PRODUCT CATALOG 2018

HALL RESEARCH

INNOVATE CONNECT COLLABORATE™

A Message from the Chief Executive Officer

Welcome to Hall Research's 2018 Catalog of Products!

Welcome to our 2018 catalog! The cascading boxes on the cover art are reminiscent of the rapidly changing Pro AV industry as the technology tumbles along into so many avenues to provide the tools needed for display and control of content in the boardroom, classroom, digital signage board, courtroom or anywhere a display is required.

While the paths and destinations for signage continue to grow, so do the available methodologies as we strive to provide a "Swiss Army Knife" catalog of extension, switching and control products - from the most basic HDMI extenders to our growing Video-over-IP solutions.

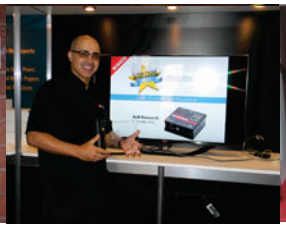
Our CTS certified sales and support teams love to be challenged by our customers to solve all kinds of installation requirements. As a result of our dogged commitment to providing a top notch customer experience, we have managed to remain a leading manufacturer of AV solutions since 1984! Our customer's loyalty, without a doubt, has been the key to our continued growth.

This year we are premiering a new motto for the Hall Research brand:
INNOVATE • CONNECT • COLLABORATE™
This exemplifies our efforts to design **Innovative** products that offer superior **Connectivity** and drive the **Collaborative** experience.

In 2018 we are premiering many new products for the education market as well as signage, healthcare, and corporate environments. The EX-HDU (Patent Pending) combines HDMI and USB extension over one UTP cable and incorporates RS-232, IR and IP control. Our AV over IP offerings have sleek new features (such as SoIP - Serial over IP) to enhance the user experience for easy operation as well as the ability to extend and matrix your video using any smart device with our user configurable Virtual Matrix IP Control modules like the new CNT-IP-264. New HDMI Matrices will also be introduced this year with HDBaseT extension incorporated.

We thank you for your continued support and welcome your feedback.

Ali Haghjoo
Chief Executive Officer




34 YEARS OF INNOVATION

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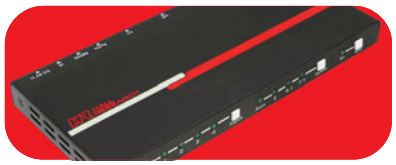

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Video Extension

over LAN/ UTP / Fiber / Coax

new

HDMI, Audio, RS-232 & IR over LAN Dynamic Virtual Matrix Switch™

FHD264-S

FHD264-R

Features

- Create a virtual video matrix with up to 64 Senders and 256 Receivers
- Front panel LCD for configuration of IP parameters, and status indication
- HDMI loop output connector on FHD264-S Sender
- HDMI Audio output on each device using 3.5mm stereo connector
- PoE ready. Does not require power supply when connected to LAN with PoE
- Fail-safe back up video designation to create automatic redundancy
- Serial Over IP (SoIP) to control external equipment connected to the Serial ports
- Receivers include small IR remote controller for switching multicast channels

Description

The FHD264 is a family of HDMI over LAN Senders (encoders) and Receivers (decoders) utilizing advanced video encoding techniques in order to distribute up to 64 Full-HD video signals to hundreds of displays on a simple 1 Gigabit local area network (LAN). They also extend Serial RS-232 communications and bi-directional IR remote signals. HDMI Audio is extracted and available on a convenient 3.5mm stereo jack on both the Sender and the Receiver. The FHD264-S Sender also provides local HDMI output.

A two-line front panel LCD is provided to enable easily configuration or monitoring of parameters such as IP settings, multicast group selection, assignment of device names, and more. This eliminates the usual installation challenges of finding and configuring devices on the network for the first time. With the front panel LCD, users can see and assign configuration parameters with ease.

The RS-232 serial ports on each unit can be used in SoIP mode (Serial over IP). This allows 3rd party IP controllers to directly control peripheral equipment via RS-232. For example if the RS-232 of a receiver is connected to a video projector, you can turn the projector on or off via telnet commands sent to the FHD264 Receiver.

Models

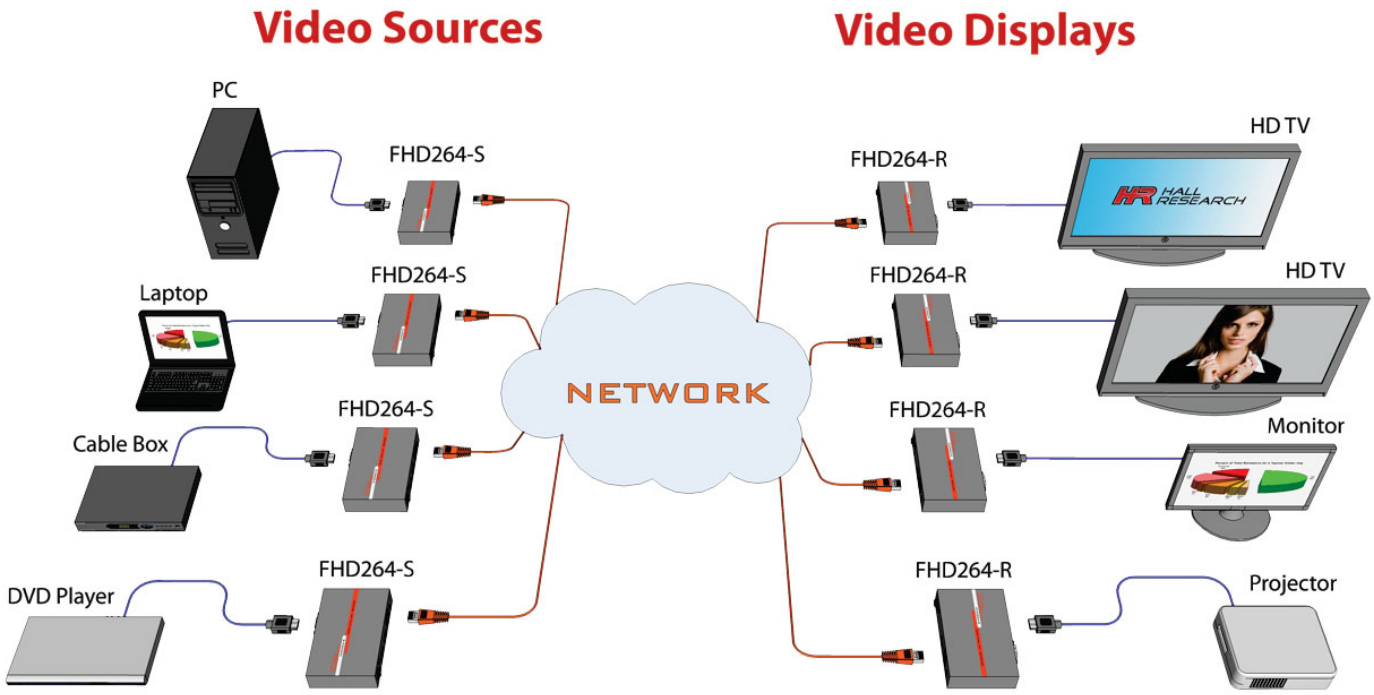
FHD264-R	HDMI over LAN Receiver
FHD264-S	HDMI over LAN Sender
FHD264-S-WP	HDMI over LAN Sender Wall Plate
FHD-RM	4U Rack Mount Frame for housing up to 12 senders

FHD-RM

FHD264-S-WP

Block Diagram

Matrix Set Up (Many to Many)



new

Video over IP Controller

Features

- Embedded software accessible from any PC, smartphone or tablet
- Switch video groups on AV over IP network on the fly and monitor status
- Control External Devices over Serial (SoIP), Telnet and TCP control interface
- Customized control for external devices such as projectors via Telnet
- Real time event scheduling with Real-Time clock with Super Capacitor backup
- Guest and Admin webpage login privilege
- Supports DHCP
- Use Hall Research Device Finder (HRDF™) to search devices

CNT-IP-264

Description

The CNT-IP-264 is a powerful video over IP controller networking module designed to manage HHD/FHD264 – HDMI over LAN senders and receivers, which utilize the latest H.264 encoding. The CNT-IP-264 acts as a web server in a dynamic web application to control a network of encoders and decoders, as well as external devices such as displays and media players. CNT-IP-264 uses Hall Research's DVM (Dynamic Virtual Matrix™) technology to manage 64 sources and 256 displays. The CNT-IP-264 can switch the channels in a video network on the fly. An intuitive GUI lets users monitor the video status and routing information on a web browser using any computing device such a PC, Mac, smartphone or a tablet.

CNT-IP-264 provides an easy way to add and control your devices with serial, Telnet or TCP commands in an AV over IP environment. CNT-IP-264 provides a real-time scheduler to run events like changing HHD/FHD264 video channels and perform actions on external devices such power on / off.

VIDEO over HDBaseT™

new

HDMI & RS-232 over UTP HDBaseT™

UH-BTX

4K ULTRAHD

Features

- Extend HDMI or DVI over one UTP to 100m / 330ft
- Utilizes HDBaseT™ extension technology
- Full HD support 1080p deep color, 3D, and 4K
- HDCP Compliant with pass-thru EDID from display to source
- Long Reach Mode on UH-BTX for extension to 150m / 500ft

Description

The UH-BTX extends HDMI and RS-232 signals up to 100m / 330ft (4K video to 70m / 230ft) over inexpensive Cat5e/6 cable using HDBaseT™ technology. The economical UH-BT extends up to 70m / 230ft (4K video to 40m / 130ft). Video and embedded audio signals are transmitted without any compression to the Receiver for a 100% identical reproduction. Also, a Long Reach Mode on UH-BTX supports a long distance of up to 150m / 500ft.

The UH-BTX consists of a kit of compact but sturdy Sender and Receiver with metal enclosures. All secondary data channels such as HDCP, DDC, and Hot-Plug detect are transparently connected between the source and the sink for a truly trouble-free operation.

Models: (Kits)

UH-BT	HDMI over HDBaseT™ kit (Sender & Receiver) 70m / 230ft
UH-BTX	HDMI over HDBaseT™ kit (Sender & Receiver) 100m / 330ft

Models: (Individual)

UH-BT-S	HDMI & RS-232 over HDBaseT™ Sender 70m / 230ft
UH-BT-R	HDMI & RS-232 over HDBaseT™ Receiver 70m / 230ft
UH-BTX-S	HDMI & RS-232 over HDBaseT™ Sender 100m / 330ft
UH-BTX-R	HDMI & RS-232 over HDBaseT™ Receiver 100m / 330ft

HDMI, LAN, RS-232 and IR over HDBaseT™

HBX-S HBX-R

Features

- Fully Compliant with HDBaseT standard
- Supports virtually all HDMI and DVI resolutions including 4K UHD
- Extends, Video, Audio, RS-232, IR, and Ethernet
- Supports extension to 100 m (330 ft)
- Fully isolates grounds between TX and RX sides
- Compact, Rugged, Reliable, and Economical
- Plug and play, no configuration needed

Description

The HBX HDMI extender is comprised of a Sender and corresponding Receiver. The kit extends HDMI, RS-232, , IR, and Ethernet up to 100 meters (330 feet) using a single Cat6 cable.

The HBX supports all PC and HDTV Resolution to 4K @ 30 Hz 4:4:4 or 4K @ 60 Hz 4:2:0

The IR extension preserves the modulation (carrier) frequency and provides compatibility to virtually any standard. It supports modulation range from 30 KHz to 60 KHz

The Sender and the Receiver each include a universal 5v power supply. IR emitter and IR detector cables are included.

The HBX-R Receiver is also compatible with the new HSM-44-BX Matrix Switch. When used with the Matrix Switch, it is powered via the UTP cable and does not need connection of external 5v power supply.

Models: (Individual)

HBX-S	HDMI + RS-232 + IR + Ethernet UTP Sender
HBX-R	HDMI + RS-232 + IR + Ethernet UTP Receiver

Models: (Kit)

HBX	HDMI + RS-232 + IR + Ethernet Extender Kit

HDMI, RS-232 and IR with Power over HDBaseT™

UHBX-P1

Features

- Extends HDMI or DVI video to 150m / 500 ft on just one UTP
- Includes RS-232 and IR extension in both directions
- Supports all HDMI and DVI resolutions including 4K
- Only one end requires power, other side is powered via UTP
- Power-over-HDBaseT™ (PoH) meets IEEE 802.3af standard

Description

UHBX-P1 is an extender kit (UHBX-S-PSE + UHBX-R-PD) that utilizes HDBaseT™ technology. It can send HDMI, RS-232, IR and PoH (Power-over-HDBaseT™) to 500 ft (150 m) on a single UTP cable. The UHBX-P1 supports DVI and HDMI signals of virtually any resolution up to 4K x 2K to 100m / 330ft, and in Long Reach mode it supports resolutions to 1920x1080 to 500 ft (150 m).

Full-duplex RS-232 extension is provided that can operate at any baud rate to 115,200 bps. The extender can also extend IR from one end to the other. IR Detector and IR Emitter cables are sold separately. The IR extension preserves the modulation (carrier) frequency and provides compatibility to all standards. It supports modulation range from 30 KHz to 60 KHz.

Models: (Individual)

UHBX-S-PSE	HDMI, IR and RS-232 sender over HDBaseT™ with power inserted through UTP cable.
UHBX-S-PD	HDMI, IR and RS-232 sender over HDBaseT™ powered via UTP cable.
UHBX-R-PSE	HDMI, IR and RS-232 receiver over HDBaseT™ with power inserted through UTP cable.
UHBX-R-PD	HDMI, IR and RS-232 receiver over HDBaseT™ powered via UTP cable.

Models: (Kits)

UHBX-P1	UHBX-S-PSE + UHBX-R-PD for HDMI, IR and RS-232 over HDBaseT™ Receiver with Power Sourcing sender unit via UTP cable.
UHBX-P2	UHBX-S-PD + UHBX-R-PSE for HDMI, IR and RS-232 over HDBaseT™ sender with Power Sourcing receiver unit via UTP cable.

HDMI with Power, with optional RS-232 and IR over HDBaseT™
Wall Plate Sender and Stand-alone Receiver

4K ULTRAHD

UHBX-WP-P2

Features

- Extends HDMI or DVI video to 150m / 500ft over one UTP
- May include RS-232 and IR extension in both directions with additional wall plate
- Supports virtually all HDMI and DVI resolutions including 4K
- Wall plate is powered through UTP.
- Power-over-HDBaseT™ meets IEEE 802.3af standard

Description

The UHBX-S-WP wall plate HDMI sender fits in a single gang Decora® style wall plate and extends HDMI video. It is powered using PoH through the UHBX-R-PSE power injecting receiver. A second single-gang module can be added to the wall plate to provide RS-232 and IR extension and is also powered using PoH.

The Receiver has two user selectable distance modes, "Standard" and "Long Reach". In Standard mode all formats including 1080p and 4K can be extended to 100m/330ft. In Long Reach mode 1080p can be extended 150m / 500ft

Full-duplex RS-232 extension is provided that can operate at any baud rate to 115,200 bps. The extender can also extend IR from one end to the other. IR Detector and IR Emitter cables are sold separately. The IR extension preserves the modulation (carrier) frequency and provides compatibility to all standards. It supports modulation range from 30 KHz to 60 KHz.

Application Note: The wall plate sender may alternatively be connected directly to projectors or TVs that have HDBaseT™ inputs, however a PoH inserter would be required (part number 511-PoH-17W).

Models: (Individual)

UHBX-S-WP	HDMI Extension over HDBaseT™ sender in single-gang Decora® Wallplate
UHBX-R-PSE	HDMI, IR and RS-232 over HDBaseT™ power injecting receiver unit via UTP cable.
UHBX-SC-WP	HDMI, RS-232, IR, PoH UTP (Dual Gang Wall Plate Sender)
511-PoH-17W	PoH Inserter

Models: (Kits)

UHBX-WP-P2	UHBX-S-WP and UHBX-R-PSE with HDMI over HDBaseT™ sender in single gang Decora® Wallplate with Power injecting receiver unit via UTP cable
UHBX-WPC-P2	UHBX-SC-WP, and UHBX-R-PSE - HDMI, IR and RS-232 over HDBaseT™ Sender in double-gang Decora® Wallplate with Power injecting receiver unit via UTP cable

Daisy Chainable HDBaseT™ Receiver with IR and RS-232 Control

UHBX-R-XT

4K ULTRAHD

Features

- Daisy-chainable HDBaseT™ receiver
- Chain up to 8 receivers to 800m / 2625ft source to display
- Supports virtually all HDMI and DVI resolutions including 4K
- Send unique RS-232 or IR commands to any unique box

Description

The UHBX-R-XT is a daisy-chainable HDBaseT™ receiver with both HDMI output for connection to local display as well as a re-buffered HDBaseT™ output for connection to downstream receivers. The device utilizes Class-A HDBaseT™ technology with Long-Reach mode that allows up to 150m / 500ft of Cat6 between any two receivers. Up to 8 receivers (displays) can be placed in the chain for a total chain length of 2625 ft @ 1080p). The UHBX-R-XT provides an HDMI output, as well as IR and RS-232 for control. The RS-232 ports are addressable, so when connected in a chain, the user can address a particular box and send commands to a specific TV or projector. IR can also be extended from the sender and issue any common IR command.

Models

UHBX-R-XT	Daisy Chainable HDBaseT™ Receiver with IR and RS-232 Control

new

HDBaseT™ Wall Plate Receiver with IR, RS-232 and PoH

UHBX-R-WP

4K ULTRAHD

Features

- Extends HDMI video to 150m / 500 ft over one UTP
- Includes RS-232 and IR extension in both directions
- Supports virtually all HDMI and DVI resolutions including 4K
- Powered via UTP (Cat6)
- Power-over-HDBaseT™ meets IEEE 802.3af standard

Description

UHBX-R-WP is an HDBaseT™ receiver in a 2-gang Decora® style wall plate with HDMI output and bidirectional RS-232 and IR for control. It is powered using PoH (Power-over-HDBaseT™) from the Sender, so no power supply connection is needed.

The UHBX-R-WP utilizes Class-A HDBaseT™ technology with Long-Reach mode that allows extension of HDMI video up to 150m / 500ft. The wall plate receiver provides an HDMI output, as well as IR and RS-232 for control.

All HDBaseT™ senders that comply with the standard are compatible such as UHBX-S-PSE. The wall plate requires a PoH compliant sender (with IEEE 802.3af handshake), alternatively you can use the Hall Research 511-PoH-17W power inserter anywhere in the Cat6 path, if the sender does not provide power.

Models: (Individual)

UHBX-R-WP	HDBaseT™ Wall Plate Receiver with IR, RS-232, and PoH
UHBX-S-PSE	HDMI, IR and RS-232 over HDBaseT™ power injecting sender unit via UTP cable.
511-PoH-17W	PoH Inserter

HDMI, USB and LAN over HDBaseT™ 2.0 with PoH & Control

UH2X-P1

Features

- Extends Video, USB, LAN, Audio, Control, and Power over a single Cat6 cable
- Uncompressed HDMI extension supports all resolutions including 4K x 2K (UHD)
- Extends USB 2.0 seamlessly for connection of keyboard, mouse, touchscreen, memory devices, smart white boards, and more
- Extends RS-232 and IR control signals in both directions
- Powered via UTP (Cat6)
- Power-over-HDBaseT™ meets IEEE 802.3af standard

Description

The UH2X-P1 is the most powerful video and data extender from Hall Research. It extends uncompressed HDMI with audio, LAN, USB 2.0, RS-232, IR, and PoH (power over HDBaseT™) over a single Cat6 cable to 100m / 330ft. It also provides a separate digital audio path from the receiver to the sender (in reverse direction of video). The audio in return path can be from the ARC (Audio Return Channel) from the display, or from an S/PDIF RCA connector, switch selectable. The sender requires a power supply (provided). Power is sent to the receiver via PoH (power over HDBaseT™), per IEEE 802.11af standard.

Conveniently a USB 2.0 hub is provided on the receiver with two USB connectors to support keyboard, mouse, touchscreen, memory devices, smart white boards, and more. Local Area Network (100-BaseT) is extended to provide a convenient way to get access to the display's IP port. Bidirectional RS-232 and IR signals are also extended.

Models

UH2X-P1	HDMI over HDBaseT™ 2.0 Extender

HDMI Multi-Port Sender with HDBaseT™

Front

Back

UHBX-8X

4K ULTRAHD

Features

- Converts 8 separate HDMI inputs to corresponding HDBaseT™ outputs
- Extends IR in both directions
- RS-232 and IP control port to issue RS-232 commands to any output
- Supports HDCP, 3D, Deep Color, CEC, and 4K (UHD) resolutions
- Sturdy 1RU design with built in power supply
- Can power compatible receivers through UTP using PoH (requires optional 48v supply)
- Front panel status indicators for power, link, video and more for each channel

Description

The UHBX-8X converts 8 HDMI inputs to corresponding HDBaseT™ outputs for extension to 150m / 500ft on single UTP. The extender supports HDCP, 3D, Deep Color, CEC, and 4 K (UHD) resolutions. Compatible receivers include the low-cost self-powered UH-BT-R and UH-BTX-R for HDMI extension to 230 ft or 330 ft respectively, or the UHBX-R-PD that supports RS-232, IR, PoH, and Long Reach modes to 500 ft. When using receivers with PoH function, a single optional 48v power supply is needed for the 8-channel sender (part number: 511-PS4815).

The UHBX-8X provides both IP (Ethernet), and RS-232 ports for control. These ports allow the user to address and send RS-232 or IR commands to any of the receivers to control the remote display. IR signals can be extended in both directions, and the UHBX-8X provides a jack for an IR detector cable. The IR received by the detector can be routed to any one or combination of outputs. Eight separate IR emitter ports are provided on the rear of the UHBX-8X which are used to connect IR detectors to each remote location for controlling multiple sources.

The extender is constructed as a 1RU rack-mountable unit and has a built-in power supply. LED indicators on the front panel show Link Status, HDCP status, Long Reach and Power for each of the 8 outputs.

Models

UHBX-8X	HDMI 8-Port Sender with HDBaseT™
UHBX-4X	HDMI 4-Port Sender with HDBaseT™
UH-BT	HDMI over HDBaseT™ Receiver 70m / 230ft
UH-BTX-R	HDMI over HDBaseT™ Receiver 100m / 330ft
UHBX-R-PD	HDMI, IR and RS-232 receiver over HDBaseT™ powered via UTP cable.
511-PS4815	48V Power Supply

HDMI on HDBaseT™ 1x3 Splitter / Extender

UHBX-3S

4K ULTRAHD

Features

- Extend HDMI Video to 3 remote displays using HDBaseT™ on UTP
- Drive cables to 100m / 330 ft in 4K x 2K resolution, or 150m / 500 ft in 1080p
- Local HDMI output for direct connection to a local display or daisy chain
- Advanced EDID management with USB port for EDID manipulation using a PC
- RS-232 port for sending commands to remote displays

Description

The UHBX-3S is an HDMI compliant splitter with one local HDMI output and 3 HDBaseT™ outputs for transmission to compatible receivers up to 150 meters (500 ft away). The Splitter supports HDCP, 3D, Deep Color, and 4K resolution. EDID management is integrated into the unit with "Pass-thru", "Learn", and "Emulate" features. Advanced users can use the USB port to download, edit, and upload EDID data to and from the device. The unit provides an RS-232 port that can individually address and control remote displays that feature RS-232 interface. The UHBX-3S provides convenient front panel LED status indicators for all HDBaseT™ parameters to quickly verify proper operation.

The UHBX-3S supports PoH (Power over HDBaseT™) using a single external 48 v DC power supply with the UHBX-R-PD. Other compatible receivers for sending only HDMI are the UH-BT-R, UH-BTX-R, and HBX-R.

Models

UHBX-3S	1x3 HDMI on HDBaseT™ Splitter
UHBX-6S	1x6 HDMI on HDBaseT™ Splitter
UH-BT-R	HDMI & RS-232 over HDBaseT™ Receiver 70m / 230ft
UH-BTX-R	HDMI & RS-232 over HDBaseT™ Receiver 100m / 330ft
UHBX-R-PD	HDMI, IR, & RS-232 Receiver over HDBaseT™ powered via UTP cable

new

HDBaseT™ Receiver with Integrated Switcher, Audio Amp & Controller with IP

VSA-X21

4K ULTRAHD

Features

- HDBaseT™ Receiver to 150m
- Audio Extractor with Integrated 50 Watt Amp
- Can directly drive 2 or 4 Speakers
- Stereo Audio Input for Mixing with HDMI Audio
- HDMI Audio Level Auto Ducking
- Can Control Peripheral Equipment via RS-232
- Internal WebGUI for Control of Peripherals
- User programmable GUI buttons
- Works with Remote Wall Plate Control Keypad
- IP and RS-232 Device Control
- Stores separate commands for the auxiliary devices
- Stereo or Mono output
- Priority Paging Sensor input (for automatically muting of the audio output)

Description

The VSA-X21 is an award winning HDBaseT Receiver with 50 watt audio amp. It includes a flexible embedded WebGUI that can be used to select inputs, control volume, turn the display power on/off, and more. VSA-X21 can directly drive 8 ohm speakers and is compatible with any HDBaseT™ compliant senders such as the UHBX-S-WP wall plate HDMI sender, UHBX-SW3-S, or UHBX-SW3-WP with multiple HDMI and VGA inputs. "Long-Reach" mode allows Cat6 cable lengths to 150 meters ("Long-Reach" mode supports 1080p max resolution).

For mixing audio from other audio sources such as microphones, a separate audio input is provided. It can also control other devices such as projectors via RS-232 or LAN. A configurable WebGUI is embedded that lets users create, name and assign functions to virtual buttons on a control page. It also supports connection to physical keypad VSA-UI-DP for control.

Advanced features include: auto display On/Off control, auto input selection, priority page mute, HDMI audio ducking, L/R stereo to mono mixer, and ARC audio support.

Use phone to control system via WebGUI

Models

VSA-X21	HDMI Switcher with HDBaseT™ Input 50 watt Audio Amp
VS-X21	HDMI Switcher with HDBaseT™ Input (does not have audio amp)
UHBX-SW3-WP	VGA, HDMI, MHL Auto-Switching Wall-Plate with HDBaseT™
UHBX-S-WP	HDMI on Cat6 (HDBaseT™) Wall Plate Transmitter
VSA-UI-DP	User Interface Decora Panel for VSA System
UI-KNOB-DP	Rotary Volume Control (digital-encoder) on Decora® Wall-Plate

VGA, HDMI, MHL Auto-Switching Sender and Receiver over HDBaseT™

Senders

UHBX-SW3-WP

UHBX-SW3-S

Receivers

UHBX-R-PSE

VSA-X21

4K ULTRAHD

Features

- Inputs handle VGA, Component, HDMI and MHL
- Programmable IR and RS-232 commands for display on/off control
- Supports all HDMI resolutions including 4K (UHD)
- No power supply required (powered through Cat6 cable from the receiver)
- Uses only one Cat6 distance to 150m / 500ft at 1080p, or 100m / 330ft at 4K resolution

Description

The UHBX-SW3 is a kit comprised of a multi-input switcher / sender and an HDBaseT™ receiver. Both wall-plate and surface mount configurations are available. The device accommodates 2 HDMI and 1 VGA inputs with audio. The HDMI #1 input also supports MHL (Mobile High-Definition Link) with phone-charging feature to allow video presentation from a smart-phone using just a passive cable. The VGA input also accepts YPbPr Component video. To ensure a proper image on the display, the switcher's VGA input is scaled to 1080p (user specifiable). This eliminates compatibility issues with various notebook or PC VGA formats that may not be displayable on an HDMI TV if not scaled to a standard HDTV resolution such as 1080p. The user can also configure the unit to pass-through 3.5 mm audio input from an MP3 audio player independent of the VGA signal.

The sender can manually or automatically switch between the various inputs and extends the video using HDBaseT™ standard. To control the power on/off function of the remote display, the sender can generate RS-232, and IR control signals which are extended using the same Cat6 cable. An IR detector is built-in to the sender to extend IR Signals. A USB port is provided for configuring the control method and other operational modes. Virtually all VGA and HDMI resolutions are supported including 4K (UHD). 4K video can be extended to 330 ft (100m) while 1080p signals can go as far as 500 ft (150m). The sender is powered through the same cable from the receiver using PoH (Power-over-HDBaseT™) standard. The UHBX-R-PSE receiver includes a small power supply and provides HDMI, RS-232 and IR outputs.

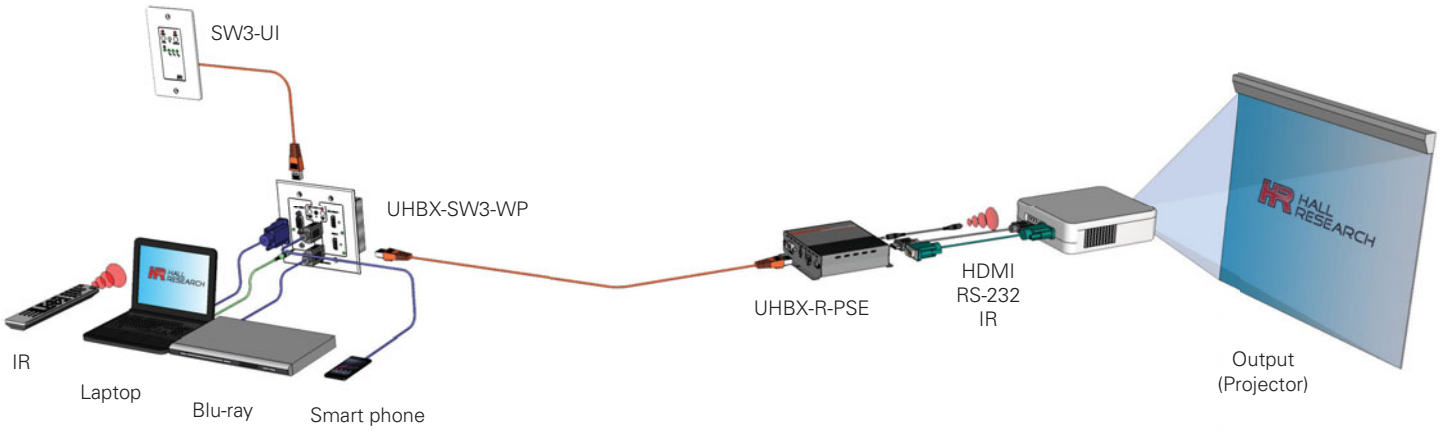
Application note: The UHBX-SW3 complies fully with HDBaseT™ Alliance's design specifications and may be connected to other compliant PSE receivers. It can also be connected to displays or projectors with HDBaseT™ inputs without the external receiver. In that case, a PoH compliant power inserter would be needed to power the sender.

Add Remote Control Using Auxiliary Keypad

The SW3-UI and the SW3-UI-VOL are auxiliary control keypads that can be plugged to the UHBX-SW3-WP using a single Cat5 cable. These single-gang keypads allow the user to see which input is currently selected and status of the display power command sent (ON or OFF). When in manual mode the user can use the push buttons on the auxiliary keypad to select inputs or to turn the display on and off. The buttons can also be used to make power and input control automatic (Auto LEDs will indicate the mode). For those users that have a display which has a controllable variable line output (with volume and mute control), or a compatible audio amp with RS-232 volume control (for example EMX-AMP), the SW3-VOL provides 3 additional buttons (Volume up/down, and mute).

SW3-UI

SW3-UI- VOL



Models

UHBX-SW3-WP	VGA, HDMI, MHL Auto-Switching Wall-Plate Sender with HDBaseT™
UHBX-SW3-S	VGA, HDMI, MHL Auto-Switching Sender with HDBaseT™
UHBX-R-PSE	HDMI+RS-232+IR+PoH UTP Receiver with Power Inserted into UTP
VSA-X21	HDMI Switcher with HDBaseT™ Input 50 watt Audio Amp
SW3-UI	Auxiliary Keypad for Manual Control and Status
SW3-UI-VOL	Auxiliary Keypad with Manual Volume Control

HDMI over UTP

HDMI over 1 CAT6 Extender Kit

(Non-HDBaseT™)

UH-1D

Features

- Use only one Cat5e/6 cable to extend HDMI™ without compression
- Can extend Full HD (1080p) to 40m / 130ft or 720p to 52m / 170ft
- Provides local HDMI loop-output on the transmitter for connection to local monitor or to another UH-1D sender
- EDID learn button (to store and emulate EDID from any display)
- Can extend IR in both directions
- Receiver provides both 3.5mm analog and RCA digital audio output

Description

The UH-1D is a member of the video over twisted pair extension line from Hall Research. This economical and easy to install extension kit uses only a single UTP (Cat6) cable to extend Full HD 1080p HDMI signals to over 40m / 130ft ,or 720p/1080i to 52m / 170ft. The product is comprised of a sturdy and compact Sender and a corresponding Receiver.

The UH-1D offers several unique features such as a local HDMI output (loop) on the Sender for connection to a local monitor, and EDID management capability with ability to learn and emulate EDID from any display. In addition to the HDMI video output, the Receiver provides both digital audio (S/PDIF) as well as analog stereo (L/R) outputs for connection to audio equipment.

The UH-1D allows connection of an IR detector and an IR emitter cable to each end. This provides the ability to extend IR signals in either direction. For example, when an IR detector is connected to the remote Receiver and IR emitter is connected to the sender, the user, from the remote TV end; can control the source using an IR remote. IR cables are sold separately.

The devices have L-shaped brackets on each end for easy surface mounting and they feature locking HDMI connectors to secure compatible locking cables such as Hall Research C-HDMI-L series cables.

Models

UH-1D	HDMI over 1 CAT 6 Extender (Sender & Receiver)
CIR-DET-P2	IR Detector Cable, Pass-thru (for use with UHBX Series)
CIR-EMT	IR Emitter Cable, 3.5mm Stereo (recommended)

HDMI and USB Extension on CAT6 with Audio and Integrated Control

EX-HDU

Features

- Extends HDMI + USB 2.0 to 200 ft (60 m) on one Cat 6 cable
- Wall plate sender has 2-port hub for connection to USB devices to the host PC
- Receiver provides HDMI, 4 USB ports, RS-232 for display control, contact closure I/O, and Stereo Audio outputs
- Perfect for Interactive displays, Soft CODECs, and KVM extension
- Wall plate does not require separate power supply
- Receiver is available with optional IP and WebGUI control

Description

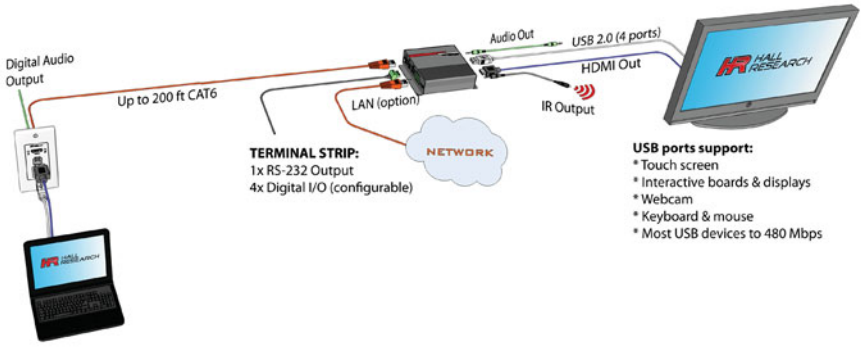
The EX-HDU is used to extend HDMI video and USB data on a single Cat6 cable up to 200 ft (60 meters). HDMI audio is extracted and is provided both as analog stereo and multi-channel digital. The EX-HDU can also be used to control other equipment by providing programmable contact closure I/O, RS-232 output, IR output, and optional LAN interface with internal WebGUI and IP control.

The EX-HDU extender consists of an EX-HDU-WP single-gang wall plate transmitter and an EX-HDU-R (or EX-HDU-R-IP) receiver. They connect using standard CAT5e/6 UTP cabling up to 200 feet (60 Meters) long.

The wall-plate Sender gets its power from the Receiver via the same UTP cable and does not need a separate power supply. For convenience, the wall plate features a USB hub with two USB ports for connection of USB devices. The plug-and-play extender is compatible with all PCs, MACs, and Android Tablets and does not require driver installation. Simply plug the PC's HDMI and USB ports to the sender and make them available at the remote receiver.

The Receiver provides HDMI video output, stereo audio output, 4 USB ports, IR output, and a terminal strip that has RS-232 output plus 4 programmable digital I/O ports. A mini-USB port is also provided for configuration upload from a PC for cases where the Receiver is used also as a control system.

Receiver with IP connectivity is the model EX-HDU-R-IP. It provides an ETHERNET port for control via IP commands or internal webpage.



Models: (Kits)

EX-HDU	HDMI and USB Extension on Cat6 with Audio and Integrated Control
EX-HDU-IP	HDMI and USB Extension on Cat6 with Audio and Integrated IP Control

VGA Over UTP

VGA + Audio Over UTP Senders

UVA-8

UVA-DP

Features

- Transmit VGA and audio up to 305m / 1000ft over UTP cable
- Supports resolutions up to 1920x1200 or 1080p
- Compatible with URA series receivers
- Local VGA and Audio outputs

Description

The UVA series senders transmit VGA and audio up to 305m / 1000ft over UTP cable. They support resolutions up to 1920x1200 @ 60 Hz. Senders are available with 2 to 8 split outputs. Senders are DDC compliant and will pass-through EDID from locally connected display, or automatically emulate EDID data if no local LCD is detected.

Single output senders are also available in a single-gang metal wall plate or single-gang Decora® plate form factor. UVA series senders are compatible with URA series receivers.

Models

UVA-DP	VGA + Audio Metal Decora® Plate (Sender)
UVA-WP	VGA + Audio Metal Wall Plate (Sender)
UVA-2	1x2 VGA + Audio Over UTP Splitter (Sender)
UVA-4	1x4 VGA + Audio Over UTP Splitter (Sender)
UVA-8	1x8 VGA + Audio Over UTP Splitter (Sender)

VGA + Audio Over UTP Receivers

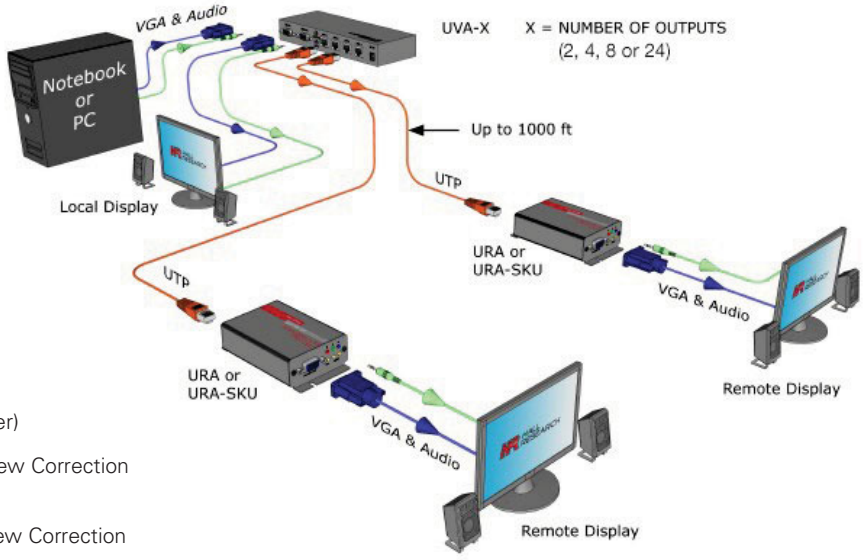
URA-SKU

Features

- Receive VGA and audio from up to 305m / 1000ft over UTP cable
- Supports resolutions up to 1920x1200 or 1080p
- Differential signaling eliminates ground loops and noise
- Optional Skew correction for compensating long cable runs (URA-SKU + URA-XT)
- Optional RJ45 output for daisy chaining multiple receivers in a single run (URA-XT)

Description

The URA series receivers accept VGA and audio over UTP cable from compatible senders up to 305m / 1000ft away. They support resolutions up to 1920x1200 at 60Hz. They can fully compensate for signal attenuation in long UTP cables using a 5-stage active filter. URA-SKU and URA-XT include a built-in Skew Correction feature that allows individual adjustment of RGB signals to compensate for signal skew that tends to occur over long distances with regular UTP cable. The URA-XT also features an RJ45 output for daisy-chaining additional receivers. Note that the URA-XT outputs the skew adjusted signal requiring compensation only for the distance between each receiver.



Models

URA	VGA + Audio Over UTP (Receiver)
URA-SKU	VGA + Audio Over UTP with Skew Correction (Receiver)
URA-XT	VGA + Audio Over UTP with Skew Correction and Extension (Receiver)

VGA + Power Over UTP

UV1

UV1-SL

Features

- Extend VGA and power up to 153m / 500ft over a single UTP cable
- Supports resolutions up to 1920x1200 or 1080p
- Only one power supply required which can be plugged to either end.

Description

The UV1 series extenders transmit VGA and power up to 153m / 500ft over a single UTP cable. Power can be supplied from either sender or receiver. Senders can be programmed with custom EDID information using our USB-EDID-HD15.

UV1 senders and receivers are available in a variety of form factors including single-gang wall plates and Decora® plates

Models

UV1	VGA Over UTP (Sender & Receiver) Kit
UV1-S	VGA Over UTP (Sender)
UV1-SL	VGA Over UTP with Local Output (Sender)
UV1-S-DP	VGA Over UTP Metal Decora® Plate (Sender)
UV1-R	VGA Over UTP (Receiver)
UV1-R-DP	VGA Over UTP Metal Decora® Plate (Receiver)

VGA + Power Over UTP Splitter/Sender

UV8-S

UV2-S

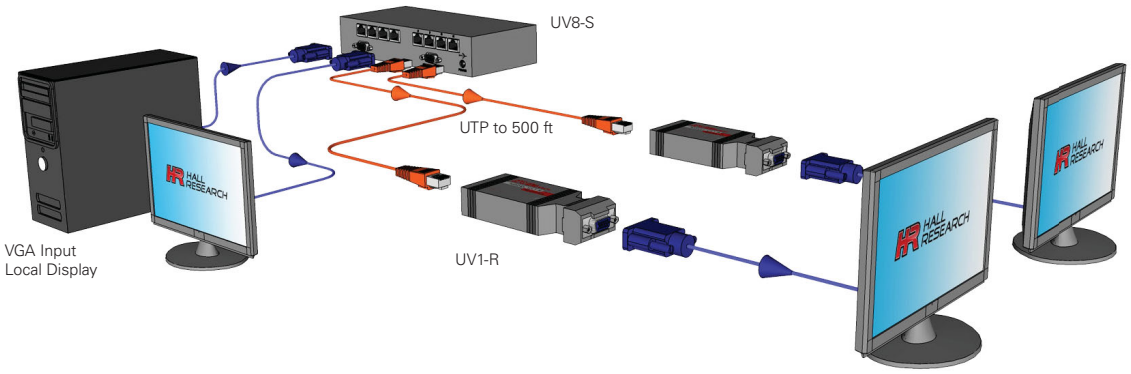
Features

- Extend VGA and power up to 153m / 500ft over a single UTP cable
- Supports resolutions up to 1920x1200 or 1080p
- Differential signaling eliminates ground loops and noise
- No power supply required at receiver side
- Compatible with UV1 series receivers

Description

UV series splitters distribute VGA and power up to 153m / 500ft over a single UTP cable. Supports resolutions up to 1920x1200 @ 60 Hz. Senders are available with 2 to 8 split outputs for distributing the same signal to multiple displays. Power is supplied by the sender to the receiver. Each sender includes a local output.

UV series senders are compatible with UV1 series receivers.



Models

UV2-S	1x2 VGA + Power Over UTP Splitter (Sender)
UV4-S	1x4 VGA + Power Over UTP Splitter (Sender)
UV8-S	1x8 VGA + Power Over UTP Splitter (Sender)
UV1-R	VGA Over UTP (Receiver)

VGA + Audio + RS-232 Over UTP Receiver

URA-232

Features

- Receive VGA, audio, and RS-232 from up to 305m / 1000ft over a single UTP cable
- Supports resolutions up to 1920x1200 or 1080p
- Stores pre-programmed RS-232 commands for triggered activation
- Built-in SKU Correction technology
- Compatible with UV232A senders

Description

URA-232 series receivers accept VGA, audio and RS-232 from up to 305m / 1000ft over a single UTP cable.

URA-232 receivers feature a built-in trigger function for firing pre-programmed RS-232 commands. This allows a sender unit to send a single command triggering all connected receivers to fire a pre-programmed RS-232 command specific to the device to-or display they are connected to. A typical application for this would be sending a power on/off command in an environment with mixed display types.

Each receiver features Hall Research SKU Correction technology for adjusting individual RGB values to compensate for signal skewing over long distances. URA-232 series receivers are compatible with UV232A splitter senders.

Models

URA-232	VGA + Audio + RS-232 Over UTP with SKU Correction (Receiver)
UV232A-S	VGA + Audio + RS-232 Over UTP (Sender)

VGA + Audio + RS-232 Over UTP

UV232A

Features

- Extend VGA, audio, and RS-232 up to 153m / 500ft over a single UTP cable
- Supports resolutions up to 1920x1200 or 1080p
- DDC compliant EDID emulation on the sender

Description

The UV232A sender transmits VGA, audio and RS-232 up to 500 ft (153 m) over a single UTP cable to the UV232A receiver. The input video can be RGBHV or YPbPr format. Unidirectional RS-232 transmitted from sender to receiver can be used to control devices or displays.

The sender includes EDID emulation assuring a proper DDC compliant signal to a connected PC. When the sender is powered from VESA compliant VGA source (+5 on Pin 9) a power supply is only required at the receiver. If the source is not VESA compliant or YPbPr then a power supply is needed at both sender and receiver.

Models

UV232A	VGA + Audio + RS-232 Over UTP (Sender & Receiver)
UV232A-S	VGA + Audio + RS-232 Over UTP (Sender)
UV232A-R	VGA + Audio + RS-232 Over UTP (Receiver)

VGA + Bidirectional RS-232 Over UTP

UV232B

Features

- Extend VGA and bidirectional RS-232 up to 153m / 500ft over a single UTP cable
- Supports resolutions up to 1920x1200 or 1080p
- DDC compliant EDID emulation on the sender

Description

The UV232B sender transmits VGA and (bidirectional) RS-232 up to 500 ft (153 m) over a single UTP cable to the UV232B receiver. The input video can be RGBHV or YPbPr format. Bidirectional RS-232 transmitted from sender to receiver can be used to control devices or displays and receive a response.

The sender includes EDID emulation assuring a proper DDC compliant signal to a connected PC. When the sender is powered from VESA compliant VGA source (+5 on Pin 9) a power supply is only required at the receiver. If the source is not VESA compliant or YPbPr then a power supply is needed at both sender and receiver.

Applications include kiosk solutions, conference halls, digital signage, interactive operator systems, factory or laboratory data acquisition and control, and more.

Models

UV232B	VGA + Bidirectional RS-232 Over UTP (Sender and Receiver)
UV232B-S	VGA + Bidirectional RS-232 Over UTP (Sender)
UV232B-R	VGA + Bidirectional RS-232 Over UTP (Receiver)

Component Video + Power Over UTP "Active Balun"

UVB1-CP

Features

- Extend component video and power up to 305m / 1000ft over a single UTP cable
- Supports resolutions up to 1080p
- Power can be supplied to both sides from sender or receiver
- Ground-loop Isolation (GLI) and RFI (radio frequency interference) immunity

Description

The UVB1 extends Component video up to 305m / 1000ft over a single UTP cable. Power is also extended and needs only be supplied at the sender or receiver.

Unlike other passive Baluns this device is active and boosts the signal using wide bandwidth (450 MHz) differential (balanced) amplifiers for an unprecedented sharp and clean image. It provides Ground-loop Isolation (GLI) and RFI (radio frequency interference) immunity to prevent 60 cycle video hum or distortion. Most other baluns provide no common mode rejection at low frequencies and are subject to facility grounding issues and noise pickup. The active design matches the impedance of the UTP cable perfectly at all frequencies so that there is no image ghosting.

Models

UVB1-CP	Component Video + Power Over UTP (Sender & Receiver)
UVB1-CP-R	Component Video + Power Over UTP (Receiver)
UVB1-CP-S	Component Video + Power Over UTP (Sender)

Composite/S-Video + Audio Over UTP "Isolated Balun"

UBL-CSA

Features

- Extend Composite/S-Video and audio up to 610m / 2000ft over a single UTP cable
- Custom transformer-based design offers 100% ground isolation at any frequency
- Same unit can be used at either end
- No power supply necessary

Description

The UBL-CSA transmits composite or S-Video and audio up to 610m / 2000ft over a single UTP cable. The passive design does not require any power supply. The 100% isolated outputs mean that there is no ground connection between the monitors connected at the output and the video source at the input. This eliminates any ground-loop video or audio noise that can cause hum bars on the video or 60 cycle noise on the audio.

Models

UBL-CSA-KIT	Composite/S-Video + Audio Over UTP (2x Stand-alone)
UBL-CSA	Composite/S-Video + Audio Over UTP (Stand-alone)

All in One Console Extender

U97-Ultra-2B

Features

- Extend Dual-Head Video, Audio, RS-232, and 3 independent USB ports
- Includes 2 "Direct" USB ports (DR1 & DR2), and a 3rd port with 4 port hub in the receiver.
- Built-in EDID (Extended display ID), allows PC to detect LCD's even if none is connected at the sender or the receiver.
- Built-in video skew correction on both video channels. This corrects the lack of RGB convergence when long Cat6 cables are used.
- Built-in Test Pattern Generator for long cable compensation (High Frequency Gain) and skew correction.
- Amplied audio input and loop output at the sender as well as DB15 output at the receiver to directly drive passive speakers.
- Built-in power supply with standard 110~240 VAC IEC320 jack.
- Eliminates the need for Utility Box (Receiver includes a guard plate that goes over all the connectors with tie-down provisions for strain relief).

Description

The U97-Ultra-2B kit is used to extend Dual Display PC Video, Stereo Audio (amplified or line level), RS-232, and up to 3 independent USB ports to a remote location up to 500 feet away on any Category Cable (CAT5e/6 etc).

These products include a rack-mountable Sender Unit plus a wall-mountable Receiver (and I/O hood cover), packaged together. However they can also be sold separately under the U97-Ultra-2B-R and U97-Ultra-2B-S Part #'s.

Models

U97-Ultra-2B	Dual-Display VGA + Audio + RS-232 + USB Console Extender (Sender & Receiver)
U97-Ultra-2B-S	Dual-Display VGA + Audio + RS-232 + USB Console Extender (Sender)
U97-Ultra-2B-R	Dual-Display VGA + Audio + RS-232 + USB Console Extender (Receiver)

4K Javelin Active Plenum HDMI Cable

CHD-AP**

Features

- Plenum Rated
- Resolutions to UHD (4K)
- Offers fiber-optic noise immunity
- No additional power supply required
- Supports DDC for HDCP and EDID, CEC
- Thin and flexible with bend radius of 0.2 inch

Description

Hall Research 4K Javelin™ Active Plenum HDMI extension cables utilize the latest in optoelectronic technology to transmit HDMI signals far beyond the typical limitation of copper cables. The cable is a hybrid of fiber and copper that allows HDMI signals to be extended 330 ft or more with zero loss. All PC and HDTV resolution are supported including 4K Ultra HD. The HDCP compliant cables also support DDC and CEC. Proprietary circuitry is conveniently incorporated inside the HDMI connectors to convert the video signals to light pulses and back.

The plug-n-play cable requires no external power supply. Power is drawn from the 5v signal pin of the source HDMI output. The cable draws less than 0.25w of power from the source. Per HDMI specifications all HDMI compliant sources must at least provide 0.25 watts of power.

Among the impressive features of the 4K Javelin™ is its indifference to the resolution that is being extended. It has the ability to handle any resolution or color depth including non-standard video formats as the video is sent using light pulses, the cable provides higher immunity to EMI or RFI interference and there is less chance of video dropouts due to environmental electromagnetic noise. The 4K Javelin™ Plenum cable can be used as a regular HDMI cable but without the worry of boosters or equalizers; being Plenum, also makes it possible to be used in any installation environment. Applications include, home theater, conference rooms, schools, airports, hospitals and more.

Models

CHD-AP10	4k Javelin Active Optical Plenum HDMI Cable, 10m (33ft)
CHD-AP15	4k Javelin Active Optical Plenum HDMI Cable, 15m (50ft)
CHD-AP23	4k Javelin Active Optical Plenum HDMI Cable, 23m (75ft)
CHD-AP30	4k Javelin Active Optical Plenum HDMI Cable, 30m (100ft)
CHD-AP46	4k Javelin Active Optical Plenum HDMI Cable, 46m (150ft)
CHD-AP60	4k Javelin Active Optical Plenum HDMI Cable, 60m (200ft)
CHD-AP100	4k Javelin Active Optical Plenum HDMI Cable, 100m (330ft)

4K Javelin™ Active Plenum HDMI Cable w/ Detachable Ends

CHD-DE**

4K ULTRAHD

Features

- Supports virtually all HDMI and DVI Resolutions Including 4K UHD
- Thin, Flexible and Lightweight (only 12 oz for 15m (50ft) cable)
- Hybrid Fiber-Optic / Copper Construction
- Plug and Play, No Power Supply Required
- Available in standard lengths of 10, 15, 23, and 30 meters (33, 50, 75, 100 ft)
- Meets International Flame Retardant Standards : UL CMP-OF (Plenum), IEC LSZH
- Offers Fiber-optic RFI/EMI noise immunity
- Supports DDC for HDCP and EDID, CEC
- Cable ends can be fished through small holes, pipes or conduits (end profile is only 0.48 x 0.32 inch)

* DVI adapter also available

Description

Hall Research 4K Javelin™ Active Plenum HDMI extension cables utilize the latest in optoelectronic technology to transmit HDMI signals far beyond the typical limitations of copper cables.

The CHD-DExx 4K Javelin™ cables have the added benefit of detachable or removable HDMI connector ends. The cable itself has a small (micro HDMI size) connector that can be pulled through small holes, pipes or conduits.

Currently the cable is available at lengths of 10, 15, 23, 30, 46 and 60 meters (33, 50, 75, 100 , 330 ft). Replace * in part number with length in meter, for example CHD-DE15 is 15 meters long

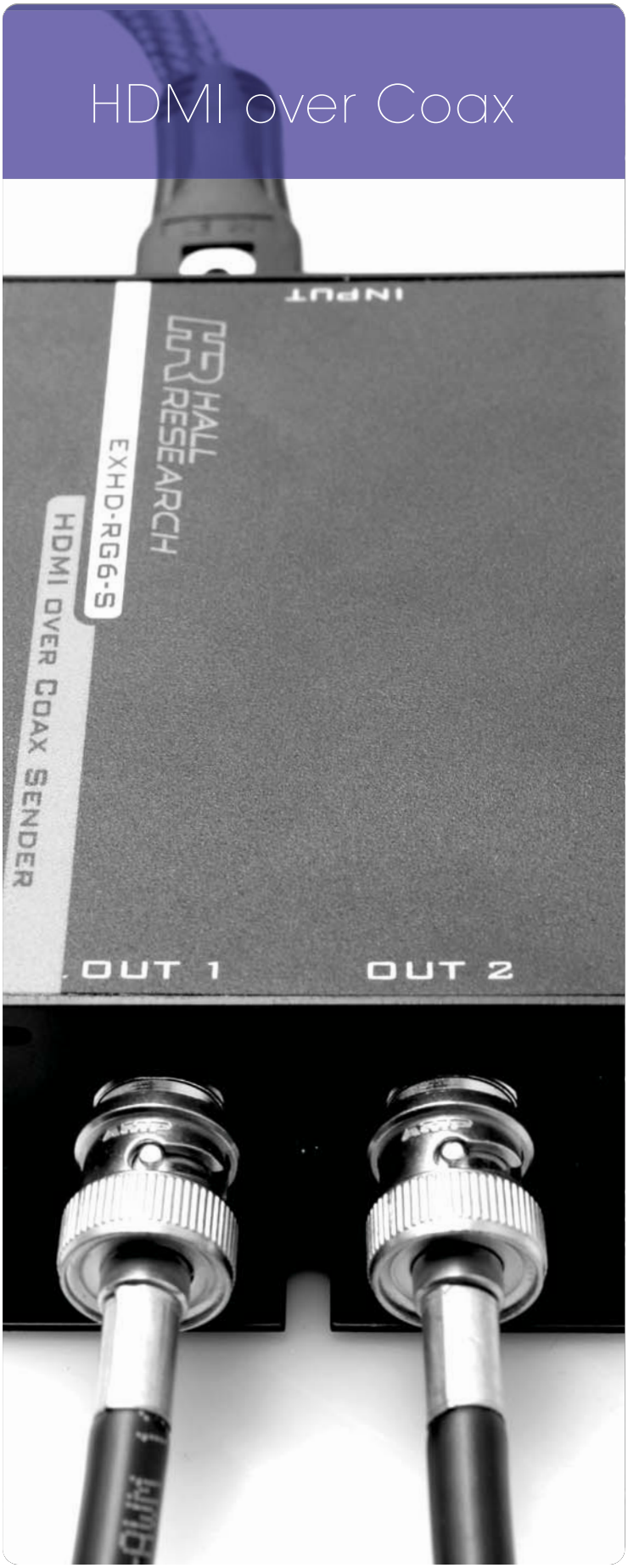
Among the impressive features of the 4K Javelin™ is its indifference to the resolution that is being extended. It has the ability to handle any resolution or color depth including non-standard video formats as long as the maximum data rate is less than 10.2 Gbps. No compression is used so the image at the far end of the cable is 100% identical to the source.

Since the video is sent using light pulses, the cable provides higher immunity to EMI or RFI interference and there is less chance of video dropouts due to environmental electromagnetic noise.

Models

CHD-DE10	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 10m (33ft)
CHD-DE15	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 15m (50ft)
CHD-DE23	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 23m (75ft)
CHD-DE30	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 30m (100ft)
CHD-DE46	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 46m (150ft)
CHD-DE60	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 60m (200ft)
CHD-DE100	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 100m (330ft)

HDMI over Coax



HDMI over Coax Extender

EXHD-RG6

Features

- Extend uncompressed HDMI to 70m / 230 ft or longer
- Supports resolutions up to 1080p 1920x1080 at 60 Hz
- No user settings, plug-n-play
- Includes Sender with two coax outputs and Receiver with daisy-chain coax output
- Uses Locking HDMI connectors

Description

The EXHD-RG6 is an HDMI-over-Coax extender that can extend HDMI signal to 230 ft or longer. Maximum cable length depends on signal resolution and quality of RG-6U cable used. It extends video with no compression for a perfect reproduction at the receiver.

The kit includes a Sender (EXHD-RG6-S) and a corresponding Receiver (EXHD-RG6-R). The Sender has an HDMI input connector and provides two BNC outputs for connection to one or two RG-6U coaxial cables. The kit also includes one Receiver (EXHD-RG6-R).

The Receiver has a BNC input for connection to the Sender, and provides an HDMI output. Additionally, a buffered Coax output is also provided that can be used to daisy chain to another Receiver if required.

The extender supports HDCP and provides HDCP content protected output. Standard TV and HDTV resolutions are supported including 486i/576i, 720p, 1080i, and 1080p

Models

EXHD-RG6	HDMI over Coax Extender (Sender + Receiver)
EXHD-RG6-S	HDMI over Coax Extender (Sender)
EXHD-RG6-R	HDMI over Coax Extender (Receiver)

Control Systems

HDMI Switcher with HDBaseT™ Input & 50 watt Audio Amp

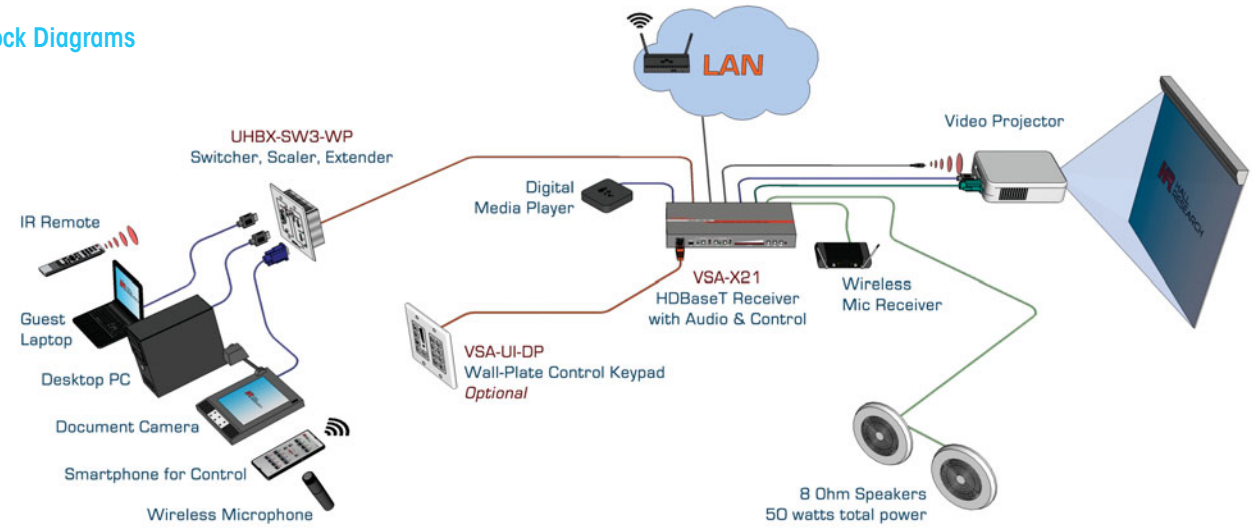
VSA-X21

Features

- HDBaseT Receiver to 150m
- Audio Extractor with Integrated 50 Watt Amp
- Can directly drive 2 or 4 Speakers
- Stereo Audio Input for Mixing with HDMI Audio
- HDMI Audio Level Auto Ducking
- Can Control Peripheral Equipment via RS-232
- Internal WebGUI for Control of Peripherals
- User programmable GUI buttons
- Works with Remote Wall Plate Control Keypad
- IP and RS-232 Device Control
- Stores separate commands for the auxiliary devices
- Stereo or Mono output
- Priority Paging Sensor input (for automatically muting of the audio output)

Use phone to control system via WebGUI

Block Diagrams



Models

VSA-X21	HDMI Switcher with HDBaseT™ Input 50 watt Audio Amp
VS-X21	HDMI Switcher with HDBaseT™ Input (does not have audio amp)
UHBX-SW3-WP	VGA, HDMI, MHL Auto-Switching Wall-Plate with HDBaseT™
UHBX-S-WP	HDMI on Cat6 (HDBaseT™) Wall Plate Transmitter
VSA-UI-DP	User Interface Decora Panel for VSA System
UI-KNOB-DP	Rotary Volume Control (digital-encoder) on Decora® Wall-Plate

HDMI Switcher with HDBaseT™ Input & 50 watt Audio Amp

SENDERS

UHBX-SW3-WP

UHBX-SW3-S

RECEIVER

UHBX-R-PSE

Features

- Inputs handle VGA, Component, HDMI and MHL
- Programmable IR and RS-232 commands for display on/off control
- Supports all HDMI resolutions including 4K (UHD)
- No power supply required (powered through Cat6 cable from the receiver)
- Uses only one Cat6 distance to 150m / 500ft at 1080p, or 100m / 330ft at 4K resolution

Description

The UHBX-SW3 is a kit comprised of a multi-input switcher / sender and an HDBaseT™ receiver. Both wall-plate and surface mount configurations are available. The device accommodates 2 HDMI and 1 VGA inputs with audio. The HDMI #1 input also supports MHL (Mobile High-Definition Link) with phone-charging feature to allow video presentation from a smart-phone using a passive cable. VGA input accepts virtually all PC and HD resolutions and is automatically scaled to 1080p (user-selectable) to provide maximum compatibility with all PC's and notebooks. Users can select inputs manually or automatically based on signal detection with user definable priority. Pass-through 3.5 mm audio input from an MP3 audio player independent of the VGA signal. The sender can manually or automatically switch between the various inputs and extends the video using HDBaseT™ standard. A USB port is provided for configuring the control method and other operational modes.

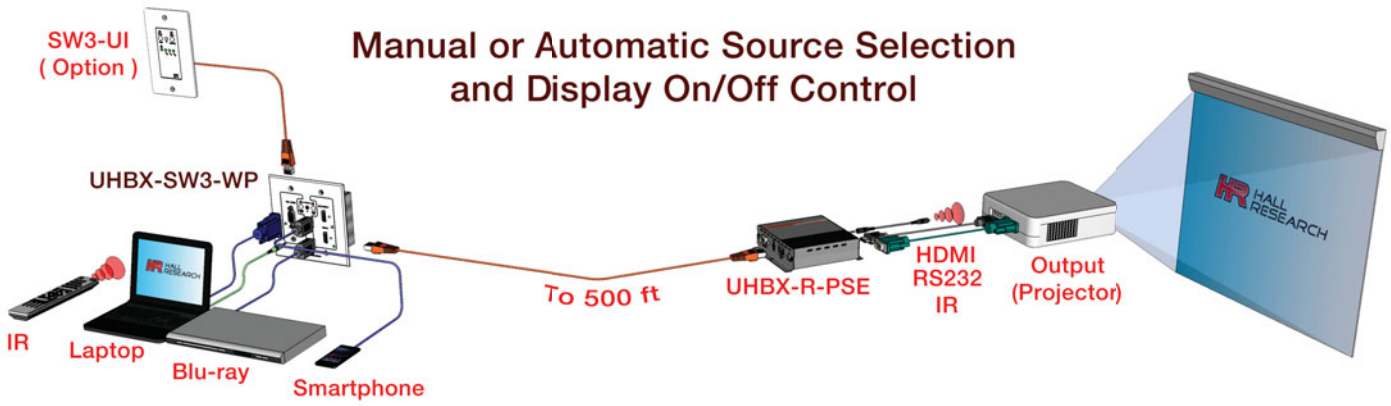
ADD REMOTE CONTROL USING AUXILIARY KEYPAD

The SW3-UI and the SW3-UI-VOL are auxiliary control keypads that can be plugged to the UHBX-SW3 sender using a single Cat5 cable.

SW3-UI

SW3-UI-VOL

Block Diagram



IP Enabled Digital AV Room Control System

Front

Back

VSA-51

IP Manager

Features

- Control a Display and other Devices Via IP, RS-232, IR, and 2 Discrete Outputs
- Up to 5 Modular Audio/Video Inputs (1 HDMI, 2 Composite, 2 VGA/YPbPr)
- Embedded Software Accessible from a PC, Smart Phone, or Tablet
- Task Scheduling and Automation
- Individual Audio Level Control with Amplification

Description

The VSA-51 is a modular room control system. It accepts up to 5 remote video and audio sources (2 VGA / Component, 2 Composite, and 1 HDMI/DVI) switched to a classroom projector or display. Switching can be controlled via wall mounted user interface panel or through a browser based control screen on a PC, tablet, or smart phone.

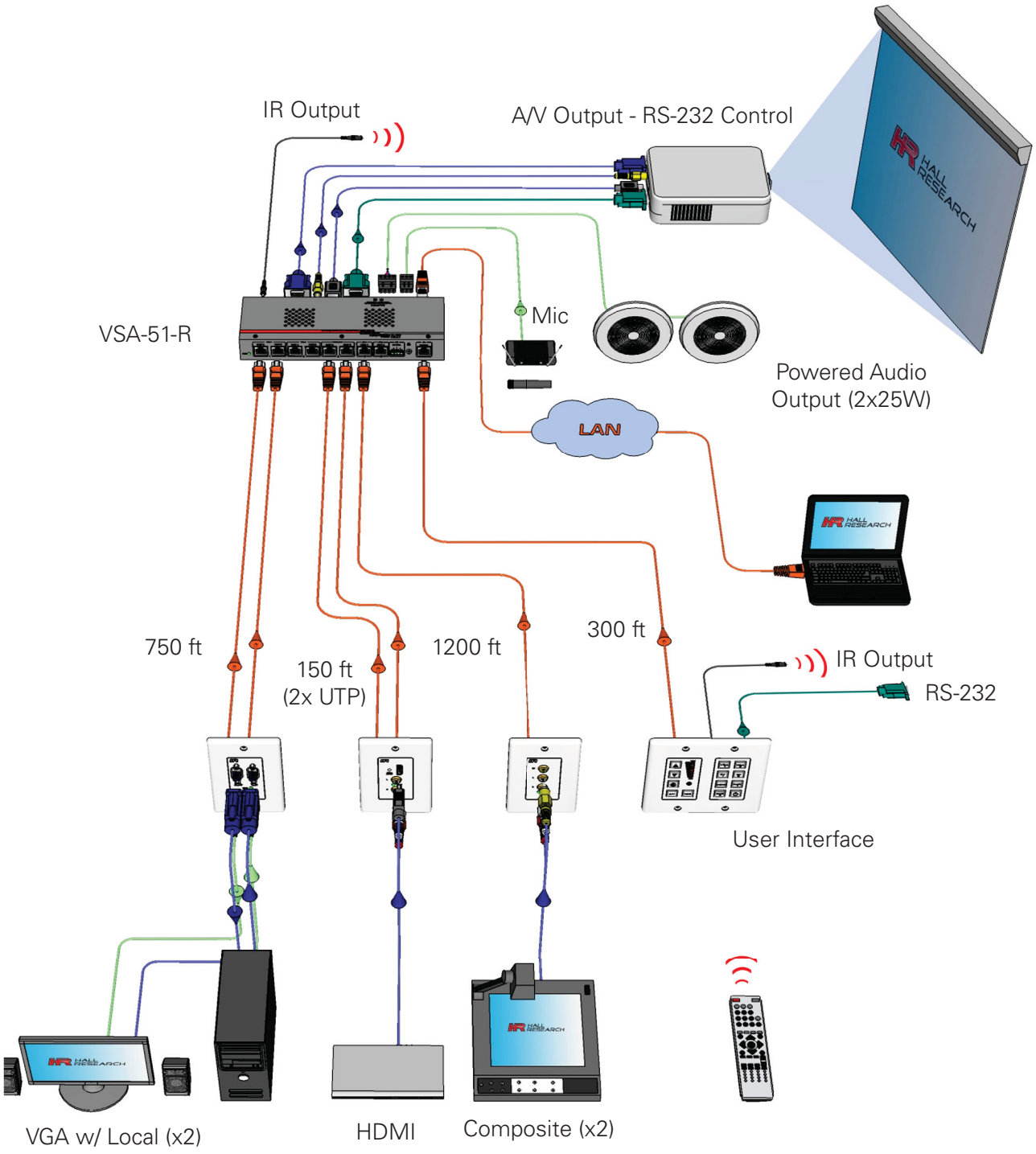
Each input for the VSA-51 is on a single-gang metal Decora® plate which can be mounted together or separately on the wall or lectern. All inputs transmit over UTP (Cat5) cable back to the receiver. Each input automatically receives power from the receiver so no additional wiring is necessary.

The VSA-51 offers advanced IP-based access, configuration and control. All configuration and control software is embedded in the receiver and served over HTTP to a browser. Custom programmable control strings allow advanced control of virtually any device via IR, IP, RS-232 and discrete output. All buttons on the User Interface panel and control software are programmable, allowing a high level of customization. Buttons can be configured to perform a string of actions so, for example, pressing the button to power on the projector may also trigger a motorized screen and turn down lights. Other software features include task scheduling, theft detection with notification, paging sensed muting, and more.

Models

VSA-51-R	System Receiver
VSA-UI-DP	User Interface Panel
VSA-UI-8	8 Button User Interface Expansion
VSA-HA-DP	HDMI + Audio Decora® Plate Sender
VSA-V-DP	VGA + Audio Decora® Plate Sender
VSA-C-DP	Composite + Audio Decora® Plate Sender
VSA-PGSNS	Non-Invasive Priority Page Sensor
VSA-MNT-01	Ceiling Mount Kit for VSA-51 (Cage only)
VSA-MNT-02	Ceiling Mount Kit for VSA-51 (Ceiling Mount, Cage, and Pole)
SPK-820T	Ceiling Tile Speaker, 25 Watt, 2ftx2ft, 8 Ohm

Block Diagram



I/O Controllers

new

Programmable 8-Button IP Keypad Wall Plate with PoE

UI-IP8-DP

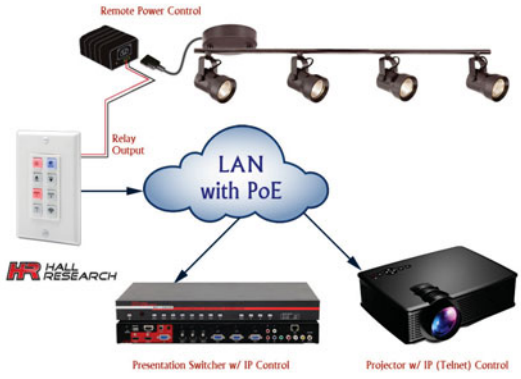
Features

- IP Keypad plugs to your network
- 8 programmable back-lit buttons
- Buttons can be programmed using WebGUI
- Can be powered from LAN using PoE
- Ability to connect power supply if PoE is not available
- Can control remote IP controllable devices
- Inactivity lock out feature with user-definable PIN
- Provides relay contact outputs for control of external devices
- Includes 28 pre-printed button labels plus 28 blank labels
- Single-gang Decora® style wall plate
- Can be used with CNT-IP-2 to provide two RS-232 control ports and additional advanced WebGUI interface with websockets technology

Description

The Hall Research UI-IP8-DP is an IP enabled wall-plate control system in a compact and versatile form-factor. Ideal for classrooms, conference rooms, and huddle rooms as it provides 8 direct macro command buttons, plus an additional 8 macro commands in the WebGUI.

Up to 16 commands can be executed with each push of a button for a total of 128 command capacity. Each button has red and blue LEDs with user definable brightness levels for user feedback of status and a professional look. The PoE (Power over Ethernet) function allows the device to operate without connection of a power supply. An external power supply is included in case your network does not provide PoE for the keypad.



Models

UI-IP8-DP	Programmable 8-button IP Keypad, Wallplate with PoE

16-Channel Programmable Serial Controller

HR-16P

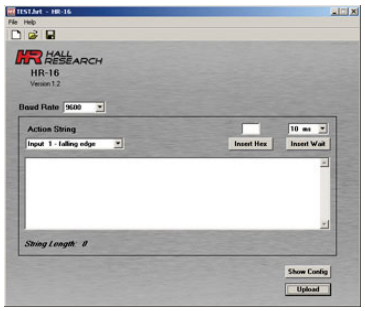
Features

- Automatically issue RS-232 commands based on contact closures
- Store up to 33 user-programmable command strings
- Windows GUI software for programming

Description

The HR-16P is a versatile programmable RS-232 serial device designed to control any device with a serial port or using relays. It has 16 discrete inputs on screw terminals that sense a DC voltage level or contact closure. It detects both "low-to-high" and "high-to-low" transitions of these discrete inputs and issues corresponding commands out the serial port to the serial device. Command strings can be a single command or a series of commands with embedded delays.

Hall Research provides a powerful Windows® based application that is used to create the data files and for uploading them to the HR-16P, via a supplied serial cable. The latest version of this file is available for free download.



Models

HR-16P	16 Channel Programmable Serial Controller

4 Port Programmable RS-232 I/O Controller with IR Learn

HR-4P

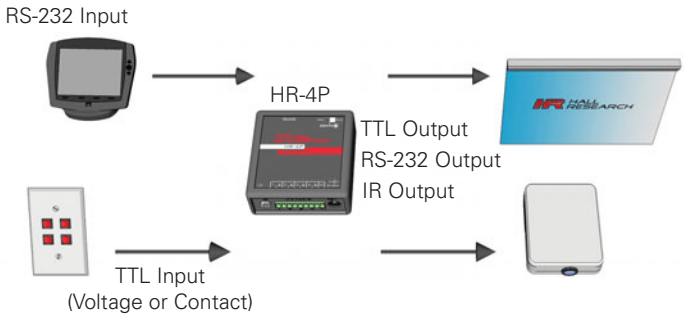
Features

- 4 user definable I/O screw terminals
- Can issue programmed or learned IR commands based on contact or RS-232 inputs
- 10 user-programmable command strings
- IR connector for optional detector or emitter
- 32 user-programmable IR Memory
- Optional IR remote control learn and playback

Description

The HR-4P is a programmable RS-232 device designed for control & automation of a projector, LCD, or any other device with serial or IR port.

It has 4 configurable I/O lines that can be defined individually to act as input or output. It can control devices that do not have an RS-232 port by converting RS-232 commands (or contact closure external switch inputs) to IR commands. It also has the ability to learn and store up to 32 different IR codes.



Models

HR-4P	4 Port Programmable RS-232 I/O Controller with IR Learn
CIR-EMT	IR Emitter
CIR-DET-D2	IR Receiver

Web Enabled Serial Controller

CNT-IP-2

Features

- Embedded Software Accessible from any PC, Smart Phone, or Tablet
- RS-232 pass-thru or dual-port control of devices
- Control other devices via Telnet (IP)
- Task Scheduling
- Real-Time Clock with Super Capacitor backup
- Custom Webpages are available

Description

The CNT-IP-2 allows two or more RS-232 devices to be remotely controlled across a LAN using a web browser.

The CNT-IP-2 consists of a compact modular enclosure with (2) RS-232 ports, (1) IP RJ-45 network port. The CNT-IP-2 controller also has the ability to route the RS-232 signals across a Telnet IP connection on IP Port# 23 of the devices assigned IP address. All configuration and control software is embedded in the device and served over HTTP to a browser which means you can create custom controls and access the device from a PC, Mac, smart phone, or tablet. Custom programmable commands offer advanced control of the device and 3rd party equipment. Software features include embedded device control, task scheduling, automation and more.

User Programmable Control Screen

Models

CNT-IP-2	Web Enabled Serial Controller

16 Port IR Router

IRCNT-16

Features

- No software required
- Pass-through IR supports carrier frequencies from 30-50kHz
- Internal Power supply using standard IEC connector.
- IR routes only to selected outputs
- Rack mountable with included hardware – only 1RU

Description

The IRCNT-16 is used to direct incoming IR signals to specific components selected by the user. This prevents unintended switching when duplicate components are present, and allows for simultaneous control when desired. Once all the IR emitters have been connected to the unit, simply press the button(s) corresponding to the device(s) you wish to control. The buttons that are lit will relay any IR signals that are sent. The unit stores and recalls the previously selected channels upon power on.

IR Emitter Cable

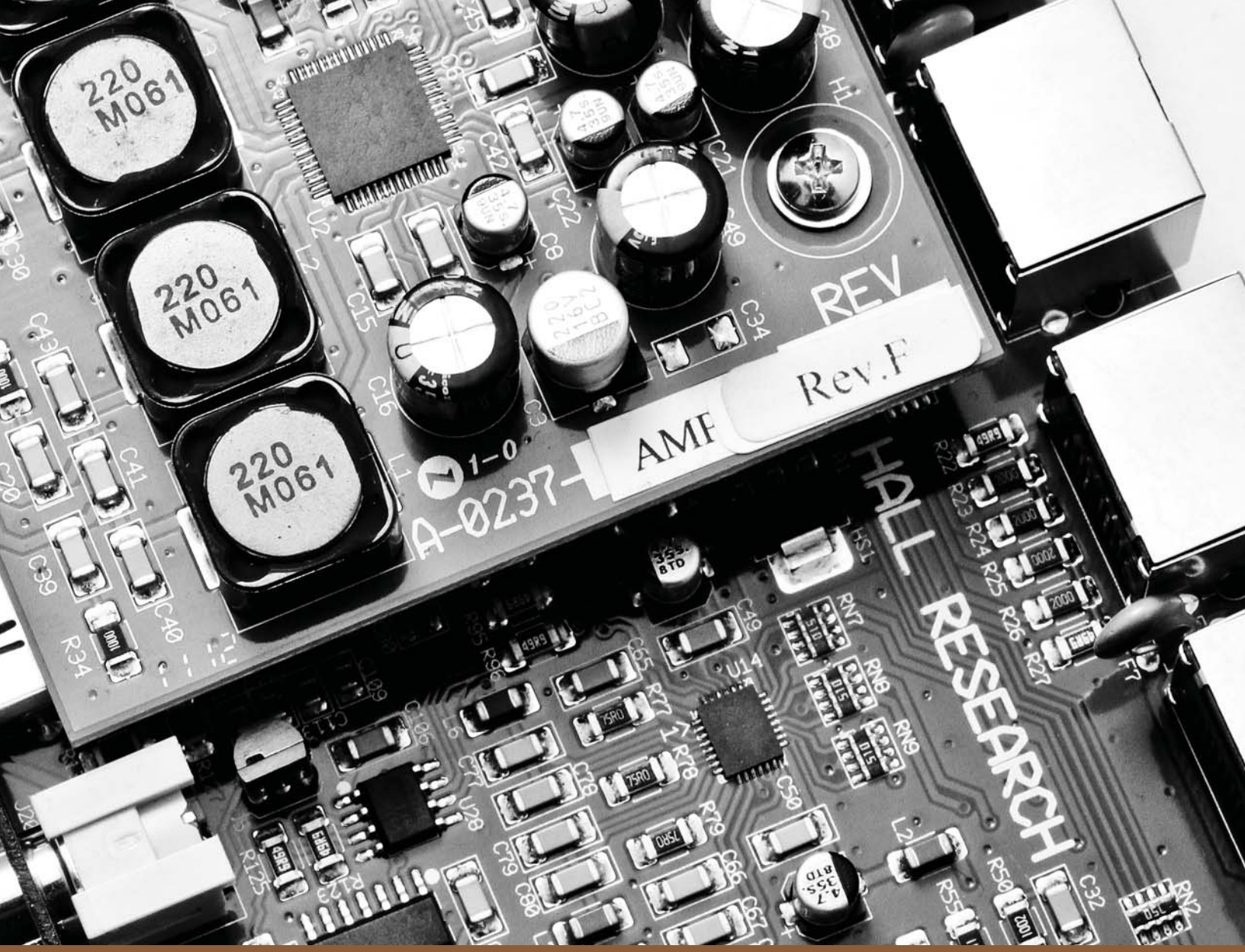
CIR-EMT2

IR Emitter Cover with Adhesive

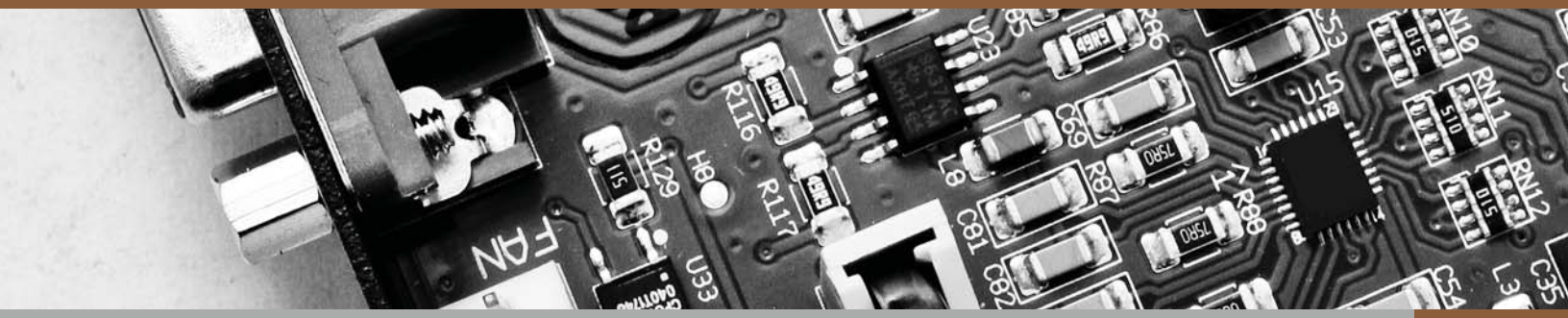
CIR-EMT2-CVR

Models

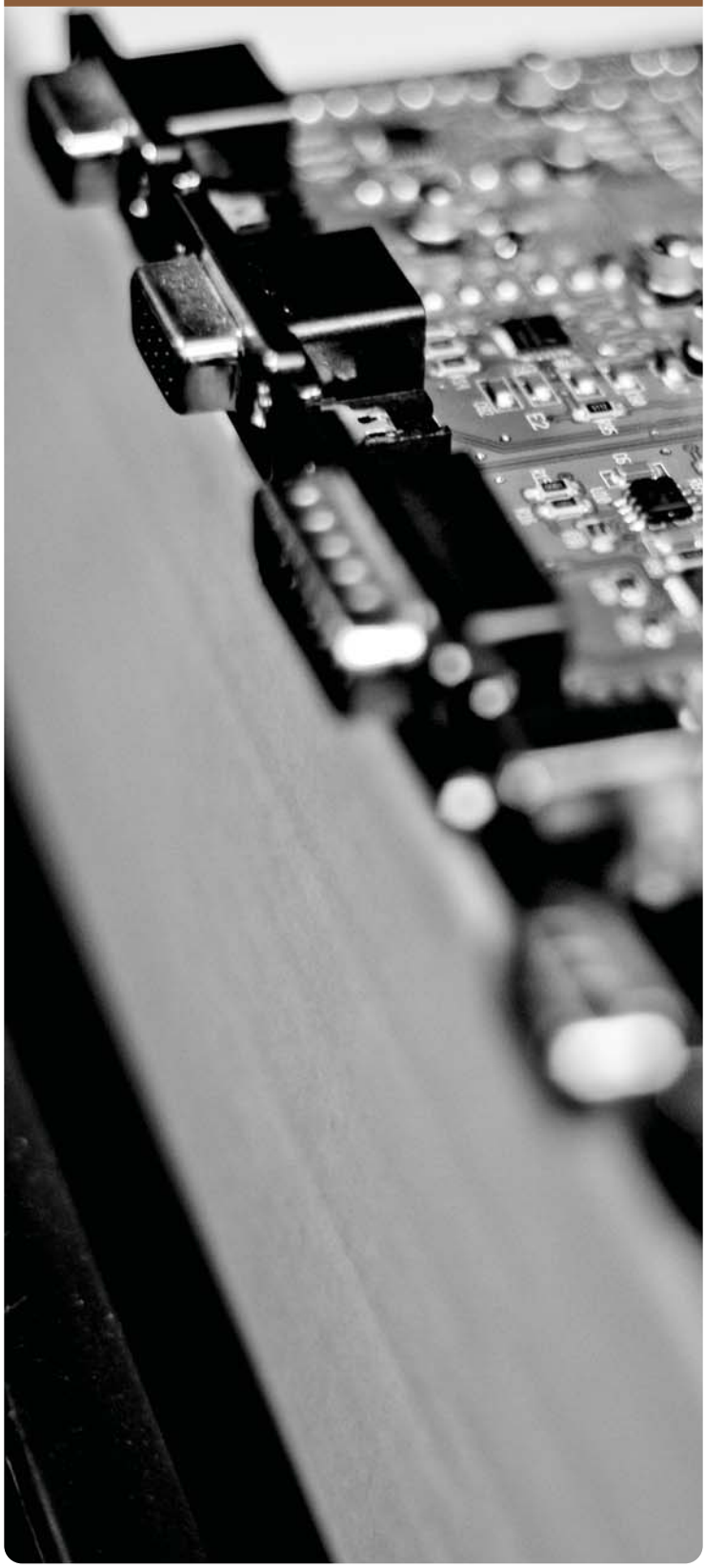
IRCNT-16	16 Port Universal IR router



AV Processors & Scalers



Multi Input Processors & Scalers



Multi-Format Digital/Analog Video and Audio HDMI Processor

SC-1080H

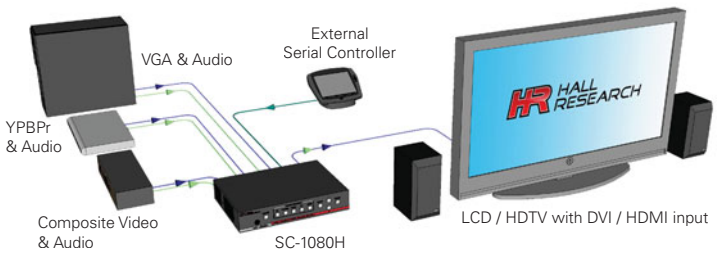
Features

- Provides scaled HDMI output to various resolutions up to 1080p and 1920x1200
- Accepts 5 input formats: HDMI/DVI, PC/VGA, YPbPr, S-Video and Composite Video
- Converts audio input into digital format for output on HDMI or separate Coaxial S/PDIF
- Horizontal mirroring
- Control from front panel, IR or RS-232
- HDMI 1.2, HDCP 1.1 and DVI 1.0 Compliant

Description

The SC-1080H is a multiple format switching video scaler. It has 5 different types of video inputs and a scaled digital output of up to 1080p or 1920x1200 resolution. The SC-1080H accepts various input formats such as HDMI, VGA, Component, Composite and S-Video and outputs on HDMI. The SC-1080H also accepts audio inputs with each source and outputs audio in the HDMI stream or on coaxial S/PDIF.

The SC-1080H features an On Screen Display (OSD) for advanced features such as brightness, color, sharpness, and tint adjustment. It also features a horizontal mirroring function for use with teleprompters.



Models

SC-1080H	Multi-Format Digital/Analog Video and Audio HDMI Processor

Multi-Format Switcher & Scaler

SC-1080R

Features

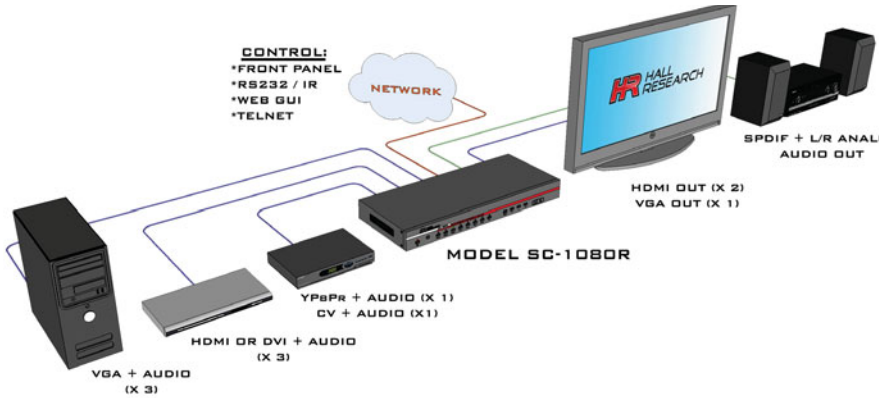
- Switch and scale among 8 AV inputs
- 4 different types of inputs are supported HDMI, VGA, YPbPr, CV
- 3 simultaneous analog and digital outputs
- Separate analog and digital audio outputs
- IP enabled with user-friendly WebGUI and Telnet control
- Powerful and intuitive RS-232 Control Commands
- Individual buttons on the front panel for direct input selection
- Includes IR remote control
- Includes detachable rack-mount ears
- Auto Scan Switching mode

Description

The SC-1080R can switch and scale among 8 AV inputs (3 HDMI, 3 VGA, 1 YPbPr, and 1 Composite Video) to 3 simultaneous outputs (2 HDMI, 1 VGA). All outputs show the selected input. The output format and resolution can be specified as either PC (VGA (640x480) to WUXGA (1920x1200) or Component Video (YPbPr from 480i/p to 1080i/p). Both Analog and Digital audio outputs are provided for convenience.

The Video Scaler can be controlled in many ways including: front panel push buttons, using the included IR remote control, Telnet (via LAN), WebGUI (via LAN), or RS-232 Serial interface.

The SC-1080R features an OSD menu for configuration, picture setup, system information and other advanced options. It is ideal for use in boardrooms, classrooms, digital signage, and high-end home-theater applications.



Models

SC-1080R	Multi-Format Digital/Analog Video Processor

Multi-Format Presentation Switcher and RS-232 Controller

SC-3H

4K ULTRAHD

Features

- Two HDMI inputs and 1 VGA input with 3.5mm Audio
- Manual or automatic input selection based on video detection
- Control via front panel buttons, optional external keypad, or RS-232
- RS-232 port can control auxiliary devices (such as projector power on/off)
- Manual or Automatic power control command.
- EDID management
- Supports VGA, HDMI, MHL (on HDMI #1), and DVI
- Locking power supply input connector
- Compact, Rugged, Reliable, and Economical

Description

The SC-3H is a multi-format switcher with 2 HDMI and 1 VGA (with audio) inputs. The SC-3H provides an HDMI video output together with stereo analog audio output. HDMI inputs support virtually all PC and TV resolutions including 4K @ 30 and 4K @ 60 (4:2:0). The VGA and its associated audio inputs are converted to HDMI and scaled to 1080p for maximum compatibility with HDMI TV's.

Affordably priced, the SC-3H provides a powerful way to add AV switching and control to any classroom, huddle room, or conference room. The device can manually or automatically switch between the various video inputs. In auto input mode it scans the inputs in order to detect video on its inputs and automatically switches to the active input. If more than one input has video, the SC-3H can choose among them based on user definable priority tree.

The device can also act as a controller to send serial RS-232 commands to turn displays on and off. Users can upload power control commands for their display and when the SC-3H is turned on, it will send the "on command" to the display and upon turning the device off, an off command will be issued. The power commands can also function automatically. In Auto Power Command Mode, the unit will send out a power on command if there is video on the output, and if there is no video is being output, it will send a power off command to the display after a predefined delay.

Normally the RS-232 port on the unit is acting as "master" issuing commands to external devices, but it can also be used to control the SC-3H.

To use the unit in manual mode, where power and inputs are selected manually, front panel buttons can be used. Alternatively, an optional external single-gang wall-plate controller can be connected to the SC-3H. They are SW3-UI and SW3-UI-VOL.

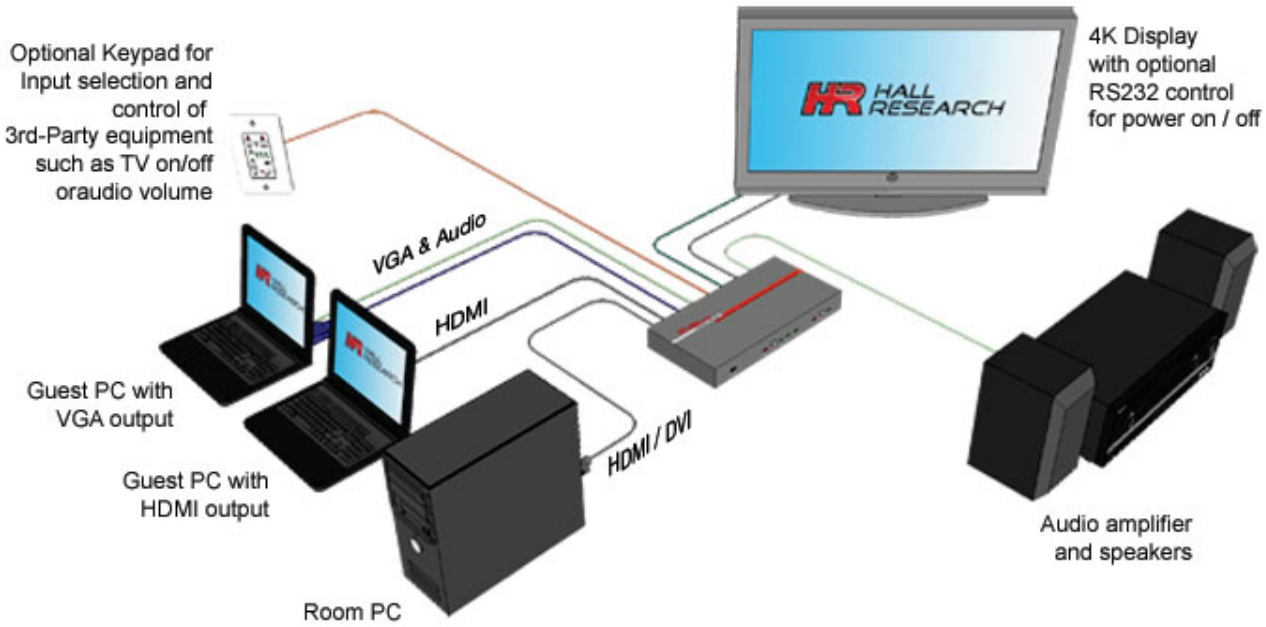
Full EDID management is provided for the HDMI inputs. By default the connected display's EDID is used for the HDMI inputs, but users have the ability to upload, emulate read, or download the EDID. A mini-USB port on the front panel is provided to configure the device via a free Windows™ GUI available from the SC-3H product webpage.

Models

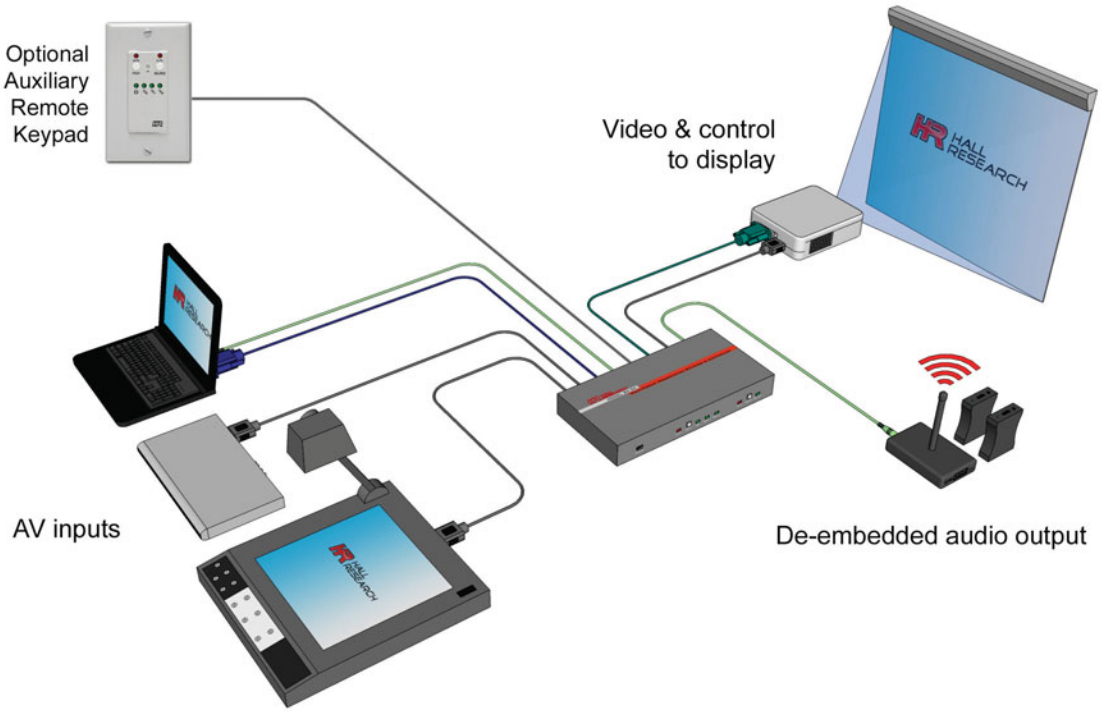
SC-3H	Multi-Format Presentation Switcher and RS-232 Controller
SW3-UI	Auxiliary Keypad for Manual Control and Status
SW3-UI-VOL	Auxiliary Keypad with Manual Volume Control

Block Diagram

Application 1



Application 2



Seamless 4-Port HDMI Switch with Quad Multi-View

SSW-HD-4

Features

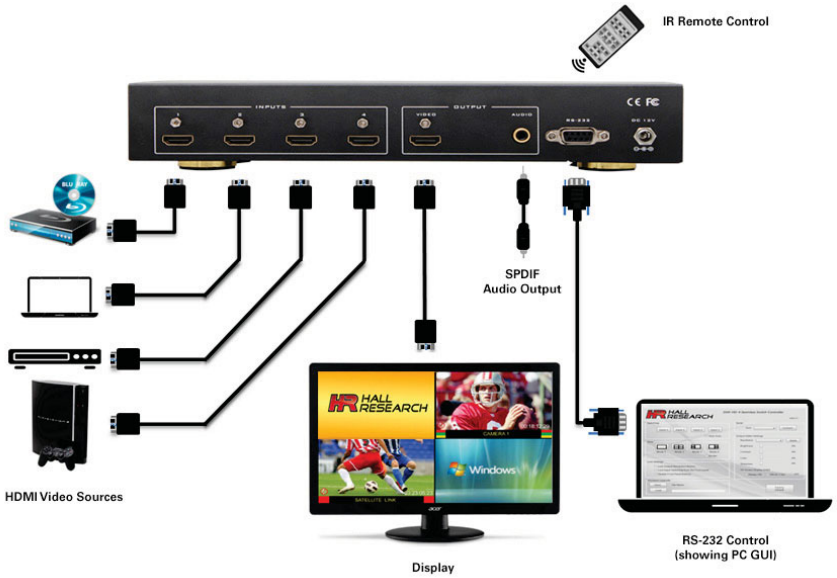
- Seamless Switching
- Pre-configured Multi-view Layouts
- Control via Front Panel, IR, PC-GUI and RS-232
- Input and Output Resolutions up to 1080p Full HD
- HDCP Compliant
- Includes IR Remote Control
- Includes Rack Mount Ears
- De-embedded S/PDIF audio out with RCA Connector
- Supports Locking HDMI Cables
- Includes Universal Power Supply w/ Locking DC Connector

Description

The SSW-HD-4 is a 4-input HDMI seamless video switch with multi-view capabilities where all inputs can be simultaneously shown in real-time in a variety of window configurations.

When only one input is shown, switching between different inputs is completely seamless with zero transition delay. The switcher supports various PC and HDTV resolutions; including 1080p Full HD on its input and produces a scaled Full HD video output.

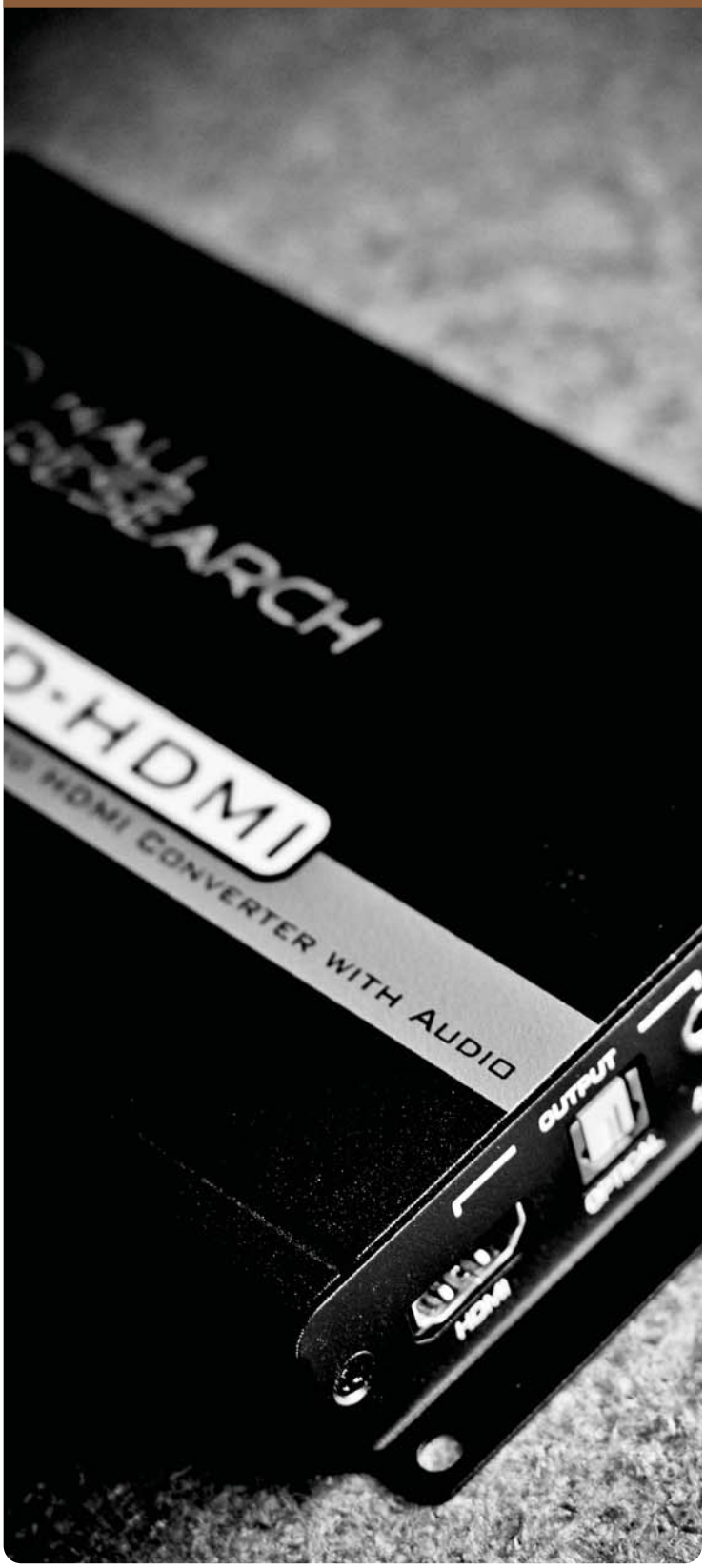
The SSW-HD-4 can display four Hi-definition sources on a single display and comes with several pre-configured multi-view layout modes. Individual buttons for each input allow quick selection from the front panel. Control of switching and multi-view window layouts can be accessed via Front panel buttons, IR remote control (included), RS-232, or with the free PC GUI that controls the device via RS-232. The product is shipped with rack ears for 1U rack mounting.



Models

SSW-HD-4	4-Port HDMI Seamless switching with IP / RS-232 / IR Control

Single Input Processors & Scalers



HDMI Scaler & Audio Extractor / Embedder

SC-HD-2A

Features

- Any PC or HDTV video signal can be scaled up or down to any other PC or HDTV resolution
- Analog and digital audio inputs and outputs
- Embeds audio to HDMI from analog or digital audio source
- Horizontal mirroring (x-axis flip)
- Advanced scaling for real-time frame rate capture & conversion
- Selectable audio delay up to 150ms (for lip sync)
- OSD adjustment of contrast, brightness, color, size, sampling clock, phase, position, audio source and delay

Description

The SC-HD-2A scales DVI or HDMI signal to various resolutions up to 1080p and 1920x1200. It accepts analog or digital audio input which is embedded into the HDMI output stream. It can also extract audio from the HDMI input stream and output in stereo analog or multi-channel digital format.

It accepts all standard PC and HDTV resolutions. It then scales and outputs the video automatically at the native resolution of the connected display (or any particular user specified output setting).

Models

SC-HD-2A	HDMI Scaler & Audio Extractor

Analog Video and Audio to HDMI Scalers

SC-VHD-HD

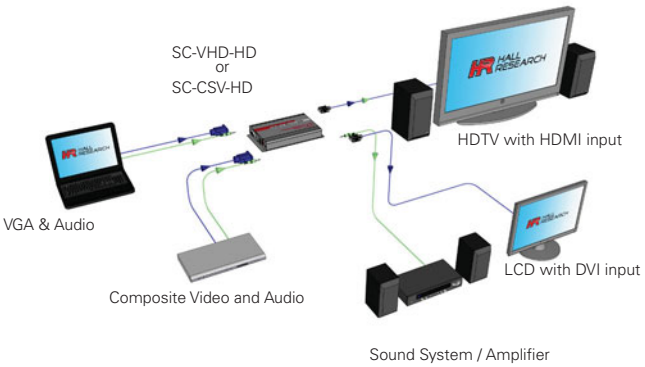
Features

- Convert VGA or Component video and audio to HDMI
- Provides scaled HDMI output to various resolutions up to 1080p and 1920x1200
- Horizontal mirroring for teleprompting
- DVI 1.0 compliant

Description

The SC-VHD-HD converts and scales Component (YPbPr) or VGA video and audio to HDMI. It supports output resolutions up to 1080p and 1920x1200. It accepts audio input on stereo analog or digital optical (TOSLINK) connector.

The SC-VHD-HD features a unique horizontal mirroring function that flips video along the x-axis. This feature is useful for Teleprompters and rear projection systems. It also has an OSD menu for configuration, picture setup, system information and many other advanced options.



Models

SC-VHD-HD	VGA / Component and Audio to HDMI Processor

Composite / S-Video and Audio to HDMI

SC-CSV-HD

Features

- Convert Composite or S-Video and audio to HDMI
- Provides scaled HDMI output to various resolutions up to 1080p and 1920x1200
- Horizontal mirroring for teleprompting
- DVI 1.0 compliant

Description

The SC-CSV-HD converts and scales Composite or S-Video and audio to HDMI. It supports output resolutions up to 1080p and 1920x1200. It accepts audio input on stereo analog or digital optical (TOSLINK) connector.

The SC-CSV-HD features a unique horizontal mirroring function that flips video along the x-axis. This feature is useful for Teleprompters and rear projection systems. It also has an OSD menu for configuration, picture setup, system information and many other advanced options.

Models

SC-CSV-HD	Composite / S-Video and Audio to HDMI Processor

VGA/Component Scaler

SC-VGA-2B

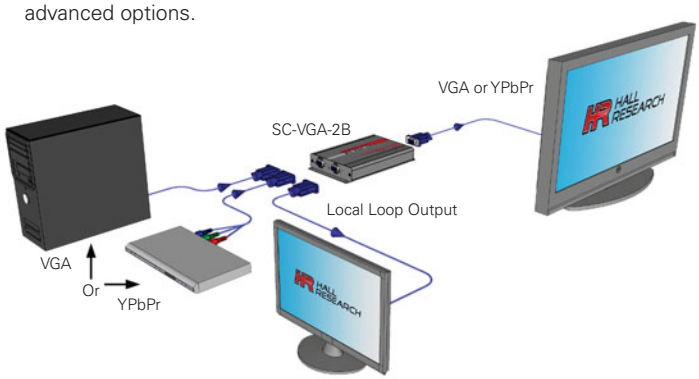
Features

- Signal format conversion between RGBHV and YPbPr
- Adjustable output frame rate
- Allows adjustment of sampling clock, phase, and position on screen
- Horizontal mirroring for teleprompting

Description

The SC-VGA-2B is a high-performance universal VGA / HDTV to VGA / HDTV Scan Rate converter with a local loop out with a scaling (Up / Down) mirroring capabilities.

The SC-VGA-2B has the ability to output a specified resolution and refresh rate regardless of the input. Output timing to the display is constant regardless of the input so when switched from one input to another, the display device does not see any interruption in the signal coming to it. The video processor combines the functions of a video scaler, scan-converter, and format transformer. The SC-VGA-2B also includes a horizontal mirroring feature which is useful for teleprompter's and rear projection systems. The SC-VGA-2B features an OSD menu for configuration, picture setup, system information and many other advanced options.



Models

SC-VGA-2B	VGA/Component Scaler

Composite/S-Video to VGA/Component

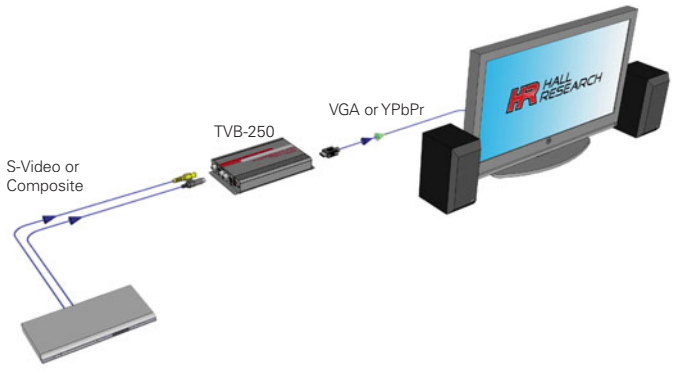
TVB-250

Features

- Scale Composite/S-Video to VGA/Component with resolutions up to 1920x1200 and 1080p.
- Advanced 3D motion adaptive de-interlacing
- Automatic 2:2 and 3:2 film mode detection
- Supports 50/60 Hz frame rate conversion

Description

The TVB-250 scales NTSC and PAL Composite and S-Video sources to a VGA output with a range of resolutions up to 1920x1200 and 1080p. It has an easy to use OSD menu for configuration, picture setup, system information and other advanced options.



Models

TVB-250	Composite/S-Video to VGA/Component Scaler

HDMI or DVI to Composite Video & Audio Scan Converter

VHD-HD2CV

Features

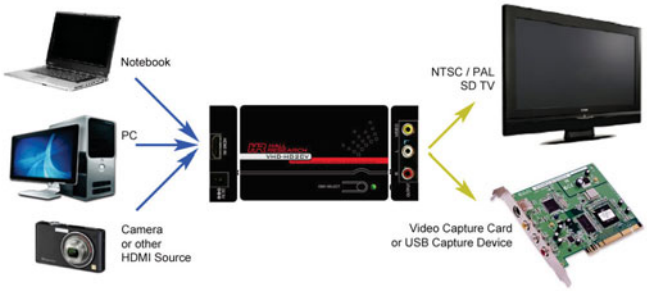
- Converts and scales digital HDMI or DVI to composite video

  Extracts HDMI audio to analog stereo output
- Output interlaced NTSC or PAL video with overscan and two under-scan output options
- Multiple aspect ratio adjustment options
- Motion adaptive 3D de-interlacing and adaptive interpolation

  Quick and simple to install

Description

The VHD-HD2CV is a compact HDMI to composite video & audio converter. It accepts HDMI or DVI video input up to 1080p and converts it to composite video. If the input HDMI signal has embedded audio, it is extracted and output as line level stereo L/R on RCA connectors.



Models

VHD-HD2CV	HDMI or DVI to Composite Video & Audio Scan Converter

VGA to Composite/S-Video

VHD-PCTV

Features

- Convert VGA Signal to Interlaced NTSC or PAL Video
- Support PC Resolutions Up to UXGA (1600x1200 @60Hz)
- Output in S-Video or Composite video format
- Underscan / Overscan Selection

Description

The VHD-PCTV converts a PC video signal to NTSC or PAL format on S-Video or Composite cable. It supports Overscan or Underscan via a selector switch.

The VHD-PCTV is very simple to setup and use. Just connect the video input and output cables, plug it in and the unit is ready to go. The LED on the top of the unit indicates the device has power and is operational.

Models

VHD-PCTV	VGA to Composite / S-Video


IP
HDMI INPUT
SPDIF OUTPUT
HDMI OUTPUT
OUTPUT
INPUT
HALL RESEARCH
HSM-I-08-08
8x8 HDMI MATRIX WITH IP CONTROL

Switches

HDMI Matrix Switches

4x4 and 4x2 HDMI Matrix Switches

HSM-I-04-04

Features

- 4 x 4 HDMI or DVI cross-point in 1 RU
- Full HD support 1080p deep color, 3D
- Supports lossless digital audio: both 5.1 and 7.1 Dolby TrueHD, Dolby
- Digital Plus and DTS-HD Master Audio
- Control from front panel, RS-232, IR remote or IP (Telnet and built-in web interface)

Description

The HSM-I-04-04 is a powerful 4x4 HDMI matrix switch with RS-232, IR, front panel and IP control (internal web-server and Telnet). The unit supports HDMI 1.4a with HDCP, deep color, multi-channel digital audio (up to 7.1 channels), and may be used with any combination of DVI (PC) or HDMI (HDTV) sources and displays.

Advanced features include: EDID management and user defined names for inputs and outputs. Control and manage your video switch from anywhere on your network using an iPhone or Android phone. The IP (LAN) port includes a Smart built-in web server with software to configure and control the switch.

IP Manager

Models

HSM-04-02	4x2 HDMI Matrix Switch
HSM-04-04	4x4 HDMI Matrix Switch
HSM-I-04-02	4x2 HDMI Matrix Switch with IP Control
HSM-I-04-04	4x4 HDMI Matrix Switch with IP Control

new

8x8 HDMI Matrix Switch with 4K UHD support, IR, RS-232, and IP Control

HSM-88-4K

4K ULTRAHD

Features

- HDCP 2.2 and HDCP 1.4 compliant
- Supports 4K @ 30Hz 4:4:4, 4K @ 60Hz 4:2:0, 1080P@120Hz, 1080P 3D@60Hz and VESA VGA to WUXGA
- Supports Deep Color 48/36/30/24-bit
- Control via RS232, IP, IR remote, or intuitive front panel buttons
- Supports lossless digital audio: 5.1 and 7.1ch, LPCM, Dolby, TrueHD, Dolby Digital Plus and DTS-HD
- Allows any source to be displayed on multiple displays at the same time

Description

The HSM-88-4K is a high performance and economical 8x8 cross-point switch in a compact 1-RU enclosure. Supports resolutions up to 4K@60 (4:2:0) and HDCP 2.2. It may be used with any combination of DVI (PC) or HDMI (HDTV) sources and displays.

The matrix switch automatically performs intelligent EDID capability mapping between sinks and sources.

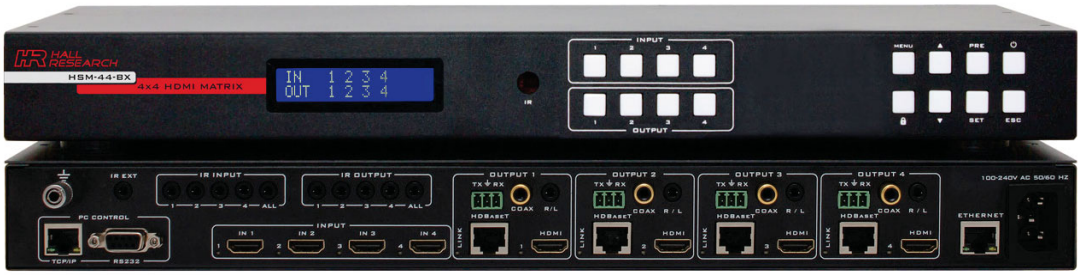
Other features include: PRESET save and recall functions (with user definable PRESET names), HDMI output blanking, comprehensive front panel controls, RS232 and Telnet control.

The HSM-88-4K Genesis Digital matrix is ideal for home theater, conference room, multimedia presentation, digital signage in retail space, and other similar settings.

Models

HSM-88-4K	8x8 HDMI Matrix Switch with 4K UHD support, IR, RS-232, and IP Control

4x4 HDMI Matrix Switch with both HDMI and HDBaseT™ Outputs 4K UHD support, IR, RS-232, and IP Control



HSM-44-BX

4K ULTRAHD

Features

- Resolutions of 4K x 2K@60 Hz (4:2:0) 12 bit, 4K x 2K@30Hz, 1080P@120Hz,1080P 3D@60Hz and VGA to WUXGA
- HDMI 2.0 and HDCP 2.2 compliant
- Video outputs on both HDMI and HDBaseT™ with Power over Cable(PoC)
- Extend HDMI A/V, 100 BaseT Ethernet, RS-232, and IR up to 100m using the Model HBX-R HDBaseT receivers
- LPCM (2.0, 5.1 &7.1), Dolby (TrueHD & Digital Plus) and DTS-HD Audio
- HDMI audio extracts to both 3.5mm line level and RCA S/PDIF outputs

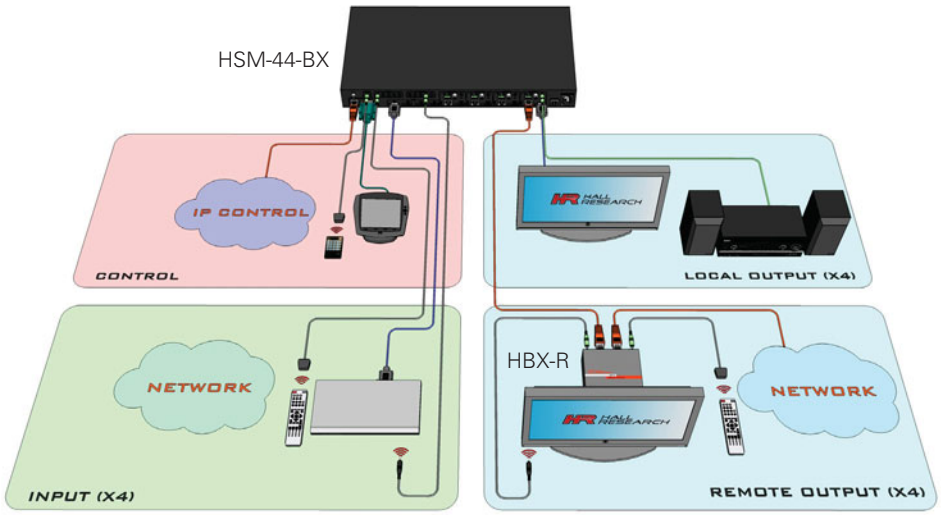
Description

The HSM-44-BX Genesis™ Digital matrix is ideal for home theater, conference room, multimedia presentation, digital signage in retail space, and other similar settings. This model is a 4X4 4K cross-point HDMI matrix in a compact 1-RU enclosure with simultaneous HDMI and HDBaseT over CATx video output. Supports resolutions up to 4K@60 (4:2:0) and HDCP 2.2. Audio support for 2.0 channel, 5.1 channel and 7.1 channel LPCM, Dolby TrueHD, Dolby Digital-Plus and DTS-HD audio. The source audio extracts onto both 3.5mm Line Level and RCA S/PDIF connectors on the matrix back panel. The audio routing for each HDMI output follows the video routing.

HDMI, Ethernet, RS-232, and bi-directional IR are extended up to 100m CAT6 cable to compatible HDBaseT Receivers such as the Model HBX-R. The matrix is controllable from IR remote control, RS-232, Telnet and/or the front panel.

The matrix switch has a Smart EDID capability that updates the source EDID in real time based on different types of sinks routed to ensure that all the displays show an image. There are 15 preset EDIDs available to ensure source and sink compatibility.

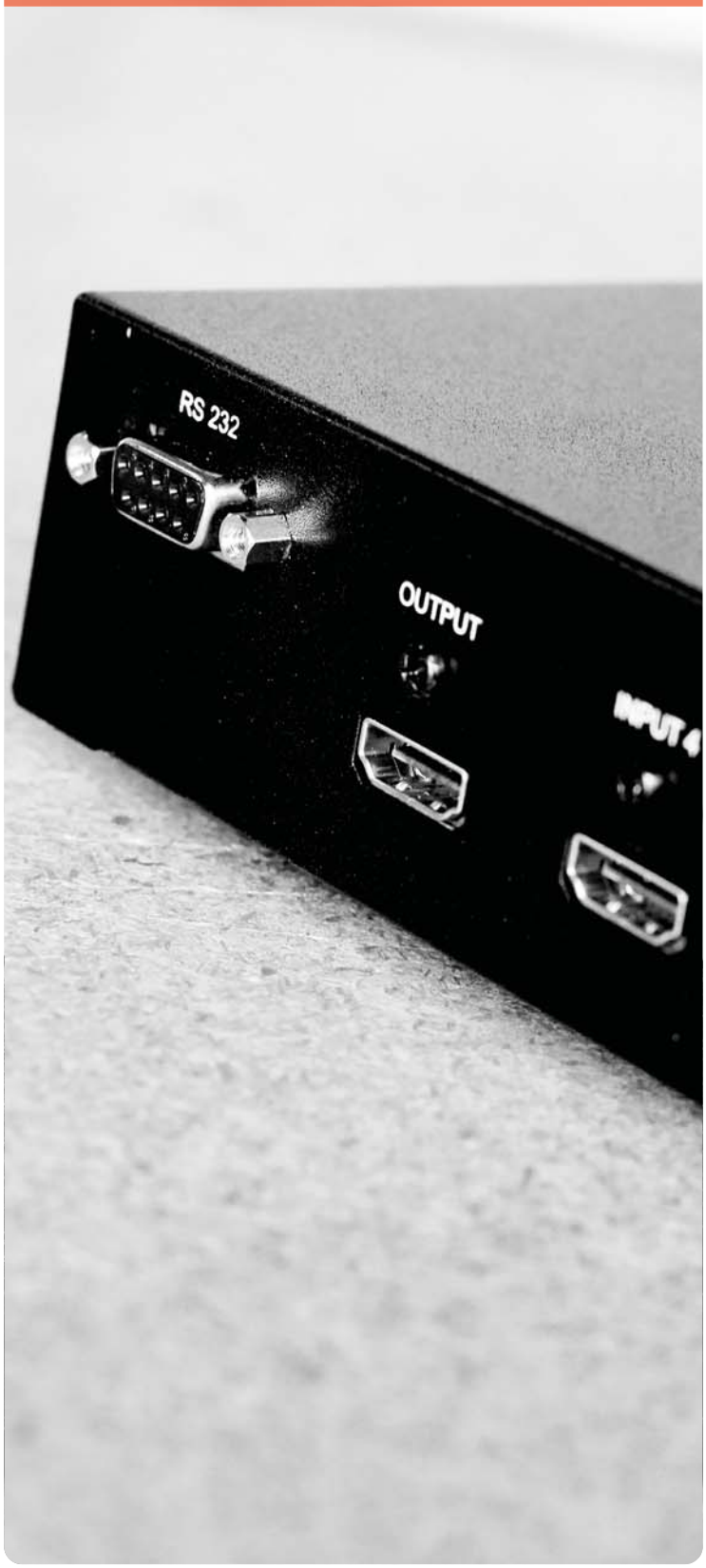
The HSM-44-BX supports four PRESETs for quickly recalling commonly used video routing patterns.



Models

HSM-44-BX	4x4 HDMI Matrix Switch with both HDMI and HDBaseT™ Outputs 4K UHD support, IR, RS-232, and IP Control
HBX-R	HDMI, RS-232, IR and Ethernet UTP Receiver

Digital Switches



2 Port DVI Switch with Audio

DVS-2A

Features

- Supports resolutions up to 1920x1200 and 1080p
- Control via front panel or RS-232
- Hot Pluggable
- DVI-D, HDCP & HDMI 1.3 Compatible

Description

The unit allows one monitor to be switched between multiple video and audio sources. The switched output can be selected via front panel push-button, RS-232 serial port, or automatically by scanning and detecting source 5v power on the inputs.
The switched output can be blanked (with audio muted) or unblanked via the front panel or through the serial port.

Optional rack mount brackets are also available

Models

DVS-2A	2 Port DVI Switch with Video

4x1 HDMI Switch for 4K 60Hz 4:4:4 and HDR, with RS-232 and IR Control

SW-HDA-4

Features

- Allows four HDMI sources to be routed to a display
- Supports High Definition resolutions up to 4K2K@60Hz(4:4:4),4K2K@30Hz,1080P@120Hz, and 1080P 3D@60Hz
- Supports auto switching or manual switching mode
- Supports up to 7.1 channels of High Definition audio (LPCM, Dolby TrueHD, and DTS-HD Master Audio)
- Supports Audio EDID management
- Flexible control via front-panel buttons, IR remote, or RS-232

Description

The SW-HDA-4 is an HDMI 2.0a and HDCP2.2 compliant 4x1 video switch with 18 Gbps bandwidth capable of supporting 4K video at 60 Hz with 4:4:4 color. It de-embeds the audio signal from HDMI stream and provides both optical (S/PDIF) and analog stereo audio outputs. The HDMI ARC (Audio Return Channel) is also supported.

Advanced features include Auto Switching, Audio EDID management and RS-232 Control.

Models

SW-HDA-4	4x1 HDMI Switch for 4K 60Hz 4:4:4 and HDR, with RS-232 and IR Control

new

Seamless 4-Port HDMI Switch with Quad Multi-View

SSW-HD-4

Features

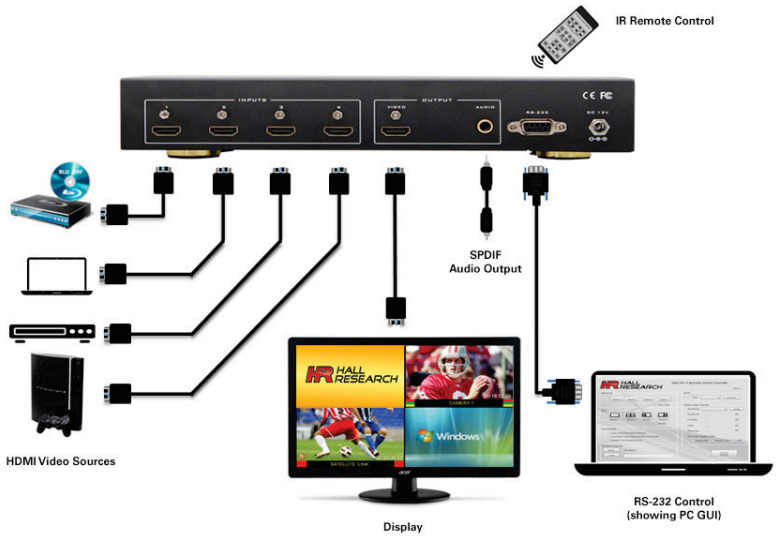
- Seamless Switching
- Pre-configured Multi-view Layouts
- Control via Front Panel, IR, PC-GUI and RS-232
- Input and Output Resolutions up to 1080p Full HD
- HDCP Compliant
- Includes IR Remote Control
- Includes Rack Mount Ears
- De-embedded S/PDIF audio out with RCA Connector
- Supports Locking HDMI Cables
- Includes Universal Power Supply w/ Locking DC Connector

Description

The SSW-HD-4 is a 4-input HDMI seamless video switch with multi-view capabilities where all inputs can be simultaneously shown in real-time in a variety of window configurations.

When only one input is shown, switching between different inputs is completely seamless with zero transition delay. The switcher supports various PC and HDTV resolutions; including 1080p Full HD on its input and produces a scaled Full HD video output.

The SSW-HD-4 can display four Hi-definition sources on a single display and comes with several pre-configured multi-view layout modes. Individual buttons for each input allow quick selection from the front panel. Control of switching and multi-view window layouts can be accessed via Front panel buttons, IR remote control (included), RS-232, or with the free PC GUI that controls the device via RS-232. The product is shipped with rack ears for 1U rack mounting.



Models

SSW-HD-4	4-Port HDMI Seamless switching with IP / RS-232 / IR Control

4-Port HDMI Fast Switch with IP / RS-232/IR Control

SW-HD-4

4K ULTRAHD

Features

- Supports 4K, 3D, 36-bit Deep Color
- Fast switching technology
- Control via IR, RS-232, Telnet and Web GUI control
- EDID Management

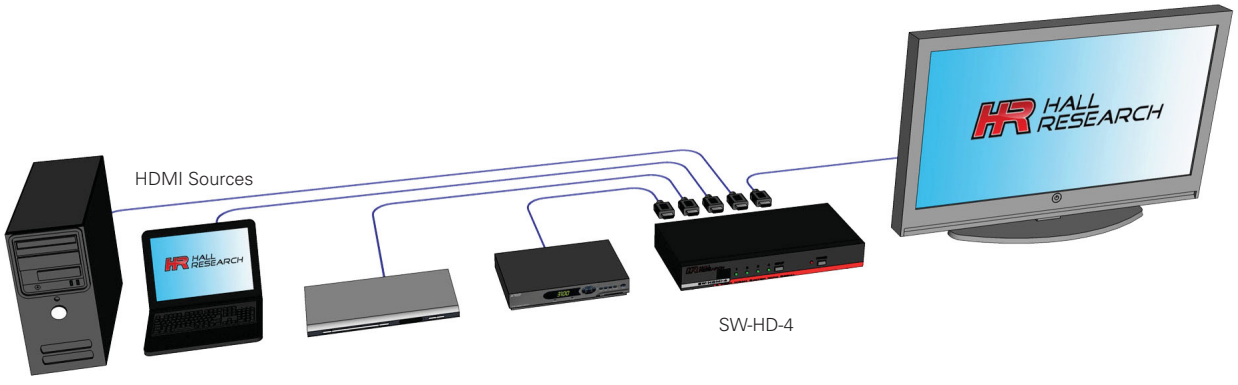
Description

The SW-HD-4 is a 4 input HDMI Switcher with InstaPort™ Technology from Silicon Image enabling fast switching among four HDMI sources. It supports 4K (UHD), 3D, 36-bit Deep Color video. Control switching via front panel button, using IR remote control, RS-232 , Telnet and also web GUI built in the unit.

Full EDID control is provided, where EDID content for each input can be set independently. Choose from a list of standard EDIDs or copy the EDID from the connected display to any input.

The SW-HD-4 offers Auto switching with priority. In this mode, the unit scans all inputs and automatically selects the active input.

Front panel buttons can be locked to prevent users from switching or changing modes. The switcher can also disable HDCP support for any input forcing the source to send unencrypted content when permitted. This is a useful feature for connecting the output to devices that do not support HDCP such as video conferencing gear.



Models

SW-HD-4	4-Port HDMI Fast Switch with IP / RS-232 / IR Control

Analog Switches

2 Port VGA Switches

VS-2

Features

- Supports resolutions up to 1920x1200 and 1080p
- Switch one monitor between multiple VGA sources
- Can be controlled manually, via Serial port , or auto-switching
- Auto mode automatically scans and selects the input with active video
- Priority auto switching gives input priority when multiple video signals are present
- Output can be blanked

Description

These versatile and compact VGA switches support VGA to 1920x1200 or 1080p. Allows one monitor to be switched between multiple video sources. The switched output can be selected via push-button, through RS-232 serial port, or automatically by scanning and detecting active video on the inputs.

Models

VS-2	2x1 VGA Switch

2 Port VGA + Audio Switches

VS-2A

Features

- Switch one monitor and speakers between multiple VGA + audio sources
- Can be controlled manually, via RS-232 or auto-switching
- Auto mode automatically scans and selects the input with active video
- Priority auto switching gives input priority when multiple video signals are present
- Output can be blanked
- 2 port model has local loop output for one of the inputs

Description

These versatile and compact VGA & audio switches supports PC resolutions to 1920x1200 or 1080p. They allow one monitor to be switched between multiple video and audio sources. The switched output can be selected via front panel push-button, through RS-232 serial port, or automatically by scanning and detecting active video on the inputs. The switched output can be blanked (with audio muted) or unblanked via the front panel or through the serial port. Optional rack mount and surface mount brackets are available.

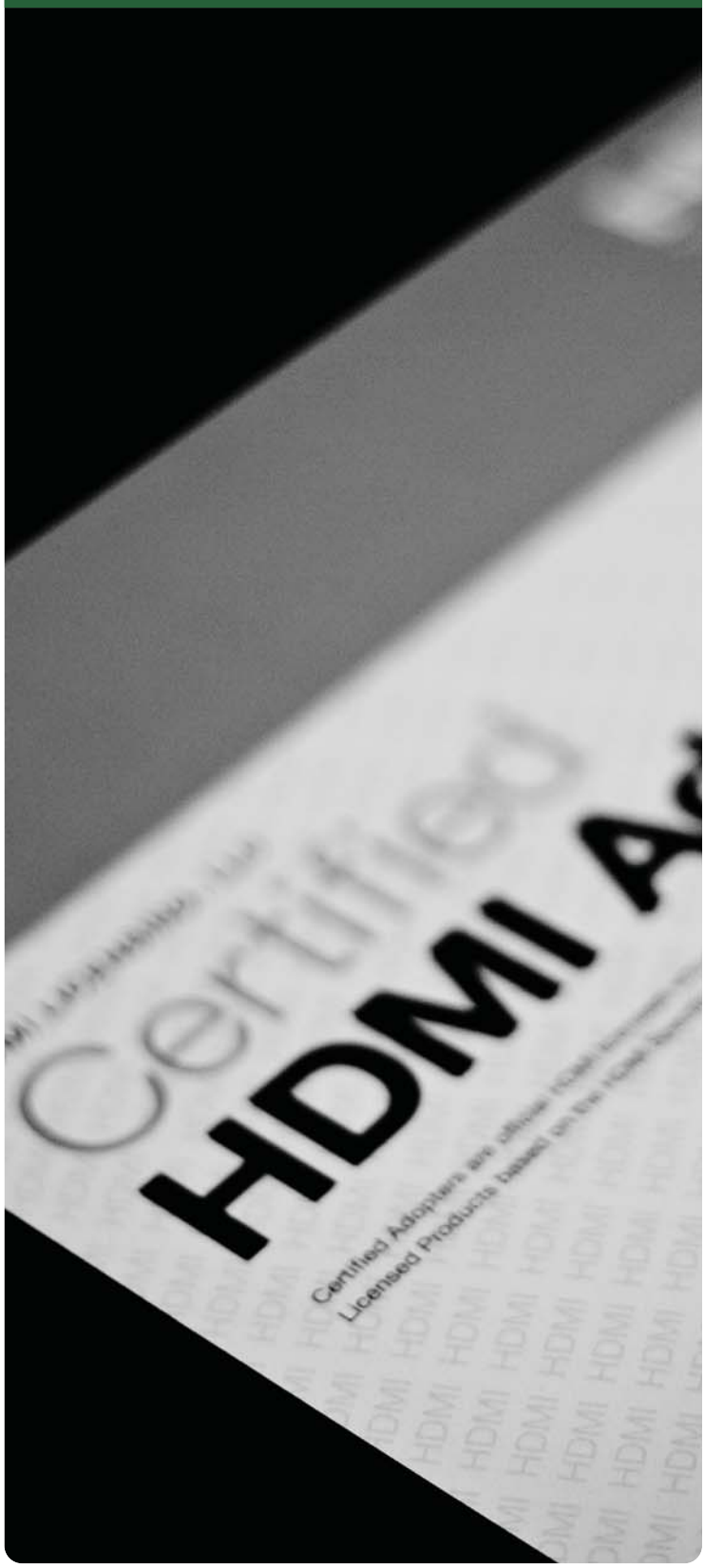
The 2 input unit (VS-2A) provides a buffered loop-out for input #1, making it ideal for presentation scenarios where the 2 inputs are from: (a) a fixed desktop PC with its own LCD, and (b) a guest notebook PC, either of which can be switched to and displayed on one projector.

Models

VS-2A	2x1 VGA + Audio Switch

Distribution Amplifiers

Digital Amplifiers



new

4-Channel HDMI Splitter with Analog and Optical Audio Output and 4K Support

SP-HD-4B

4K ULTRAHD

Features

- Lossless Ultra HD 4K distribution to four (4) UHD or HD outputs
- Supports PC & HDTV resolutions up to 4Kx2K@30Hz (4:4:4), 1080P@120Hz, and 1080P 3D@60Hz
- Supports 30/36/48 bits per pixel
- Full 3D video support including frame packing up to a 297MHz TMDS clock
- LED status indicators for power, source signal, and 4 output connections
- Analog and digital audio extraction via L/R and SPDIF outputs

Description

The SP-HD-4B is a compact 4-channel HDMI Video Splitter that can produce 4 identical outputs of DVI or HDMI input source for display on 4 outputs. It supports Full-HD (1080p) as well as 4K (UHD) video formats.

Furthermore, the device extracts the audio from the HDMI input signal and outputs it as analog (L/R) stereo, and digital optical TOSLINK signals for connection to audio amplifiers, headphones, or other audio devices. If no output display is connected (or if both displays are tuned off), the SP-HD-8B will emulate a display (using EDID) so the source still outputs HDMI video and the splitter with extract and output the audio.

It is HDCP compliant and supports HDMI 1.4 deep color, 3-D, UHD 4K/30, and handles all HDMI Audio formats.

For convenience a pair of mounting brackets and hardware are provided so it can be easily surface mounted.

Models

SP-HD-4B	4-Channel HDMI Splitter with Analog and Optical Audio Output and 4K Support

new

8-Channel HDMI Splitter with Analog and Optical Audio Output and 4K Support

SP-HD-8B

4K ULTRAHD

Features

- Lossless Ultra HD 4K distribution to eight (8) UHD or HD outputs
- Supports PC & HDTV resolutions up to 4K x 2K@30Hz (4:4:4),1080P@120Hz,and 1080P 3D@60Hz
- Supports 30/36/48 bits per pixel
- Full 3D video support including frame packing up to a 297MHz TMDS clock
- LED status indicators for power, source signal, and 8 output connections
- Analog and digital audio extraction via L/R and SPDIF outputs

Description

The SP-HD-8B is a compact 8-channel HDMI Video Splitter that can produce 8 identical outputs of DVI or HDMI input source for display on 8 outputs. It supports Full-HD (1080p) as well as 4K (UHD) video formats.

Furthermore, the device extracts the audio from the HDMI input signal and outputs it as analog (L/R) stereo, and digital optical TOSLINK signals for connection to audio amplifiers, headphones, or other audio devices. If no output display is connected (or if both displays are tuned off), the SP-HD-8B will emulate a display (using EDID) so the source still outputs HDMI video and the splitter with extract and output the audio.

It is HDCP compliant and supports HDMI 1.4 deep color, 3-D, UHD 4K/30, and handles all HDMI Audio formats.

For convenience a pair of mounting brackets and hardware are provided so it can be easily surface mounted.

Rack Mount Adaptor Kit is optional and should be ordered separately Part No: F10537-KIT

Models

SP-HD-8B	8-Channel HDMI Splitter with Analog and Optical Audio Output and 4K Support

2-Channel HDMI Splitter with Analog and Optical Audio Output and 4K Support

SP-HD-2A

Features

- Supports PC & HDTV resolutions, VGA-to-UXGA and 480p-to-UHD
- LED indicators for Power, Source Video and Output Connections
- Includes brackets for surface mounting
- Extracts HDMI Audio and outputs it as L/R Analog and TOSLINK
- Supports LPCM 7.1CH, Dolby TrueHD and DTS-HD Master Audio
- Plug and play installation with Smart EDID Management

Description

The SP-HD-2A is a compact 2-channel HDMI Video Splitter that can produce two identical outputs of DVI or HDMI input source for display on two outputs. It supports Full-HD (1080p) as well as 4K (UHD) video formats.

Furthermore, the device extracts the audio from the HDMI input signal and outputs it as analog (L/R) stereo, and digital optical TOS-LINK signals for connection to audio amplifiers, headphones, or other audio devices. If no output display is connected (or if both displays are tuned off), the SP-HD-2A will emulate a display (using EDID) so the source still outputs HDMI video and the splitter with extract and output the audio.

It is HDCP compliant and supports HDMI 1.4 deep color, 3-D, UHD 4K/30, and handles all HDMI Audio formats.

For convenience a pair of mounting brackets and hardware are provided so it can be easily surface mounted.

Models

SP-HD-2A	1x2 HDMI Distribution Amplifier

Single & Dual Link DVI Extender with EDID Management

EMX-DVI

Features

- Extend and boost DVI video to 90 ft total
- Can Learn and store EDID from any LCD
- Pass-through EDID or emulate any LCD
- Supports Single and Dual-Link DVI, HDMI™, CEC & 3D Video
- Can be powered from DVI input or external power supply
- LED Indicators for Mode Display

Description

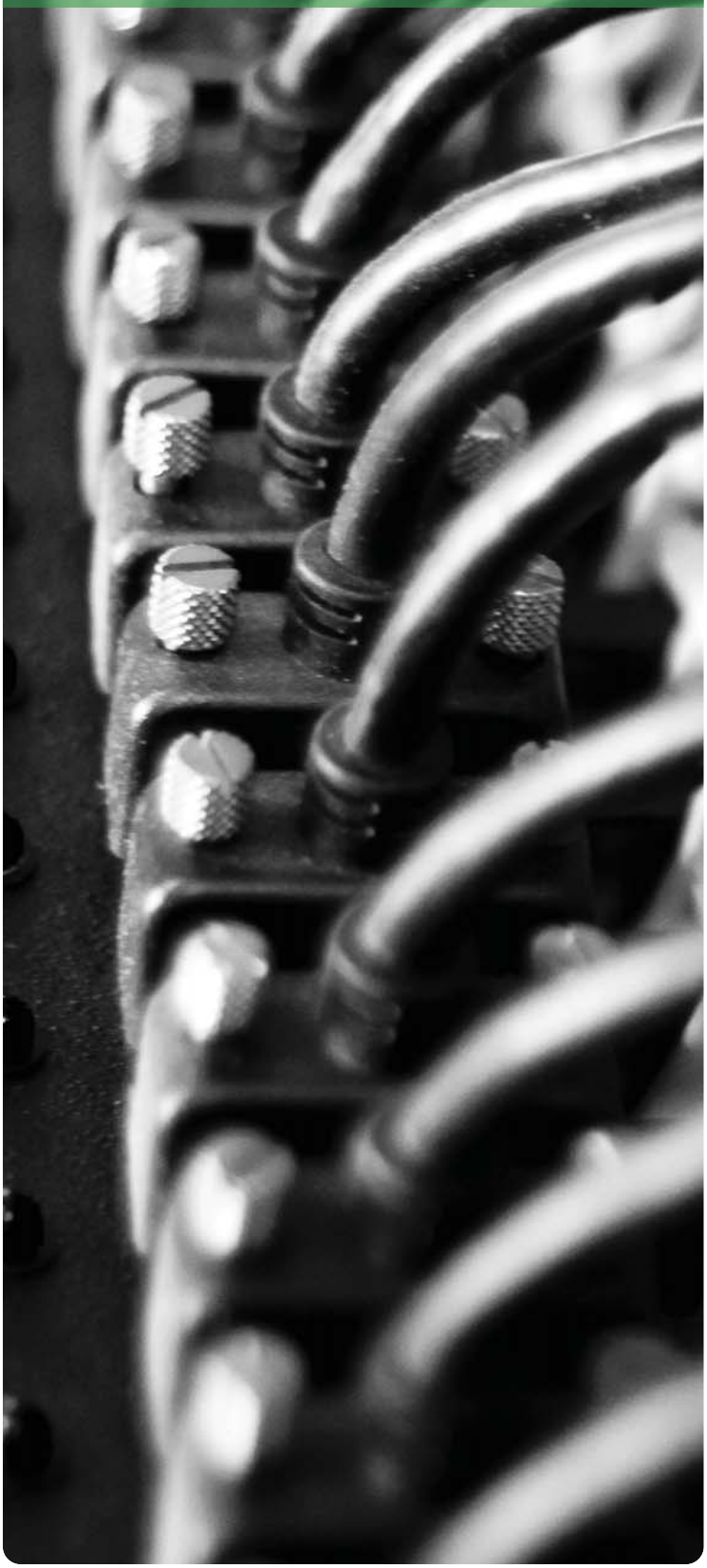
The EMX-DVI automatically compensates for signal degradation in long cables. Input cable length can be up to 50 ft (15 m), and the unit can drive long DVI Cables on its output to 40 ft (12 m) by boosting the DVI video output.

The DDC channel (for EDID and HDCP) can either be bypassed through the EMX-DVI (source "sees" the connected LCD), or Emulated, where the EDID is supplied from internal EDID memory in the EMX-DVI. When EDID is Emulated, HDCP is turned off (forcing the source to send non-content protected video without HDCP). Using the learn button, you can copy and store EDID from any HDMI or DVI LCD into the internal EDID memory of the EMX-DVI.

Models

EMX-DVI	Single & Dual Link DVI Extender with EDID Management

Analog Amplifiers



RGBHV Splitter with Universal Sync Processor

210-LU

Features

- Automatically detects and accepts all input sync modes (RGBHV, RGBS, or RGsB)
- Each output can generate all three sync types, user selectable
- 300 MHz Bandwidth
- Boost output to 150 feet or more

Description

The 210-LU buffers and splits component (RGBHV, RGBS, or RGsB) video signals for display on two monitors. The device is capable of outputting separate, composite, or sync-on-green based on a switch setting independently for each output. Outputs video up to 150 feet or longer depending on the resolution used and cable quality.

Models

210-LU	1x2 RGBHV Distribution Amplifier

VGA Splitter/Extender

400

200A

Features

- Split a single VGA signal to multiple displays
- Boost output to 150 feet or more
- 2 channel (200A) splitter features audio and EDID routing switch (pass-thru or emulate)
- Supports resolutions up to 1920x1200 and 1080p

Description

Distribute a single VGA signal to multiple displays. Amplified outputs allow cable lengths up to 150 feet or more depending on the resolution.

Models

200A	1x2 VGA Distribution Amplifier with Audio and EDID Management (pass-thru or emulate)
400	1x4 VGA Distribution Amplifier


AD-340
AUDIO DELAY PROCESSOR
DISTANCE
USB
DIGITAL
DELAY
TIME
(mSEC)
L/R INPUT
SELECT
AUDIO INPUT
POWER

AUDIO

Microphone Preamp with Line Mix and Analog + Digital + Fiber Outputs

HR-101-S

Features

- XLR mic input with low noise preamp
- Adjustable gain for MIC preamp
- Stereo line level input on 3.5mm jack
- VU meter to indicate sound level
- Phantom power to accommodate a wide range of MIC inputs
- Analog stereo and digital S/PDIF audio outputs
- Fiber optic output for extension to 1 km (3280 ft)

Description

The HR-101 is an ultra low-noise microphone preamp with Stereo line level mix (XLR and 3.5mm inputs). Local outputs include analog Stereo line-level on 3.5mm jack as well as Digital S/PDIF on an RCA. The front panel includes a color LED bar for VU indication, mic gain adjustment knob, and a switch for injecting phantom power in the XLR input. The HR-101-S has both stereo analog (on 3.5mm) and S/PDIF digital (on RCA) outputs as well as a fiber-optic ST connector for driving long cables to 3,280 ft. to compatible receiver.

The Model HR-101-R Receiver has an ST fiber optic input connector to receive audio from the sender. It provides a stereo line level output on 3.5mm mini-stereo jack and a S/PDIF digital audio output on a RCA connector.

The HR-101 can extend an audio over a single multi-mode fiber optic cable spanning distances of over 1000m (3280ft). For lengths of up to 500 meters OM2 or OM3 cables are recommended, and for distances of over 500 meters OM3 cable is recommended. Hall Research can provide pre-terminated fiber optic cables at various lengths up to 1,000 meters at competitive prices

Models

HR-101-S	Microphone Preamp with Line Mix
HR-101-R	Fiber Optic Audio Receiver
HR-101	Mic and Line Level Fiber Optic Audio Extender Kit

Universal Digital to Analog Audio Decoder DSP

DAC-51

Features

- Converts any digital audio to analog
- Optical (TOSLINK) and Coax (RCA) inputs
- Compatible with PCM or DTS/ AC3 digital source audio
- Down-mixes multi-channel digital audio into 2 channel stereo
- Plug and play

Description

The DAC-51 Digital to Analog Audio Decoder uses 24-bit audio DSP and 192KHz DACs to convert virtually any type of digital audio input to stereo output.

It supports uncompressed two-channel PCM as well as compressed multi-channel bit-stream audio (Digital AC-3, Pro Logic, DTS) and provides two channels of analog outputs both on RCA as well as 3.5mm headphone jack. When the input is multi-channel, the device down-mixes (using downmixing or fold-down algorithm) the digital channels to 2-channel stereo for easy connection to entertainment devices. Both TOSLINK optical, coaxial digital S/PDIF inputs are provided (switch selectable by the user).

Models

DAC-51	Universal Digital to Analog Audio Decoder DSP

HDMI Audio Extractor with EDID Management

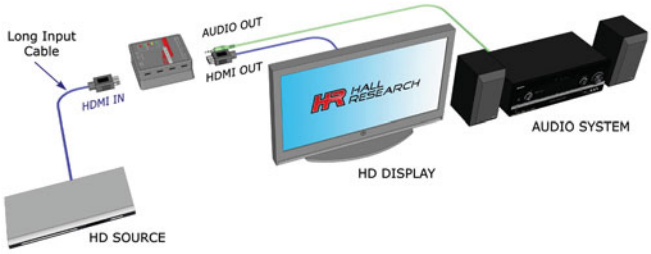
EMX-HD-AUD

Features

- Extracts both analog and digital audio
- Pass-through EDID or Learn and emulate custom files
- Powered from HDMI input (100 mA req'd) or external power supply
- Re-clocks HDMI and buffers DDC (resolves EDID and HDCP issues)
- Surge protects HDMI input and output
- Supports DVI, HDMI™, CEC, Deep-Color & 3D Video

Description

The EMX-HD-AUD device can be used to extract the audio from HDMI, extend HDMI cable length, manage EDID (pass-thru or emulate), and re-clock both TMDS video and DDC data. The use of EMX-HD-AUD can often resolve system level HDMI signal-chain issues by acting as an intelligent intermediary.



Models

EMX-HD-AUD	HDMI Audio Extractor with EDID Management

Ground Loop Isolator

GLI-3.5mm

Features

- Eliminates ground loop noise between the audio source and TV, or audio amp
- Near perfect response of .03 db from 20 to 20,000 Hz
- Perfect for AV presentations in classrooms or conference rooms

Description

Stereo Audio Ground-Loop Isolator & Filter. Eliminates ground loop noise between any audio source such as a notebook PC and audio equipment. Perfect frequency response of +.03 db from 20 to 20,000Hz. Uses proprietary audio transformers and filters for total elimination of any spurious buzz and hum in the audio.

Models

GLI-RCA	Stereo Audio Ground-Loop Isolator & Filter with RCA Connectors
GLI-3.5mm	Stereo Audio Ground-Loop Isolator & Filter with 3.5mm Connectors

HDMI Repeater and Audio Extractor

HD-AUD

4K ULTRAHD

Features

- Buffers and re-clocks HDMI signals
- Extracts audio from HDMI input
- Works with or without display
- Supports Full HD and 4K x 2K (UHD)
- USB to mini-USB cable included

Description

Use this compact HDMI Repeater to buffer HDMI signals (helps resolve compatibility issues), and extract the stereo audio (analog L/R) from the video.

The repeater consumes very little power and most HDMI sources can power it just using the HDMI connection. If a source does not provide enough power, a USB cable is included to apply power (USB power supply is not provided).

Models

HD-AUD HDMI Repeater and Audio Extractor

new HDMI 2.0 Audio Processor with HDCP 2.2 & EDID Mgmt

HD-AUD-IO

4K ULTRAHD

Features

- Extracts (de-embeds) audio from HDMI input
- Inserts audio into HDMI output
- Supports multi-channel digital and 2-channel analog audio
- Generates HDMI output with embedded audio with no HDMI input
- 18 Gbps bandwidth for compatibility with HDMI 2.0
- Supports 4K/60 4:4:4, HDR, HDCP 2.2 & 1.4
- Can pass-thru or emulate EDID
- Learn button for EDID management

Description

The Hall Research HD-AUD-IO is an HDMI audio inserter with a host of advanced features. It provides one HDMI input along with digital and analog audio inputs. It has one HDMI output whose audio can be selected by the user to be either the original audio of the HDMI input, multi-channel audio received on the SPDIF digital input, or the audio from its 3.5mm stereo analog input.

The product provides a video bandwidth of 18 Gbps and supports resolutions to 4K 60 Hz 4:4:4 with HDR. It also supports HDCP 2.2 as well as HDCP 1.4. Advanced EDID management allows the user to pass the EDID of the connected sink (TV) to the source or to "emulate" EDID from internal data. The "emulated" EDID can be factory default, or learned from a connected device using a simple learn push button.

The product has many unique capabilities including the ability to output an HDMI signal with embedded audio even if there is no HDMI input. This is sometimes refereed to as HDMI Audio Bridging. It provides a convenient means to distribute audio only signals over an HDMI network.

Models

HD-AUD-IO HDMI 2.0 Audio Processor with HDCP 2.2 & EDID Mgmt

4K HDMI Audio Extractor with Audio Amplifier, RS-232 and IP Control

EMX-AMP

4K ULTRAHD

Features

- 4K HDMI audio extractor with EDID management
- Built-in 50 watt audio amp
- Separate analog audio input for connection of line-level mics or other audio inputs
- 2nd RS-232 port for controlling auxiliary devices
- Volume control via front panel, RS-232, Digital Pot (rotary encoder), and IP

Description

The EMX-AMP and EMX-I-AMP are 4K HDMI Audio Extractors with line-level audio input and built-in 50 watt audio amplifier for direct connection of 8 ohm speakers. Both devices allow audio mixing (HDMI audio and/or analog L/R input), and volume control from the front panel and RS-232. The EMX-I-AMP also provides IP connectivity which allows network control of the device using TELNET commands or via the built-in webpage control.

The devices also have a provision of controlling the volume remotely using a simple rotary encoder that can be mounted on a wall-plate. They also feature a second auxiliary RS-232 that can be connected to a projector. Using the primary RS-232 input, or the IP port, the user can send power on/off commands to the display through the Auxiliary RS-232 port.

Full EDID management is provided with the ability to learn, download, upload, emulate or pass-thru EDID. A USB port is provided on the front panel that can be used to configure EDID behavior, update firmware, and more.

Models

EMX-AMP	4K HDMI Audio Extractor with Audio Amplifier, RS-232
EMX--I-AMP	4K HDMI Audio Extractor with Audio Amplifier, RS-232 and IP Control
UI-KNOB-DP	Rotary Volume Control (digital-encoder) on Decora® Wall-Plate
SPK-820T	Ceiling Tile Speaker, 25 Watt, 2ftx2ft, 8 Ohm
VSA-PGSNS	Non-Invasive Priority Page Sensor

Universal Audio Delay Processor

AD-340

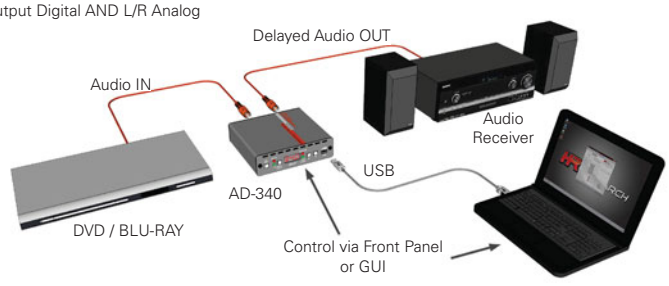
Features

- Delay analog or digital audio in milliseconds, frames, or distance
- Analog to Digital and Digital to Analog conversion
- Supports CD, DVD, and Blu-Ray sample rates at 32kHz, 44.1kHz, 48 kHz and 96kHz
- Supports 2-channel linear PCM digital audio and 5.1 Channel Dolby Digital and DTS encoded bitstreams
- USB interface for advanced control via Windows software

Description

The AD-340 is an audio delay processor with universal analog (L/R) and digital (S/PDIF) inputs and outputs. Both outputs are simultaneously active, enabling conversion between analog stereo audio to LPCM or vice versa. Delay time can be specified in milliseconds, frames, or distance depending on the application. Analog inputs provide +/- 24 db of gain for direct connection of low level mic as well as handling 2vrms line-level signals. The AD-340's digital I/O support 2-channel linear PCM, 5.1 Channel Dolby Digital, and DTS Surround encoded bitstreams at any sampling rate from 32KHz to 96KHz.

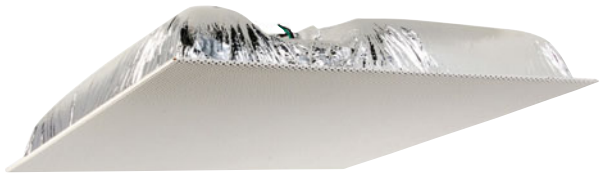
Input Digital OR L/R Analog
Output Digital AND L/R Analog



Models

AD-340	Universal Audio Delay Processor

Ceiling Tile Speaker



SPK-820T

Features

- Installs quickly into suspended tile ceilings
- Supported by the T-bar grid
- Acoustically transparent perforated grille blends with ceiling tiles
- 24 watts maximum continuous program power handling
- Excellent frequency response in its class 50 Hz to 18 KHz at 95 dB SPL
- 3.5 inch deep protective enclosure over the speaker

Description

Designed for operation with Hall Research "VSA Series" room control systems, these speakers are perfect for unobtrusive appearance and easy installation in suspended ceiling applications.

They are shipped ready to install and require no speaker cut-outs in the tile. The fully enclosed and protected driver is mounted to a fine perforated 2' x 2' square grille finished in white powder epoxy for long lasting appearance that blends perfectly and unobtrusively.

Speakers include Five (5) seismic tie-off points and meet plenum requirements. No assembly required.

Models

SPK-820T	Ceiling Tile Speaker, 25 Watt, 2ftx2ft, 8 Ohm

USB Extension

USB 2.0 Over UTP with Integrated 4-Port Hub

U2-160-4

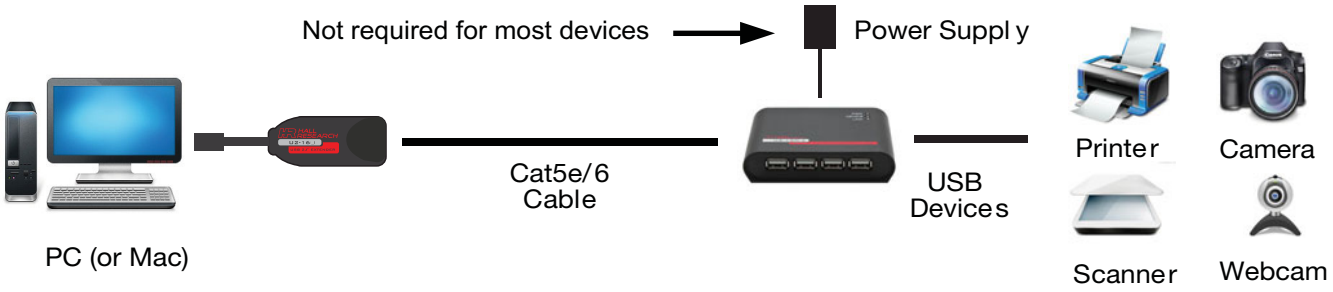
PoC

Features

- Support for any high-speed (480 Mb/s) , full-speed (12 Mb/s) or low speed (1.5 Mb/s) USB device.
- Allows a USB device to be remotely located up to 50m /164 ft.
- Compatible with USB 1.0 at low (1.2 Mbps) and Full (12 Mbps) speeds
- Sends power from local to remote using PoC (power over cat5)
- Compatible with interactive white boards, touchscreens, KVM, and USB video cameras

Description

The U2-160 is an economical but high performance USB extender, compliant with USB 2.0 specifications. Extend any USB 1.1 or 2.0 device from the Host (PC) up to 50m (164 ft) using twisted pair cable. It can be used in the applications like extending USB web camera, keyboard, mouse and printer etc. to a distance of 50m / 164 ft . All models send power over Category cable and for most USB devices connection of an additional power supply is not required. However all models include a power supply in case it is needed.



Models

U2-160-4	USB 2.0 Over UTP Extension Kit with 4-port hub in Remote

new

USB 2.0 Over UTP (with 2-Port Hub)

U22-160

U22-160-DP

PoC

Features

- Extends USB 2.0 devices up to 165 ft (50 m) using Cat5
- Supports high-speed, full-speed, and or low-speed devices
- Status LEDs indicate Power and Data
- Supports Hot Plug/Unplug
- Can power most USB devices without power supply
- Plug and Play installation
- Surface/Wall mount brackets included

Description

The U22-160 extends your host PC's USB 2.0 port across a single Cat5e/6 cable to 50 meters (165 ft) with data rates up to 480 Mb/s.

In most instances, no power supply is needed for either side as the local (host) side gets its power from the PC and it sends PoC (Power-over-Cable) to the remote (device) side. However for convenience a power supply is included that can be plugged in to the remote end for power hungry USB devices. The remote end has a two port hub built-in to allow connection of 2 USB Devices. The U22-160 is a perfect solution for industrial and commercial applications.

This product can be used to extend a broad range of USB devices like webcams, printers, keyboards, and disk drives up to 165 ft (50 m) using single Cat 5/6 cable.

Models

U22-160	USB 2.0 over UTP Extender with 2-Port Hub
U22-160-DP	USB 2.0 over UTP Extender Decora® Wall Plate with 2-Port Hub

HDMI and USB Extension on CAT6 with Audio and Integrated Control

EX-HDU

Features

- Extends HDMI + USB 2.0 to 200 ft (60 m) on one Cat 6 cable
- Wall plate sender has 2-port hub for connection to USB devices to the host PC
- Receiver provides HDMI, 4 USB ports, RS-232 for display control, contact closure I/O, and Stereo Audio outputs
- Perfect for Interactive displays, Soft CODECs, and KVM extension
- Wall plate does not require separate power supply
- Receiver is available with optional IP and WebGUI control

Description

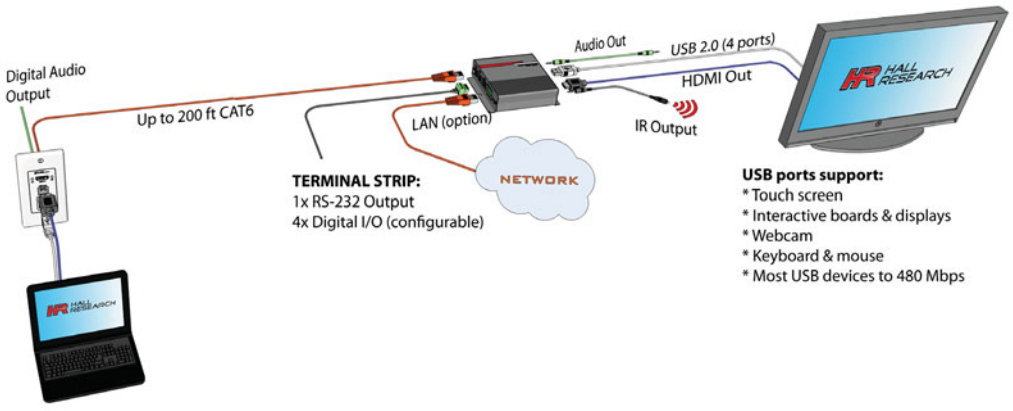
The EX-HDU is used to extend HDMI video and USB data on a single Cat6 cable up to 200 ft (60 meters). HDMI audio is extracted and is provided both as analog stereo and multi-channel digital. The EX-HDU can also be used to control other equipment by providing programmable contact closure I/O, RS-232 output, IR output, and optional LAN interface with internal WebGUI and IP control.

The EX-HDU extender consists of an EX-HDU-WP single-gang wall plate transmitter and an EX-HDU-R (or EX-HDU-R-IP) receiver. They connect using standard CAT5e/6 UTP cabling up to 200 feet (60 Meters) long.

The wall-plate Sender gets its power from the Receiver via the same UTP cable and does not need a separate power supply. For convenience, the wall plate features a USB hub with two USB ports for connection of USB devices. The plug-and-play extender is compatible with all PCs, MACs, and Android Tablets and does not require driver installation. Simply plug the PC's HDMI and USB ports to the sender and make them available at the remote receiver.

The Receiver provides HDMI video output, stereo audio output, 4 USB ports, IR output, and a terminal strip that has RS-232 output plus 4 programmable digital I/O ports. A mini-USB port is also provided for configuration upload from a PC for cases where the Receiver is used also as a control system.

Receiver with IP connectivity is the model EX-HDU-R-IP. It provides an ETHERNET port for control via IP commands or internal webpage.



Models

EX-HDU	HDMI and USB Extension on Cat6 with Audio and Integrated Control

USB Extender on Cat6 Cable to 150m (500ft)

new

U2-DR1

Features

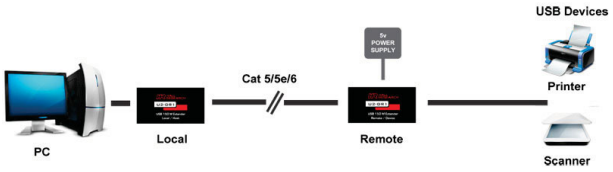
- Extends High-Speed USB to 150 meters (500 ft)
- Plug-n-play – No driver installation required
- Supports a vast variety of USB devices including webcams, flash memory, touch screens, printers, scanners, etc.
- Includes Universal Power Supply

Description

The U2-DR1 extends a host PC's USB 2.0 port on a CAT6 cable to 150 meters (500 ft) with data rates up to 480 Mb/s.

The local (host) side gets its power from the PC and the remote (device) side is powered by an included universal power supply.

The U2-DR1 is compatible with all PCs and Macs and requires no driver installation. It also extends the USB port transparently without any hidden hubs for maximum compatibility across all USB devices. The U2-DR1 is a perfect solution for corporate, education, industrial, and commercial applications.



Models

U2-DR1	USB Extender on CAT6 Cable to 150m (500 feet)

HDMI + USB + LAN over HDBaseT™ 2.0 with PoH & Control

UH2X-P1

4K ULTRAHD

Features

- Extends Video, USB, LAN, Audio, Control, and Power over a single Cat6 cable
- Uncompressed HDMI extension supports all resolutions including 4K x 2K (UHD)
- Extends USB 2.0 seamlessly for connection of keyboard, mouse, touchscreen, memory devices, smart whiteboards, and more
- Extends RS-232 and IR control signals in both directions
- Powered via UTP (Cat6)
- Power-over-HDBaseT™ meets IEEE 802.3af standard

Description

The UH2X-P1 is the most powerful video and data extender from Hall Research. It extends uncompressed HDMI with audio, LAN, USB 2.0, RS-232, IR, and PoH (power over HDBaseT™) over a single Cat6 cable to 100m / 330ft. It also provides a separate digital audio path from the receiver to the sender (in reverse direction of video). The audio in return path can be from the ARC (Audio Return Channel) from the display, or from an S/PDIF RCA connector, switch selectable. The sender requires a power supply (provided). Power is sent to the receiver via PoH (power over HDBaseT™), per IEEE 802.11af standard.

Conveniently a USB 2.0 hub is provided on the receiver with two USB connectors to support keyboard, mouse, touchscreen, memory devices, smart white boards, and more. Local Area Network (100-BaseT) is extended to provide a convenient way to get access to the display's IP port. Bidirectional RS-232 and IR signals are also extended.

Models

UH2X-P1	HDMI over HDBaseT™ 2.0 Extender

USB 3.0 Active Extension with 4-Port Hub

USB3-33H4

Features

- 4 downstream USB 3.0 ports
- Backward compatible with USB 2.0 /1.1 devices
- Data Transfer rates to up 5Gbps
- Plug and Play no driver required
- Works without external power supply

Description

USB 3.0 Active Extension Cable with Hub enables you to connect to multiple devices up to 10m / 33ft away. The USB3-33H4 supports data transfer rates up to 5Gbps and is fully backward compatible with 2.0 / 1.1 devices.

Additional DC-Jack is provided for devices which need more power such as USB HDD, PTZ cameras, etc.

A power supply is also included.

Models

USB3-33H4	USB 3.0 Active Extension with 4-Port Hub

USB 3.0 ACTIVE EXTENSION CABLE - 16'

USB3-EXT-16

Features

- Perfect for USB 3.0 HD cameras, portable HDDs, etc
- Active extension with no drivers needed
- USB bus powered for one or two in a daisy-chain
- Connect up to 4 to achieve 20 m / 65ft
- Optional power supply for daisy-chains more than 2
- Active extension with no drivers needed
- USB bus powered for one or two in a daisy-chain
- Connect up to 4 to achieve 20 meters (65ft)
- Optional power supply for daisy-chains more than 2
- Meets USB 3.0 Super speed devices to 5 Gbps

Description

The USB3-EXT-16 is an active extension cable which can be cascaded (up to 5) to extend the distance between USB devices and a PC. It regenerates the USB signal for maximum reliability and performance over extended distances.

Can be used without a power supply when cascaded up to 2 devices maximum otherwise the power supply is required at the farthest connection from the USB source.

Models

USB3-EXT-16	USB 3.0 Active Extension Cable - 16'

Accessories

4K Monitor Test Pattern Generator Analyzer

PGA-VHD

Features

- Simultaneous HDMI and VGA output
- HDMI loop and pass-through functions for testing cables, extenders, and switchers
- Large 4.3" touch screen for display and control
- Supports HDMI 2.0(a) on both input and output with 18 Gbps Bandwidth
- Supports 4K2K/60 4:4:4 8bit and 4K2K60 4:2:0 16bit video signals
- High Dynamic Range Video with HDR 10 support
- Selectable HDCP 2.2 or 1.4
- Large selection of output video patterns including user defined and patterns with moving objects
- Audio output (stereo L/R)
- Supports mouse control
- Supports Ethernet TCP/IP device control
- Supports user defined pattern up to 2GB
- The touch screen video image can be mirrored (duplicated) to the HDMI output (perfect for training)
- EDID read and save option
- Creates reports for video format, timing, packet data and Audio parameters
- Rugged and durable housing with elastic rubber corner protection
- Convenient carrying case for field use
- Battery operation time up to 4 hours under full load

Description

The PGA-VHD is a must-have tool for every AV installer and system integrator!

This battery-operated instrument provides an HDMI input and both VGA and HDMI outputs. The PGA-VHD has a large 4K touch screen for user operation. The display can also act as an HDMI monitor and signal analyzer. Input and outputs support resolutions to 4K UHD @ 60 4:4:4. The PGA-VHD provides a host of tools for verification and troubleshooting of complex AV systems.

When configured as a Pattern Generator, it can provide both legacy VGA and digital HDMI outputs supporting HDMI 2.0a with HDR standards. Embedded audio of up to 8-channel @ 192K is provided. The analyzer can perform system level "loop test" acting as both source and sink to test repeaters, extenders and cables. It can also act as a pass-thru HDMI signal analyzer.

The pattern generator Includes a universal power supply and is battery-powered with operation time of 4 to 6 hours on a single charge. Various tests and reports (saved on external USB flash memory) such as HDMI video format and parameter information, HDCP and EDID tests are provided for testing video sources and video sinks (TVs, extenders, Switchers, etc). It can also perform tests on AV equipment such as extenders, splitters, switchers, and scalers.

The analyzer is also equipped with an Ethernet port and all of its functions are controllable using Telnet protocol.

Models

PGA-VHD	4K Monitor Test Pattern Generator Analyzer

EDID Emulation & Programming

VGA, HDMI, DVI EDID Reader & Programmer

USB-EDID-PRO2

Features

- Record EDID from any VGA, HDMI, or DVI display
- Program any compatible Hall Research devices - for example, EDID
- Emulators or the UV-1 MiniCat®
- Save or read multiple EDID files

Description

The USB-EDID-PRO2 can be used to read the EDID from any VGA, DVI or HDMI monitor, or similar device. It can also program a new EDID back into the device (if target is write enabled and allows programming). Connect to the USB port of any PC and plug The DVI output port to your display's input. For VGA and HDMI displays adapters are included in the kit. Simply plug the appropriate adapter to the DVI output. Using free Hall Research Windows™ software, you will be able to read, save, and even modify the EDID of any display. You can also use it to program EDID into Hall Research VGA EDID Emulator (EM-EDID-HD15). No power supply is needed when connected to USB port of PC. Can be used as DVI buffer/extender and EDID Emulator.

Models

USB-EDID-PRO2	VGA, HDMI, DVI EDID Reader & Programmer

HDMI Audio Extractor with EDID Management

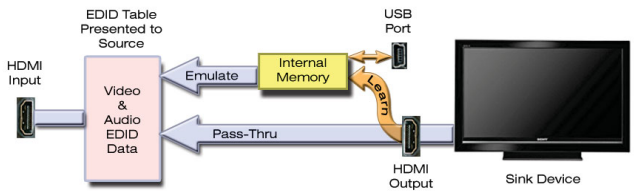
EMX-HD-AUD

Features

- Extracts both analog and digital audio
- Pass-through EDID or Learn and emulate custom files
- Powered from HDMI input (100 mA req'd) or external power supply
- Re-clocks HDMI and buffers DDC (resolves EDID and HDCP issues)
- Surge protects HDMI input and output
- Supports DVI, HDMI™, CEC, Deep-Color & 3D Video

Description

The EMX-HD-AUD device can be used to extract the audio from HDMI, extend HDMI cable length, manage EDID (pass-thru or emulate), and re-clock both TMDS video and DDC data. The use of EMX-HD-AUD can often resolve system level HDMI signal-chain issues by acting as an intelligent intermediary.



Models

EMX-HD-AUD	HDMI Audio Extractor with EDID Management

Single & Dual Link DVI Extender with EDID Management

EMX-DVI

Features

- Extend and boost DVI video to 90 ft total
- Pass-through EDID or emulate any LCD
- Can be powered from DVI input or external power supply
- Can Learn and store EDID from any LCD
- Supports Single and Dual-Link DVI, HDMI
- LED Indicators for Mode Display

Description

The EMX-DVI automatically compensates for signal degradation in long cables. Input cable length can be up to 50 ft (15 m), and the unit can drive long DVI Cables on its output to 40 ft (12 m) by boosting the DVI video output.

The DDC channel (for EDID and HDCP) can either be bypassed through the EMX-DVI (source "sees" the connected LCD), or Emulated, where the EDID is supplied from internal EDID memory in the EMX-DVI. When EDID is Emulated, HDCP is turned off (forcing the source to send non-content protected video without HDCP). Using the learn button, you can copy and store EDID from any HDMI or DVI LCD into the internal EDID memory of the EMX-DVI.

Models

EMX-DVI	Single & Dual Link DVI Extender with EDID Management

Adapters

DisplayPort Adapters

GC-HD-DP	HDMI to DisplayPort Adapter
GC-DP-HD	DisplayPort to Active HDMI Adapter
GC-DP-DVI-P	DisplayPort to DVI Adapter
GC-DP-VGA-P	DisplayPort to VGA Adapter
GC-MDP-DVI-P	Mini DisplayPort to DVI Adapter
GC-MDP-HDMI-P	Mini DisplayPort to HDMI Adapter
GC-MDP-VGA-P	Mini DisplayPort to VGA Adapter

DVI - VGA / HDMI Adapters

GC-DVI-VGA	DVI to VGA Adapter
GC-HDMIF-DVIM	DVI Male to HDMI Female Adapter

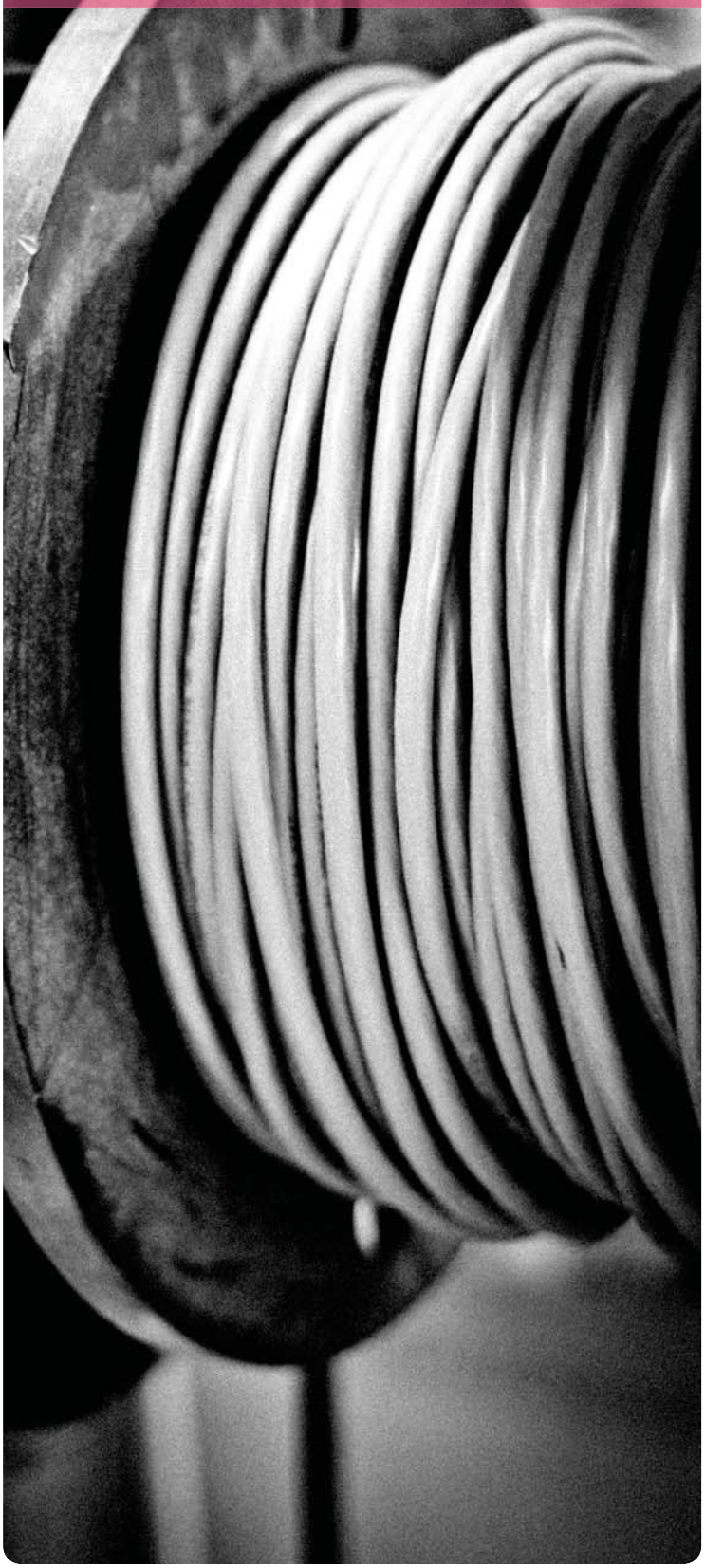
IR Detectors and Emitter Cables

CIR-DET-D2	IR Detector Cable, Demodulated (for use with HR-4P)
CIR-DET-P2	IR Detector Cable, Pass-thru (for use with UHBX Series)
CIR-EMT	IR Emitter Cable, 3.5mm Stereo (for use with HR-4P, UHBX, VSA-51)
CIR-EMT2	IR Emitter Cable, 3.5mm Mono (for use with IR-CNT-16, UHBX)
CIR-EMT2-CVR	Adhesive Cover for CIR-EMT2 Cable

USB to Serial

USB-RS-232-1	USB to RS-232 Serial Converter

Cables



Locking HDMI Patch Cables

C-HDMI-L-1.5	Locking HDMI Patch Cable (1.5 feet)
C-HDMI-L-6	Locking HDMI Patch Cable (6 feet)
C-HDMI-L-25	Locking HDMI Patch Cable (25 feet)

HDMI Patch Cables

C-HDMI-5i	HDMI Patch Cable (5 inch)
C-HDMI-2M	HDMI Patch Cable (2 meter)
C-HDMI-3M	HDMI Patch Cable (3 meter)
C-HDMI-5M	HDMI Patch Cable (5 meter)

HDMI to DVI Patch Cables

C-HDMI-DVI-2M	HDMI to DVI Patch Cable (2 meter)
C-HDMI-DVI-3M	HDMI to DVI Patch Cable (3 meter)
C-HDMI-DVI-5M	HDMI to DVI Patch Cable (5 meter)

4K Javelin™ Active Plenum HDMI Cable w/ Detachable Ends

new

CHD-DE**

4K ULTRAHD

Features

- Supports virtually all HDMI and DVI Resolutions Including 4K UHD
- Thin, Flexible and Lightweight (only 12 oz for 15m (50ft) cable)
- Hybrid Fiber-Optic / Copper Construction
- Plug and Play, No Power Supply Required
- Available in standard lengths of 10, 15, 23, and 30 meters (33, 50, 75, 100 ft)
- Meets International Flame Retardant Standards : UL CMP-OF (Plenum), IEC LSZH
- Offers Fiber-optic RFI/EMI noise immunity
- Supports DDC for HDCP and EDID, CEC
- Cable ends can be fished through small holes, pipes or conduits (end profile is only 0.48 x 0.32 inch)

* DVI adapter also available

Description

Hall Research 4K Javelin™ Active Plenum HDMI extension cables utilize the latest in optoelectronic technology to transmit HDMI signals far beyond the typical limitations of copper cables.

The CHD-DExx 4K Javelin™ cables have the added benefit of detachable or removable HDMI connector ends. The cable itself has a small (micro HDMI size) connector that can be pulled through small holes, pipes or conduits.

Currently the cable is available at lengths of 10, 15, 23, 30, 46 and 60 meters (33, 50, 75, 100 ft). Replace * in part number with length in meter, for example CHD-DE15 is 15 meters long

Among the impressive features of the 4K Javelin™ is its indifference to the resolution that is being extended. It has the ability to handle any resolution or color depth including non-standard video formats as long as the maximum data rate is less than 10.2 Gbps. No compression is used so the image at the far end of the cable is 100% identical to the source.

Since the video is sent using light pulses, the cable provides higher immunity to EMI or RFI interference and there is less chance of video dropouts due to environmental electromagnetic noise.

Models

CHD-DE10	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 10m (-33ft)
CHD-DE15	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 15m (50ft)
CHD-DE23	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 23m (75ft)
CHD-DE30	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 30m (100FT)
CHD-DE46	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 46m (150ft)
CHD-DE60	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 60m (200ft)
CHD-DE100	4K Javelin™ Active Plenum HDMI Cable w/Detachable Ends, 100m (330ft)

4K Javelin™ Active Plenum HDMI Cable

CHD-AP*

4K ULTRAHD

Features

- Plenum Rated
- Resolutions to UHD (4K)
- Offers fiber-optic noise immunity
- No additional power supply required
- Video supports 3D, Deep color, xvYCC Color
- Audio supports PCM, Dolby, True HD, DTS-HD
- Supports DDC for HDCP and EDID, CEC
- Thin and flexible with bend radius of 0.2 inch

Description

Hall Research 4K Javelin™ Active Plenum HDMI extension cables utilize the latest in optoelectronic technology to transmit HDMI signals far beyond the typical limitations of copper cables. The cable is a hybrid of fiber and copper that allows HDMI signals to be extended 200 f or more with zero loss. All PC and HDTV resolutions are supported including 4K Ultra HD. The HDCP compliant cables also support DDC and CEC. Proprietary circuitry is conveniently incorporated inside the HDMI connectors to convert the video signals to light pulses and back.

The plug-n-play cable requires no external power supply. Power is drawn from the 5v signal pin of the source HDMI output. The cable draws less than 0.25w of power from the source. Per HDMI specifications all HDMI compliant sources must at least provide 0.25 watts of power.

Among the impressive features of the 4K Javelin™ is its indifference to the resolution that is being extended. It has the ability to handle any resolution or color depth including non-standard video formats as he video is sent using light pulses, the cable provides higher immunity to EMI or RFI interference and there is less chance of video dropouts due to environmental electromagnetic noise. The 4K Javelin™ Plenum cable can be used as a regular HDMI cable but without the worry of boosters or equalizers; being Plenum, also makes it possible to be used in any installation environment. Applications include, home theater, conference rooms, schools, airports, hospitals and more.

Models

CHD-AP10	4k Javelin Active Optical Plenum HDMI Cable, 10m (-33ft)
CHD-AP15	4k Javelin Active Optical Plenum HDMI Cable, 15m (-50ft)
CHD-AP23	4k Javelin Active Optical Plenum HDMI Cable, 23m (-75ft)
CHD-AP30	4k Javelin Active Optical Plenum HDMI Cable, 30m (-100ft)
CHD-AP46	4k Javelin Active Optical Plenum HDMI Cable, 46m (-150ft)
CHD-AP60	4k Javelin Active Optical Plenum HDMI Cable, 60m (-200ft)
CHD-AP100	4k Javelin Active Optical Plenum HDMI Cable, 100m (-330ft)

DisplayPort Patch Cables

CDP-03-MM	DisplayPort Patch Cable (3 foot)
CDP-06-MM	DisplayPort Patch Cable (6 foot)
CDP-10-MM	DisplayPort Patch Cable (10 foot)
CDP-15-MM	DisplayPort Patch Cable (15 foot)

VGA Patch Cable

CVGA-X-03-MM	VGA Patch Cable (3 feet)
CVGA-X-06-MM	VGA Patch Cable (6 feet)
CVGA-X-10-MM	VGA Patch Cable (10 feet)
CVGA-X-15-MM	VGA Patch Cable (15 feet)
CVGA-X-25-MM	VGA Patch Cable (25 feet)
CVGA-X-50-MM	VGA Patch Cable (50 feet)
CVGA-X-75-MM	VGA Patch Cable (75 feet)
CVGA-X-100-MM	VGA Patch Cable (100 feet)
CVGA-X-BULK	VGA Patch Cable (Custom)

VGA to Component Cable

CHD15-RGB-3	VGA to Component Cable (3 foot)
CHD15-RGB-6	VGA to Component Cable (6 foot)

Ultra-Thin VGA Patch Cable

CUTV-00-MM	Ultra-Thin VGA Patch Cable (8 inch)
CUTV-03-MM	Ultra-Thin VGA Patch Cable (3 feet)
CUTV-06-MM	Ultra-Thin VGA Patch Cable (6 feet)
CUTV-10-MM	Ultra-Thin VGA Patch Cable (10 feet)
CUTV-15-MM	Ultra-Thin VGA Patch Cable (15 feet)
CUTV-25-MM	Ultra-Thin VGA Patch Cable (25 feet)

PoH Compliant Power Inserter

511-PoH-17W

Universal Power Supply w/ IEC320 input & 48v @ 1.5A output

511-PS4815

USB to HDMI Power Injector for Javelin™ Cables

GC-HDPI-KIT

NOTES

NOTES

Product Index

About Us

Hall Research has been a leading manufacturer of innovative Audio/Video distribution, switching, scaling and automation products for over 34 years. Hall Research products are used in thousands of installations worldwide by every major industry.

Our corporate office and manufacturing facilities are located in Orange County, CA

Warranty and Return Policy

Hall Research guarantees that the supplied equipment is free from defective workmanship and materials. Hall Research will repair or replace, at it's option, the defective components for a period of 3 years from the date of purchase. Cross-shipment for replacement products are available for products within 1 year of purchase.

Returns requested within 90 days of the original ship date from Hall Research will receive a full refund (minus shipping charges) if the product is fully functional, completely free of any damages or scratches and includes all components and packaging originally shipped with the product

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