

## GEFEN GEN 2.0 AV OVER IP

# EXT-UHDKA-LANS-TX EXT-UHDKA-LANS-RX

**EXTEND AND DISTRIBUTE 4K  
HDMI W/ HDR, USB, RS-232,  
IR, AND 2-WAY AUDIO OVER A  
LOCAL AREA NETWORK**



Gefen's AV over IP solutions continue their tradition of providing high performance, scalable, expandable, and secure AV routing and distribution over a standard Gigabit Local Area Network. The Gen 2.0 KVM products offer enhanced performance, features, and functionality such as 4K Ultra HD with HDR support, built-in scalars, video-wall control, independent USB, RS-232, IR, and audio routing\*\*, and backward-compatibility with our first generation products.

The EXT-UHDKA-LANS-TX & RX feature maximum input resolution of 4K 60 Hz 4:2:0, and maximum output resolution of 4K 30 Hz 4:4:4. HDCP 2.2 and 1.4 are also supported. 7.1 channels of HBR (High Bit Rate) lossless and LPCM digital audio can pass through the system as well.

The Sender unit features a video output for local monitoring of the source. USB, RS-232 2-way IR, and audio can be routed independently\*\* between any Sender and Receiver unit, allowing end-users to control any of the sources and the displays within their network. With this greatly expanded array of new cutting-edge features and performance, the new Gefen AV over IP products fully address the ever-growing needs of systems integrators.

The Receiver features a built-in scaler to help optimize the image for a variety of displays and different viewing environments. It also includes a powerful video wall controller that accommodates any screen configuration up to 16x16 and provides great flexibility in sizing and manipulating live and signage content in demanding installations. Digital and analog audio break-out de-embeds audio from the video and sends it to a separate audio system, enhancing the impact of presentations.

The Receiver's integrated USB hub with two USB 2.0 and two USB 1.1 ports accommodates touch panels, keyboard and mouse, and a variety of supported devices. This feature, along with analog audio inputs and outputs, make these products perfect to use in collaborative and interactive installations. To ensure maximum versatility and compatibility, the audio outputs on the Receiver units are compatible with both headphones and line level devices such as powered speakers.

The new KM Emulation feature facilitates real-time, simultaneous Keyboard and Mouse control of each source from all connected workstations, eliminating the inherent limitations of earlier systems. Power-over-Ethernet allows the Sender and Receiver units to be powered through a standard PoE-enabled IP network switch, without the need for external power supplies. When used in conjunction with the EXT-CU-LAN Matrix Controller, system configuration is automated and quick. Its Mass-Firmware-Update feature keeps firmware for the entire system up-to-date without the need to access and upgrade each unit separately. Enhanced network security by separating the control and AV networks is also made possible with the EXT-CU-LAN. Other control options include front panel buttons, web server interface, Telnet, UDP, and the Gefen Keyboard Switching Controller software (available for download at [www.gefen.com](http://www.gefen.com)). Gefen's Enhanced API provides added functionality and facilitates use with third party controllers. The Gefen Gen 2.0 AV over IP products have been specifically designed for use with the Gefen Syner-G™ software, available for download at [www.gefen.com](http://www.gefen.com). The Gefen Syner-G™ Discovery

and Show-Me features greatly simplify initial IP configuration. Each cable run from a Sender to a Receiver or from a Sender or Receiver to the network switch can be up to 100 meters (330 feet). A built-in 2-port Gigabit switch on the Receiver allows daisy-chaining of additional Receivers or other IP-enabled devices. In applications such as digital signage, where there is a need to replicate content on multiple displays, the ability to cascade Receivers removes the requirement for each cable to be run directly to the main network switch, thereby extending the range of these units far beyond the limits of a point-to-point video distribution system. The Sender and Receiver can be used as KVM extenders in a one-to-one system, or as nodes in a virtual matrix environment where any source can be routed to any or all displays, supporting up to 39,900 Senders and a combination of over 65,000 units. Applications include high performance AV and signage systems in sports bars, clubs, restaurants, board and huddle rooms, command and control centers, museums, airports, classrooms, auditoriums, hotels, and retail establishments. The Sender features a 1U tall and half-rack-width enclosure, perfect for rack-mounting using the Gefen EXT-RACK-1U-GRY rack tray (available separately). It can also be surface-mounted or be placed on a shelf. The low-profile Receiver unit is also rack-mountable using the rack tray, and it can be surface-mounted or placed on a shelf. When used with a Gefen EXT-RMT-EXTIRN IR Extender module, it can be hidden away behind a display or inside the equipment closet.

\*\* Pending features to be activated via an upcoming firmware update

# FEATURES\*

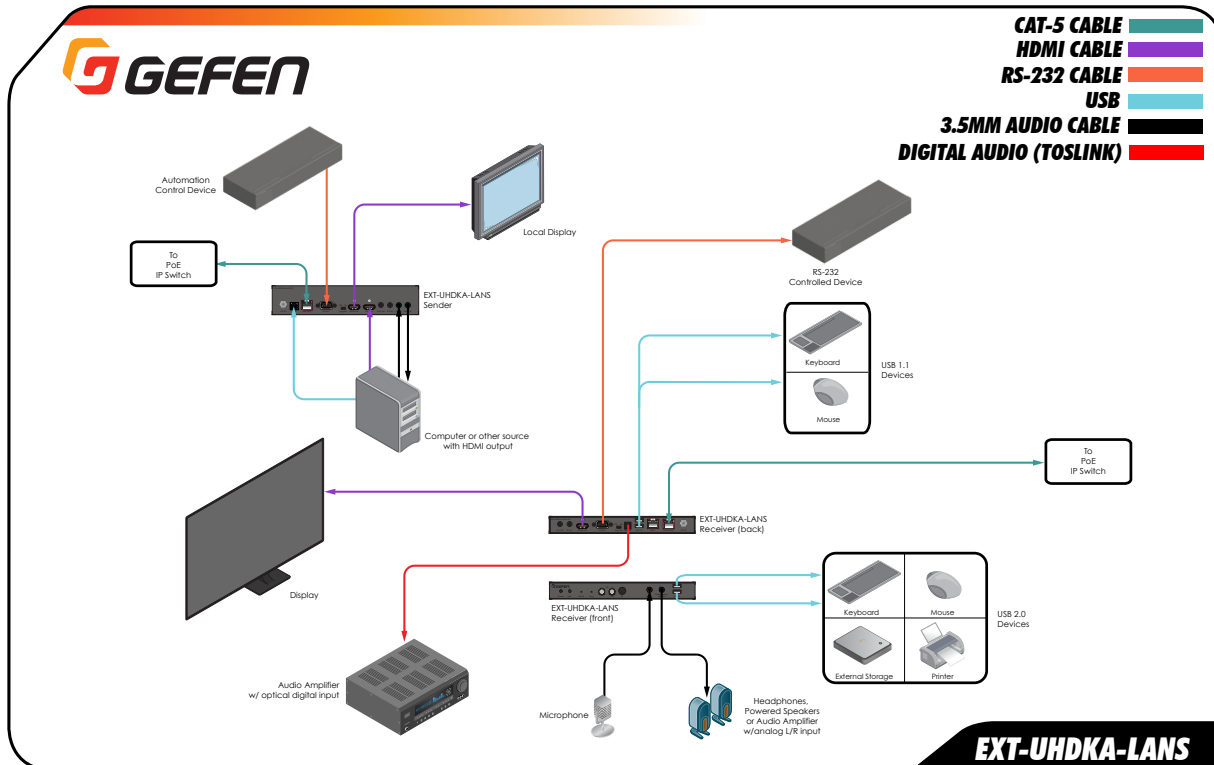
- Extends HDMI, USB, RS-232, 2-way analog audio, and IR, using a Gigabit Local Area Network
- Independent video, USB, RS-232, IR, and audio routing\*\*
- Backward-compatible with first generation Gefen AV over IP products
- Supports input resolutions up to 4K 60Hz 4:2:0
- Supports output resolutions up to 4K 30Hz 4:4:4
- Supported HDMI Features:
  - HDR
  - HDCP 2.2 and 1.4
  - Deep Color
  - Lip-Sync
  - Uncompressed LPCM digital audio up to 7.1 channels
  - Up to 7.1 channels of HBR (High Bit Rate) digital audio including Dolby Atmos®, Dolby® TrueHD, DTS:X™, and DTS-HD Master Audio™
- When used with Gefen DVI-to-HDMI cables (not included), supports the use of DVI sources and DVI displays up to 1080p Full HD and 1920x1200 (WUXGA)
- Video output on Sender unit for local monitoring of the source
- KM Emulation feature facilitates real-time, simultaneous Keyboard and Mouse control of each source from all connected workstations
- Integrated scaler ensures maximum compatibility and best possible viewing experience with different contents and displays
- Built-in video wall controller accommodates any number of rows and columns up to 16x16
- Built-in Audio De-Embedder on Receiver breaks out 2 channel analog, 2 channel PCM, and up to 5.1 channels of Bitstream audio from the HDMI signal, allowing the audio content to be sent to external amplifiers and music distribution systems for added impact
- Mass-Firmware-Update, quick and automated configuration, and enhanced control capabilities and system security when used with the Gefen EXT-CU-LAN Matrix Controller
- Enhanced API for added functionality with third-party control systems
- Built-in web interface, Telnet, and UDP
- Compatible with the Gefen Keyboard Switching Controller software, available for download at [www.gefen.com](http://www.gefen.com)

- Supports 39,900 Senders and a combination of over 65,000 Sender and Receiver units, depending on the network bandwidth and number of ports on your network switch
- Two USB 2.0 ports with data rates up to 480 Mbps and backward-compatibility with USB 1.1
- Two USB 1.1 ports with KM Emulation, for use with Human Interface Devices (H.I.D.)
- 802.3af standard Power-over-Ethernet allows the Sender and Receiver units to be powered through a standard PoE-enabled IP network switch, without the need for external power supplies
- Two-port Gigabit Ethernet switch built into the Receiver unit
- Mode switch on Sender for sharpness or motion-optimization of image
- Field-updatable firmware via EXT-CU-LAN controller or the built-in web server interface
- Locking power supply connectors
- Half-rack width Sender and Receiver enclosures are rack-mountable using EXT-RACK-1U-GRY
- Sender and Receiver can also be surface-mounted using the included L-brackets
- Low profile Receiver enclosure features an IR Extender port and can be hidden away behind the display

- RS-232 port (Sender): (1) DB-9, female
- RS-232 port (Receiver): (1) DB-9, male
- IR Sensor (Receiver): (1) Located on front panel
- IR In/Ext (Sender/Receiver): (1) 3.5mm mini-stereo jack
- IR Out (Sender/Receiver): (1) 3.5mm mini-mono jack
- IR Extender type: EXT-RMT-EXTIRN
- Ethernet port (Sender): (1) RJ-45, shielded, PoE
- Ethernet ports (Receiver): (2) RJ-45, shielded, one with PoE
- Channel Up/USB-Request button (Receiver): (1) tact-type
- Channel Down button (Receiver): (1) tact-type
- Mode button (Sender): (1) tact-type, recessed
- Reset button (Sender/Receiver): (1) tact-type, recessed
- Program button (Sender/Receiver): (1) tact-type, recessed
- Program Select switch (Sender/Receiver): (1) slide-type, recessed
- Link Indicator (Sender/Receiver): (1) LED, green
- Power Indicator (Sender/Receiver): (1) LED, blue
- Power Supply jack (Sender/Receiver): 5V DC, 2.5mm pin and 5.5mm barrel, locking
- Power Requirement (Sender/Receiver): 5V DC, or PoE (802.3af standard)
- Power Consumption (maximum): Sender: 7.2W, Receiver: 22W
- Operating Temperature (Sender/Receiver) +32 to +122°F (0 to +50°C)
- Operating Humidity (Sender/Receiver) 5% to 90% RH, non-condensing
- Storage Temperature (Sender/Receiver) -4 to +185°F (-20 to +85°C)
- Storage Humidity (Sender/Receiver) 0% to 95% RH, non-condensing
- MTBF: Sender: 50000 hours / Receiver: 50000 hours
- Dimensions (W x H x D, without connectors or feet): Sender: 8.4" x 1.7" x 5.9" (214mm x 43mm x 150mm) Receiver: 8.4" x 1.0" x 5.9" (214mm x 25mm x 150mm)
- Unit Weight: Sender: 2.2 lbs. (1 kg), Receiver: 2 lbs. (0.9 kg)
- Shipping Weight: Sender: 4.2 lbs. (1.9 kg), Receiver: 4.2 lbs. (1.9 kg)

# SPECIFICATIONS\*

- Video Input connector (Sender): (1) HDMI Type A 19-pin, female, locking
- Video Output connector (Sender): (1) HDMI Type A 19-pin, female, locking
- Video Output connector (Receiver): (1) HDMI Type A 19-pin, female, locking
- Line Input (Sender): (1) 3.5mm mini-stereo jack
- Line Output (Sender): (1) 3.5mm mini-stereo jack
- Mic Input (Receiver): (1) 3.5mm mini-stereo jack
- Headphones/Line Output (Receiver): (1) 3.5mm mini-stereo jack
- Optical Digital Audio Output (Receiver): (1) Toslink®
- USB Host Interface port (Sender): (1) USB Type B, female
- USB Device ports (Receiver): (2) USB 2.0 Type A, female (2) USB 1.1 Type A, female



\* Features and specifications are subject to change without notice. \*\* Pending features to be activated via an upcoming firmware update.