



## SP-HD-4A HDMI Video splitter

1 input × 4 outputs

Supports 4Kx2K video. HDCP Compliant. EDID Management

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CUSTOMER  
SUPPORT  
INFORMATION

FREE technical support, call 714-641-6607  
Hall Research, 1163 Warner Ave. Tustin, CA 92780  
[www.hallresearch.com](http://www.hallresearch.com) [info@hallresearch.com](mailto:info@hallresearch.com)

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### FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been designed to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are intended to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



**RoHS**  
Compliant

# 1. Introduction

## 1.1 General

Thank you for purchasing the SP-HD-4A, 4-channel HDMI Video Splitter from Hall Research. This device splits a single DVI or HDMI audio/video source for display on four identical outputs.

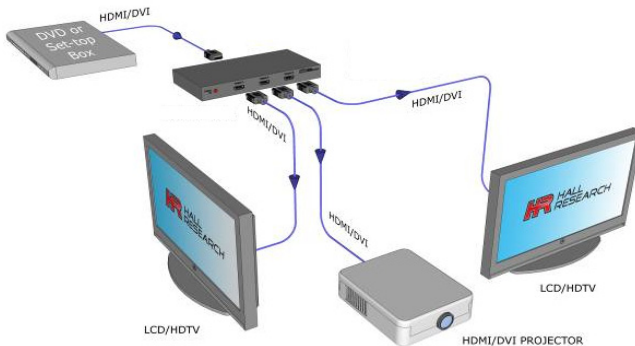
It supports HDTV resolutions up to 4Kx2K, is HDCP compliant; supports HDMI 1.4 deep color & 3-D formats, and handles all HDMI Audio formats.

The device is a high-performance unit that digitally splits and buffers the input signal for a 100% perfect image and sound reproduction on all outputs.

## 1.2 Features

- Supports HDMI 1.4 Deep-Color (up to 12 bits per color) and 3D formats
- Supports PC & HDTV resolutions, VGA~WUXGA and 480p~4Kx2K
- LED indicators for power and video
- 1 RU compact size, includes surface mounting brackets
- Supports LPCM 7.1CH, Dolby TrueHD and DTS-HD Master Audio
- Plug and play installation
- Bandwidth of 10.2 Gbps (Giga bits / second) for sharp digital image
- Intelligent EDID Pass-through or EDID Emulation (user selectable)
- Low power (consumes less than 2.5 watts fully loaded)
- Includes Universal power adapter with interchangeable AC plugs
- Locking HDMI and DC Power connectors

## 2. Connection Block Diagram



### 3. Package Contents

- One SP-HD-4A HDMI Splitter
- One Users Manual
- One Power Supply  
Input: 100 – 240V AC @ 50/60Hz,  
Output: +5V DC, 2.6A DC, 13 Watts



**Note:** HDMI Cables are not supplied with this unit. Please order those separately

### 4. Controls, Functions and Indicators



#### **Power Indicator**

The power indicator is illuminated when power is applied to the unit.

#### **Locking DC Input Power Jack**

Only use the power supply provided with the splitter. The power supply cable is secured to the splitter via a threaded sleeve preventing accidental disconnection.

#### **Input Video Indicator**

This LED will illuminate when a valid video signal is detected on the input

#### **EDID Selection Switch**

Default position is NORM. In this mode the unit will scan the outputs and create an EDID based on connected LCD's. In EMUL mode the unit will use a generic EDID that is independent of connected LCD's. Read more about EDID in the next section.

**HDMI Input Connector**

Connect the HDMI SOURCE to this connector.

**HDMI Output #1 thru #4**

Connect a compatible HDMI Display device to this connector. Note the order of HDMI output connections determines the EDID presented to the HDMI SOURCE.

**Service Connector**

No user functionality. For Firmware installation and upgrade only.

**CAUTION:**

Use only 5v DC supply (center positive) as supplied with the unit. Use of any power supply other than the one supplied may damage the unit and void warranty



## 5. EDID Handling

**NORM**

After power-up, the unit scans the outputs and looks for connected display devices (SINK) in ascending order (1 through 4). The EDID from the first discovered sink is recorded in internal memory and is passed on to the input source.

If no SINK is found, an internal pre-programmed EDID is used and passed on to the input source.

**EMUL**

After power-up, the unit uses an internal pre-programmed generic EDID and passes it on to the source. Please contact Hall Research Support for further details or questions.

## 6.0 Contacting Hall Research and Shipping/Packaging

### 6.1 Contacting Hall Research

If you determine that your HDMI video splitter is malfunctioning, do not attempt to repair the unit; instead, contact Hall Research Technical Support at 714-641-6607 or send an email to [support@hallresearch.com](mailto:support@hallresearch.com)

Before you do, make a record of the history of the problem. We will be able to provide a more efficient and accurate assistance if you have a complete description of problem.

### 6.2 Shipping and Packaging

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.

## 7. Specifications

<b>Input Port</b>	1x HDMI Female Locking Connector (Type A)
<b>Output Port</b>	4x HDMI Female Locking Connector (Type A)
<b>Connectors</b>	Locking HDMI
<b>Video Resolutions</b>	Output resolution is same as input resolution. PC Resolutions : VGA - SVGA - XGA - SXGA - UXGA - WUXGA HDTV Resolutions : 480i - 480p - 720p - 1080i - 1080p, 4Kx2K@30
<b>Bandwidth</b>	10.2 Gbps total (or 3.4 Gbps per color, or 340 MHz TMDS clock)
<b>Video Standards</b>	HDMI 1.4 (for 3D, Deep-Color & 4Kx2K), HDCP1.1 and DVI1.0
<b>Audio Formats</b>	All HDMI Embedded Audio including: LPCM 7.1CH, Dolby TrueHD and DTS-HD Master Audio (32-192kHz sample rate)
<b>Power Supply</b>	100-240 VAC, 50-60 Hz, external; +5 V DC, 2.6 A DC, 13 Watts, Center-Positive, Locking 2.1mm ID Connector Actual Power Consumption: 110 mA ~ 475 mA (or 0.55 ~ 2.4 watts) depending on # outputs plugged in at 1080P
<b>Temperature/humidity</b>	Storage: -40 to +185 °F (-40 to +85°C) / 10% to 90%, non-condensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, non-condensing
<b>Mounting</b>	End plates have L bracket with holes for surface mounting
<b>Enclosure type</b>	Metal (Steel ends and Aluminum extrusion)
<b>Dimensions</b>	1.5" H x 5.6" W x 4.1" D (38mm H x 142mm W x 105mm D)
<b>Product weight</b>	Product - 0.85 lb (0.386kg) Shipping - 1.5lbs (0.681 kg)
<b>Safety</b>	CE
<b>EMI/EMC</b>	CE, FCC Class A
<b>MTBF</b>	90,000 hours (Calculated Estimate)
<b>Warranty</b>	2 years parts and labor

**Specifications are subject to change without notice**

*Note: When displaying an HDMI signal with a higher bandwidth than 225 MHz (such as 1080p deep-color, or 4Kx2K video), a High Speed HDMI cable is required.*





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Mail order: **Hall Research**, 1163 Warner Ave. Tustin, CA 92780  
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