HALL RESEARCH

USER'S MANUAL

VSA-HA-DP

HDMI input Wall Plate for VSA Series with HDMI Audio Extraction and Separate Audio Input

Extracts audio from HDMI input for the power amp in VSA Receiver
Separate 3.5 mm L/R stereo line input mixes with HDMI audio
Can either pass-thru or Emulate EDID
USB port for EDID read & write
HDCP compliant

CUSTOMER SUPPORT INFORMATION
FREE support, Call **714-641-6607** or email **support@hallresearch.com**
Hall Research, 1163 Warner Ave., Tustin, CA 92780
Web site: **www.hallresearch.com**

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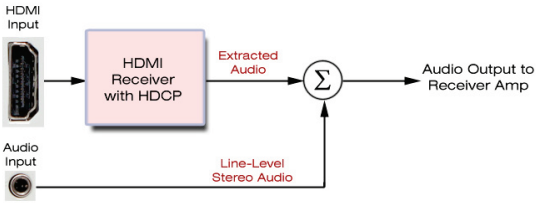
Trademarks

1.0 Introduction

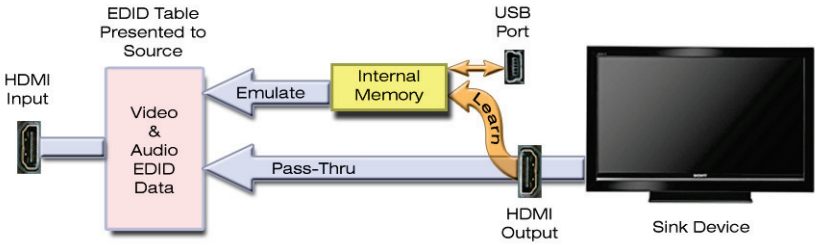
The Hall Research VSA-HA-DP is a member of the VSA wall-plate input modules . It is designed to connect to a VSA-51 receiver using 2 Cat5e/6 cables and is powered by the receiver (no additional power supply needed). The VSA-HA-DP provides the means to extend DVI or HDMI signals to the receiver and is able to extract the embedded audio from the HDMI video input for the audio amplifier in the VSA-51 Receiver. It can also accommodate a separate audio input though the 3.5mm stereo jack provided.



A USB port on the panel is available for configuration and management of EDID. Advanced users can use a free downloadable Windows™ GUI software to set the modes of operation and manage the EDID. For example, it is possible to read the EDID from the display connected to the VSA receiver, download it to a PC, modify the EDID, and upload it back to the wall-plate for emulation.

The VSA-HA-DP is HDMI 1.3 and 1.4 (deep-color and 3D) compatible, and automatically compensates for the signal degradation in long HDMI input cables up to 50 ft (15 m). The RJ45 output can drive long Cat5e/6 cables up to 130 ft (40m).

The package includes a USB cable for connection to a PC. Free Windows™ PC software is available on the product's website that allows reading, saving, manipulating, and writing EDID tables to and from the unit. The software can be used to control the operational modes and provides diagnostic information such as an indication of the HDMI input signal's video and audio characteristics.



EDID Routing Modes

2.0 Features

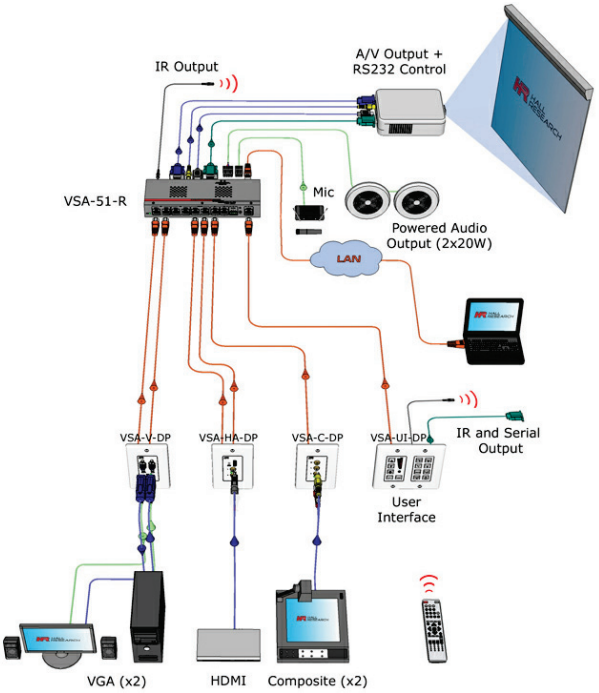
- Member of the VSA wall-plate input modules
- Supports DVI, HDMI™, HDCP, CEC, Deep-Color, and 3D Video
- Connects to the VSA receiver using 2 Cat5e/6 cables
- Can be located 130 ft (40m) away from the VSA receiver
- Powered by the receiver (no additional power supply needed)
- Extracts embedded audio from HDMI for the audio amplifier in the Receiver
- Provides a separate audio input though a 3.5mm stereo jack
- USB port for configuration and management of EDID
- Free Windows™ GUI software to set the modes of operation and manage the EDID
- Can pass-thru or emulate EDID
- Supports HDCP, HDMI deep-color and 3D
- Designed and made in USA

Wall plate Front and Rear Views

3.0 Installation

The VSA-HA-DP is a modular wall plate that sends HDMI and Audio to the VSA-51-R receiver via (2) Cat5e/6 cables. This wall plate is one part of a larger system with multiple capabilities. Simply plug the A and B RJ45 outputs on the rear of the wall-plate to the corresponding inputs on the receiver. Make sure to plug A to A and B to B. The wall plate will not work if the UTP cables are crossed and damage may occur.

1080i/720p signals can be extended to 170ft, while1080p signals can be extended up to 130 ft. For distances of 100 ft or beyond 23 gauge Cat6 cable is recommended.



Make sure the receiver is powered off.

Connect the VSA-HA-DP to the VSA-51 Receiver using (2) Cat5e/6 cables

Make sure the HDMI output of the VSA-51 Receiver is plugged into a projector or display

Power up the VSA-51 Receiver. The power light on the wall plate illuminates

Connect any HDMI or DVI video source to the VSA-HA-DP video input

Connect an external audio source to the VSA-HA-DP 3.5mm audio if desired

4.0 EDID Management

In most installations no user setup or configuration is needed. As shipped from the factory, the EDID routing mode of the wall plate is set to pass the EDID of the connected projector to the source. However the VSA-HA-DP has its own alternate internal EDID memory that can be used instead of the actual EDID of the projector.

There are several scenarios where a user may want to "emulate" a different EDID than the one in the actual projector. For example if the projector supports a variety of "strange" resolutions, one may want to eliminate those to get a more predictable behavior.

To change the EDID routing mode from Pass-thru (default) to Emulate, the USB connector on the front panel must be used (USB cable for connection to a PC), and the user must download and install the free Windows™ GUI from the product's webpage.

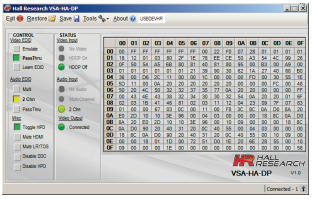
Using the GUI you can configure the wall plate to use its internal EDID table. As shipped, the internal EDID has the settings shown in the table below (highlighted row is the native). The internal EDID table can be overwritten either by: (1) learn the EDID from connected projector (read and copy EDID from the projector to the internal EDID memory), or (2) upload an EDID table from the PC.

The following lists the default resolutions of the VSA-HA-DP internal EDID. Performing a Factory Default reset using the GUI will restore these values are reset.

Resolution	Refresh Rate	Aspect Ratio	Resolution	Refresh Rate	Aspect Ratio
640x480	60, 67, 72, 75	(Aspect 4:3)	720x480i	59.94/60	(Aspect 4:3, 8:9)
800x600	56, 60, 72, 75	(Aspect 4:3)	720x480p	59.94/60	(Aspect 4:3, 8:9)
1024x768	60, 70, 75	(Aspect 4:3)	1280x720p	59.94/60	(Aspect 16:9, 1:1)
1280x720	**60**	**(Aspect 16:9)**	1920x1080i	59.94/60	(Aspect 16:9, 1:1)
1280x800	60	(Aspect 16:10)	1920x1080p	50, 59.94/60	(Aspect 16:9, 1:1)
1280x1024	60, 75, 85	(Aspect 5:4)			
1400x1050	60	(Aspect 4:3)			
1440x900	60	(Aspect 16:10)			
1600x1200	60	(Aspect 4:3)			
1680x1050	60	(Aspect 16:10)			
1920x1080	60	(Aspect 16:9)			
1920x1200	60	(Aspect 16:10)			

5.0 Free Windows Software GUI

The VSA-HA-DP is controllable via a free Windows™ based GUI available on the Hall Research website. All of the device features, are accessible from the GUI. To learn mode, download the user guide for the Software GUI from the website.



6.0 Troubleshooting

No Video — Verify cabling and make sure maximum lengths are not exceeded. Using the GUI make sure DDC control is enabled.

No Audio — Verify source audio and video formats. Verify EDID has Audio capabilities

Bad EDID — Ensure VIDEO & AUDIO modes not changed

When an EDID is learned, the VSA-HA-DP will be in Pass-Thru modes for both Video and Audio. In these modes, the EDID will remain un-touched and can be exported, if desired.

If either VIDEO or AUDIO modes are changed; the EDID will be altered by the VSA-HA-DP to allow audio capabilities. The previous 'un-touched' EDID will no longer be available unless previously exported.

7.0 Returning unit for Repair

The VSA-HA-DP has no user serviceable parts. If you need to transport or ship your unit: Package it carefully. We recommend that you use the original container.

Before you ship the units back to Hall Research for repair or return, contact us to get a Return Authorization (RMA) number.

8.0 Specifications

Power Supply	Powered from VSA-51-R
Size (excluding bezel)	1.378" W x 1.77" D x 4.02" H (35 mm x 45 mm x 102 mm)
Operating Temperature	32 to 104 DegF (0 to 40 DegC)
Storage Temperature	-40 to 185 DegF (-40 to 85 DegC)
Humidity	10 to 90% non-condensing
Safety	CE
EMI/EMC	CE, FCC Class A
MTBF	90,000 hours
USB	2.0 Full Speed
UTP Cable Functions	Video (TDMS) on PORT "A" Power, audio, DDC on PORT "B"