

User Manual

ALTIMIUM

SP2H2A-H2

HDMI 2.0 1x2 Splitter with Audio Breakout



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Preface

Read this user manual carefully before using the product. Pictures are shown in this manual for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till January, 2018. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

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.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



SAFETY PRECAUTIONS

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

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1. Product Introduction

Thanks for purchasing this one input to two output HDMI2.0 Splitter. The splitter supports HDMI video resolution up to 4K@60Hz 4:4:4, 1080P 3D and multichannel audio formats. In addition to passing EDID information from the display, there are multiple built-in EDID settings to simplify the installation. The splitter can de-embed digital stereo audio to two analog audio outputs to provide audio sources for existing audio systems. Two-way CEC is designed to control source devices and displays by using one of IR remotes.

Moreover, the splitter supports convenient firmware update through Micro-USB port. The splitter also provides LEDs on the front of the product indicating the state of the connections into and out of the unit.

1.1 Features

- Splits a single HDMI input to two HDMI outputs.
- Supports video resolution up to 4K@60Hz 4:4:4.
- Fully compliant with the HDMI 2.0 and HDCP2.2 specifications.
- 18Gbps high bandwidth.
- Features 3.5mm mini jack and 3-pin Euroblock/phoenix connector for audio de-embedded.
- Features smart EDID management: multiple preset and customized setting allowed.
- Supports two-way CEC control.
- Supports Hot-plugging.
- Provides four LEDs to indicate the current operating status and to assist troubleshooting an installation.
- Micro-USB port for convenient firmware upgrade.

1.2 Packing List

- 1x HDMI 2.0 1x2 Splitter
- 2x Mounting Ears with 4 Screws
- 4x Plastic Cushions
- 1x 3-pin Euroblock/phoenix Connector
- 1x Power Adapter (5V DC 2A)
- 1x User Manual

Note: Please contact your distributor immediately if any damage or defect in the components is found.

2. Specification

Video Input	
Input	(1) HDMI
Input Connector	(1) Female type A HDMI
HDMI Input Resolution	Up to 4Kx2K@60Hz 4:4:4
HDMI Standard	2.0
HDCP Version	2.2
Video Output	
Output	(2) HDMI
Output Connector	(2) Female type A HDMI
HDMI Output Resolution	Up to 4Kx2K@60Hz 4:4:4
HDMI Standard	2.0
Audio	
Output	(2) Audio outputs
Output Connector	(1) 3.5mm mini stereo audio jack (1) 3-pin Euroblock/phoenix connector
Audio Format	PCM
Audio Output Impedance	70 Ohms
Frequency Response	20Hz ~ 20kHz, ±3dB
General	
Bandwidth	18Gbps
Operation Temperature	-10 ~ +55°C
Storage Temperature	-25 ~ +70°C
Relative Humidity	10%-90%
Power Supply	Input:100V~240V AC; Output: 5V DC 2A
Power Consumption	6W(Max)
Dimension (W*H*D)	170mm x 20mm x 100mm
Net Weight	225g

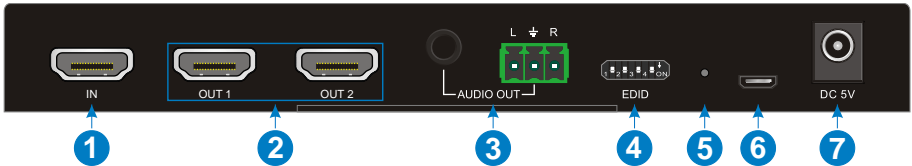
3. Panel Description

3.1 Front Panel



- ① **Power LED:** The LED illuminates green when power is applied.
- ② **INPUT LED:** The LED illuminates green when there is an input signal present.
- ③ **OUT 1 ~ OUT 2 LED:** The LED illuminates green when there is HDMI output on the corresponding channel.

3.2 Rear Panel



- ① **IN:** Type A female HDMI input port to connect HDMI source.
- ② **OUT 1 and OUT 2:** Two Type A female HDMI output ports to connect HDMI displays.
- ③ **AUDIO OUT:** 3.5mm mini jack and 3-pin Euroblock/Phoenix connector for analog audio output.
- ④ **EDID:** 4-pin DIP switch for EDID setting.
- ⑤ Pinhole button for EDID setting.
- ⑥ Micro-USB port for firmware upgrade.
- ⑦ **DC 5V:** DC barrel port to connect a 5 VDC AC power adapter.

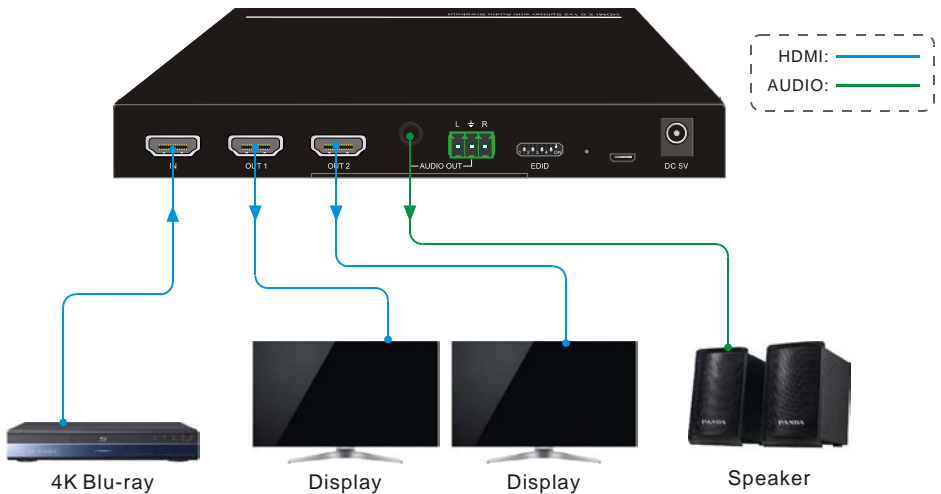
4. System Connection

4.1 Usage Precautions

- Verify all components and accessories included before installation.
- Make sure all components and accessories included before installation.
- System should be installed in a clean environment with proper temperature and humidity.
- All of the power switches, plugs, sockets, and power cords should be insulated and safe.
- All devices should be connected before power on.

4.2 System Diagram

The following diagram illustrates typical input and output connections that can be utilized with the splitter:

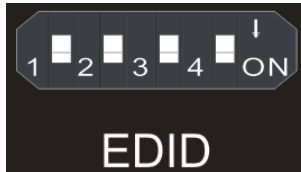


5. EDID Management

The Extended Display Identification Data (EDID) is used by the source device to match its video resolution with the connected display.

- **Predefined EDID settings**

The 4-pin DIP switch on the rear panel can be used to set the EDID to a fixed value. Use the following table to determine the settings for the 4-pin DIP switch for specific video resolution and audio capabilities. When in the lower (ON) position, each switch represents “1”, it represents “0” when setting the switch in the upper position.



Switch Status	Video Resolution	Audio Format
0000	1920x1080p@60Hz 4:4:4 RGB 8bit (Factory default)	Stereo
0001	1920x1080p@60Hz 4:4:4 RGB 8bit	High Definition
0010	1920x1080p@60Hz 4:4:4 RGB 12bit	Stereo
0011	1920x1080p@60Hz 4:4:4 RGB 12bit	High Definition
0100	3840x2160p@60Hz 4:2:0 RGB 12bit	Stereo
0101	3840x2160p@60Hz 4:2:0 RGB 12bit	High Definition
0110	3840x2160p@60Hz 4:4:4 RGB 12bit HDR	Stereo
0111	3840x2160p@60Hz 4:4:4 RGB 12bit HDR	High Definition
1000	1280x800p@60Hz 4:4:4 RGB 8bit	Stereo
1001	1920x1200p@60Hz 4:4:4 RGB 8bit	Stereo
1010	2560x1600p@60Hz 4:4:4 RGB 8bit	Stereo
1011	1280x720p@60Hz DVI	No audio
1100	1920x1080p@60Hz DVI	No audio
1101	3840x2160p@60Hz DVI	No audio

● EDID data transfer

Please follow the procedure as below to allow the source device to obtain its EDID data from the display which is connected to the **OUT 1** port:

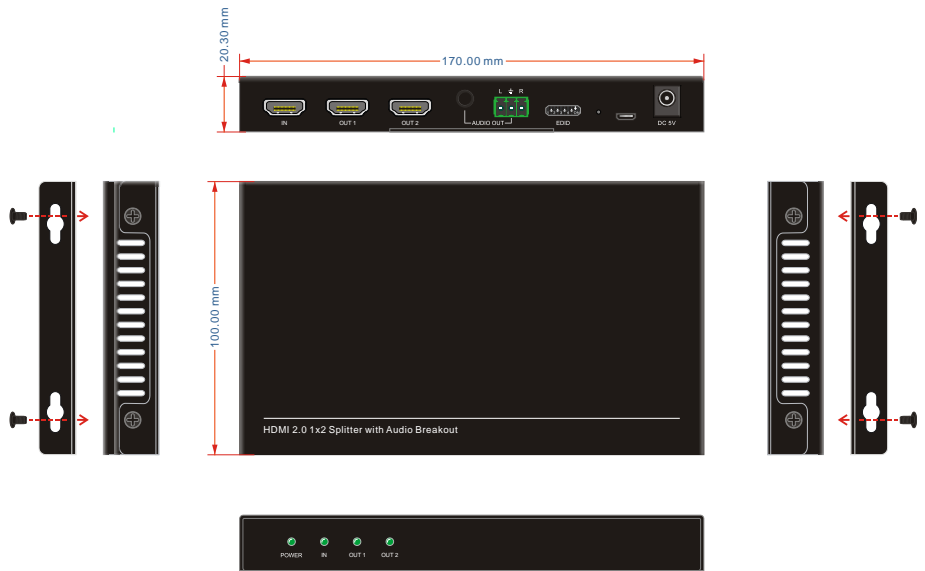
- 1) Set the 4-pin DIP switch to status “1110”.
- 2) Connect the source device to **IN** port, and connect the display to the **OUT 1** port.
- 3) Long-press the pinhole at least five seconds on the rear panel until the input LED blinks up to indicate the splitter enter into EDID copy mode.
- 4) When successfully copy the EDID data from the **OUT 1** port to the input source, the input LED will blinks three times. If that fails, the copy process will repeat 5 times or less. If it still fails, the input LED will go out and the source device still save the previous EDID data.

6. Firmware Upgrade

Please follow the steps as below to upgrade firmware by the Micro-USB port on the rear panel:

- 1) Connect the splitter to the PC with USB cable, and then power on the splitter. The PC will automatically detect a U-disk named of “BOOTDISK”.
- 2) Double-click the U-disk, a file named of “READY.TXT” would be showed.
- 3) Directly copy the latest upgrade file (.bin) to the “BOOTDISK” U-disk.
- 4) Reopen the U-disk to check the filename “READY.TXT” whether automatically becomes “SUCCESS.TXT”, if yes, the firmware was updated successfully. If not, the firmware updating is fail, the name of upgrade file (.bin) should be confirm again, and then follow the above steps to update again.
- 5) Remove the USB cable after firmware updating.

7. Panel Drawing



8. Troubleshooting & Maintenance

Problems	Potential Causes	Solutions
Colour losing or no video signal output in HDMI display.	The connecting cables may not be connected correctly or it may be broken.	Check whether the cables are connected correctly and in working condition.
	The display is not compatible with the present output resolution.	Make sure the resolution of the display(s) is compatible with the present resolution.
No HDMI signal output in the splitter while local HDMI input is in normal working state.	The connecting cables may not be connected correctly or it may be broken.	Check whether the cables are connected correctly and in working condition.
Splash screen in output devices.	Poor quality of the connecting cable.	Change for another cable of good quality.
Static becomes stronger when connecting the video connectors.	Bad grounding.	Check the grounding and make sure it is connected well.

Note: *If your problem still remaining after following the above troubleshooting steps, please contact your local dealer or distributor for further assistance.*

9. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. These terms and conditions may be changed without prior notice.

1) Warranty

The limited warranty period of the product is fixed 3 (three) years.

2) Scope

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) Warranty Exclusions:

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
 - ✓ Normal wear and tear.
 - ✓ Use of supplies or parts not meeting our specifications.
 - ✓ No certificate or invoice as the proof of warranty.
 - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
 - ✓ Damage caused by force majeure.
 - ✓ Servicing not authorized by distributor.
 - ✓ Any other causes which does not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

4) Documentation:

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defect has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

Remarks: For further assistance or solutions, please contact your local distributor.



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