PRODUCT CATALOG 2015-2016

HR HALL RESEARCH

A New Wave in Connectivity

A Message from the Chief Executive Officer

Welcome to Hall Research's 2015-16 Catalog of Products!

It is hard to believe that 2015 is the 31st year since I started this company. One thing is for certain, we have consistently grown year after year in terms of sales, market penetration, and breadth of products that we offer. So, first and foremost I would like to thank our customers who have been loyal supporters for years and consider Hall Research a valuable partner. In a way, I feel that we are just getting started. We see endless opportunities in the new Digital AV and Control technologies and we are committed to be a leader in this ever-evolving landscape. Our strong and growing engineering team is a mix of young talent with new ideas together with accomplished and experienced engineers many with advanced degrees. Having come from an engineering and academic background myself, I attribute much of our success to our ability to innovate and produce leading edge, user friendly and reliable products.

We hope that you will find this catalog informative and easy to use. Products are divided into functional categories, the header of each page features a color-coded tab indicating the category for the page, and most sections contain a feature set or compatibility chart to aid in choosing the right products for specific requirements.

Of course, for detailed descriptions, full specifications, block diagrams, product photos and User's Manuals, please refer to our website: www.hallresearch.com

Our 2015-2016 catalog includes many new items. The award winning UHBX-8x (HDBaseT™ Multi-Port Sender) won a "Best of Show" award at Infocomm 2014 from Digital Signage magazine. Our UHBX-SW3 (VGA, HDMI, MHL Auto-Switching Wall-Plate with HDBaseT™) is one of our hottest products this year and we are very excited about all of the applications we feel our customers will find for this powerful small room control system.

We thank you for your support and welcome your feedback.

Ali Haghjoo
Chief Executive Officer

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What's New!

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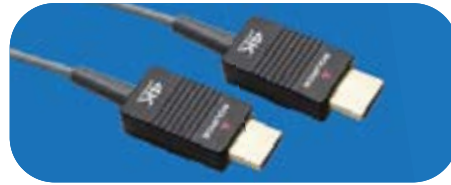**UHBX-SW3-S**   Page 27

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HR HALL RESEARCH

Switches

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AV Processors & Scalers

Control Systems

Audio

Accessories

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, RS232, IR remote or IP (Telnet and built-in web interface)

DESCRIPTION

The HSM-I-04-04 is a powerful 4x4 HDMI matrix switch with RS232, 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: "Fast-Switch" technology with EDID management, 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.

Control and manage your video switch from anywhere on your network using a browser or smartphone. The IP (LAN) port includes a smart web server with embedded 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

8x8 HDMI Matrix Switch

HSM-I-08-08

IP Manager

FEATURES

8x8 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

Extracts Audio from each source and can be routed independently

Control from front panel, RS232 or IP (Telnet and built-in web interface)

Try me!

DESCRIPTION

The HSM-I-08-08 is a powerful 8x8 HDMI matrix switch with RS232, 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: "Fast-Switch" technology with EDID management, audio extraction, independent audio routing, user defined names for inputs and outputs, with video overlay of the user-defined input name on the output video (duration and position of OSD overlay are adjustable).

Control and manage your video switch from anywhere on your network using a browser or smartphone. The IP (LAN) port includes a smart web server with embedded software to configure and control the switch.

MODELS

HSM-I-08-08   8x8 HDMI Matrix Switch with RS-232 and IP Control

4x4 VGA + Audio Matrix Switch with UTP Output and IP Control

VSM-A-I-4-JA4

FEATURES

Cross-point switching of VGA or HD video and audio signals

Independent audio routing

Balanced stereo audio inputs/outputs allow interference free connections

RS232, front panel or IP control (via built-in web-based software and Telnet)

4x additional UTP outputs for sending audio and video up to 1,000 ft

550 MHz video bandwidth to support resolutions to 1920x1200

Supports EDID at all inputs

DESCRIPTION

The powerful and highly economical 4x4 VGA matrix switches from Hall Research have balanced stereo audio inputs and outputs with its own audio cross-point. They have RS-232 supporting Hall's intiitive ASCII Genesis™ Control Command Set and user friendly front-panel controls. Users can initiate ties (routing) from input or output and the device can store and recall 8 presets.

The VSM–I-A-4-JA4 adds UTP extension of video and audio up to 1000 ft for each of the outputs and adds a powerful IP port with web based embedded configuration and control software accessible from any browser or smart device. User can assign meaningful English names to each of the inputs and outputs so making ties using the embedded app is easy and intuitive. Telnet control is also provided for those that do not wish to use the embedded app.

IP Manager

MODELS

VSM-A-4-4	4x4 VGA + Audio Matrix Switch
VSM-I-A-4-JA4	4x4 VGA + Audio Matrix Switch with UTP Output and IP Control

Digital Switches >

2 & 4 Port DVI Switch with Audio

DVS-4A

FEATURES

Supports resolutions up to 1920x1200 and 1080p

Control via front panel or RS-232

Hot Pluggable

DVI-D, HDCP & HDMI 1.3 Compatible

Switches stereo audio

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 rackmount brackets are also available

MODELS

DVS-2A	2x1 DVI + Audio Switch
DVS-4A	4x1 DVI + Audio Switch

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

SW-HD-4

4K x 2K

FEATURES

Supports 4K, 3D, 36-bit Deep Color

Fast Switch 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 of four HDMI sources to a single HDMI output. The switcher 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, whereby you can decide individually the EDID content for each input. You can choose from a list of standard EDIDs or copy the EDID from the connected display to any input. This can be done using the web GUI or by sending RS-232 commands.
Auto switching with priority is another important feature of the switcher. In Auto mode, the SW-HD-4 scans all inputs and automatically selects the active input. Priority is based on position with #1 input having the highest priority (so if more than one input has video, in Auto mode, the input with lowest port number will be selected).

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 allowed (some sources add HDCP even if the content shown is not protected). When the input does not have HDCP, the output will not have HDCP. This is a useful feature for connecting the output to devices that do not support HDCP such as video conferencing gear.

The SW-HD-4 provides a USB type A port on the back for connection of USB flash devices for firmware upgrade. This USB connector provides 500 ma of power and can be used to power external devices such as Google's Chromecast or Amazon's Fire TV.

HDMI Sources

MODELS

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

Analog Switches

2 & 4 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.

The switched output can be blanked or unblanked via the front panel or through the serial port.

Optional rackmount brackets are available.

MODELS

VS-2	2x1 VGA Switch
VS-4	4x1 VGA Switch

2 & 4 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 rackmount and surfacemount 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
VS-4A   4x1 VGA + Audio Switch

Distribution Amplifiers

Digital Amplifiers

DVI Splitters

SP-DVI-4A

FEATURES

Supports resolutions up to 1920x1200 and 1080p

Can be cascaded (2-levels deep) for more outputs

Supports both digital and analog DVI signals (DVI-I)

DESCRIPTION

Split a single DVI signal to multiple DVI displays. This Amplifier can boost DVI outputs to 10 meters (33 feet). Multiple units can be cascaded to provide even more outputs.

MODELS

SP-DVI-2A	1x2 DVI Distribution Amplifier
SP-DVI-4A	1x4 DVI 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

HDMI Splitter/Extender

SP-HD-8A

4K x 2K

FEATURES

Splits an HDMI source to multiple outputs without loss

Supports HDMI 1.4 deep-color (up to 12 bits per color) and 3D formats

Supports VGA & HDTV resolutions, VGA to WUXGA and HD from 480p to 1080p

4 port model supports 4K resolution

HDMI, HDCP, and DVI Compliant.

LED indicators for power, source signal, and 8 output connections

High bit-rate digital audio - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio

DESCRIPTION

Hall Research offers 2,4, and 8 Channel HDMI Splitters that can be used with any single-link DVI or HDMI input signals. The HDCP compliant splitters support Full-HD and deep-color and currently the four channel model (SP-HD-4A) also supports 4K video.

The splitters feature HDMI locking connectors (for use with compatible locking HDMI cables such as Hall's C-HDMI-L-xx) and each output is buffered to drive HDMI cables to 12 meters (40 meters).

MODELS

SP-HDMI-2A	1x2 HDMI Distribution Amplifier
SP-HD-4A	1x4 HDMI Distribution Amplifier
SP-HD-8A	1x8 HDMI Distribution Amplifier

Analog Amplifiers >
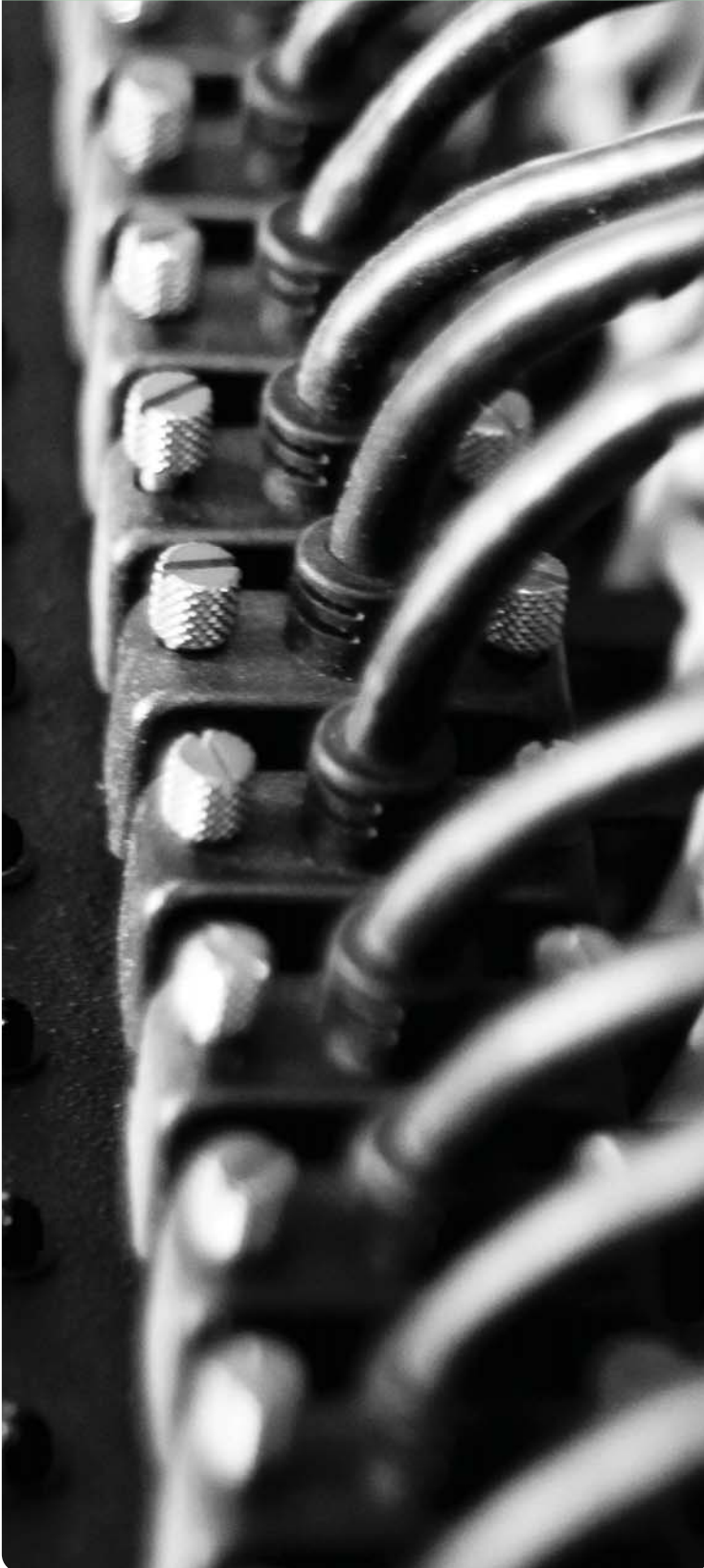
VGA Splitter/Extender

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

RGBHV Splitter
with Universal Sync Processor

210-LU

S-Video / Composite
Splitter / Extender

CSV-3

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

FEATURES

Split a single s-video and/or composite signals to 3 displays

Boost output to 200 feet

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.

DESCRIPTION

The CSV-3 is a compact and highly versatile S-video and Composite Video 3-way video splitter. It splits composite video, S-Video, or both 3-ways with no loss in image quality or ghosting. Input signals are terminated to eliminate reflections and ghosting.

MODELS

210-LU	1x2 RGBHV Distribution Amplifier

MODELS

CSV-3	1x3 S-Video and Composite Distribution Amplifier
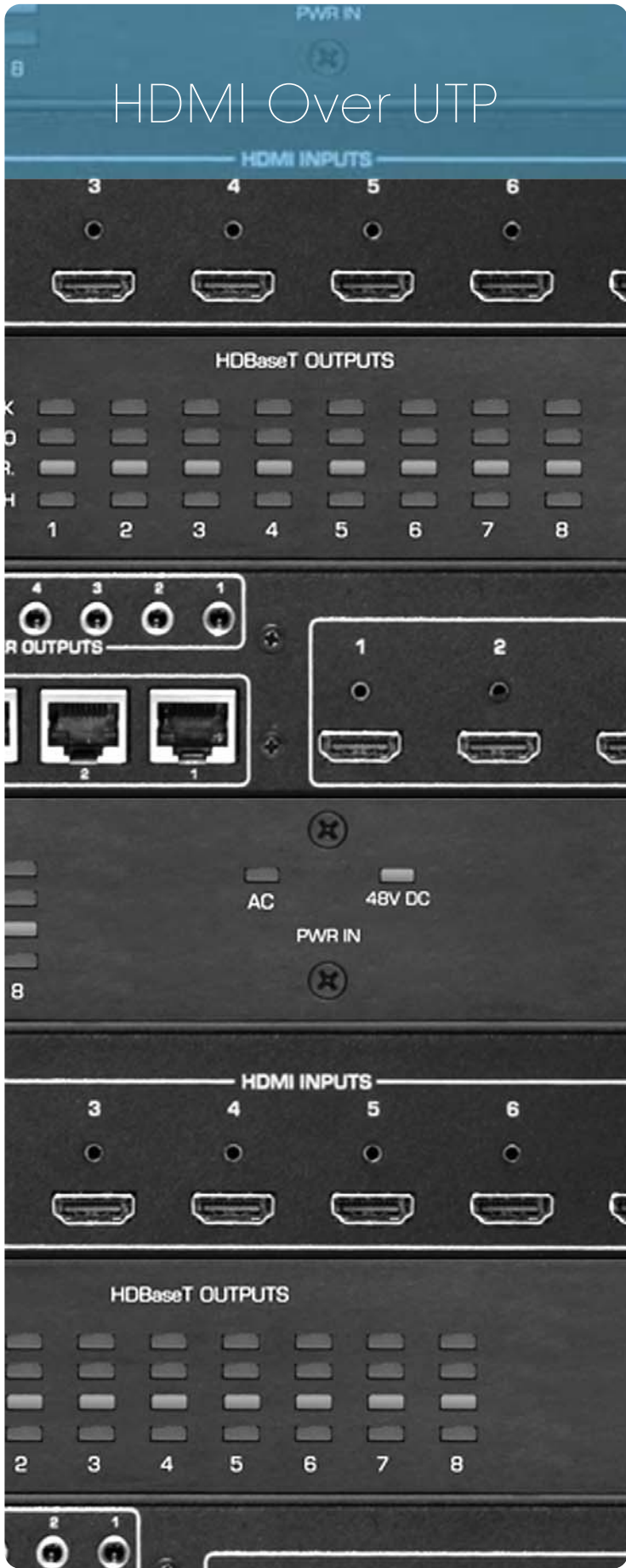
HDMI Over UTP

HDMI Over UTP HDBaseT™

UH-1BTX

4K x 2K

FEATURES

Extend HDMI or DVI over single UTP 5e/6 up to 330 ft (100 m)

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-1BTX for extension to 500ft (150m)

DESCRIPTION

The UH-1BTX extends any HDMI or single link DVI video signal up to

330 ft (100 m) over inexpensive Cat5e or UTP cable using HDBaseT™ technology. The economical UH-1BT extends 230 ft. Video and embedded audio signals are transmitted without any compression to the remote for a 100% identical reproduction.

The UH-1BTX 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

UH-1BT	HDMI Over HDBaseT™ kit (Sender & Receiver) 230 ft (70m)
UH-1BTX	HDMI Over HDBaseT™ Kit (Sender & Receiver) 330ft (100m)

All Models in the above table are comprised of a sender (-S), and a receiver (-R)

NEW FOR 2015 - Long Reach Mode Switch for extension to 150m (500ft) on UH-1BTX

HDMI, RS232 and IR Extension over HDBaseT™ with Power over UTP (POH) on Wall Plate

UHBX-WPC-P2

4K x 2K

FEATURES

Extends HDMI or DVI video to 500 ft on just one UTP

Includes RS232 and IR extension in both directions

Supports virtually all HDMI and DVI resolutions including 4K

Only one end requires power, other side is powered via UTP

Power-over-HDBaseT™ meets IEEE 802.3af standard

DESCRIPTION

Hall Research's wall plate HDMI transmitters can be purchased individually or as kits that include other pieces such as compatible receiver. The basic HDMI sender fits in a single gang Decora® style wall plate and is capable of extending any HDMI video signal, including 4K video, up to 150 meters (500 ft).

A second single-gang module can be added to the wall plate to provide RS-232 and IR extension in both directions. The RS-232 can operate at any baud rate including 115,200. The IR extension is fully compatible with all standards (SONY, NEC, RC5, RCA, etc). The wall plate is powered

though the UTP cable eliminating the need for a separate power supply. The wall plate conforms to HDBaseT™ power standard (IEEE802.3af) making it compatible with any certified HDBaseT power sourcing equipment.

The wall plate sender may be connected to projectors or TVs that have direct HDBaseT™ inputs. In this case no external receiver would be needed. A PoH inserter will 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 RS232 over HDBaseT™ power injecting receiver unit via UTP cable.
UHBX-COM	IR and RS232 in double-gang Decora® Wallplate

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 RS232 over HDBaseT™ Sender in double-gang Decora® Wallplate with Power injecting receiver unit via UTP cable

HDMI over UTP Extender with HDBaseT™

UHBX-P1

4K x 2K

FEATURES

Extends HDMI or DVI video to 500 ft on just one UTP

Includes RS232 and IR extension in both directions

Supports virtually all HDMI and DVI resolutions including 4K

Only one end requires power, other side is powered via UTP

Uses standard 5v power supply

Power-over-HDBaseT™ (PoH) meets IEEE 802.3af standard

Sturdy metal enclosures with mounting provisions

DESCRIPTION

UHBX-P1 is an extender kit (UHBX-S-PSE + UHBX-R-PD) that utilizes HDBaseT™ technology. It can send HDMI and PoH (Power-over-HDBaseT™) to 500 ft (150 m) on a single UTP cable. The extender uses only one +5v power supply, internally creates 48v PoH and complies with IEEE 802.3af handshake. The P1 extender's sender unit provides power to the receiver. In standard mode the UHBX—P1 supports DVI and HDMI signals of virtually any resolution up to 4K x 2K to 330 ft (100m), and in Long Reach mode it supports resolutions to 1920x1080 to 500 ft (150 m). The end identified as PSE (power sourcing equipment) injects power on to the UTP cable and the side identified as PD (Powered Device) is powered through the UTP cable. The PSE side requires connection of an AC adapter that supplies 5v DC, while the PD side is simply powered through the RJ45 connector from the opposite side.

MODELS (Individual)

UHBX-R-PD	HDMI, IR and RS232 receiver over HDBaseT™ powered via UTP cable.
UHBX-R-PSE	HDMI, IR and RS232 receiver over HDBaseT™ with power inserted through UTP cable.
UHBX-S-PSE	HDMI, IR and RS232 sender over HDBaseT™ with power inserted through UTP cable.
UHBX-S-PD	HDMI, IR and RS232 sender over HDBaseT™ powered via UTP cable.

MODELS (Kits)

UHBX-P1	UHBX-S-PSE +UHBX-R-PD for HDMI, IR and RS232 over HDBaseT™ Receiver with Power Sourcing sender unit via UTP cable.
UHBX-P2	UHBX-S-PD +UHBX-R-PSE for HDMI, IR and RS232 over HDBaseT™ sender with Power Sourcing receiver unit via UTP cable.

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

UHBX-R-XT

4K×2K

FEATURES

Daisy-chainable HDBaseT™ receiver

Chain up to 6 receivers to 3000 feet; source to display

Supports 4K (UHD)

Send unique RS-232 or IR commands to any unique box

Made in USA

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 500 ft of Cat6 between any two receivers. Up to 6 receivers (displays) can be placed in the chain for a total chain length of 3,000 feet). 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

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

UHBX-R-WP

4K×2K

FEATURES

Extends HDMI or DVI video to 500 ft on just one Cat6

Includes RS232 and IR extension in both directions

Supports virtually all HDMI and DVI resolutions including 4Kx2K

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 bi-directional 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 500 ft. The wall plate receiver provides an HDMI output, as well as IR and RS-232 for control.

All HDBaseT™ transmitters that comply with the standard are compatible. The wall plate requires a PoH compliant transmitter (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

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

HDMI Multi-Port Sender with HDBaseT™

UHBX-8X

4K x 2K

FEATURES

Converts 8 separate HDMI inputs to corresponding HDBaseT™ outputs

Extends IR in both directions

Can issue RS-232 or IR commands to any output

RS-232 and IP control ports

Supports HDCP, 3D, Deep Color, CEC, and 4K (UHD) resolutions

Sturdy 1RU design with built in power supply

HDBaseT™ Compliant

Can power compatible receivers through the cable using PoH (requires optional 48v supply)

Front panel status indicators for power, link, video and more for each channel

DESCRIPTION

The UHBX-8X is a 1 RU box that converts 8 HDMI inputs to corresponding HDBaseT™ outputs for extension to 150 meters (500 ft) 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-1BT-R and UH-1BTX-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 (power supply part number: 511-PS4812).

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 Multi-Port Sender with HDBaseT™

HDMI on HDBaseT™ 1x3 or 1x6 Splitter / Extender

UHBX-3S

4K×2K

FEATURES

Send HDMI Video to 3-6 remote displays using HDBaseT™

Drive cables to 100m (330 ft) in 4Kx2K resolution, or 150m (500 ft) in 1080p

Local HDMI output for direct connection to a local display

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 / 6S is an HDMI 1.4 compliant splitter with one local HDMI output and 3-6 HDBaseT™ outputs for transmission to compatible receivers up to 150 meters (500 ft away). The Splitter supports HDCP, 3D, Deep Color,CEC, 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/6S provides convenient front panel LED status indicators for all HDBaseT™ parameters to quickly verify proper operation.

The UHBX-3S / 6S supports PoH (Power over HDBaseT™) using an optional (sold separately) external 48 v DC power supply (part number 511-PS4812). Compatible receivers are powered from the sender using PoH standard so no additional power supplies are needed. The HDBaseT™ compliant PoH performs all necessary low voltage handshakes prior to injecting power on the UTP line for maximum reliability, safety, and compliance.

MODELS

UHBX-3S   1x3 HDMI on HDBaseT™ Splitter
UHBX-6S   1x6 HDMI on HDBaseT™ Splitter

HDMI Multi-Port Sender with HDBaseT™

UH2X-P1

4K x 2K

FEATURES

Extends Video, USB, LAN, Audio, Control, and Power over a single Cat6 cable

Uncompressed HDMI extension supports all resolutions including 4Kx2K (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

Sender sends power to the receiver via the same Cat6 cable

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 100 meters. 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 SPDIF RCA connector, switch selectable. Only the transmitter 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 whiteboards, 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 Multi-Port Sender with HDBaseT™

HDMI, VGA, and MHL Auto-Switching HDBaseT™ Transmitter and Controller

UHBX-SW3-S

4K x 2K

FEATURES

3 inputs handle VGA, Component, HDMI (or DVI), and even MHL

VGA input is scaled to 1080p or user specified output resolution

Supports all HDMI resolutions including 4K (UHD)

Distance to 500 ft (150m) at 1080p, or 330 ft (100m) at 4K resolution

Manual or automatic input selection and Power commands

USB port for configuration

DESCRIPTION

The UHBX-SW3-S is a box version of the popular Auto-Switching wall-plate (UHBX-SW3-WP). It is designed to be surface mounted under a conference room table or on any surface where a wall-plate may not be suitable.

Just as its wall-plate counterpart, it does not require any power supplies since power is provided through the Cat6 cable from the receiver using HDBaseT's PoH power standard. Recommended receiver is the model UHBX-R-PSE.

The UHBX-SW3-S switcher/scaler accommodates 2 HDMI and 1 VGA inputs with audio. The HDMI #1 input also supports MHL (Mobile High-Definition Link) to allow video presentation from a smart-phone using just a passive cable.

The unit can manually or automatically control the power on/off function of the remote display using RS-232 and/or IR commands. A USB port is provided for configuring the control method and other other operational modes.

For adding an external keypad to control the input selection or sending commands to the display, the UHBX-SW3-S has an auxiliary control port for connection of SW3-UI or SW3-UI-VOL keypads.

MODELS

UHBX-SW3-S   HDMI, VGA, and MHL Auto-Switching HDBaseT™ Transmitter and Controller

VGA, HDMI, MHL Auto-Switching Wall-Plate with HDBaseT™

UHBX-SW3-WP   UHBX-R-PSE

4K × 2K

FEATURES

Inputs handle VGA, Component, HDMI and MHL

Programmable IR and RS232 commands for displayon/off control

Supports all HDMI resolutions including 4K (UHD)

No power supply required (powered throughCat6 cable from the receiver)

Uses only one Cat6Distance to 500 ft (150m) at 1080p, or 330 ft(100m) at 4K resolution

DESCRIPTION

The UHBX-SW3 is a kit comprised of a multi-input wall-plate and an HDBaseT™ receiver. The wall plate accommodates 1 VGA and 2 HDMI inputs. It also supports MHL (Mobile High-Deÿnition Link) with phone-charging feature to allow video presentation from a smart-phone using just 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 deÿnable priority.

There is an IR detector built into the wall plate to extend IR signals. For the advanced users the system allows defyning RS232 or IR codes for controlling the remote display. Display on/off commands can be set to automatic (based on video detection), or manual. The receiver can be located upto 150m (500 ft) away, and the only connection to the wall plate is a single Cat6 cable. Power is delivered to the wall-plate using

PoE/PoH standard and the system complies with the HDBaseT™ speciÿcations and is compatible with all compliant PSE receivers including Crestron's DM series switchers.

MODELS

UHBX-SW3-WP	VGA, HDMI, MHL Auto-Switching Wall-Plate with HDBaseT™
UHBX-R-PSE	HDMI+RS232+IR+PoH UTP Receiver with Power Supply (PSE)
EMX-AMP	4K HDMI Audio Extractor with Audio Amplifier, RS-232 and IP Control
SW3-UI	Auxiliary Keypad for Manual Control and Status
SW3-UI-VOL	Auxiliary Keypad with Manual Volume Control

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 RS232 volume control (for example EMX-AMP shown below), the SW3-VOL provides 3 additional buttons (Volume up/down, and mute).

SW3-UI

SW3-UI-VOL

SW3-UI

UHBX-SW3-WP

IR

Laptop

Blu-ray

Smartphone

UHBX-R-PSE

HDMI
RS232
IR

Output
(Projector)
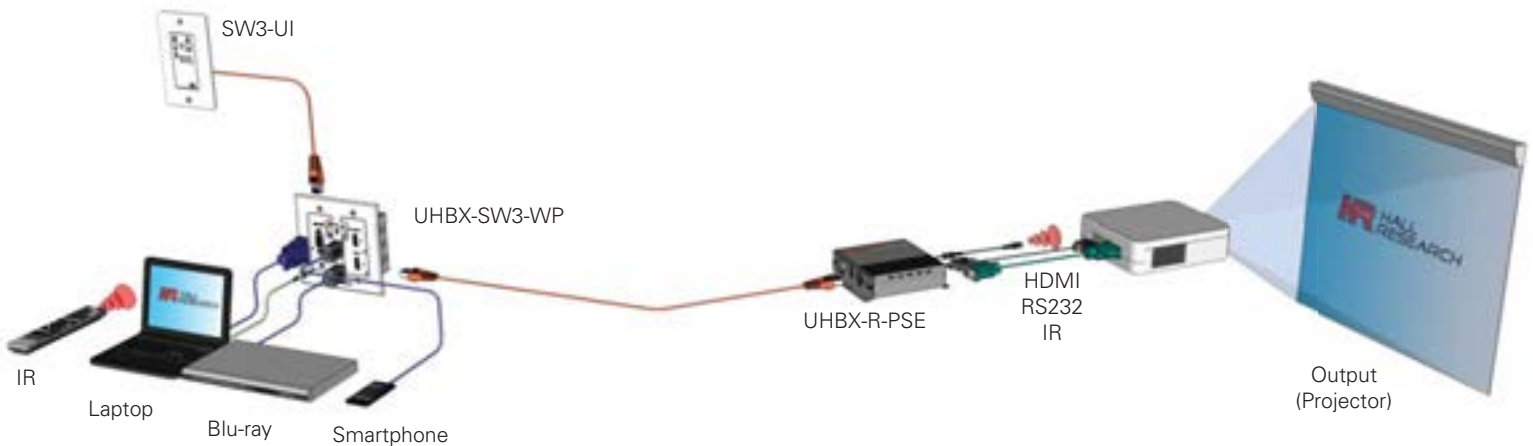
ADD 50 WATT HDMI AUDIO AMP (with line input mix)

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 an 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.

EMX-AMP

HDMI over 1 CAT6 Extender Kit

UH-1D

FEATURES

Uses only one Cat5e/6 cable to extend HDMI™ without compression

Can extend Full HD (1080p) to 130 ft (40m)

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)

Supports HDCP

Receiver provides both 3.5mm analog and RCA digital audio outputs

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 130 ft (40m),or 720p/1080i to 170 ft (52m). 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 (SPDIF) 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 kit

Dual UTP Kit

UH-2D

UH-2D-S-DP

FEATURES

Use 2 UTP cables to extend pure digital high definition HDMI™ audio video signals

Can drive cables to 170 ft @ 1080i/720p or 130ft @ 1080p on 2 UTP cables

Only one power supply needed

DESCRIPTION

The UH-2D extender kit uses two UTP cables to extend high definition video well beyond the limitations of HDMI cable. The Sender and Receiver set support HDCP, Deep-Color, 3D and can achieve a distance of up to 170 ft @ 1080i/720p or 130 ft @ 1080p resolution.

A single power supply is provided that can be plugged at either end for easy installation. The extender equalizes TMDS video using state of the art technology for a crisp image, and buffers the DDC channel for error free EDID and HDCP operation that help prevent image dropouts. The extender can also extend single link DVI video from any PC.

MODELS (Individual)

UH-2D-R   HDMI over Dual UTP Receiver
UH-2D-S   HDMI over Dual UTP Sender
UH-2D-S-DP   HDMI over dual UTP Decora Wallplate (Sender)

MODELS (Kits)

UH-2D   HDMI over 2 UTP Extender Kit
UH-2D-DP   HDMI over 2 UTP Wallplate Extender Kit

3 - Port HDMI Extender over Dual UTP

UH-2D-3S

DESCRIPTION

The UH-2D-3S is used to extend HDMI™ or DVI video up to 170 ft @ 1080i/720p or 130 ft @ 1080p resolution on 2 UTP cables to 3 remote receivers (Model UH-2D-R). The unit provides one local HDMI output and 3 sets of RJ45 pairs for connection to the remote receivers. Cables that are of lower quality and construction will reduce the maximum distance.

The UH-2D-3S is compatible with HDMI versions 1.2a, 1.3 and 1.4 in terms of 3D, deep- color, and 4K video support. The remote receiver (UH-2D-R) includes state of the art automatic equalization to compensate for signal losses in the cables and produces a crisp image as clear as the original.

The unit is housed in a compact sturdy metal enclosure that is 1RU high. Two can be mounted side-by-side using Hall Research Model RMS-1U-1A rack shelf (UH-2D-3S has threaded holes on the bottom for this purpose), or a single unit can be mounted using the Model RMK-05 Rack Mount Kit.

VGA Over UTP

VGA + Audio Over UTP Senders

UVA-8

UVA-DP

FEATURES

Transmit VGA and audio up to 1000 ft (305 m) 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 1000 ft (305 m) over UTP cable. They support resolutions up to 1920x1200 @ 60 Hz. Senders are available with 2 to 24 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 1000 ft (305 m) 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

Optional RJ45 output for daisy chaining multiple receivers in a single run

DESCRIPTION

The URA series receivers accept VGA and audio over UTP cable from compatible senders up to 1000 ft (305 m) away. It supports resolutions up to 1920x1200 at 60Hz. It can fully compensate for signal attenuation in long UTP cables using a 5-stage active filter. Low skew cable such as Hall Research Zero-Skew™ are recommended with the URA. 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.

UVA-8

UTP to 750'

URA-XT   URA-XT

PC A/V Input

Local Display

Remote Outputs
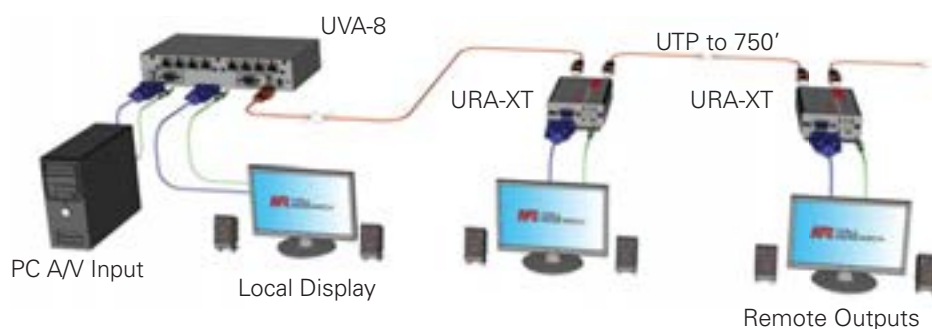
MODELS

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 500 ft (153 m) 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 500 ft (153 m) 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

UV1-S

UV1-R

UTP up to 500 ft

1 Power Supply

PC

Remote Display

MODELS

UV1	VGA Over UTP (Sender & Receiver)
UV1-R	VGA Over UTP (Receiver)
UV1-R-DP	VGA Over UTP Metal Decora Plate (Receiver)
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)

VGA + Power Over UTP Splitter/Sender

UV8-S

UV2-S

FEATURES

Extend VGA and power up to 500 ft (153 m) 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 500 ft (153 m) over a single UTP cable. Supports resolutions up to 1920x1200 @ 60 Hz. Senders are available with 2 to 24 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.

UV8-S

UTP to 500 ft

VGA Input
Local Display

UV1-R
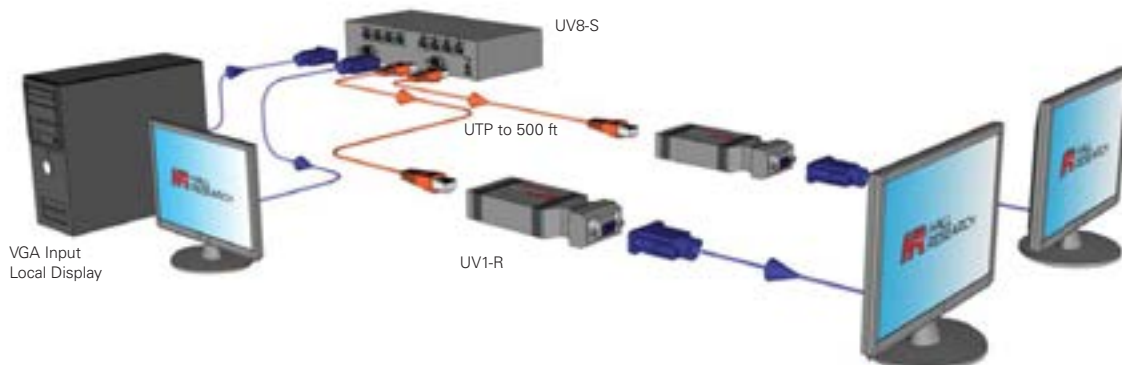
MODELS

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)

VGA + Audio + RS-232 Over UTP Receiver

URA-232

FEATURES

Receive VGA, audio, and RS-232 from up to 1000 ft (305 m) 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 1000 ft (305 m) 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 Reseach 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)

VGA + Audio + RS-232 Over UTP Splitter

UV232A-8S

FEATURES

Extend VGA, audio, and RS-232 over a single UTP cable

Supports resolutions up to 1920x1200 or 1080p

Send RS-232 commands on push button or serial trigger event

Built-in video test pattern generator to assess and/or achieve optimum adjustment of long-cable compensation and RGB skew at each remote URA

Compatible with URA-232 series receivers

DESCRIPTION

The UV232A series of multi channel splitter senders distributes VGA, audio and RS-232 up to 1000 ft over a single UTP cable. They are compatible with URA-232 series receivers.

RS-232 data that is output at each remote receiver can be triggered or come from various sources:

• Pass-Thru data from the Sender
• Locally stored data in each remote URA-232, triggered by RS-232 command sent to the sender
• Locally stored data in each remote URA-232, triggered by
  detection of contact (located on each URA-232)
• Locally stored data in each remote URA-232, triggered by a push button on the Sender

The mode of operation is set using a dip switch on the Sender and by programming each URA-232 receiver using free Windows® GUI.

MODELS

UV232A-4S   1x4 VGA + Audio + RS-232 Over UTP Splitter (Sender)

UV232A-8S   1x8 VGA + Audio + RS-232 Over UTP Splitter (Sender)

VGA + Audio + RS-232 Over UTP

UV232A

FEATURES

Extend VGA, audio, and RS-232 up to 500 ft (153 m) 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. Uni-directional 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 + Bi-Directional RS-232 Over UTP

UV232B

FEATURES

Extend VGA and bi-directional RS-232 up to 500 ft (153 m) 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 (bi-directional) 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. Bi-directional RS-232 transmitted from sender to receiver can be used to control devices or displays and receive a response. Applications include kiosk solutions, conference halls, digital signage, interactive operator systems, factory or laboratory data acquisition and control, and more.

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

UV232B	VGA + Bi-Directional RS-232 Over UTP (Sender and Recevier)
UV232B-S	VGA + Bi-Directional RS-232 Over UTP (Sender)
UV232B-R	VGA + Bi-Directional RS-232 Over UTP (Recevier)

Component Video + Power Over UTP
"Active Balun"

UVB1-CP

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

UBL-CSA

FEATURES

Extend component video and power up to 1000 ft (305 m) 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

FEATURES

Extend Composite/S-Video and audio up to 2000 ft (610 m) 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 UVB1 extends Component video up to 1000 ft (305 m) 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.

DESCRIPTION

The UBL-CSA transmits composite or S-Video and audio up to 2000 ft (610 m) 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

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

MODELS

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

Dual-Display VGA + Audio
+ RS-232 + USB Console Extender

U97-Ultra-2B

USB Over UTP

FEATURES

Combines the functions of Hall Research Models U97-H2, UU2X4-P1, two SKU-RGB, DVC-3 video test pattern generator, and more

Eliminates the need for Utility Box (Receiver includes a guard plate that goes over all the connectors with tie-down provisions for strain relief)

Does not require external power supply (built-in supply with standard 110~240 VAC IEC320 jack)

Includes 2 "Direct" USB ports (DR1 & DR2), and a Standard with Hub at receiver.

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)

USB 2.0 Over UTP

U2-160

U2-160-DP

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).
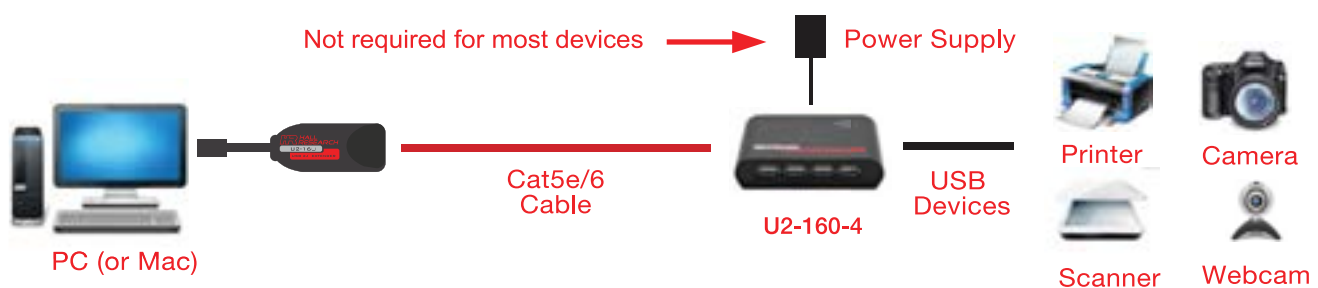
Compatible with USB 2.0 at low (1.2 Mbps) and Full (12 Mbps) speeds

Sends power from local to remote using PoC (power over cat5)

Compatible with interactive whiteboards, 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 incase it is needed.

Not required for most devices → Power Supply

PC (or Mac)

Cat5e/6 Cable

U2-160-4

USB Devices

Printer

Camera

Scanner

Webcam

MODELS

U2-160   USB 2.0 Over UTP Extension Kit with Local & Remote

U2-160-DP   USB 2.0 Over UTP Extension Kit with Local (Decora®) & Remote

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

AV Over Fiber

HDMI and RS-232 Over Single Fiber

HR-731

FEATURES

Transmits uncompressed HDMI video along with RS-232 to 1000m

Supports Deep-color (HDMI 1.3 or 1.4) and 3D

Status indication of fiber-optic link, Source video, RS232 or CEC extension

Bi-directional RS-232 data transmission between the sender and the receiver

RS-232 control of the data channel selection and setup

Requires a single (simplex) multi-mode fiber with SC connectors

DESCRIPTION

The HR-731 is a kit of Sender and Receiver modules to extend HDMI and bi-directional RS-232 up to 1 Km (3280 ft) on a single multi-mode cable. The unit is fully HDCP compliant and supports HDMI 1.4 deep-color and 3D. EDID pass-through from the remote display to the source guarantees trouble free operation. Virtually all PC (DVI) and HDTV resolutions are supported

MODELS

HR-731   HDMI and RS-232 Extender

*Hall Research can provide pre-terminated fiber optic cables at lengths to 1500m. Please contact your sales representative.

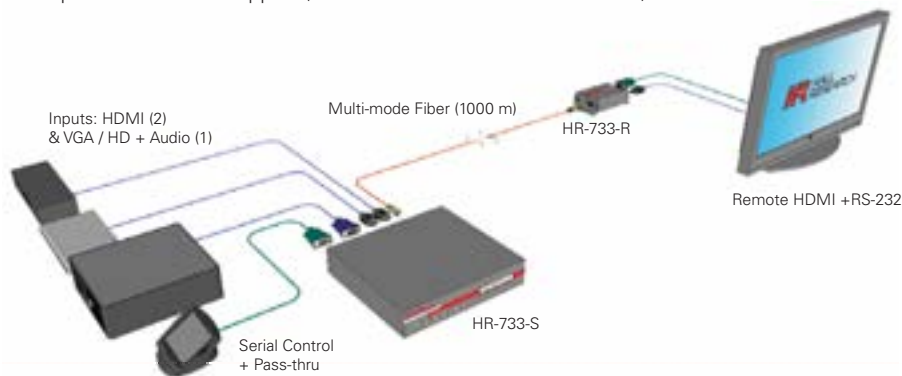# HDMI + VGA + Audio + RS-232 Over Single Fiber

HR-733

FEATURES

Transmit HDMI and RS-232 up to 3280 ft (1000 m) over multi-mode fiber

Converts and scales VGA/Component video and audio to HDMI

3 remotely selectable video inputs (2 HDMI and 1 VGA/YPbPr with Audio)

Front panel LCD display

Supports HDMI 1.4 and 3D HDMI

DESCRIPTION

The HR-733 extends uncompressed HDMI video, audio, and bi-directional RS-232 up to 3280 ft (1000 m) over multi-mode fiber optic cable. It accepts 2 HDMI inputs and 1 VGA/YPbPr with audio (via 3.5mm stereo or S/PDIF TOSLINK). Analog input is converted to HDMI with a built-in scaler/converter and output at the receiver as HDMI with embedded audio.

The HR-733 can also extend a bi-directional data channel (CEC, or RS-232 Serial) along with the video and audio. The RS-232 port can also be used to control the Sender (for input selection, adjusting settings such as baud-rate, resolution, etc).

A user friendly front panel with high contrast LCD read-out is used for easy setup and control of the system. Advanced features include: automatic scaling of the analog video input to match the native resolution of the remote display, diagnostic messages on the front panel LCD (e.g. RS-232 strings sent or received), audio delay of the analog input to correct lip-sync, support for CEC data channel of HDMI (choice of RS-232 or CEC extension), and 3D deep-color HDMI 1.4 support (without ARC or Ethernet extension).

Inputs: HDMI (2) & VGA / HD + Audio (1)

Multi-mode Fiber (1000 m)

HR-733-R

Remote HDMI +RS-232

HR-733-S

Serial Control + Pass-thru

MODELS

HR-733	HDMI + VGA + Audio + RS-232 Over Fiber (Sender & Receiver)
HR-733-T	HDMI + VGA + Audio + RS-232 Over Fiber (Sender)
HR-733-R	HDMI + VGA + Audio + RS-232 Over Fiber (Receiver)

*Hall Research can provide pre-terminated fiber optic cables
at lengths to 1500m. Please contact your sales representative.

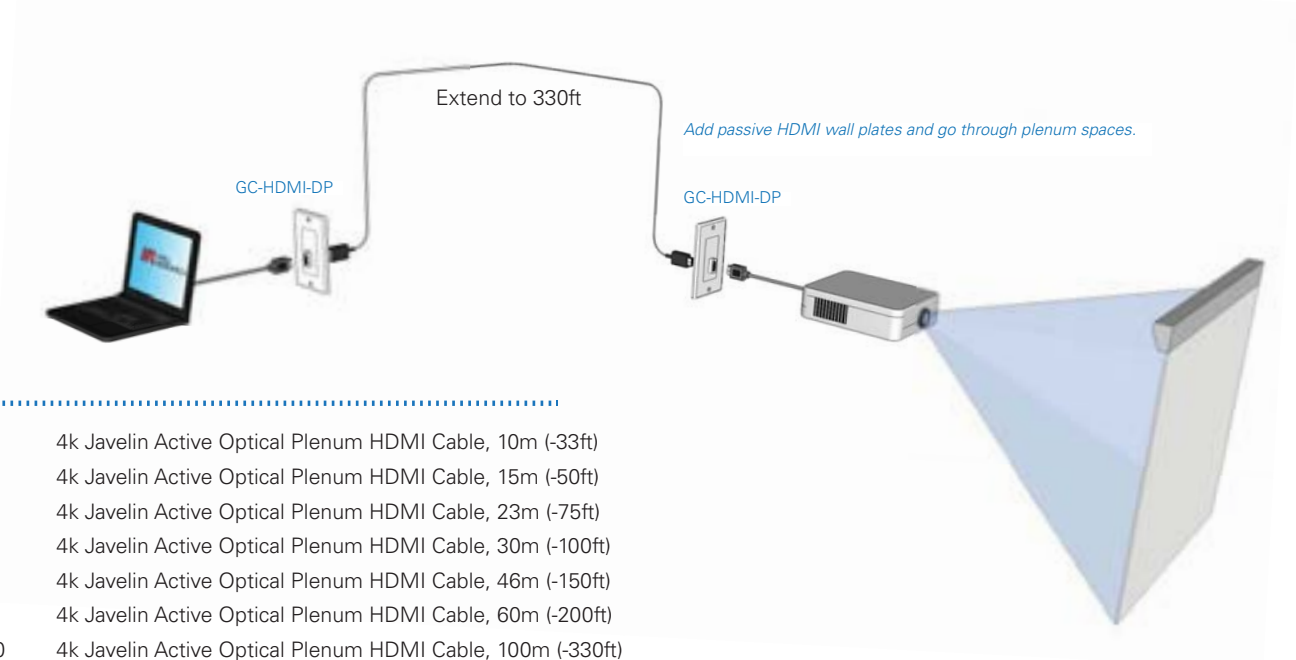# 4K Javelin™ Active Plenum HDMI Cable

CHD-APxx

4K x 2K

FEATURES

Plenum Rated
Resolutons to UHD (4K)
Offers fiber-optc noise immunity
No additonal 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™ Actve Plenum HDMI extension cables utlize the latest in optoelectronic technology to transmit HDMI signals far beyond the typical limitatons 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 resolutons 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.
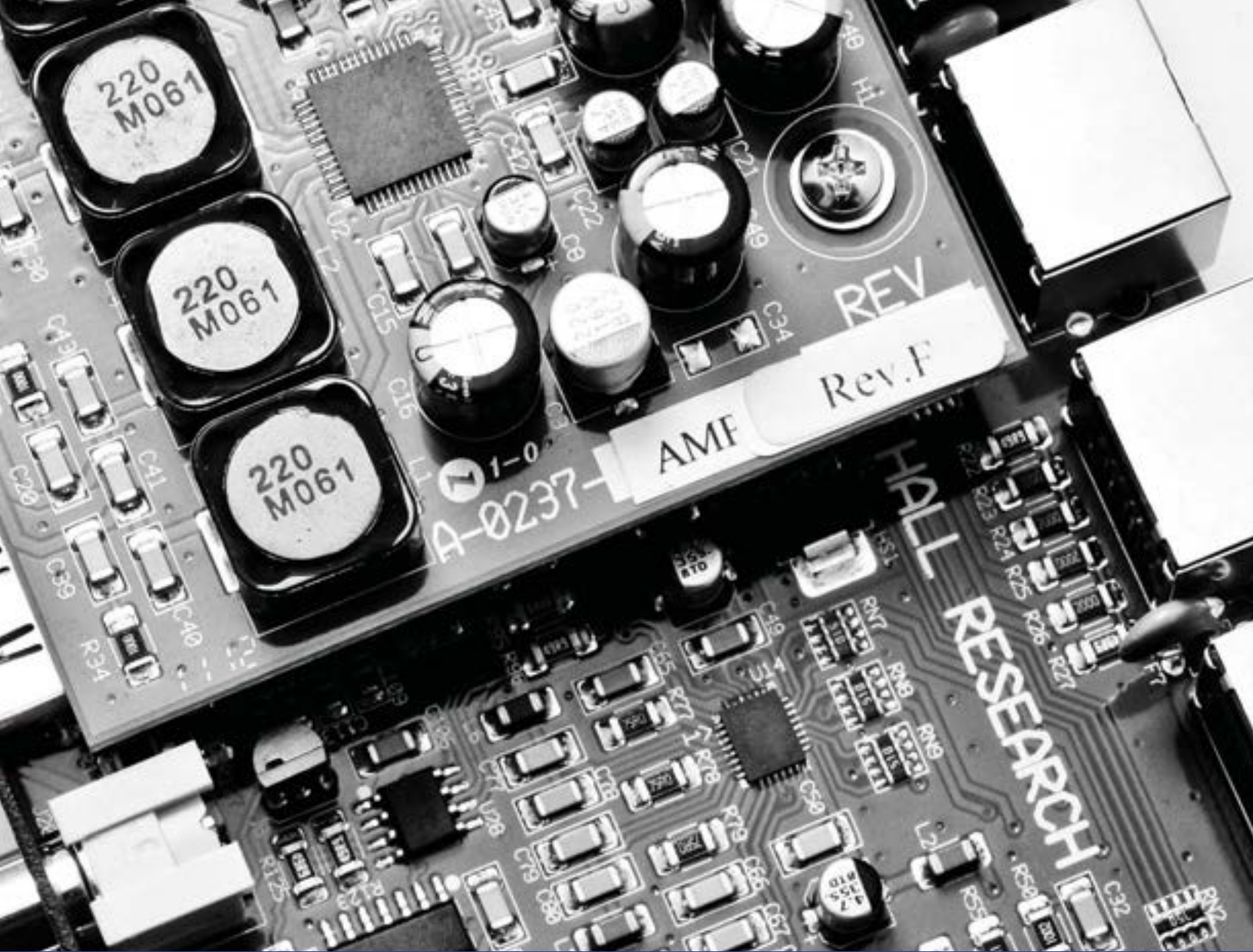
The plug-n-play cable requires no external power supply. Power is drawn from the 5v signal pin of the source HDMI output. The cable draws less than 0.25w of power from the source. Per HDMI specificatons all HDMI compliant sources must at least provide 0.25 wats of power.

Among the impressive features of the 4K Javelin™ is its indifference to the resoluton that is being extended. It has the ability to handle any resoluton 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 electromagnetc 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 installaton environment. Applicatons include, home theater, conference rooms, schools, airports, hospitals and more.

Extend to 330ft

Add passive HDMI wall plates and go through plenum spaces.

GC-HDMI-DP

GC-HDMI-DP

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)
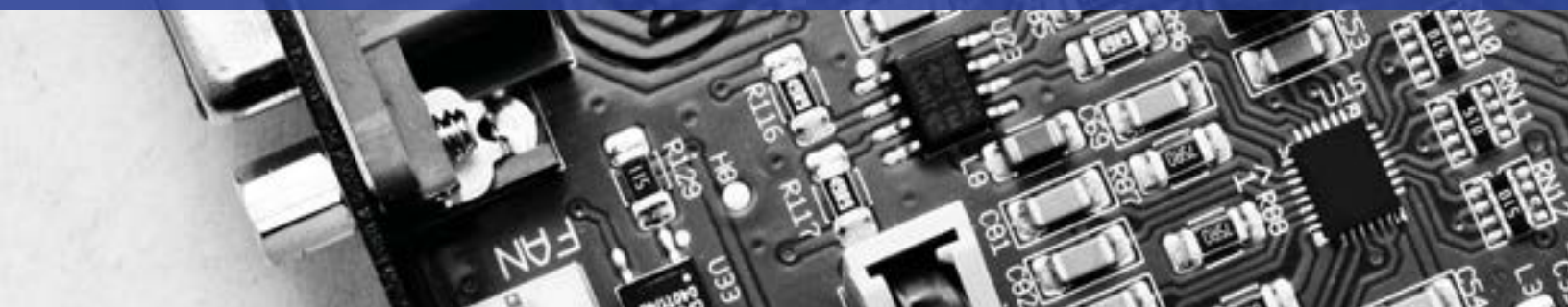
AV Processors & Scalers

HDMI Scaler &
Audio Extractor / Embedder

SC-HDMI-2A

FEATURES

Provides scaled HDMI output to various resolutions up to 1080p and 1920x1200

Perfect for converting DVI + Audio to HDMI

Extract audio from HDMI stream to analog or digital audio output

Embed analog or digital audio into the HDMI stream

Horizontal mirroring for teleprompting

HDCP 1.1 and DVI 1.0 compliant

DESCRIPTION

The SC-HDMI-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-HDMI-2A   HDMI Scaler & Audio Extractor

Analog Video and Audio to HDMI Scalers

SC-VHD-HDMI

FEATURES

Convert Composite or S-Video and audio to HDMI

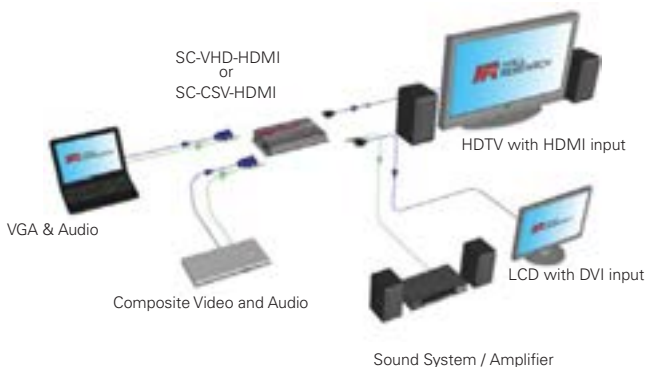Provides scaled HDMI output to various resolutions up to 1080p and 1920x1200

Horizontal mirroring for teleprompting

HDCP 1.1 and DVI 1.0 compliant

DESCRIPTION

The SC-VHD-HDMI 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-HDMI 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.

SC-VHD-HDMI
or
SC-CSV-HDMI

VGA & Audio

Composite Video and Audio

HDTV with HDMI input

LCD with DVI input

Sound System / Amplifier

MODELS

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

Composite / S-Video and Audio to HDMI

SC-CSV-HDMI

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

HDCP 1.1 and DVI 1.0 compliant

DESCRIPTION

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

MODELS

SC-CSV-HDMI   Composite / S-Video and Audio to HDMI Processor
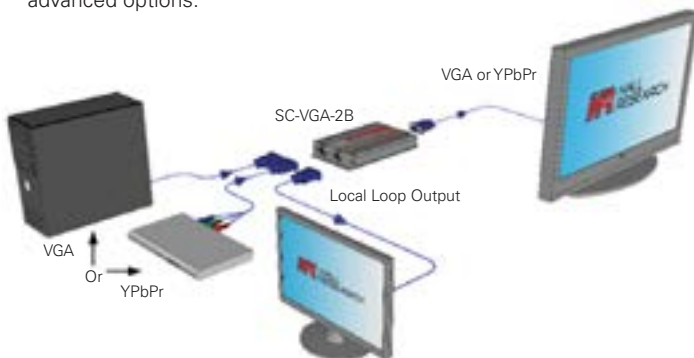
VGA/Component Scaler

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.

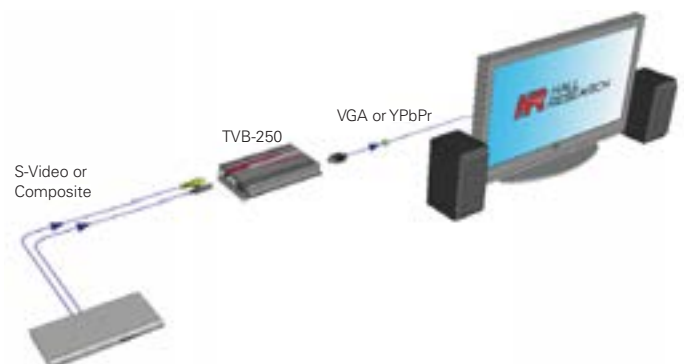
MODELS

TVB-250   Composite/S-Video to VGA/Component Scaler
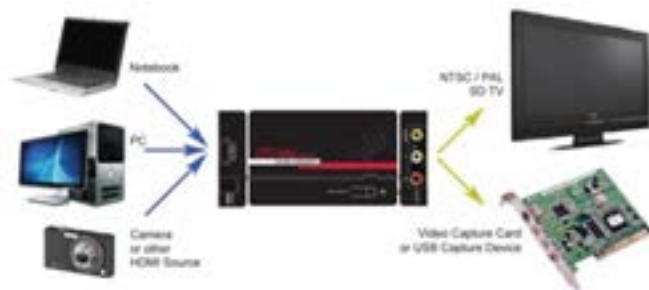
HDMI or DVI to Composite Video & Audio Scan Converter

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 |

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 SC1080-H 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 reoslution. The SC1080-H 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.
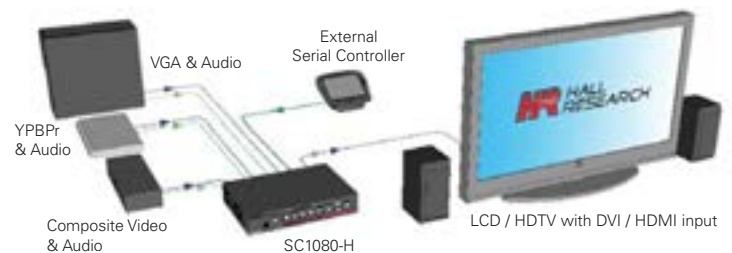
MODELS

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

Multi-Format Scaler Switch with HDBaseT™

SC-12BT

4K x 2K

FEATURES

12 input Switcher

4x HDMI, 4 x VGA, 2 x CV, 1 x S-Video, 1 x YPbPr

3 Simultaneously Active Outputs

VGA, HDMI, and HDBaseT™ (70 m)

Scaler with User Settable Output Resolution

User friendly and intuitive front panel design

RS-232 and IP Control

English-Based ASCII Command Set

HDMI Audio Extraction and Embedding

Balanced Microphone and Stereo Line Inputs

Line level and HDMI embedded audio outputs

20 Watt Power Amp for driving 4 or 8 Ω speakers

DESCRIPTION

The Model SC-12BT is a 12 input HD Scaler that accommodates 4 HDMI, 4 VGA, and 4 AV inputs.

Select any of the inputs by using front panel push- buttons, RS-232 or IP commands. The Selected source is scaled to a fixed user-settable resolution and simultaneously output in 3 convenient formats: VGA, HDMI, and HDBaseT (for easy extension to 70m / 230 ft on a single UTP).

The SC-12BT provides comprehensive audio capabilities as well. HDMI audio is extracted; VGA and AV inputs (Composite, S-Video, and YPbPr) have their own separate audio inputs. Two auxiliary audio inputs are provided (balanced mic and stereo line-level).

Separate audio controls are provided on the front panel (for selected video and for Aux input). The overall audio is embedded in the HDMI and HDBaseT™ outputs and also available on RCA jacks. The unit also boasts a 20 watt audio amplifier for direct connection to 4 or 8 Ω speakers.

MODELS

SC-12BT   Multi-Format Scaler Switch with HDBaseT

VGA, HDMI, and MHL Multi-format HDMI Switch and Controller
(with HDBaseT™ output on SC-3BX)

SC-3H

4K x 2K

FEATURES

3 inputs handle VGA, Component, HDMI (or DVI), and MHL

Supports phone charging feature if MHL source is detected

VGA input is scaled to 1080p or user specified output resolution to ensure proper image

Supports all HDMI resolutions including 4K (UHD)

Manual or automatic input selection

IR Extension

Can issue its own RS-232 or IR commands to turn display On or Off

Display power control can be manual or automatic

USB port for configuration (including display power on/off control methodology)

SC-3BX provides additional HDBaseT™ output with PoH

DESCRIPTION

The SC-3H and SC-3BX are desktop switchers accommodate 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 and to ensure compatibility with all HDMI displays, the VGA/YPbPr input is scaled to 1080p or 720p).

The units provide an HDMI output, along with separate audio outputs (SPDIF digital and L/R analog). The SC-3BX also provides a Class-A

HDBaseT™ output with PoH (sends power to receiver using Power-over-HDBaseT) for connection to compatible receivers such as UHBX-R-PD. The SC-3BX can extend 4K video to 330 ft (100m) while 1080p signals can go as far as 500 ft (150m).

The unit can manually or automatically switch between the various inputs. In manual mode select inputs by pressing the Source button on the front panel or buttons on optional expansion wall plate keypads (SW3-UI and SW3-UI-VOL). The input selection can also be automatic based on detecting video.

Both units are designed to control the power on/off function of the display by generating RS232, and/or IR control signals. For example in Auto Power mode, if a video is detected on the selected input, the wall-plate will issue the desired ON command, and if there is no video, it can issue an OFF command after a programmed delay. The control commands can be RS232 or IR based on the user's needs.

A USB port is provided on the device for programming the commands using free Windows® GUI software. Moreover, the switcher features an IR detector that can extend IR signals.

MODELS

SC-3H   VGA, HDMI, and MHL Multi-format HDMI Switch and Controller
SC-3BX   VGA, HDMI, and MHL Multi-format HDMI Switch and Controller with HDBaseT™

Multi-Format Digital / Analog Processor

SC-1080D

FEATURES

Provides scaled VGA and DVI output to various resolutions up to 1080p and 1920x1200

Horizontal mirroring

Accepts DVI, VGA and Component input formats

Control from front panel, IR or RS-232

HDCP 1.1 and DVI 1.0 Compliant

DESCRIPTION

The SC-1080D combines the functions of many products in one compact and versatile unit. It provides both high definition analog as well as digital inputs. Two outputs are available (simultaneously active: one analog RGBHV and one digital DVI-D). Output resolution up to 1080p or 1920x1200.

The SC-1080D uses the latest high-resolution video scaling techniques to produce a professional grade and superior video output for a perfect image on the LCD. User-friendly On Screen Display (OSD) is available for advanced feature settings. Can be controlled via front panel, IR remote, or RS-232.

MODELS

SC-1080D	Multi-Format Digital/Analog Video Processor
F10295-KIT	Rack Mount Brackets for SC-1080D

Closed Caption Decoder and Text
Video Overlay

CC-101-PRO

FEATURES

Overlay text on video

Decode closed captioning data

S-Video and Composite Video inputs and outputs

VGA or Component output (CC-101-PRO)

DESCRIPTION

Capture closed captioning text (CC1 through CC4). Text can be overlaid on video or streamed through a serial port (CC-101-PRO). Perfect for classrooms and digital signage applications where closed captioning decoding may not be an option (such as when projectors or scalers are used that strip out the captioning).

The CC-101 is equipped with a serial port, through which the unit can display user defined text anywhere on the screen. The unit also has internal non-volatile flash memory for storing up to 10 strings of data which can be automatically displayed when the unit is turned on or activated via the front panel. Windows™ software is available for defining and storing text.

MODELS

CC-101   Closed Caption Decoder and Text Video Overlay

CC-101-PRO   Closed Caption Decoder and Text Video Overlay with Component Output

Control Systems

Modular Digital Room Control System

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.
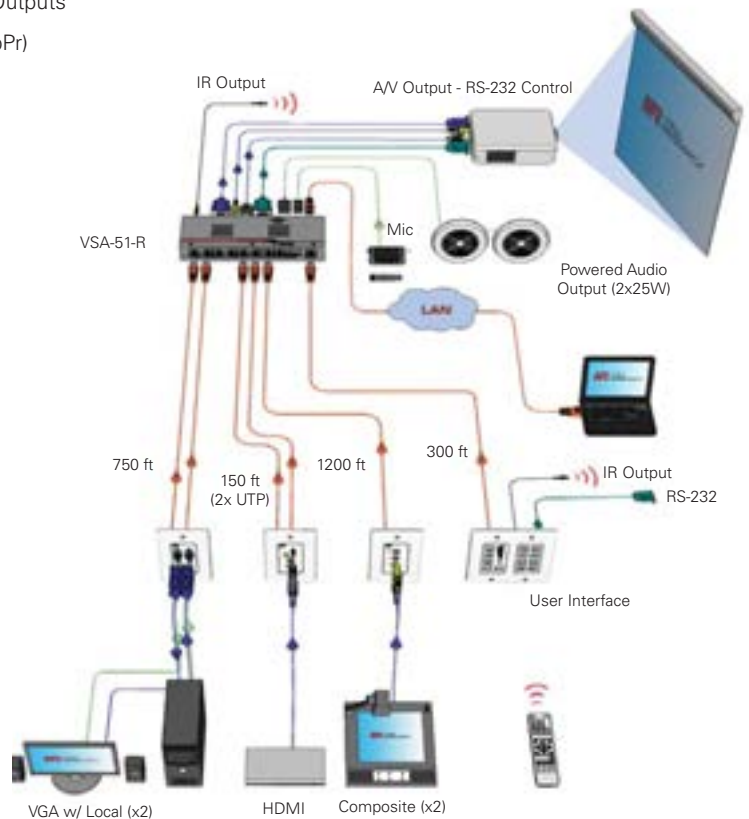
MODELS

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)
VSA-H-DP	HDMI + Audio Input Decora Plate (No HDMI Audio Extraction)
SPK-820-T	Ceiling Tile Speaker, 25 Watt, 2ftx2ft, 8 Ohm

Switch-UTP AV Control System

VSA-31-SP-W

FEATURES

Control a classroom display with multiple video and audio sources

Switch between 2x VGA and 1x S-Video/Composite video sources with audio

Built-in 20 Watt (2x10W) stereo amplifier

Programmable relay contacts can switch on or off with a press of a button

All components connect to the central receiver via Cat5 cable

Power provided to in-wall components via Cat5 from the receiver

DESCRIPTION

The Switch-UTP AV control system is a convenient system for controlling a display in a classroom or conference room environment. It supports 2x VGA/Component and 1x S-Video/Composite source inputs with audio as well as mic input. The programmable user interface panel can be used to turn a display on/off, control volume, and switch between sources. Modular user interface and VGA wallplate options are available.

The source input plate sends the selected AV source to a receiver via 2 Category 5 cables up to 750 feet (230 m) away. No power supply is needed for either wallplate since power is supplied via the Cat5 cables from the remote receiver unit.

The system features a built-in 2x10W stereo audio amplifier to drive 4 or 8 Ohm speakers directly. In addition, the remote receiver features line-level audio output for connection to an external audio amp if required. Relay contacts for controlling things such as lights and motorized screens are also available.

The optional VSA-31-IP serial to IP adapter allows the system to be controlled remotely over a LAN via Windows software. It can also be used to extend any serial connection over a LAN.
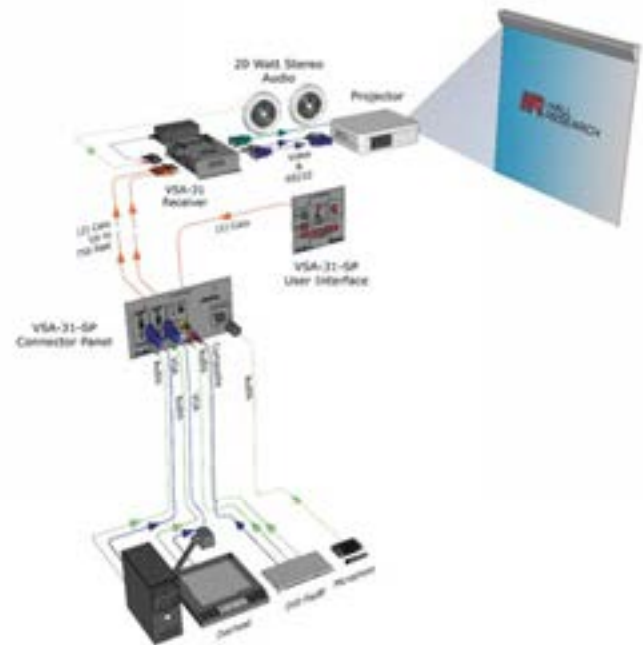
MODELS

VSA-31-SP-W	1x3 Analog AV Control System (Modular User Interface, White)
VSA-31-IP	IP to Dual RS-232 Controller

I/O Controllers

Auto-Sensing Projector Controller

HR-3P

FEATURES

Automatically control a display when a video signal is detected

Accepts S-Video / Composite and VGA input

Provides video pass-thru for S-Video/Composite and 1x2 splitter for VGA

RS-232 port for control

DESCRIPTION

The HR-3P is a serial control device that automatically detects the presence or loss of a video signal on one of its 3 video inputs and subsequently issues a RS-232 and/or relay commands to a display and screen (e.g. turn on/off, select input, etc). It supports S-Video/Composite and VGA inputs, and has a 1x2 splitter for the VGA. It features a bi-directional RS-232 serial port for controlling the display. The HR-3P is an ideal tool for the basic automation of a display.

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

Front panel LED status indicator

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.

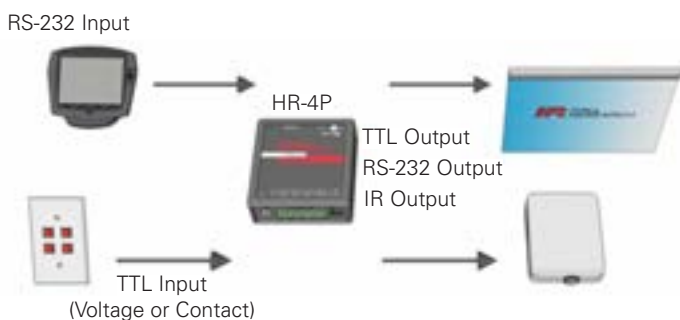# 4 Port Programmable RS-232 I/O Controller with IR Learn

Web Enabled Serial Controller

HR-4P

CNT-IP-2

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

FEATURES

Embedded Software Accessible from any PC, Smart Phone, or Tablet

RS232 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 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.

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) RS232 ports, (1) IP RJ-45 network port. The CNT-IP-2 controller also has the ability to route the RS232 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 and automation and more.

RS-232 Input

HR-4P

TTL Output
RS-232 Output
IR Output

TTL Input
(Voltage or Contact)

User Programmable Control Screen

MODELS

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

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

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 SPDIF 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 SPDIF 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 SPDIF 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 SPDIF 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 upto 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 SPDIF inputs are provided (switch selectable by the user).

MODELS

DAC-51   Universal Digital to Analog Audio Decoder DSP

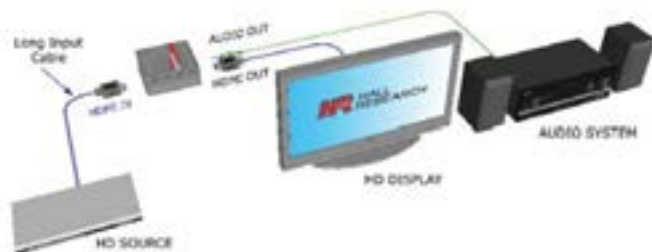# HDMI Audio Extractor with EDID Management

EMX-HD-AUD

Ground Loop Isolator

GLI-35mm

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

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

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.

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

| EMX-HD-AUD | HDMI Audio Extractor with EDID Management |

MODELS

| GLI-RCA | Stereo Audio Ground-Loop Isolator & Filter with RCA Connectors |
| GLI-35mm | Stereo Audio Ground-Loop Isolator & Filter with 3.5mm Connectors |

HDMI Repeater and Audio Extractor

HD-AUD

4K x 2K

FEATURES

Buffers and re-clocks HDMI signals

Extracts audio from HDMI input

Works with or without display

Supports Full HD and 4Kx2K (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

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

EMX-AMP

4K x 2K

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

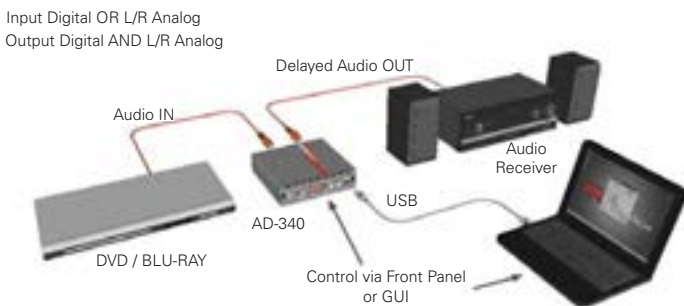|	
EMX-AMP	4K HDMI Audio Extractor with Audio Amplifier, RS-232
EMX--I-AMP	4K HDMI Audio Extractor with Audio Amplifier, RS-232 and IP Control

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 (SPDIF) 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

Delayed Audio OUT

Audio IN

Audio Receiver

USB

AD-340

DVD / BLU-RAY

Control via Front Panel or GUI

MODELS

AD-340   Universal Audio Delay Processor

Ceiling Tile Speaker

SPK-820-T

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

Accessories

EDID Emulation & Programming

VGA EDID Emulator

EM-EDID-HD15

FEATURES

Allows PC to 'see' an LCD in absence of DDC channel (common problem with extenders)

Record EDID from any VGA, DVI or HDMI display using USB-EDID-PRO

Can be powered from VGA input (if source is VESA compliant)

Ideal for use with video splitters, switches and extenders

DESCRIPTION

Some analog video extenders do not transmit a DDC channel which is necessary for computers to negotiate what display resolutions are available. Hall Research EDID Emulators are designed to emulate an EDID table for a PC or notebook where a direct connection to the display is not available. Each one comes pre-programmed with a common set of resolutions but they can also be custom programmed using the EDID Programmer.

The USB-EDID programmer allows you to easily connect directly to a display to record the EDID information which can then be uploaded to an EDID emulator. You can also modify the EDID table using our software utility.

MODELS

EM-EDID-HD15	VGA EDID Emulator
EM-EDID-HD15-P	VGA EDID Emulator with External DC Adapter
USB-EDID-HD15	EDID Programmer

HDMI Audio Extractor with EDID Management
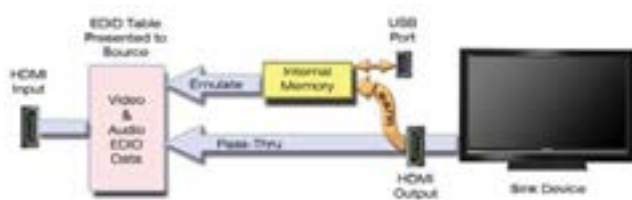
EMX-HD-AUD

FEATURES

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Pass-through EDID or Learn and emulate custom files

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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.

MODELS

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

Adapters

DisplayPort Adapters

GC-DP-DVI-P	DisplayPort to DVI Adapter
GC-DP-HDMI-P	DisplayPort to HDMI 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

Serial to USB

| USB-RS232-1 | USB Serial Adapter |

Cables

Locking HDMI Patch Cables

C-HDMI-L-1.5	Locking HDMI Patch Cable (1.5 feet)
C-HDMI-L-3	Locking HDMI Patch Cable (3 feet)
C-HDMI-L-6	Locking HDMI Patch Cable (6 feet)
C-HDMI-L-10	Locking HDMI Patch Cable (10 feet)
C-HDMI-L-15	Locking HDMI Patch Cable (15 feet)
C-HDMI-L-25	Locking HDMI Patch Cable (25 feet)
C-HDMI-L-35	Locking HDMI Patch Cable (35 feet)
C-HDMI-L-50	Locking HDMI Patch Cable (50 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)
C-HDMI-25	HDMI Patch Cable (25 feet)

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

4K x 2K

FEATURES

Plenum Rated

Resolutons to UHD (4K)

Offers fiber-optc noise immunity

No additonal 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™ Actve Plenum HDMI extension cables utlize the latest in optoelectronic technology to transmit HDMI signals far beyond the typical limitatons 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 resolutons 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 specificatons all HDMI compliant sources must at least provide 0.25 wats of power.

Among the impressive features of the 4K Javelin™ is its indifference to the resoluton that is being extended. It has the ability to handle any resoluton 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 electromagnetc 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 installaton environment. Applicatons 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)

DVI-D Cables

C-DVID-D-1M	DVI-D Dual Link Cable (1 meter)
C-DVID-D-2M	DVI-D Dual Link Cable (2 meter)
C-DVID-D-3M	DVI-D Dual Link Cable (3 meter)
C-DVID-D-5M	DVI-D Dual Link Cable (5 meter)
C-DVID-D-10M	DVI-D Dual Link Cable (10 meter)
C-DVID-D-15M	DVI-D Dual Link Cable (15 meter)

DVI to VGA Cable

C-DVI-VGA-1M	DVI to VGA Cable (1 meter)
C-DVI-VGA-2M	DVI to VGA Cable (2 meter)
C-DVI-VGA-3M	DVI to VGA Cable (3 meter)
C-DVI-VGA-5M	DVI to VGA Cable (5 meter)

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)

Component Patch Cable

C-3RCA-CP-8i	Component Patch Cable (8 inch)
C-3RCA-CP-12i	Component Patch Cable (12 inch)
C-3RCA-CP-16i	Component Patch Cable (16 inch)

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)

Category 5 Skew Free Cable

CUTP-Z-50-MM	Category 5 Skew Free Cable (50 feet)
CUTP-Z-75-MM	Category 5 Skew Free Cable (75 feet)
CUTP-Z-100-MM	Category 5 Skew Free Cable (100 feet)
CUTP-Z-200-MM	Category 5 Skew Free Cable (200 feet)
CUTP-Z-300-MM	Category 5 Skew Free Cable (300 feet)
CUTP-Z-500-MM	Category 5 Skew Free Cable (500 feet)
CUTP-Z-1000-MM	Category 5 Skew Free Cable (1000 feet)

VGA + Audio Patch Cable

CVGA-XA-03-MM	VGA + Audio Patch Cable (3 feet)
CVGA-XA-06-MM	VGA + Audio Patch Cable (6 feet)
CVGA-XA-10-MM	VGA + Audio Patch Cable (10 feet)
CVGA-XA-15-MM	VGA + Audio Patch Cable (15 feet)
CVGA-XA-25-MM	VGA + Audio Patch Cable (25 feet)
CVGA-XA-50-MM	VGA + Audio Patch Cable (50 feet)

VGA to Component Cable

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

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

Category 5 Skew Free Plenum Rated Cable

CUTP-ZP-100-MM   Category 5 Skew Free Plenum Rated Cable (100 feet)

CUTP-ZP-200-MM   Category 5 Skew Free Plenum Rated Cable (200 feet)

CUTP-ZP-1000-MM   Category 5 Skew Free Plenum Rated Cable (1000 feet)

PoH Compliant Power Inserter

511-POH-17W

Universal Power Supply w/IEC320 input & 48v @ 1.2A output

511-PS4812

Notes

About Us

Hall Research has been a leading manufacturer of innovative Audio/Video distribution, switching, scaling and automation products for over 30 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 2 years from the date of purchase. Cross-shipment for replacement products is 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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