



SP-HD-2A

2-Channel HDMI Splitter with Analog and Optical Audio Output

Supports 4Kx2K UHD Video

UMA1250 Rev A

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FCC RADIO FREQUENCY INTERFERENCE STATEMENT

This device complies with part 15 Class A of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



1.0 Introduction

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

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

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

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



Figure 1 – Included Brackets

1.1 Block Diagram

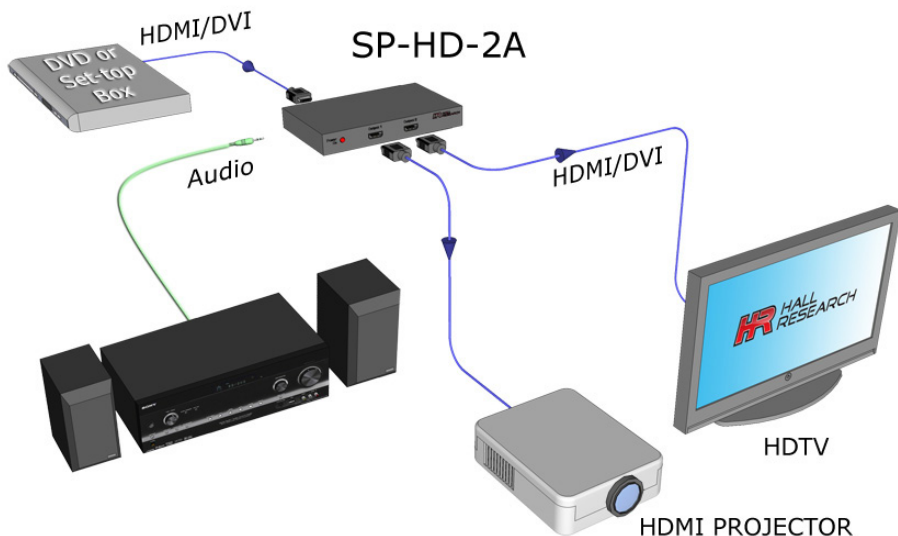


Figure 2 – Block Diagram

2.0 Features

- Supports PC & HDTV resolutions, VGA-to-UXGA and 480p-to-UHD
- LED indicators for Power, Source Video and Output Connections
- Includes brackets for surface mounting
- Extracts HDMI Audio and outputs it as L/R Analog and TOSLINK
- Supports LPCM 7.1CH, Dolby TrueHD and DTS-HD Master Audio
- Plug and play installation with Smart EDID Management
- Bandwidth of 10.2 Gbps for a sharp digital image
- Unplugging one output will not cause interruption on the other one
- Includes Universal power adapter with interchangeable AC plugs
- HDCP Compliant

3.0 Setup

The Splitter is plug and play. Connect the source to the splitter using quality HDMI cables. Connect each output to respective displays. Plug the included power supply to the splitter. If needed connect headphones or audio amp to the audio outputs of the splitter.

Note that if no display is hooked up to the outputs or if both displays are turned off - no HPD (Hot-Plug Detect) is being received by the splitter, it will use an internal EDID which requests 2-Channel stereo audio from the source.

By default the Splitter will use the EDID from the display connected to Output #1. On power up, if output #1 is off or not connected, then it will use EDID from Output #2, and if #2 is missing also, it will use internal EDID.

If source is sending multi-channel audio, the 3.5mm analog output is muted and extracted audio output will only be available as digital on the TOSLINK optical output.



Figure 3 – Front and Rear Panels

4.0 Troubleshooting

If you are experiencing problems getting the splitter to work properly, please use the following troubleshooting suggestions.

- Make sure that all of the connections on both the sender and the receiver are solid. Loose connections are the number one cause of issues.
- Check the LED's on the front panel. The 3 red LEDs indicate if the device is receiving video and if it is detecting a display (that is turned on) and if it is sending video output to them.
- Maximum resolution supported is 4Kx2K@24bit/30Hz. Make sure the source is not outputting a higher resolution signal (such as 4K/60Hz). In that case, you must change the setting of your source video to limit the max output clock rate to one supported by the splitter.
- If the 3.5mm L/R analog audio output is not working, make sure your source is not sending multi-channel (Dolby, DTS, etc) audio. In that case use the TOSLINK output, or change the setting on your source device to output 2-channel PCM audio instead of multi-channel.

If you still are not able to get the system working properly, contact Hall Research support (preferably via email or the form on support page of www.hallresearch.com) with a detailed description of the issue and the troubleshooting steps you have taken.

Do not open or try to repair the unit yourself as this will void your warranty. To return the extender for repair, you must contact HR Support at 714-641-6607 or via email or web. To ship the unit back for repair, make sure to obtain a Return Material Authorization (RMA) number.

5.0 Specifications

Video

Standards	DVI (single link) and HDMI (compliant with HDMI video specifications including 12 bit color depth, 3D video and 4K/30)	
Signal type	TMDS	
Connectors	HDMI	
Bandwidth	10.2 Gbps total (or 3.4 Gbps per color, or 340 MHz TMDS clock)	
Resolutions	DVI signal	VGA (640x480) thru WUXGA (1920x1200)
	HDTV signal	480i through 4K/30

Audio

Formats	All HDMI Embedded Audio including: LPCM 7.1CH, Dolby TrueHD and DTS-HD Master Audio (32-192kHz sample rate)
Connectors	3.5mm L/R stereo Analog, plus Optical S/PDIF audio (TOSLINK)

General

Power Consumption	2.2 watts
Temp/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, non-condensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, non-condensing
Cooling	Convection
Enclosure type	Metal
Dimensions	2.76" W × 5.71" D × 0.98" H (70 mm W × 145 mm D × 25 mm H)
Product weight	Splitter alone: 8 oz (0.5 lb or 230 g) Package (shipping): 16 oz (1 lb or 460 g)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Safety	CE
EMI/EMC	CE, FCC Class A
MTBF	90,000 hours (Calculated Estimate)
Warranty	3 years parts and labor

Specifications are subject to change without notice



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