDMI, RS-232, and Bi-Directional IR Extender over IP

How It Works

If you will be connecting multiple Sender units, use the built-in web interface to assign an unique channel ID to each unit. Use the included HDMI cable to connect an HDMI source to the Sender’s HDMI input. Using the included interface programming to create a virtual crosspoint matrix, connect a Sender to Receiver, and connect the included IR Extender (Gefen part no. EXT-RMT-EXTIRN) (one included with Receiver unit) or electrical IR outputs from automation control devices to the display or another RS-232 controlled device. If IR extension between the local and remote locations to control the source and the display is needed, connect IR emitters (Gefen part no. EXT-IREMIT) (one included with Sender unit) to the Sender and Receiver units’ IR Out ports and attach them to the IR sensor lenses of the display or another RS-232 controlled device. IR control can be extended from Sender to Receiver and from Receiver to Sender, allowing the control of sources and displays over the entire network.

Multiple Receiver units can simultaneously connect to any Sender unit within the network, depending on the network bandwidth and number of ports on your network switch. If you will be connecting multiple Sender units, use the built-in web interface to assign an unique channel ID to each unit, and connect a Sender to Receiver using the included HDMI cable. The HD over IP Extender is the perfect solution for large scale remote KVM control over a Gigabit Local Area Network.

Features*

- Extends HDMI, RS-232, and bi-directional IR over IP, using a Gigabit Local Area Network
- Supports resolutions up to 1080p Full HD and 1920 x 1200 (WUXGA)
- Supports HDMI Features:
  - Deep Color
  - 3D
  - HDCP, Deep Color, 48 Continuous Bit, 10-Bit Chroma, and Lip-Sync pass-through
  - Lip-Sync pass-through
- Supports a total of just over 65,000 Sender and Receiver units, depending on the network bandwidth and number of ports on your network switch
- Mode Selector function in web interface for switching between any number of inputs connected to the network
- RS-232 Cables and IR Extenders are available for connecting RS-232 controlled devices
- RS-232 and IR Emitter Ports are included with Sender unit
- RS-232 and IR Extender Ports are included with Receiver unit
- Surface mountable
- Field-upgradable firmware via web server interface
- HDCP, Deep Color, 3D, Lip-Sync, and HDMI audio passthrough

Specifications*

- Maximum Pixel Clock: 165 MHz
- Maximum TMDS Clock: 225 MHz
- Video Input Connector: (Sender) - HDMI Type A 19-pin, female, locking
- Video Input Connector: (Receiver) - HDMI Type A 19-pin, female, locking
- Video Output Connector: (Receiver) - HDMI Type A 19-pin, female, locking
- Power 230 VAC power supplies (Sender) - 8.5 W maximum power (120 W, 240 W, 50 Hz, 60 Hz)
- Power 230 VAC power supplies (Receiver) - 4.5 W maximum power (120 W, 240 W, 50 Hz, 60 Hz)
- Operating Temperature: 0°C to 50°C
- Operating Humidity: 0% to 90% non-condensing
- Storage Temperature: -20°C to 60°C
- Storage Humidity: 0% to 95% Relative Humidity, non-condensing
- Dimensions (Sender/Receiver) - 16.3” x 2.7” x 2.9”
- Dimensions (Senders/Receivers) - 22.3” x 3.3” x 0.5”
- Weight (Sender/Receiver) - 0.8 lb. (0.4 kg)
- Weight (Senders/Receivers) - 1.6 lbs. (0.8 kg)
- Shipping Weight (Sender/Receiver) - 1.0 lb. (0.5 kg)
- Shipping Weight (Senders/Receivers) - 2.0 lbs. (1.0 kg)

*Any of the Senders within a network can be accessed by any Receiver unit via a web browser on a mobile device or computer, or by using the Gefen KVM/Video over IP Keyboard Switching Controller software (available for download at www.gefen.com). The Gefen HD over IP Extender is the perfect solution for large scale remote KVM control over a Gigabit Local Area Network.

Exten and Distribute HDMI, RS-232, and 2-Way IR over a Local Area Network

The HD over IP Extender is a Gigabit Local Area Network (LAN) Extender, and is designed to extend HDMI, RS-232, and 2-Way IR signals over an IP network. The Gigabit Local Area Network Extender includes the Gefen HDMI over LAN products with HDMI, DTI, or VGA video, to create a virtual crosspoint matrix of over 65,000 Sender and Receiver units, depending on the network bandwidth and number of ports on the network switch (see Notes 1 and 2).

IR control can be extended from Sender to Receiver and from Receiver to Sender, allowing the control of sources and displays over the entire network. The IR input ports on Sender and Receiver units are compatible with the Gefen powered IR extender EXT-RMT-IR and electrical IR in-car entertainment control devices. The HD over IP Extender can also be extended between multiple Senders and Receivers. The IR injection interface (located inside) can also be extended to IR control from automation control devices.

IR power supplies to the Sender and Receiver units and to available electrical outlets, depending on the network bandwidth and number of ports on the network switch.

CAT-5 Cable
HD Cable
RS-232 Cable
IR
Matrix Controller

Configure, manage, and control a scalable and expandable virtual matrix using an assortment of Gefen Video and KVM over IP products.

How It Works

If this product will be placed on a table or shelf, attach the included rubber feet to the bottom of the unit. If the unit is to be mounted in a standard 19-inch rack, attach the included rack ears to the front sides of the unit, using the machine screws provided. The EXT-CU-LAN can be configured to work with a single LAN that includes control and AV routing devices, or as a system with two independent Local Area Networks, one for control and the other for AV routing. It comes preconfigured to work with a single LAN (its “Network Mode” is set to “Combined”). If your system architecture includes two independent Local Area Networks for system control and AV/KVM routing: Connect the LAN 1 port of the EXT-CU-LAN to the control network. Connect the Ethernet port called LAN 2 to the other Local Area Network that includes the Video/KVM over-IP Senders and Receivers. If POE is not available from the network that is connected to the LAN 1 port, connect the included power supply to the 5V DC power supply jack and to an external 5V DC power supply that ships with the product. If setting up a system with two independent Local Area Networks, one for system control and the other for AV routing: Connect the LAN 1 port of the EXT-CU-LAN to the control network. Connect the Ethernet port called LAN 1 (RJ-45) to the other Local Area Network that includes the Video/KVM over-IP Senders and Receivers. Each LAN port of the EXT-CU-LAN can be configured to support a network with multiple sources and displays, AV formats, and resolutions in a dynamic environment. To indicate that the unit is receiving power, a single-level LED indicator is provided.

Specifications

- Power Source: 5V DC, locking connector
- IR Sensor: (1) on front panel
- Dimensions: 19" x 3.5" x 2.7" (482mm x 88mm x 68mm)
- Weight: 5.6 lbs (2.6 kg)
- Net Unit Weight: 3.7 lbs (1.7 kg)
- Operating Humidity: 5% to 90% RH, non-condensing
- Operating Temperature: +32 to +122 °F (0 to +50 °C)
- Power Indicator: (1) LED, blue
- LAN 2 IP Port: (1) RJ-45 jack
- LAN 1 IP Port: (1) RJ-45 jack, POE-enabled
- Display: 2 lines, 20 characters per line, Liquid Crystal Display, backlit
- Push-buttons: (28) tact-type
- System Configuration Upload/Download function
- Password-protected independent user and administrative access
- Automatic assignment of IP addresses for all Gefen Video and KVM over IP devices on a network
- Front panel control push-button, display, handheld IR remote, and web server interface allow easy and convenient end-user operation
- Front panel control push-buttons/display, handheld IR remote, and web server interface allow easy and convenient end-user operation
- Seamless integration with Gefen Syner-G™ software allows for quick installation and configuration on a network
- Detects, configures, and controls all Gefen Video and KVM over IP products.
- Built-in web server allows access from any web-enabled device, including phones, tablets, and PCs
- Easiest installation of any KVM over IP switch, Gigabit Switch, and POE. Provides a complete and powerful solution for managing video and audio sources in different rooms and environments. Its comprehensive and user-friendly interface can be accessed by any web-enabled device, including phones, tablets, and PCs. End-users can control matrix Using an assortment of Gefen Video and KVM over IP products to scalable and expandable virtual matrix environment. Its comprehensive and user-friendly interface can be accessed by any web-enabled device, including phones, tablets, and PCs. End-users can control matrix devices including KVM, Video and Audio over IP, and POE. Provides a complete and powerful solution for managing video and audio sources in different rooms and environments.

Gefen Syner-G™ simplifies discovery and IP configuration of this product. When installed on a Local Area Network, the EXT-CU-LAN facilitates quick identification of all Gefen Video and KVM over IP devices that use the network and assigns IP addresses to them. The Gefen Matrix Controller’s unique enclosure shape provides flexible installation options. Its slanted front panel enhances user access to push-buttons and provides better display readability when placed on a conference table. Its 2U tall rack-mountable enclosure, detachable rack ears included facilitates installation in a standard 19-inch-wide equipment rack, and provides for better display readability when placed on a table. The Gefen Matrix Controller’s unique enclosure shape provides flexible installation options. Its slanted front panel enhances user access to push-buttons and provides better display readability when placed on a conference table. Its 2U tall rack-mountable enclosure, detachable rack ears included.

Copyright© 2014 Gefen LLC

www.gefen.com

Tel. (818) 772-9100   (800) 545-6900   Fax (818) 772-9120
20600 Nordhoff Street, Chatsworth CA 91311
Intuitive and Powerful

Web Server Interface

- Gefen Syner-G™ simplifies discovery and IP configuration of this product.
- Automatic assignment of IP addresses for all Gefen Video and KVM over IP devices on a network.
- Front panel control push-button, display, handheld IR remote, and web server interface allow easy and convenient end-user operation.
- Seamless integration with Gefen Syner-G™ software allows for quick installation and configuration on a network.
- Detects, configures, and controls all Gefen Video and KVM over IP products.
- Built-in web server allows access from any web-enabled device, including phones, tablets, and PCs.
- Easiest installation of any KVM over IP switch, Gigabit Switch, and POE. Provides a complete and powerful solution for managing video and audio sources in different rooms and environments.
- Its comprehensive and user-friendly interface can be accessed by any web-enabled device, including phones, tablets, and PCs. End-users can control matrix devices including KVM, Video and Audio over IP, and POE.
- Provides a complete and powerful solution for managing video and audio sources in different rooms and environments.

Matrix Controller
Extend DVI up to 495 feet (150 meters) over one CAT-5e cable

The DVI ELR Extender over one CAT-5 allows the extension of a DVI source to a display, up to 495 feet (150 meters), using a single CAT-5e cable. This product is capable of HDCP and HPD pass-through. It can also be configured by the installer via DIP switches for maximum range or maximum bandwidth, and for low power consumption (auto sleep mode) or always-on operation.

The DVI Extender over one CAT5 uses Gefen’s ELR implementation of HDBaseT® technology, allowing the DVI signal to travel along a single CAT-5e or better cable, reducing cable costs and facilitating installation.

How It Works

Use the included DVI cable to connect the computer or other DVI source to the Sender unit. Connect the Receiver unit to a Hi-Def display with a DVI cable. Use up to 495 feet (150m) of CAT-5e cable to connect the Sender to the Receiver unit. Configure DIP switches as necessary. Connect the included locking power supplies to the Sender and the Receiver units and plug the power supplies to available electrical outlets. Power on all connected equipment.

Features*

- Extends DVI up to 495 feet (150 meters) over one CAT-5e cable
- Supports resolutions up to 1080p Full HD and 1920 x 1200 (WUXGA)
- EDID management for rapid integration of source and display
- Enable/Disable switches for HPD pass-through
- Power-Save (Green Mode) selector switch
- 150m/100m range selector switch configures the extender for maximum range (150 meters) or maximum bandwidth
- Locking power supplies
- Surface-mountable

Specifications*

- Maximum Pixel Clock: 165 MHz
- Video Input Connector (Sender): (1) DVI-I, 29-pin, female (digital only)
- Video Output Connector (Receiver): (1) DVI-I, 29-pin, female (digital only)
- Link Connector (Sender/Receiver): (1) RJ-45
- Internal/External EDID Selector (Sender): (1) DIP switch
- HPD Pass-Through Selector (Sender): (1) DIP switch
- Power-Save Selector (Sender/Receiver): (1) DIP switch
- 150m/100m Range Selector (Sender/Receiver): (1) DIP switch
- Power Indicator (Sender/Receiver): (1) LED, blue
- Link Indicator (Sender/Receiver): (1) LED, green
- Power Supply (Sender/Receiver): 5V DC
- Power Consumption (Sender/Receiver): 10 W per unit maximum
- Operating Temperature: 0 to +45°C
- Operating Humidity: 0 to 90% RH, non-condensing
- Dimensions (W x H x D): 4.3” x 1” x 3.4” (110mm x 26mm x 86mm)
- Shipping Weight: 3 lbs (1.4 kg)

* Features and specifications are subject to change without notice.

All trademarks and registered trademarks are properties of their respective owners

Copyright © 2013 Gefen LLC

EXT-DVI-1CAT5-ELR
Extra Long Range KVM Extender for HDMI and USB over one CAT-5 cable

The Gefen HDMI KVM ELR extends HDMI and USB up to 330 feet (100 meters) over a single CAT-5 cable. Resolutions up to 4K Ultra HD (3840 x 2160 @ 60Hz 4:2:0 or 30Hz 4:4:4), 4K Cinema-DCI (4096 x 2160 @ 24 or 30Hz), 1080p Full HD, and 1920 x 1200 (WUXGA) are supported. HDCP, USB 2.0 up to 30 Mbps, and USB 1.1 are also supported. The Receiver unit accommodates up to three USB devices, providing access to keyboard, mouse, touch-panels, printers, scanners, and external storage media. Typical applications include remote workstations and interactive digital signage with touch-screens. This product uses Gefen’s ELR implementation that integrates the proven HDBaseT™ technology with powerful EDID Management capabilities. HDMI and USB are transported over the same CAT-5e cable, reducing cabling costs in addition to providing easier and more reliable installation.

How It Works

Place the HDKVM ELR Sender unit next to the computer source and use the included HDMI cable to connect the computer to the Sender unit. Use the supplied USB cable to connect the USB host (source) device to the USB port on the Sender unit. Connect the Receiver unit to a display with an HDMI cable. Connect the USB devices to the Receiver unit. Use one CAT-5e cable, up to 330 feet (100 meters), to connect the Sender unit to the Receiver unit. Connect the included locking power supplies to the Sender unit and Receiver unit, and then connect both power cords to available electrical outlets.

Features*

- Extends 4K Ultra HD (3840 x 2160 @ 60Hz, 4:2:0 or 30Hz, 4:4:4), and USB over a single CAT-5 cable up to 330 feet (100 meters)
- Extends 4K Cinema (DCI) (4096 x 2160 @ 24 or 30Hz, 4:4:4), and USB over a single CAT-5 cable up to 330 feet (100 meters)
- Extends HDMI at 1080p Full HD, and USB over a single CAT-5 cable up to 330 feet (100 meters)
- HDMI Features Supported:
  - HDMI 2.0
  - HDCP 1.4 compliant
  - 18-bit Deep Color
  - LPCM 7.1 audio, Dolby TrueHD, Dolby Digital Plus, and DTS-HD Master Audio™ pass-through
  - 3DTV pass-through
  - CEC pass-through
  - Lip Sync pass-through
  - Supports up to 30 Mbps when using USB 2.0
  - Backward-compatible with USB 1.1
  - EDID management for rapid integration of source and display devices
  - ELR and HDBaseT™ technologies
  - Locking power supplies
  - 1U rack-mountable using EXT-RACK-1U

Specifications*

- Maximum Pixel Clock: 300 MHz
- Maximum TMDS Clock: 300MHz
- Video Input Connector (Sender): HDMI Type A, 19-pin, female
- Video Output Connector (Receiver): HDMI Type A, 19-pin, female
- USB Connector (Sender): (1) Type B, female
- USB Connector (Receiver): (2) Type A, female
- Lock Connector (Sender / Receiver): RJ-45, shielded
- Power Supply (Sender / Receiver): 5V DC, locking

Copyright © 2015 Gefen LLC. VER A10
Extend HDMI with 4K Ultra HD support, RS-232, and Bi-Directional IR over one fiber optic cable up to 3300 feet (1000 meters)

The Gefen 4K Ultra HD Extender for HDMI over One Fiber is a complete solution, allowing HDMI, RS-232, and Bi-Directional IR to be extended up to 3300 feet (1000 meters) at 4K resolution and up to HDMI source and receiver resolutions up to 4K Ultra HD (3840 x 2160) 24/60Hz, 4:4:4. This product works with any HDMI source and supports resolutions up to 4K Ultra HD (3840 x 2160) 24/60Hz, 4:4:4 and 4K Ultra HD (4096 x 2160) 24/60Hz, 4:4:4. This HDCP-compliant extender is the ideal for installations where a HDMI source and display are located apart from each other in an interference-prone operating environment. A single strand of SC-terminated multi-mode fiber optic cable is used for transmission, providing excellent protection from electromagnetic interference (EMI) and preventing signal integrity. The Automatic Virtual EDID feature allows automatic copying of the Extended Display Identification Data (EDID) to the sender unit for continuous availability to the source. This allows rapid recovery of picture and display power up on the source when used in conjunction with Switchers and Matrixes. To control devices at the viewing location (such as the display) from the source side, use the IR In/Ext port on the Sender side and the IR Extender type: EXT-RMT-EXTIRN IR Extender. The IR Extender type: EXT-RMT-EXTIRN IR Extender to the IR In/Ext connector on the Receiver, and connect an IR Emitter to the IR Out connector on the Receiver unit to IR Sensor window of the Source. When used in conjunction with Switchers and Matrixes. To control devices at the viewing location (such as the display) from the source side, use the IR In/Ext port on the Sender side and the IR Out connection on the Receiver side. Connect one strand of multi-mode fiber optic cable, with SC connectors, between the Sender unit and the Display. The Sender unit is placed near the source and the Receiver unit near the Display. Connect the supplied locking HDMI cable between the Sender unit and the display. Connect an HDMI cable between the Receiver unit and the display. Connect an HDMI cable between the Sender unit and the Receiver unit for continuous availability to the source. This allows rapid recovery of picture and display power up on the source when used in conjunction with Switchers and Matrixes.

Features:
- HDMI 2.0, 4K Ultra HD, Bi-Directional IR over a single strand fiber optic cable
- Extends HDMI (3840x2160@24/60Hz) 24/60Hz, 4:4:4 up to 3300 feet (1000 meters) over 50/125µm OM3/OM4 fiber
- 4K Ultra HD (4096x2160@24/60Hz) 4:4:4 up to 1000 feet (300 meters) over 50/125µm OM3/OM4 fiber
- 4K Ultra HD (4096x2160@24/60Hz) 4:4:4 up to 6600 feet (2000 meters) over 50/125µm OM3e fiber
- HDCP 1.4
- 256-bit AES Color
- HDCP 1.2 support, DMT (320/7.1 audio, Dolby TrueHD, and DTS-HD Master Audio) *
- 4x10Gbps ethernet through fiber optic cable
- Auto IR Extender
- HDMI automatic calibration based on the type and length of fiber optic cable
- Full duplex RS-232 up to 115200 bps
- Fan-out operation over USB
- IR interrupts immune to electromagnetic interference (EMI)
- Limiting power supplies
- Surface-mountable

Specifications:
- Maximum Pixel Clock: 300 MHz
- HDMI Connectors: Sender/Receiver: (1) HDMI type A, 19-pin, male../female, locking
- RS-232 Connectors: (1) DB-9, female
- Link Indicators (Sender/Receiver): (1) LED, green
- Link Connectors (Sender/Receiver): (1) SC type
- Storage Temperature: -4 to +185 °F (-20 to +85 °C)
- Operating Humidity: 5% to 90% RH, non-condensing
- Power Consumption: 2.5W each maximum
- Power Supplies (Sender/Receiver): 5V DC
- Link Connectors: (1) SC type
- Bias Voltage: 5V DC ±5% (24V for a bias voltage)
- Supply Voltage: 5-12V DC
- Input Impedance: >100 kΩ
- Bias Voltage: 5V DC ±5%
- Automation Control Device
- IR Extender (EXT-RMT-EXTIRN)
- IR Emitter
- Ultra HD Source
- Ultra HD Display
- IR Extender (EXT-RMT-EXTIRN)
- RS-232 CABLE
- IR IN
- IR OUT
- FIBER OPTIC (SC-SC) CABLE
- HDMI CABLE
- RS-232 CABLE
- IR IN
- IR OUT
- 1080P
- 25
The Gefen 4K Ultra HD Extender uses the Gefen implementation of the HDBaseT™ technology to extend HDMI up to 495 feet (150 meters), using one CAT-5e cable. Resolution, up to 4K Ultra HD (3840 x 2160) (24 or 30p, 4:4:4), Ethernet, RS-232, and Bi-Directional IR over a single CAT-5e cable up to 330 feet/100 meters (8-bit color).

- **Features**
  - Extends HDMI (3840 x 2160 @ 60 Hz 4:2:0 or @ 30 Hz 4:4:4), Ethernet, RS-232, and Bi-Directional IR over a single CAT-5e cable up to 330 feet/100 meters (8-bit color).
  - Extends 4K Cinema (DCI) (4096 x 2160) (24 or 30 Hz 4:4:4), Ethernet, RS-232, and Bi-Directional IR over a single CAT-5e cable up to 320 feet/100 meters (8-bit color).
  - Extends HDMI at 1080p Full HD, Ethernet, RS-232, and Bi-Directional IR over a single CAT-5e cable up to 495 feet/150 meters (8-bit color).
  - Bi-Directional POL feature provides power to the Sender or the Receiver unit over the link cable - only one side needs external power.
  - Uses the Gefen implementation of HDBaseT™ technology.
  - Advanced EDID Management.
  - Firmware upgradable via RS-232.
  - Lip Sync pass-through.
  - CEC pass-through.
  - 3DTV pass-through.
  - LPCM 7.1 audio, Dolby® TrueHD, and DTS-HD Master Audio™ pass-through.
  - 12-bit Deep Color.
  - HDCP 2.2 and 1.4.
  - HDMI 2.0.
  - Rx Ethernet (EXT-RMT-EXTIRN) IR Extender to the IR In/Ext port on the Receiver.
  - RS-232 Extension.
  - IR extension from Sender to Receiver and from Receiver to Sender.
  - Gefen Bi-Directional POL feature provides power to the Sender or the Receiver unit over the link cable - only one side needs external power.
  - Uses the Gefen implementation of HDBaseT™ technology.
  - Surface mountable.
  - Locking power connector.
  - Surface mountable.
  - 12-bit Deep Color.
  - HDCP 2.2 and 1.4.
  - HDMI 2.0.

**How It Works**

The Sender unit is placed near the source and the Receiver unit near the display. Connect the supplied locking HDMI cable between the Sender unit and the display.

Connect an RS-232 automation control device to the Sender unit using the included Phoenix-to-female DB-9 cable. Connect the Receiver unit to an RS-232-controlled device such as the display, using the included Phoenix-to-male DB-9 cable. To send an IR control signal from the viewing location to the source unit, connect the IR output from an automation control device or the Gefen EXT-RMT-EXTIRN IR Extender to the IR In/Ext port on the Receiver, and connect an IR Extender to the IR Out port on the Sender unit and attach it to the IR Sensor window of the source. To control devices at the viewing location (such as the display) via IR from the source side, use the IR In/Out port on the Sender side and IR-Out connection on the Receiver side. Connect the Sender and the Receiver units together using a CAT-5e or better cable. Connect the locking power supply to either the Sender or the Receiver unit and plug it into an electrical outlet. Only, one of the units needs an external power supply. The other unit will be powered through the CAT-5 cable. Power up all associated equipment.

**Specifications**

- **Input/Output**: 3.5mm mini-stereo jack
- **IR Extender type**: EXT-RMT-EXTIRN
- **LED Indicator**
  - IR Extender (EXT-RMT-EXTIRN): (1) Bi-color: Blue/Green
- **Power/Link Indicator LED (Sender/Receiver)**: (1) Bi-color: Blue/Green
- **Power Supply**: (1) 24V DC, locking.
- **Power Consumption**: Sender and Receiver combined: 12W maximum
- **Operating Temperature**: -32 to +113 °F (-32 to +45 °C)
- **Operating Humidity**: 5% to 90% RH, non-condensing
- **Storage Temperature**: -4 to +185 °F (-20 to +85 °C)
- **Storage Humidity**: 0% to 95% RH, non-condensing
- **MTBF**: 50,000 hours
- **Dimensions**: (W x H x D): Sender/Receiver: (1) 4.3" x 1" x 3.2" (10cm x 26mm x 85mm)
- **Net Weight**: Sender/Receiver: 0.4 lbs (0.2 kg each)
- **Shipping Weight**: 3.0 lbs. (1.4 kg)
HDBaseT Extender for HDMI with Bi-Directional IR (IN/OUT) and POL

**Overview:**
- **HDBaseT Extender for HDMI** using one CAT-5e or CAT-6 cable up to 230 feet (70 meters).
- **Gefen’s implementation of the HDBaseT™ technology** to extend HDMI at resolutions up to 4K Ultra HD 60 Hz 4:2:0 and 4K DCI (Cinema), along with 7.1 channels of HBR (High Bit Rate) lossless digital audio.
- **Extension range at 1080p Full HD** is up to 230 feet (70 meters) using one CAT-6 cable or up to 198 feet (60 meters) using one CAT-5e.
- Provides 2-way IR extension between the Sender and the Receiver unit, allowing IR communications between the source and the viewing location.
- Gefen POL (Power Over Line) technology powers the Receiver unit using the same cable that extends the HDMI signal. This feature eliminates the need for an external power supply for the Receiver unit and simplifies installation.

**How It Works:**
- Connect the Sender unit to the Hi-Def source using an HDMI cable. Use another HDMI cable to connect the Receiver unit to the HDTV display.
- Connect a single CAT-6 cable up to 230 feet (70 meters) or CAT-5e cable up to 198 feet (60 meters) between the Sender and Receiver unit.
- Connect the included 24V DC power supply in to the Sender unit and plug the power supply to an available electrical outlet. Power to the Receiver unit is delivered from the Sender unit over the CAT-5e/6 cable using Gefen POL technology.
- To control the Hi-Def source from the display location, connect an IR Extender (Gefen part no. EXT-RMT-EXTIRC) to the Ext IR connector on the Receiver unit.
- Connect an IR emitter (Gefen part no. GTB-IREMIT) to the IR Out on the Receiver unit and attach the IR emitter to the IR sensor of the device being controlled.

**Features:**
- Extends 4K Ultra HD (3840 x 2160 @ 60Hz 4:2:0, or 30Hz, 4:4:4) and Bi-Directional IR up to 230 feet (70 meters) over a single CAT-5e or CAT-6 cable (8-bit color)
- Extends 4K Ultra HD (4096 x 2160 @ 24 or 30Hz 4:4:4) and Bi-Directional IR up to 130 feet (40 meters) over a single CAT-5e or CAT-6 cable.
- Extends HDMI at 1080p Full HD and Bi-Directional IR up to 230 feet (70 meters) over a single CAT-6 cable, or up to 198 feet (60 meters) over CAT-5e

**Specifications:**
- **Maximum Pixel Clock:** 300 MHz
- **Video Input Connector (Sender):** (1) HDMI Type A 19-pin, female, locking
- **Video Output Connector (Receiver):** (1) HDMI Type A 19-pin, female, locking
- **Link Connectors (Sender/Receiver):** (1) RJ-45, shielded
- **Power Input Connector:** (1) 24V DC, +5V, locking
- **Power Consumption:** 24W (max.)
- **Dimensions (W x H x D):** (Sender / Receiver): 4.3" x 1" x 3.2" (109mm x 26mm x 80mm)
- **Shipping Weight:** 4 lbs. (1.8 kg)

* Features and specifications are subject to change without notice. All trademarks and registered trademarks are properties of their respective owners. Copyright© 2015 Gefen LLC.
How It Works

Connect the Sender unit to a Hi-Def source using the included HDMI cable. Use another HDMI cable to connect the Receiver unit to a display. Connect a single CAT-5e or better cable between the Sender and Receiver unit. To control the source from the display location via RS-232, connect the included RS-232 cable (Gefen part no. EXT-RMT-BI232) to the RS-232 connector on the Receiver unit. Connect the included IR emitter (Gefen part no. GTB-IREMIT) to the IR Extender port of the Sender unit (such as the display) and connect the IR Extender type: EXT-RMT-EXTIRN. Connect the IR Extender port (Receiver) to the IR In connector on the Sender unit. Connect an IR emitter (Gefen part no. EXT-IREMIT) to the IR Out port on the Receiver unit and attach the IR emitter to the IR sensor of the device being controlled. To extend the RS-232 cable between the local and remote locations, connect the included male-to-female DB-9 cable from the Sender unit to an automation control device, and connect another DB-9 cable of the same type from the Receiver unit to the device to be controlled. Connect the included 24V DC power supply to the Sender unit and plug it into an available electrical outlet. Place the Receiver unit in a location from the Sender unit over the CAT-5e cable using Gefen POL technology. Power all associated equipment.

Note: Standard CAT-5e cable or CAT-6 may be acceptable depending on cable quality but is not the best choice. Care should always be given to keep these cables away from power lines and other sources of electromagnetic interference.

Specifications*
- Maximum Peak Clock: 300 MHz
- Maximum TMDS Clock: 336 MHz
- Video Input Connector (Sender): (1) HDMI Type A 4-pin, female, locking
- Video Input Connector (Receiver): (1) HDMI Type A 4-pin, female, locking
- Link Connector (Sender/Receiver): (1) 6.35 mm (1/4"), female
- IR Extender port (Receiver): (1) 2.5 mm mini-uniboot jack
- IR Extender type: EXT-RMT-EXTIRN
- IR Out port (Sender/Receiver): (1) 2.5 mm mini-uniboot jack
- Power LED: (1) bi-color: Blue/Amber
- Power Supply: (1) 24V DC, locking
- Power Consumption: 10W maximum
- Operating Temperature: 0°C to +50°C
- Operating Humidity: 10% to 90%, Relative Humidity, non-condensing
- Storage Temperature: -20°C to +60°C
- Storage Humidity: 40% to 90%, non-condensing
- MTBF: 50000 hours
- Dimensions (W x H x D): (Sender / Receiver): 4.3" x 1" x 3.2" (110mm x 26mm x 80mm)
- Weight (Sender/Receiver): 0.35 lbs. (0.2 kg)
- Weight (Shipping): 2.4 lbs. (1.2 kg)

* All trademarks and registered trademarks are properties of their respective owners.
Wireless Extender for HDMI 5 GHz Short Range
up to 33 feet (10 meters)

HDMI CABLE
IR Extender
Presentation Source with HDMI output
HDMI Display

The Wireless for HDMI 5 GHz SR (Short Range) Extender system sends high definition audio and video to any HDTV screen up to 33 feet (10 meters). It extends HDCP-compliant HDMI AV content from computers, game consoles, set-top boxes, Blu-ray players, and other AV sources to a remotely located display. HD resolutions up to 1080p full HD, 7.1 channels of LPCM digital audio, and 5.1 channels of Dolby® or DTS® formats are supported. The wireless system is comprised of a Sender and a Receiver unit. The small "Stick" Sender connects directly to an HDMI port, and can be powered either from a powered USB port or from the included power supply. It is ideal for high-definition AV extension in a conference room or home theater installation that requires occasional connection of portable devices such as a presentation laptop computer or a video camera. The Receiver unit connects to display with an HDMI input, using the supplied HDMI cable. It can be attached to a standard ½"-20 camera tripod mount, wall mounted using two keyhole slots, or be placed on a shelf. Thanks to its small, low-profile, and the included wireless IR Extender module, it can be hidden away behind the display or inside an equipment cabinet if needed. Up to eight Sender units can be accessed by the Receiver, one at a time, using its handheld remote control. While the Wireless for HDMI 5 GHz SR Extender system can transmit through obstacles and does not require line-of-sight placement of its transceivers, it is optimized for shorter distances that are typical of in-room use. For longer range extension, use the Gefen EXT-WHD-1080P-LR.

Features:
- Wireless extension of HDMI up to 1080p full HD, up to 7.1 channels of LPCM digital audio, and up to 5.1 channels of Dolby® or DTS® formats
- Transmits through obstacles – does not require line-of-sight
- HDMI Features Supported
  - 20-pin pass-through
  - HDCP pass-through
  - Up to 1080p
- Uncompressed High Definition AV from source to display
- Less than 1 frame latency
- AES: 128 Encryption
- Firmware update via Mini-USB port using Gefen Syner-G™ software
- Flexible mounting options: ¼"-20 thread, wall mounting, shelf placement
- Small and compact form factor – can be installed behind the TV
- Ideal for temporary connection of mobile devices, laptops, cameras, etc.
- Receiver unit:
  - HDMI Display
  - IR Extender module included for hidden installations
  - Small and compact form factor – can be installed behind the TV
  - Flexible mounting options: ¼"-20 thread, wall mounting, shelf placement
  - Handheld IR remote for easy setup and operation
  - Firmware update via Mini-USB port using Gefen Syner-G™ software
  - WHDI 1.0, FCC Part 15, IC, and ETSI-compliant
- Additional Sender units (EXT-WHD-1080P-SR-TX) available separately
- Receiver Unit:
  - EU model: 5.19 GHz, 5.230 GHz
  - US model: 5.19 GHz, 5.230 GHz, 5.755 GHz, 5.795 GHz
  - Maximum number of Senders to be linked: 8
  - Video Input Connectors (Sender): (1) HDMI Type A, 19-pin, female
  - Power Consumption (Receiver): 3W (max.) / 6W (max.)
  - Power Supply (Receiver): (1) 5V/2A DC with USB Type-A connector
  - Power Connector (Sender/Receiver): (1) USB Mini-B
  - Storage Temperature: +14 to +140 °F (-10 to +60 °C)
  - Storage Humidity: +5 to +90%, Relative Humidity, non-condensing
  - Dimensions (W x H x D):
    - Receiver Unit (including feet): 1.2" x 0.65" x 3.2" (30mm x 16mm x 80mm)
    - Receiver Unit (including power supply): 3.88" x 1.4" x 2.88" (95mm x 35mm x 75mm)
  - Range: Up to 33 feet
  - Net Unit Weight:
    - Receiver Unit: 0.3 lbs (0.15 kg)
    - Shipping Weight: 3.8 lbs (1.7 kg)

Specifications:
- Number & location of channels:
  - US model: 4. 5.19 GHz, 5.230 GHz, 5.755 GHz, 5.795 GHz
  - EU model: 2. 5.19 GHz, 5.230 GHz
  - Maximum number of Senders to be linked: 8
  - Video Input Connectors (Sender): (1) HDMI Type A, 19-pin, female
  - Power Consumption (Sender): 3W (max.) / 6W (max.)
  - Power Supply (Sender): (1) 5V/2A DC with USB Type-A connector
  - Power Connector (Sender/Receiver): (1) USB Mini-B
  - Storage Temperature: +14 to +140 °F (-10 to +60 °C)
  - Storage Humidity: +5 to +90%, Relative Humidity, non-condensing
  - Dimensions (W x H x D):
    - Sender Unit (including power supply): 3.88" x 1.4" x 2.88" (95mm x 35mm x 75mm)
  - Net Unit Weight:
    - Sender Unit: 0.6 lbs (0.3 kg)
    - Receiver Unit: 0.3 lbs (0.15 kg)
  - Shipping Weight: 3.8 lbs (1.7 kg)

Copyright© 2015 Gefen LLC
www.gefen.com

33/34
Wireless Extender for HDMI 5 GHz Long Range
up to 100 feet (30 meters)

The Wireless for HDMI 5 GHz LR (Long Range) Extender system sends high-definition audio and video to any HDMI display up to 100 feet (30 meters). It extends HDCP-compliant HDMI content from computers, game consoles, set-top boxes, Blu-ray players, and other AV sources to a remotely located display. HD resolutions up to 1080p Full HD, 7.1 channels of Dolby®-encoded audio, and 5.1 channels of DTS® formats are supported. This wireless extender comprises a Sender and a Receiver unit. Both units can be attached to a standard 1/4”-20 camera tripod mount, wall mounted, or be placed on a shelf. The small and low-profile Receiver unit includes a wired IR extender module, and can be hidden away behind a display or on equipment cabinet if needed. The Sender features two HDMI inputs and an HDMI output for connection to a local display. The end user can switch between the two HDMI sources by using the included handheld IR remote or by pressing the Input button on the Sender or the Receiver unit. The included IR emitter array can be connected to the Sender unit and attached to the front window of the two IR sources, allowing full control of the source unit from another room simply by pointing the IR remote at the Receiver unit. This wireless extender system is ideal for high-definition AV extension in a conference room, classroom, auditorium, home theater, and multiroom AV installations that feature multiple sources and two displays. Up to eight Sender units can be accessed by a Receiver, one at a time, using its handheld remote control. The Wireless for HDMI 5 GHz LR Extender system can transmit through walls and does not require line-of-sight placement of its transceivers.

Features:
- Wireless extension of HDMI up to 100 feet (30 meters)
- Supports resolutions up to 1080p Full HD, up to 7.1 channels of LPCM digital audio, and up to 5.1 channels of Dolby® and DTS® formats
- Transmits through obstacles - does not require line-of-sight placement of its transceivers.
- Long Range performance makes it ideal for multi-room use
- IR Back Channel for full control of the source unit
- Flexible mounting options: ¼”-20 thread, wall mounting, shelf placement
- Small and compact form factor – can be installed behind the TV
- Receiver unit:
  - 2 HDMI inputs
  - Local HDMI “Mirrored” Output
  - IR Output port and included Emitter Array for source control
  - Ideal for use with two sources in a fixed home theater type installation
  - Flexible mounting options: ¼”-20 thread, wall mounting, shelf placement
- Receiver unit:
  - IR Emitter module included for hidden installations
  - Small and compact form factor – can be installed behind the TV
  - Flexible mounting options: ¼”-20 thread, wall mounting, shelf placement
  - Handheld IR remote for easy setup and operation
- Firmware upgrade via mini-USB port using Gefen Syner-G™ software
- HDMI Source 1
- HDMI Source 2
- IR Emitter Array

Specifications:
- Number & location of channels:
  - US model: 4: 5.19 GHz, 5.230 GHz, 5.755 GHz, 5.795 GHz
  - EU model: 2: 5.19 GHz, 5.230 GHz
- Maximum number of Senders to be linked: 8
- Video Input Connectors (Sender): (2) HDMI Type A, 19-pin, female
- Video Output Connectors (Sender): (1) HDMI Type A, 19-pin, female
- Video Output Connectors (Receiver): (1) HDMI Type A, 19-pin, female
- Power Connector (Sender): (1) 3.5mm barrel-type DC jack
- Power Connector (Receiver): (1) USB Mini B
- Power Supply (Sender): (1) 5V/1A DC, with USB Type-A connector
- Power Supply (Receiver): (1) 5V/1A DC, with USB Type-A connector
- Power Consumption (Sender/Receiver): 5W max / 6W max
- Operating Temperature: -32° C to +104° F (-20° C to +40° C)
- Storage Temperature: -40° C to +85° C (-40° F to +185° F)
- Dimensions (W x H x D, including feet):
  - Receiver Unit: 7.2” x 1.3” x 3.9” (182mm x 33mm x 98mm)
  - Receiver Unit: 3.8” x 1.4” x 3.8” (95mm x 35mm x 95mm)
  - Net Unit Weight: (0.3 lbs (0.15 kg)
  - Shipping Weight: (0.8 lbs (0.36 kg)

Copyright© 2015 Gefen LLC
All trademarks and registered trademarks are the property of their respective owners.

Gefen, LLC
3860 Point West Drive
Canoga Park, CA 91303
Tel. (818) 772-9100   (800) 545-6900   Fax (818) 772-9120
www.gefen.com
Wireless Extender for HDMI 60 GHz

Wirelessly extend HDMI video at 1080p Full HD with high resolution lossless 7.1 channel digital audio up to 33 feet (10 meters).

- The GefenTV Wireless for HDMI 60 GHz extender system sends high definition audio and video to any HDTV display up to 33 feet (10 meters). It extends HDMI A/V content from computers, set-top boxes, and Blu-ray players to a remote HDCP-compliant Hi-Def display. This wireless product is comprised of small tabletop Sender and Receiver units. It supports resolutions up to 1080p Full HD, 3DTV, CEC, and 7.1-channels of High Bit Rate (HBR) lossless digital audio such as Dolby® TrueHD, DTS-HD Master Audio™, and LPCM digital audio streams up to 7.1 channels.
- The Wireless for HDMI 60 GHz is specifically designed to transmit within a room. Its signal will not penetrate through walls, facilitating interference-free operation of multiple units in adjacent venues and close proximity. Line-of-sight placement of transceivers, however, is not necessary. Thanks to its small form-factor, high performance, and near-zero latency, this product is ideal for high-definition A/V extension within a conference room or home theater installation.

How It Works

Connect the included HDMI cable from the Hi-Def source to the Sender unit. Connect the other included HDMI cable from the Receiver unit to the HDTV display. Connect the power supplies to both the Sender and Receiver units and to available electrical outlets. Power-on the source and the display. Press the power button on the Sender and Receiver units and make sure that they are on. A clear and vivid Hi-Def picture will appear on the screen and high resolution 7.1 channel audio will be played back through the audio system. CEC commands are also transferred seamlessly between connected HDMI components.

Features*

- Wireless extension of HDMI up to 33 feet (10 meters)
- Supports resolutions up to 1080p Full HD
- HDMI Features Supported
  - HDCP pass-through
  - 3DTV pass-through
  - CEC pass-through
  - Dolby® TrueHD, DTS-HD Master Audio™, and LPCM digital audio streams up to 7.1 channels
- Lip Sync
- Uncompressed High Definition A/V from source to display
- Near zero latency (less than one frame)
- Specifically designed for in-room operation only.

Specifications*

- Frequency Range: 60 GHz
- Video Input Connector (Sender): (1) HDMI Type A, 19-pin, female
- Video Output Connector (Receiver): (1) HDMI Type A, 19-pin, female
- USB Connector (Sender/Receiver): (1) Micro-B (firmware upgrade only)
- Link/Pair Button (Sender/Receiver): (1) Touch type push-button switch
- Power Button (Sender/Receiver): (1) Latching push-button switch
- Power Indicator (Sender/Receiver): (1) LED, blue
- Power Supply (Sender/Receiver): 5V/2A DC
- Power Consumption (Sender/Receiver): 10W max.
- Dimensions (Sender/Receiver, W x H x D): 3.4” x 1.2” x 2.8” (85mm x 31mm x 72mm)
- Shipping Weight: 2.0 lbs. (0.9 kg)

* Features and specifications are subject to change without notice. All trademarks and registered trademarks are the properties of their respective owners. Copyright © Gefen LLC.
The Gefen GTB-HD4K2K-142C routes one Ultra HD source to two 4K Ultra HD displays. This HDCP-compliant product has been specifically designed to support multiple layers of splitting/cascading for flawless performance in large video distribution and signage applications, supporting hundreds of displays. Resolutions supported include 4K Ultra HD (3840 x 2160 at 60 Hz, 4:2:0 color space), 4K DCI (4096 x 2160 at 24 and 30 Hz), 1080p Full HD, and 1920x1200 (WUXGA). Deep Color, 3D, and multichannel digital audio including 7.1 channels of LPCM and HBR (High Bit Rate) lossless formats are also passed through. This product features Fast Switching Technology (FST). FST is a Gefen firmware implementation for HDMI products. It eliminates the lengthy HDMI authentication process, and allows disconnecting, reconnecting, or powering down HDTV displays without any of these activities causing picture loss in other displays within the same distribution system. The choice between built-in and passed-through EDIDs, and the ability to configure the EDID for 2-channel or multichannel operation help customize your AV system to meet its operational requirements.

How It Works
The Ultra HD 4K Splitter is connected between the Ultra Hi-Def source and two Ultra HD displays. One or both of its outputs can alternatively be connected to another Gefen splitter to create a cascaded system that distributes HDMI to a larger number of displays. Each splitter should also be connected to an AC outlet using the included power supply. Once the source and the displays are turned on and power is applied to the splitter(s), the 4K picture will appear on all connected screens without any further set-up.

Features*
- Simultaneously displays an Ultra Hi-Def source on up to two Ultra HD displays
- Specifically designed to support 10 layers of splitting/cascading in large video distribution and signage applications, supporting hundreds of displays
- Supports resolutions up to 4K DCI (4096 x 2160 at 24 and 30 Hz), 4K Ultra HD (3840 x 2160 at 60Hz, 4:2:0 color space), 1080p Full HD, and 1920x1200 WUXGA
- Supports 12-bit Deep Color at 1080p
- 3Dv pass-through
- Lip Sync pass-through
- FST Technology speeds up HDCP authentication process
- EDID Management and Audio Mode selectors for rapid integration of source and displays
- Supports LPCM 7.1, Dolby® TrueHD, Dolby Digital® Plus, and DTS-HD Master Audio™
- Supports the use of DVI sources and DVI displays with HDMI-to-DVI adapters (not included)
- Field-upgradable firmware using Mini-USB port
- Locking Power Supply
- Surface-mountable

Specifications*
- Maximum Pixel Clock: 300 MHz
- HDMI Input Connector: (1) Type A 19-pin female, locking
- HDMI Output Connectors: (2) Type A 19-pin female, locking
- USB Port: (1) Mini-B
- Power Indicator: (1) LED, blue
- FST Switch: (1) 2-position slide-type
- Audio Switch: (1) 2-position slide-type
- EDID Switch: (1) 2-position slide-type
- DC Power Connector: (1) Locking type
- Locking Power Supply
- DC Power Connector: (1) Locking type
- Power Supply: 5V DC
- Power Consumption: 4 Watts (maximum)
- Operating Temperature: +32 to 104 °F (0 to +40 °C)
- Dimensions (W x H x D): 3.0" x 6.5" x 1.0" (76mm x 165mm x 26mm)
- Shipping Weight: 2.5 lbs. (1.1 kg)

* Features and specifications are subject to change without notice.

All trademarks and registered trademarks are the property of their respective owners.

Copyright © 2015 Gefen LLC

Gefen, LLC
20600 Nordhoff Street, Chatsworth CA 91311
Tel. (818) 772-9100   (800) 545-6900   Fax (818) 772-9120
www.gefen.com

GTB-HD4K2K-142C-BLK
The Gefen GTB-HD4K2K-144C routes one Ultra HD source to four Ultra HD displays. This HDCP-compliant product has been specifically designed to support multiple layers of splitting/cascading for flawless performance in large video distribution and signage applications, supporting hundreds of displays. Resolutions supported include 4K Ultra HD (3840 x 2160 at 24 and 30 Hz), 4K DCI (4096 x 2160 at 24 and 30 Hz), 1080p Full HD, and 1920x1200 (WUXGA). Deep Color, 3D, and multichannel digital audio including 7.1 channels of LPCM and HBR (High Bit Rate) lossless formats are also passed through. This product features Fast Switching Technology (FST), an innovative firmware implementation for HDMI products, that eliminates the lengthy HDMI authentication process, and allows disconnecting, reconnecting, or powering down HDTV displays without any of these activities causing picture loss in other displays within the same distribution system. The choice between built-in and passed-through EDIDs, and the ability to configure the EDID for 2-channel or multichannel operation helps customers to easily customize their AV system to meet its operational requirements.

The Gefen 1:4 Splitter is a high performance and capable choice for any small or large 4K video distribution system.

How It Works

The Ultra HD 4K Splitter is connected between the Ultra Hi-Def source and four Ultra HD displays. One or all of its outputs can alternatively be connected to another Gefen splitter to create a cascaded system that distributes HDMI to a larger number of displays. Each splitter should also be connected to an AC outlet using the included power supply. Once the source and the displays are turned on and power is applied to the splitter(s), the 4K picture will appear on all connected screens without any further set-up.
The Gefen GTB-HD4K2K-148C-145 routes one Ultra HD source to eight 4K Ultra HD displays. This HDCP-compliant product has been specifically designed to support 10 layers of splitting/cascading for flawless performance in large video distribution and signage applications, supporting hundreds of displays. Resolutions supported include 4K Ultra HD (3840 x 2160 at 60 Hz, 4:2:0 color space), 4K DCI (4096 x 2160 at 24 and 30 Hz), 1080p Full HD, and 1920x1200 (WXGA). Deep Color, 3D, and multichannel digital audio including 7.1 channels of LPCM and HBR (High Bit Rate) lossless formats are also passed through. This product features Fast Switching Technology (FST), a Gefen firmware implementation for HDMI products. It eliminates the lengthy HDMI authentication process, and allows disconnecting, reconnecting, or powering down HDMI displays without any of these activities causing picture loss in other displays within the same distribution system. The choice between built-in and passed-through EDIDs, and the ability to configure the EDID for 2-channel or multichannel operation help customize your AV system to meet its operational requirements. The Gefen 1:8 Splitter is the perfect choice for any small or large 4K video distribution system.

How It Works

The Ultra HD 4K Splitter is connected between the Ultra Hi-Def source and eight Ultra HD displays. One or all of its outputs can alternatively be connected to other Gefen splitters to create a cascaded system that distributes HDMI to a larger number of displays. Each splitter should also be connected to an AC outlet using the included power supply. Once the source and the displays are turned on and power is applied to the splitter(s), the 4K picture will appear on all connected screens without any further set-up.

Features*

- Simultaneously displays an Ultra Hi-Def source on up to eight Ultra HD displays
- Specifically designed to support 10 layers of splitting/cascading in large video distribution and signage applications, supporting hundreds of displays
- Supports resolutions up to 4K DCI (4096 x 2160 at 24 and 30 Hz), 4K Ultra HD (3840 x 2160 at 60Hz, 4:2:0 color space), 1080p Full HD, and 1920x1200 (WXGA)
- Supports 12-bit Deep Color at 1080p
- 3DTV pass-through
- Lip Sync pass-through
- FST Technology speeds up HDCP authentication process
- EDD Management and Audio Mode selections for rapid integration of source and display
- Supports LPCM 7.1, Dolby® TrueHD, Dolby Digital® Plus, and DTS-HD Master Audio™
- Supports the use of DVI sources and DVI displays with HDMI-to-DVI adapters (not included)
- Field-upgradeable firmware using Mini-USB port
- Locking Power Supply
- Surface-mountable

Specifications*

- Maximum Pixel Clock: 300 MHz
- HDMI Input Connector: (1) Type A 19-pin female, locking
- HDMI Output Connectors: (8) Type A 19-pin female, locking
- USB Port: (1) Micro-B
- Power Indicator: (1) LED, blue
- FST Switch: (1) 2-position slide-type
- Audio Switch: (1) 2-position slide-type
- EDD Switch: (1) 2-position slide-type
- DC Power Connector: (1) Locking type
- Power Supply: 5V DC
- Power Consumption: 13 Watts (max.)
- Operating Temperature: +32 to 104 °F (0 to +40 °C)
- Dimensions (W x H x D): 4.5” x 10.4” x 1.0” (115mm x 264mm x 26mm)
- Shipping Weight: 3 lbs. (1.4 kg)

All trademarks and registered trademarks are the property of their respective owners.

Copyright© 2015 Gefen LLC

Gefen, LLC
20600 Nordhoff Street, Chatsworth CA 91311
Tel. (818) 772-9100   (800) 545-6900   Fax (818) 772-9120
www.gefen.com

* Features and specifications are subject to change without notice.

Version A2
Scaler/Converters
Use an SDI source with an HDMI display or downstream equipment

The Gefen EXT-3G-HD-C converts audio and video from SDI to HDMI format, or resolutions up to 1080p Full HD. 3G-SDI, single link HD-SDI, and audio formats up to 8 channels of LPCM are supported. This product is fully compatible with the Gefen Syner-G™ software suite. The Gefen Syner-G™ is a powerful set of software tools specifically designed to help discover, configure, configure, manage, monitor, and upgrade Gefen products. The Gefen EXT-3G-HD-C’s compact enclosure, while light enough to be held in place using double sided Velcro® tape, features an ISO standard 1/4-20 attachment provision as well as a detachable surface-mounting bracket. This, along with a flexible power input circuitry capable of accepting a wide range of DC voltages and a locking power supply connector, makes the EXT-3G-HD-C ideal for cutting edge mobile A/V applications as well as high performance fixed installations.

How It Works

This product can be installed on camera gear via an industry-standard 1/4-20 attachment thread located on the bottom of the unit. It can also be surface-mounted using the included surface mounting bracket. The EXT-3G-HD-C is light and compact enough to be held in place using Velcro® if your particular installation does not allow for the two preferred methods of installation described above. Set the DIP switches as necessary. Connect an SDI cable between the input of the EXT-3G-HD-C and an SDI source. Connect the HDMI output of the Gefen converter to an HDMI display or other downstream equipment using a Gefen locking HDMI cable. Connect the included 12V DC power supply to the 3GSDI to HDMI Converter’s power supply jack and to an available electrical outlet. To remove the power supply plug from the unit, disengage the lock by pulling back on its plastic sleeve. The power LED indicator will glow in blue to indicate that the unit is powered on. The HDMI Out LED indicator will glow in green to indicate that an active HDMI sink is present. Use the USB Mini-B port with Gefen Syner-G™ software suite for performing firmware updates. See the user manual for details.

Features*

• Converts SDI to HDMI
• Input resolutions up to 1080p60
• Output resolutions up to 1080p Full HD
• HDMI (YCbCr 4:4:4) or DVI (RGB 4:4:4) output modes
• Supports 3G-SDI levels A and B, single link HD-SDI, and SD-SDI
• Supports up to 10 bit color on input and output
• Up to LPCM 7.1 audio support
• Field configurable via DIP switch settings
• Mini USB port for use with Gefen Syner-G™ for in-field firmware updates
• Wide power supply operating range (6V to 24V DC)
• Locking power supply connector
• 1/4-20 industry-standard camera gear attachment thread on bottom
• Surface-mountable using the included detachable bracket

Specifications*

• Maximum Pixel Clock: 150 MHz
• Maximum TMDS Clock: 225 MHz
• Video Input Connector: (1) SDI BNC-type, female
• Video Output Connector: (1) HDMI Type A 19-pin, female, locking
• USB Connector: (1) Mini-B
• Configuration Switches: (5) DIP-type
• HDMI Indicator: (1) LED, green
• Power Indicator: (1) LED, blue
• Power Supply Connector: (1) 3-pin, locking
• Power Supply: 12V DC nominal (6V to 24V DC operating range)
• Power Consumption: 2W maximum
• Operating Temperature: -20 to +122 °F (-20 to +50 °C)
• Operating Humidity: 5% to 90% RH, non-condensing
• Storage Temperature: -40 to 185 °F (-40 to +85 °C)
• Storage Humidity: 0% to 95% RH, non-condensing
• MTBF: 50000 hours
• Dimensions (excluding connectors, W x H x D): 2.9” x 1.2” x 2.3” (74mm x 30mm x 59mm)
• Net Unit Weight: 0.3 lbs (0.15 kg)
HDMI to 3GSDI Converter

Use an HDMI source with an SDI display or downstream equipment

The Gefen HD-3G-C converts audio and video from HDMI to 3G-SDI and single link HD-SDI. Resolutions up to 1080p Full HD and audio formats up to 8 channels of LPCM are supported. This product is fully compatible with the Gefen Syner-G®™ software suite. The Gefen Syner-G®™ is a powerful set of software tools specifically designed to help discover, configure/customize, manage, and upgrade Gefen products. The Gefen HD-3G-C™ compact enclosure, while light enough to be held in place using double-sided Velcro® tape, features an ISO standard 1/4-20 attachment provision as well as a detachable surface-mounting bracket. This, along with a flexible power input circuitry capable of accepting a wide range of DC voltages and a locking power supply connector, makes the HD-3G-C™ ideal for cutting edge mobile A/V applications as well as high performance fixed installations.

How It Works

This product can be installed on camera gear via an industry-standard 1/4-20 attachment thread located on the bottom of the unit. It can also be surface-mounted using the included surface-mounting bracket. The HD-3G-C™ is light and compact enough to be held in place using Velcro® if your particular installation does not allow for the two preferred methods of installation described above. Set the DIP switches as necessary. Connect an SDI cable between the output of the HD-3G-C™ and an SDI display or other downstream equipment. Connect the HDMI source to the HDMI input of the HD-3G-C™ using the included Locking HDMI cable. Connect the included 12V DC power supply to the 3GSDI to HDMI Converter's power supply jack and to an available electrical outlet. To remove the power supply plug from the unit, disengage the lock by pulling back on its plastic sleeve. The power LED indicator will glow in blue to indicate that the unit is powered on. The HDMI In LED indicator will glow in green to indicate that an active HDMI source is present.

NOTE: The extension HD-3G-C™ is not compatible with HDCP encoded HDMI content. If the input signal is HDCP-encrypted, there will be no SDI output.

Features*

• Converts HDMI to SDI
• Input resolutions up to 1920 x 1200 (WUXGA) and 1080p Full HD
• Output resolutions up to 1080p60
• Supports HDMI 12 bit color and SDI 10-bit color
• Supports Color Spaces: 4:4:4 (RGB and YCbCr) and 4:2:2 (YCbCr)
• Supports 3G-SDI Levels A and B
• Up to LPCM 7.1 audio support
• Field configurable via DIP switch settings or Gefen Syner-G™ software
• Gefen Syner-G™ simplifies in-field firmware updates and advanced EDID management
• Mini USB port for use with Gefen Syner-G™
• Wide power supply operating range (5V to 24V DC)
• Locking power supply connector
• Compact enclosure, while light enough to be held in place using double-sided Velcro® tape, features an ISO standard 1/4-20 attachment provision as well as a detachable surface-mounting bracket
• Surface-removable using the included detachable bracket

Specifications*

• Maximum Pixel Clock: 150 MHz
• Maximum NMOS Clock: 225 MHz
• Video Input Connector: (1) HDMI Type A 19-pin, female, locking
• Video Output Connector: (1) SDI BNC-type, female
• USB Connector: (1) Mini-B
• Configuration Switches: (3) DIP-type
• HDMI Indicator: (1) LED, green
• Power Indicator: (1) LED, blue
• Power Supply Connector: (1) 3-pin, locking
• Power Supply: 12V DC nominal (5V to 24V DC operating range)
• Power Consumption: 3W maximum
• Operating Temperature: 32 to +122 °F (0 to +50 °C)
• Operating Humidity: 5% to 95% RH, non-condensing
• Storage Temperature: -4 to +185 °F (-20 to +85 °C)
• Storage Humidity: 5% to 95% RH, non-condensing
• MTBF: 50000 hours
• Dimensions (excluding connectors, W x H x D): 2.9" x 1.2" x 2.3" (74mm x 30mm x 59mm)
• Net Unit Weight: 0.3 lbs (0.15 kg)

* Features and specifications are subject to change without notice. All trademarks and registered trademarks are the property of their respective owners.

Copyright © 2014 Gefen LLC
Gefen, LLC
20600 Nordhoff Street, Chatsworth CA 91311
Tel. (818) 772-9100   (800) 545-6900   Fax (818) 772-9120
www.gefen.com
**HDMI & VGA to 3GSDI Scaler/Converter**

Switch video and audio from an HDMI and a VGA source, scale the picture, and output it to an SDI device.

The Gefen HDVGA-3G-SC scales and converts video from an HDMI or a VGA source to SDI formats, including 3G-SDI and single link HD-SDI. It can also embed HDMI audio or analog L/R audio into the SDI stream. Video can be scaled up to 1080p Full HD. An intuitive and comprehensive on-screen display (OSD) menu allows easy set-up and control. This product can be configured and updated using the Gefen Syner-G™ software suite. The Gefen Syner-G™ is a powerful set of tools specifically designed to help discover, configure, manage, monitor, and upgrade Gefen products. Wide power supply operating range of 6V to 24V DC offers installation flexibility for mobile use, in complex studio environments with a common power supply, and with remotely located power sources. A locking power supply connector, small footprint, and a surface-mountable enclosure facilitate easy and secure installation.

**How It Works**

Use the included HDMI and VGA cables to connect an HDMI source to the HDMI input and/or a VGA source to the VGA input. If you will be embedding analog L/R audio into the SDI stream, connect the included 3.5mm mini-stereo cable from the source to the L/R audio input. Connect an SDI display or other downstream equipment to the BNC video connector output. Connect the included 12V DC power supply to the unit and to an available electrical outlet. The power LED will glow in blue once the power supply is plugged in. Once the unit is powered-on, the HDMI and VGA buttons can be used to select the desired input. Once an input is selected, the corresponding LED will glow in green. To bring up the On-Screen Display (OSD), press the Menu button. Use the Up and Down (down) buttons to navigate through the various functions of the OSD.

**Features**

- Converts and scales HDMI and VGA and L/R analog audio to SDI
- Input resolutions up to 1920 x 1200 (WUXGA) and 1080p60
- Output resolutions up to 1080p60
- On-screen display (OSD) menu allows easy set-up and control
- Aspect Ratio Control: Full Screen, Panoramic, Letter/Pillar, Extract/Crop
- Test Pattern Generator for quick system configuration
- Embeds 2-channel analog stereo audio in SDI signal (VGA Input only)
- Up to LPCM 7.1 audio support (HDMI input only)
- Gefen Syner-G™ simplifies in-field firmware updates and advanced EDID management including custom input timings
- USB port for use with Gefen Syner-G™
- Wide power supply operating range (6V to 24V DC)
- Locking power supply connector
- Surface-mountable

**Specifications**

- Maximum Pixel Clock - HDMI and VGA Inputs: 165 MHz
- Maximum Pixel Clock – SDI Output: 150 MHz
- Maximum TMDS Clock: 225 MHz
- Video Input Connectors: (1) HDMI: Type A 19-pin, female, locking (1) VGA: HD-15, female
- Audio Input Connector: (1) 3.5mm mini-stereo jack
- Video Output Connector: (1) SDI, BNC-type, female
- USB Connector: (1) Mini-B
- Input Select/Menu/Navigation Switches: (3) tact-type
- HDMI Indicator: (1) LED, green
- VGA Indicator: (1) LED, green
- Power Indicator: (1) LED, blue
- Power Supply Connector: (1) 3-pin, locking
- Power Supply: 12V DC nominal (6V to 24V DC operating range)
- Power Consumption: 5W maximum
- Operating Temperature: +32 to +122 °F (0 to +50 °C)
- Operating Humidity: 5% to 90% RH, non-condensing
- Storage Temperature: -4 to +185 °F (-20 to +85 °C)
- Storage Humidity: 0% to 95% RH, non-condensing
- MTBF: 50000 hours
- Dimensions (excluding connectors, W x H x D): 5.6” x 1.2” x 3.7” (141mm x 30mm x 93mm)
- Net Unit Weight: 0.5 lbs (0.23 kg)

*This product has been specifically designed for use with the Gefen Syner-G™ Software Suite, available for download at www.gefen.com

In addition to all the configuration settings that are available from the On-Screen Display, the Gefen Syner-G™ simplifies firmware updates and provides the ability to configure the scaler/converter for custom setup requirements.

**Features and specifications are subject to change without notice. All trademarks and registered trademarks are the property of their respective owners. Copyright© 2014 Gefen LLC.**
Scale and convert video from a VGA source for use with a DVI display.

The Gefen EXT-VGA-DVI-SC scales and converts video from a VGA source to a DVI output. Video can be scaled up to 1080p Full HD and 1920 x 1200 (WUXGA). An intuitive and comprehensive on-screen display (OSD) menu allows easy set-up and control. This product can be configured and updated using the Gefen Syner-G™ software suite. Wide power supply operating range of 6V to 24V DC offers installation flexibility for mobile use, in complex studio systems with a common power supply, and with remotely located power sources. A locking power supply connector, small footprint, and a surface-mountable enclosure facilitate easy and secure installation.

How It Works

Use the included VGA cable to connect a VGA source to the VGA input. Use a DVI cable to connect a DVI display to the DVI output. Connect the included 12V DC power supply to the unit and to an available electrical outlet. The power LED will glow in blue once the power supply is plugged in. Once the unit is connected, powered on, and displaying video, press the Menu button to bring up the On-Screen Display (OSD). The Up and Down (down) buttons are used to navigate through the various functions of the OSD.

Features*

- Converts and scales VGA to DVI
- Input resolutions up to 1920 x 1200 (WUXGA)
- Output resolutions up to 1088p60 and 1920 x 1200 (WUXGA)
- On-screen display (OSD) menu allows easy set-up and control
- Aspect Ratio Control: Full Screen, Panoramic, Letterbox, Extract/Crop
- Test Pattern Generator for quick system configuration
- Gefen Syner-G™ simplifies in-field firmware updates and advanced EDID management including custom input timings
- USB port for use with Gefen Syner-G™
- Wide power supply operating range (6V to 24V DC)
- Locking power supply connector
- Surface mountable

Specifications*

- Maximum Pixel Clock: 165 MHz
- Maximum TMDS Clock: 165 MHz
- Video Input Connector: (1) VGA HD-15, female
- Video Output Connectors: (1) DVI-I, 29-pin, female (digital only)
- USB Connector: (1) Mini-B
- Menu/Navigation Switches: (3) tact-type
- Power Indicator: (1) LED, blue
- Power Supply Connector: (1) 3-pin, locking
- Power Supply: 12V DC nominal (6V to 24V DC operating range)
- Power Consumption: 2W maximum
- Operating Temperature: -32 to +122 °F (0 to +50 °C)
- Operating Humidity: 5% to 95% RH, non-condensing
- Storage Temperature: -4 to +185 °F (-20 to +85 °C)
- Storage Humidity: 0% to 95% RH, non-condensing
- MTBF: 50000 hours
- Dimensions (excluding connectors, W x H x D): 4.9” x 1” x 3.2” (123mm x 26mm x 82mm)
- Unit Weight: 0.4 lbs. (0.2kg)

---

In addition to all the configuration settings that are available from the On Screen Display, the Gefen Syner-G™ simplifies in-field firmware updates and provides the ability to configure the scaler/converter for custom input timings.

This product has been specifically designed for use with the Gefen Syner-G™ Software Suite, available for download at www.gefen.com.
Scale and convert video and audio from a VGA source for use with an HDMI Display

The Gefen EXT-VGAA-HD-SC scales and converts video from a VGA source to digital video from an HDMI output. It can also embed analog L/R audio into HDMI. Video can be scaled up to 1080p Full HD and 1920 x 1200 (WUXGA). An intuitive and comprehensive on-screen display (OSD) menu allows easy set-up and control. This product can be configured and updated using the Gefen Syner-G™ software suite. The Gefen Syner-G™ is a powerful set of software tools specifically designed to help discover, configure/customize, manage, monitor, and upgrade Gefen products.

Wide power supply operating range of 6V to 24V DC offers installation flexibility for mobile use, in complex studio systems with a common power supply, and with remotely located power sources. A locking power supply connector, small footprint, and a surface-mountable enclosure facilitate easy and secure installation.

How It Works
Use the included VGA cable to connect a VGA source to the VGA input. Connect the included 3.5mm mini-stereo cable from the source to the L/R audio input. Use a Gefen locking HDMI cable to connect a display to the HDMI output. Connect the included 12V DC power supply to the unit and to an available electrical outlet.

The power LED will glow in blue once the power supply is plugged in. Once the unit is connected, powered on, and displaying video, press the Menu button to bring up the On-Screen Display (OSD). The Up and Dn (down) buttons are used to navigate through the various functions of the OSD.

Specifications*
- **Maximum Pixel Clock:** 165 MHz
- **Maximum TMDS Clock:** 225 MHz
- **Video Input Connector:** (1) VGA HD-15, female
- **Video Output Connector:** (1) HDMI Type A 19-pin, female, locking
- **Audio Input Connector:** (1) 3.5mm mini-stereo jack
- **USB Connector:** (1) Mini-B
- **Menu/Navigation Switches:** (3) tact-type
- **Power Indicator:** (1) LED, blue
- **Power Supply Connector:** (1) 3-pin, locking
- **Power Supply:** 12V DC nominal (6V to 24V DC operating range)
- **Power Consumption:** 2.6W maximum
- **Operating Temperature:** +32 to +122 °F (0 to +50 °C)
- **Operating Humidity:** 5% to 90% RH, non-condensing
- **Storage Temperature:** -4 to +185 °F (-20 to +85 °C)
- **Storage Humidity:** 0% to 95% RH, non-condensing
- **MTBF:** 50000 hours
- **Dimensions (excluding connectors, W x H x D):** 4.9” x 1” x 3.2” (123mm x 26mm x 82mm)
- **Net Unit Weight:** 0.4 lbs. (0.2kg)

*Features* and specifications are subject to change without notice.

All trademarks and registered trademarks are the property of their respective owners.

Copyright © 2014 Gefen LLC

VER A1

Gefen, LLC
20600 Nordhoff Street, Chatsworth CA 91311
Tel. (818) 772-9100   (800) 545-6900   Fax (818) 772-9120

www.gefen.com

This product has been specifically designed for use with the Gefen Syner-G™ Software Suite, available for download at www.gefen.com.

In addition to all the configuration settings that are available from the On Screen Display, the Gefen Syner-G™ simplifies in-field firmware updates and provides the ability to customize the scaler/converter for custom input timings.
Multi-Format Processor
**How It Works**

If the product is placed on a shelf, attach the included rubber feet to the bottom of the unit. If the unit is to be installed in a 19" rack, use the Gefen EXT-RACK-1U-GRY rack tray (available separately). Attach the EXT-MFP to the rack tray using the two machine screws provided. It can also be mounted on a surface using the L-bracket provided. The following ports are available on the EXT-MFP: HDMI, 3.5mm, DisplayPort, VGA, and Composite Video. Connect an MFP to the RS-232 serial port to an automation control device. Connect up to four audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution. Connect up to two digital audio sources to TOSLINK® Optical and S/PDIF Coaxial inputs, using high quality cables specific to each format and resolution.
Multiview Switcher
How It Works

This product can be placed on a shelf or mounted in a standard 19-inch rack. Connect DVI cables output, USB, L/R audio output, and microphone input from up to four computers to DVI-D, USB Host, L/R in, and Mic ports for Source 1 through 4 on the back panel of EXT-DVIK-MV-41. Connect up to two DVI displays to the Video A DVI-D and Video B DVI-D Outputs. Connect a pair of headphones or powered speakers to the L/R Out audio output. Connect a mono microphone to the Mic jack. Connect a keyboard and a mouse to the Workstation USB ports on the front of the switcher. If rack-mounting the unit, securely connect the Chassis Ground Connection: (1) machine screw, on back panel. Front Panel Controls: (10) tact-type, blue backlight, (6) tact-type, six action LED indicators.

Features*

• Dual Screen Workstation Set-up: Full Screen and Multiview

• A Multiview Monitor, Full Screen, Quad-View, PIP (Picture-in-picture), and P2P (Picture-And-Picture)

• Input and Output resolutions up to 1920 x 1200 (WUXGA) and 1080p Full HD

• HDCP 1.4 Compliant

• Controlled by front panel, keyboard/mouse, and RS-232.

• Comprehensive and easy-to-use On Screen Display.

• Supports cascading of up to 8 units to create a 32 computer system controlled from one keyboard/mouse workstation.

• Firmware updates via USB port using the Gefen Syner-G™ software.

• Locking power supply connector

• Rack-mountable using the included brackets

Specifications*

• Maximum Pixel Clock: 165 MHz

• Maximum TMDS Clock: 225 MHz

• Video Input Connectors: (4) DVI-D, 29-pin, female (digital-only)

• Video Output Connectors: (2) DVI-D, 29-pin, female (digital-only)

• USB Connections

Front Panel: (2) Type A, 5V DC at 1A maximum shared current

Back Panel: (4) Type B

• Microphone Input: (1) 3.5mm mini-mono jack

• Microphone Outputs: (4) 3.5mm mini-stereo picks

• USB Audio Inputs: (4) 3.5mm mini-stereo picks

• USB Audio Outputs: (4) 3.5mm mini-stereo picks

• RS-232 Input Port: (1) DB-9, male

• RS-232 Output Port: (1) DB-9, female

• Super PiVOT Switch: (1) toggle, on basic panel

• Chassis Ground Connection: (1) machine screw, on basic panel

• Front Panel Controls: (12) toggle switches, blue backlight, (6) LED type

• Power Indicator: (1) LED, blue

• Video B Indicators: (4) LEDs, blue

• Audio Indicator: (4) LEDs, blue

• USB Indicators: (4) LEDs, blue

• Power Supply Indicator: (1) P5, glowing

• Power Supply: 12V DC

• Power Consumption: 40W maximum

• Operating Temperature: -32 °C to +50 °C

• Operating Humidity: 5% to 95% RH, non-condensing

• Storage Temperature: -40 °C to +50 °C

• Storage Humidity: 5% to 95% RH, non-condensing

• MTBF: 50000 hours

• Dimensions (excluding connectors): 17.2” x 1.2” x 7.9” (437 mm x 30 mm x 200 mm)

• Net Unit Weight: 3.7 lbs (1.6 kg)

* Features and specifications are subject to change without notice.
Full Product Catalog

Digital Extenders

DVI

DVI and DVI KVM over CAT-5 / CAT-6

DVI and DVI KVM over Fiber Optic

HDMI

Wireless

HDMI over CAT-5

HDMI over Fiber Optic

USB and Audio Extenders over Fiber Optic and CAT-5 / CAT-6

DisplayPort over Fiber Optic and CAT-7

DisplayPort over Fiber Optic and CAT-7

Detectives and Boosters

EDID Detectives

Boosters

Splitters, Converters and Scalers

DVI Splitters

HDMI Splitters

Converters and Scalers

Cables

DVI Fiber Optic Integrated Cables

HDMI Extreme Integrated Fiber Optic Cables

DisplayPort Extreme Fiber Optic Cables

Dual-Link DVI Cables

Dual-Link DVI DLX Cables

High-Speed HDMI Cables with Ethernet and Mono•LOK™

DVI to HDMI Cables

VGA and other Extenders

Adapters and Couplers

Accessories

IR Extenders, Emitters and Rack Trays

Gefen Digital Signage

Gefen TV Product Line

Splitters, Switchers and Matrixes for HDMI - 4K Ultra HD

HD Signal Generator

4K Ultra HD HDBaseT™ Extenders

USB 2.0 Extenders

Scalers

Daisy Chain Extender for HDMI

Gefen Pro Product Line

Matrixes

Extenders

Video Wall Controllers, Multiview Switchers, Seamless Switchers, Seamless Matrix

DVI and DisplayPort Switchers and Matrixes

Single-Link DVI

Dual-Link DVI

DisplayPort

Need help finding a product? Call the Gefen Sales Team at (800) 545-6900, or visit... www.gefen.com
## GefenToolBox® Product Line

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTB-HD4K2K-142C-BLK</td>
<td>1:2 Splitter for HDMI 4Kx2K with Cascading Capability</td>
<td></td>
</tr>
<tr>
<td>GTB-HD4K2K-144C-BLK</td>
<td>1:4 Splitter for HDMI 4Kx2K with Cascading Capability</td>
<td></td>
</tr>
<tr>
<td>GTB-HD4K2K-148C-BLK</td>
<td>1:8 Splitter for HDMI 4Kx2K with Cascading Capability</td>
<td></td>
</tr>
<tr>
<td>GTB-HD4K2K-441-BLK</td>
<td>4x1 Switcher for HDMI 4Kx2K</td>
<td></td>
</tr>
<tr>
<td>GTB-HD4K2K-442-BLK</td>
<td>4x2 Matrix for HDMI 4Kx2K</td>
<td></td>
</tr>
<tr>
<td>GTB-HD4K2K-444-BLK</td>
<td>4x4 Matrix for HDMI 4Kx2K</td>
<td></td>
</tr>
<tr>
<td>GTB-HD4K2K-642-BLK</td>
<td>6x2 Matrix for HDMI 4Kx2K</td>
<td></td>
</tr>
<tr>
<td>GTB-HD4K2K-848-BLK</td>
<td>4K Ultra HD 8x8 Matrix for HDMI</td>
<td></td>
</tr>
<tr>
<td>GTB-HD-SIGGEN</td>
<td>HD Pattern Signal Generator</td>
<td></td>
</tr>
<tr>
<td>GTB-UHD2IRS-ELRPOL-BLK</td>
<td>4K Ultra HD ELR-POL Extender w/ RS-232 and 2-way IR</td>
<td></td>
</tr>
<tr>
<td>GTB-HDBT-POL-BLK</td>
<td>Extender for HDMI with POL</td>
<td></td>
</tr>
<tr>
<td>GTB-USB2.0-4LR-BLK</td>
<td>USB 2.0 LR 4-Port Extender (Black)</td>
<td></td>
</tr>
<tr>
<td>GTB-HD-1080PS-BLK</td>
<td>High Definition 1080p Scaler - Black</td>
<td></td>
</tr>
<tr>
<td>GTB-HD-DCR-BLK</td>
<td>Daisy Chain HD System - Receiver Unit</td>
<td></td>
</tr>
<tr>
<td>GTB-HD-DCRP-BLK</td>
<td>Daisy Chain HD System - Splitter Unit</td>
<td></td>
</tr>
<tr>
<td>GTB-HD-DCS-BLK</td>
<td>Daisy Chain HD System - Sender Unit</td>
<td></td>
</tr>
</tbody>
</table>

## GefenTV® Product Line

### Extenders for HDMI

- **GWTV-WHD-60G**
  - Wireless for HDMI 60 GHz Extender System
  - Sends high definition audio and video to any HDTV display up to 33 feet (10 meters)

### Converters, Scalers and Switchers

- **GTV-DVIDL-2-MDP**
  - Dual Link DVI to Mini DP Converter
  - View any PC or Mac with audio support on a display using mini DisplayPort
- **GTV-HDMI-2-COMPSVIDSN**
  - HDMI to Composite / S-Video Scaler
  - Transforms HDMI video into Composite or S-Video
- **GTV-COMPSVID-2-HDMIS**
  - Composite to HDMI Scaler
  - Transforms composite or S-Video into scaled HDMI video
- **GTV-HDMI-2-HDMIAUD**
  - HDMI to HDMI Plus Audio Converter
  - Converts Hi-Def source using HDMI with HDCP and outputs to an HDTV display with up to 8 channels of LPCM audio

### Audio Splitters, Switchers, and Converters

- **GTV-DIGAUD-2-AAUD**
  - Digital Audio to Analog Adapter
  - Converts digital audio to L/R analog audio
- **GTV-AAUD-2-DIGAUD**
  - Analog to Digital Audio Adapter
  - Takes analog audio and converts it to digital via TOSLINK / SPDIF
- **GTV-DD-2-AA**
  - Digital Audio Decoder
  - Converts digital audio to analog audio with support for Dolby to create surround sound audio
- **GTV-DIGAUDT-141**
  - Digital Audio Translator
  - Converts coaxial and optical digital audio formats
- **GTV-HDMI-2-HDMIAUD**
  - HDMI to HDMI Plus Audio Converter
  - Converts Hi-Def source using HDMI with HDCP and outputs to an HDTV display with up to 8 channels of LPCM audio

## GefenPRO® Product Line

### Matrixes

- **GEF-DVIKVM-848DL-PB**
  - 8x8 DVI KVM Dual Link Matrix w/ Push Button Control
  - Routes DVI, USB, and Audio from eight computers to eight Hi-Def workstations
- **GEF-HDFST-MOD-16416-HD**
  - 16 x 16 Modular Matrix for HDMI w/ HDCP - HDMI In/Out
- **GEF-HDFST-MOD-32432-HD**
  - 32 x 32 Modular Matrix for HDMI w/ HDCP - HDMI In/Out

### Extenders

- **GEF-DVI-FM1500**
  - DVI FM1500 Optical DVI Extender with Recordable EDID
  - Extends a DVI source up to 3280 feet (1000 meters) using single-strand SC-terminated fiber optic cable
- **GEF-DVI-FM2000**
  - DVI FM 2000 Extender (Dual Link)
  - Extends a DVI source with HDCP to a single or dual-link display up to 1000 feet away at resolutions reaching 3840 x 2400