Alfatron ALF-SUK2

HDMI 2.0 1x2 Splitter with 4K to 1080P

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HDMI 2.0 1x2 Splitter with 4K to 1080P Down-scaling

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are 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 October 2018. In the constant effort to improve the product, we reserve the right to make function or parameter 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 ventilation to avoid damage caused by overheating.
- Keep the module away from liquids.
- Spillage onto 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 forcefully pull ends of the optical cable. It may cause a 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 as normal electrical waste.

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1. Product Introduction

Thank you for choosing the ALFAtron SUK2 HDMI 2.0 1x2 Splitter, which can distribute one HDMI input to two outputs. The splitter supports HDMI video resolution up to 4K@60Hz 4:4:4, 1080P 3D, and multichannel audio formats. Besides passing EDID information from the display, there are multiple built-in EDID settings that can be selected by the 4-pin DIP switch on the front panel. Moreover, the splitter supports convenient firmware upgrade through Micro-USB port.

1.1 Features

- Supports HDMI 2.0 and the video resolution up to 4K@60Hz 4:4:4.
- HDMI input supports HDCP 2.2 and the outputs support HDCP Active or HDCP Passive mode.
- Supports video resolution down-scaling, the 4K input can be automatically degraded to 1080P output for compatibility with 1080P display.
- 18Gbps high bandwidth.
- Advanced EDID management: multiple built-in EDID settings can be selected.
- Built-in equalizer for signal enhancement to avoid signal attenuation in transmission.
- Supports CEC pass-through.
- Provides LEDs to indicate the current operating status.
- Firmware upgrade by Micro-USB port.

1.2 Packing List

- 1x HDMI 2.0 1x2 Splitter
- 4x Plastic Cushions
- 1x Power Adapter (5V DC 1A)
- 1x User Manual

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

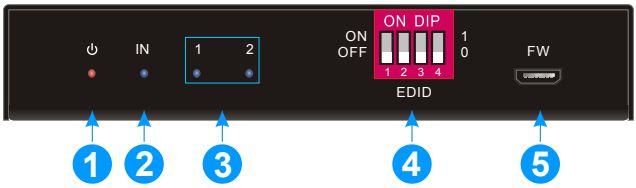
2. Technical Specification

Video Input	
Input	(1) HDMI
Input Connector	(1) Type-A female HDMI
HDMI Input Resolution	Up to 4Kx2K@60Hz 4:4:4 8bit
HDMI Standard	2.0
HDCP Version	2.2, 1.4 compliant
CEC	Supported
Video Output	
Output	(2) HDMI
Output Connector	(2) Type-A female HDMI
HDMI Output Resolution	Up to 4Kx2K@60Hz 4:4:4 8bit
HDMI Standard	2.0
HDCP Version	2.2, 1.4 compliant
CEC	Supported
Control	
Control Part	(1) EDID 4-pin DIP switch, (1) Micro-USB port
General	
Bandwidth	18Gbps
HDMI 2.0 Cable Length	4K@60Hz 4:4:4 ≤ 5m, 4K@60Hz 4:2:0 ≤ 15m, 1080P ≤ 20m
Operation Temperature	-10℃ ~ +55℃
Storage Temperature	-25℃ ~ +70℃
Relative Humility	10%-90%
Power Supply	Input:100V~240V AC; Output: 5V DC 1A
Power Consumption	1.5W (Max)
Dimension (W*H*D)	96.0mm x 17.6mm x 70.4mm
Net Weight	185g

Note: *Please use a high-quality HDMI cable fully compliant with HDMI 2.0 for reliable transmission and connection.*

3. Panel Description

3.1 Front Panel



① **POWER LED:** The LED illuminates red when power is applied.

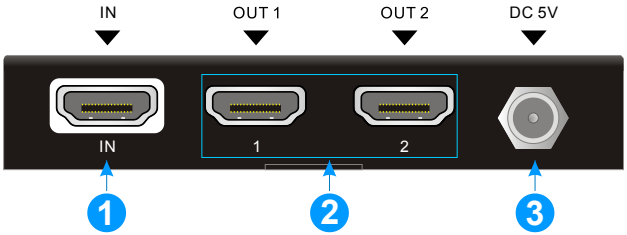
② **INPUT LED:** The LED illuminates blue when there is HDMI input.

③ **OUTPUT LEDs:** The LED illuminates blue when there is HDMI output on the corresponding channel.

④ **EDID:** 4-pin DIP switch for EDID setting and HDCP mode selection. Please refer to the ***5.1 EDID Management*** for more details.

⑤ **FW:** Micro-USB port for firmware upgrade.

3.2 Rear Panel



① **INPUT:** Type-A female HDMI input port to connect a HDMI source.

② **OUTPUTS:** Two type-A female HDMI output ports to connect HDMI displays.

③ **DC 5V:** DC barrel port to connect an AC power adapter.

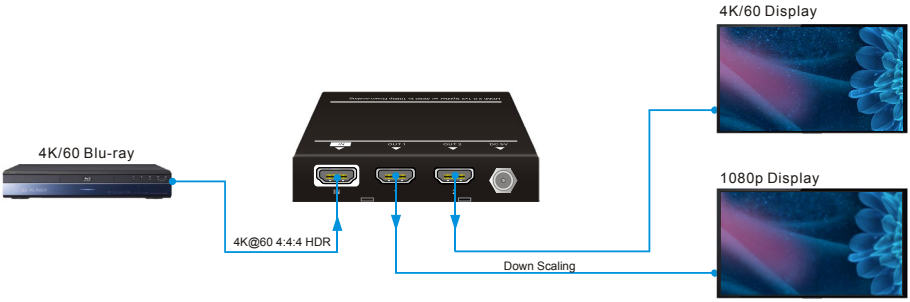
4. System Connection

4.1 Usage Precaution

- Ensure all components and accessories are 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 the typical input and output connection of the splitter:

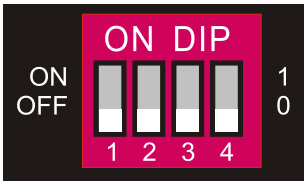


5. DIP Switch Operation

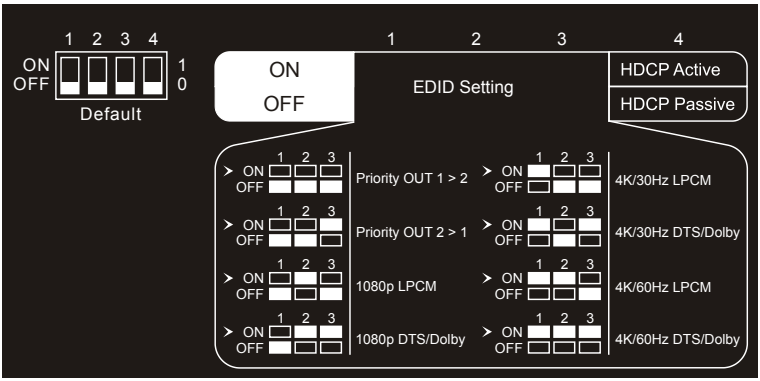
5.1 EDID Management

The Extended Display Identification Data (EDID) is used by the source device to match its video resolution with the connected display. By default, the source device obtains its EDID from the first connected display. Meanwhile, since the displays with different capabilities are connected to the splitter, the DIP switch on the front panel can be used to set the EDID to a fixed value to ensure the compatibility in video resolution.

The switch represents "**0**" when in the lower (**OFF**) position, and it represents "**1**" while putting the switch in the upper (**ON**) position.



Switch 1~3 are used for EDID setting. The DIP switch status and its corresponding setting are shown at the back of the product.



Switch Status	Video Resolution	Audio Format
000	Obtains EDID from the first detected display starting at HDMI output 1>2.	
001	Obtains EDID from the first detected display starting at HDMI output 2>1.	
010	1080P	LPCM

011	1080P	DTS/Dolby
100	3840x2160@30Hz HDR	LPCM
101	3840x2160@30Hz HDR	DTS/Dolby
110	3840x2160@60Hz HDR	LPCM
111	3840x2160@60Hz HDR	DTS/Dolby

5.2 HDCP Mode

Put the switch 4 on the "**ON**" position to select **HDCP Active** mode, or on the "**OFF**" position for **HDCP Passive** mode.

Switch Status	Mode	HDCP
OFF (0)	Passive (Default)	Automatically follows the display's HDCP version.
ON (1)	Active	Automatically removes the HDCP content of HDMI output for broader video solution.

6. Firmware Upgrade

Please follow the below steps to upgrade firmware via the Micro-USB port:

1) Connect the splitter to the PC with USB cable.
2) Power on the splitter, and then the PC will automatically detect a U-disk named of “BOOTDISK”.
3) Double-click to open the U-disk, a file named of “READY.TXT” will be showed.
4) Copy the latest upgrade file (.bin) to the “BOOTDISK” U-disk directly.
5) If the filename “READY.TXT” automatically turns to “SUCCESS.TXT”, the firmware was upgraded successfully. If the firmware upgrade failed, please check the file (.bin) and then follow the above procedure to operate again.
6) Remove the USB cable after firmware upgrade.

7. Panel Drawing

8. Troubleshooting & Maintenance

Problems	Potential Causes	Solutions
Colour loss 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 through 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.	Replace with 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 the problem persists after following the above troubleshooting steps, please contact your local dealer or distributor for further assistance.*

9. After-sales Service

Should you experience problems using the ALF-SUK2, please refer to the manual and troubleshooting and maintenance section (8). Should the error persist, note that any transport costs of the equipment to the distributor are borne by the user during the warranty.

1) **Product Limited Warranty:** ALFAtron warrants that its products will be free from defects in materials and workmanship for **seven years,** which starts from the first day of purchase.

   Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the warranty period must be presented to obtain warranty service.

2) **What the warranty does not cover (servicing available for a fee):**

   - 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 product specifications
     - No certificate or invoice as the proof of warranty.
     - The product model showed on the warranty card does not match with the product or if the product had been altered.
     - Damage caused by force majeure.
     - Servicing not authorized by ALFAtron
     - Any other causes which does not relate to a product defect
   - Delivery, installation or labour charges for installation or setup of the product

3) **Technical Support:** Contact our after-sales department via email or telephonically and please inform us the following information about your case:

   - Product version and name.
   - Detailed failure situations.
   - The formation of the cases.

1. Limited warranty in respect of Alfatron Products Only

1.1 This limited warranty covers defects in materials and workmanship in this product.

1.2 Should warranty service be required, proof of purchase must be presented to the Company. The serial number on the product must be clearly visible and not have been tampered with in any way whatsoever.

1.3 This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by the Company to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover equipment enclosures, cables or accessories used in conjunction with this product.

This limited warranty does not cover the cost of normal maintenance. Failure of the product due to insufficient or improper maintenance is not covered.

1.4 The Company does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

1.5 Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

1.6 Unless otherwise specified, the goods are warranted in accordance with the manufacturer’s product specific warranties against any defect attributable to faulty workmanship or materials, fair wear and tear being excluded.

1.7 This limited warranty only covers the cost of faulty goods and does not include the cost of labour and travel to return the goods to the Company’s premises.

1.8 In the event of any improper maintenance, repair or service being carried out by any third persons during the warranty period without the Company’s written authorization, the limited warranty shall be void.

1.9 A 7 (seven) year limited warranty is given on the aforesaid product where used correctly according to the Company’s instructions, and only with the use of the Company’s components.

1.10 The Company will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1.10.1 Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labour to complete the repair and restore this product to its proper operating condition.; or

1.10.2 Replace this product with a direct replacement or with a similar product deemed by the Company to perform substantially the same function as the original product; or

1.10.3 Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

1.11 The Company is not obligated to provide the Customer with a substitute unit during the limited warranty period or at any time thereafter.

1.12 If this product is returned to the Company this product must be insured during shipment, with the insurance and shipping charges prepaid by the Customer. If this product is returned uninsured, the Customer assumes all risks of loss or damage during shipment. The Company will not be responsible for any costs related to the removal or reinstallation of this product from or to any installation. The Company will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

1.13 Please be aware that the Company's products and components have not been tested with competitor's products and therefore the Company cannot warrant products and/or components used in conjunction with competitor's products.

1.14 The appropriateness of the goods for the purpose intended is only warranted to the extent that the goods are used in accordance with the Company's installation, classification and usage instructions.

1.15 Any claim by the Customer which is based on any defect in the quality or condition of the goods or their failure to correspond with specification shall be notified in writing to the Company within 7 days of delivery or, where the defect or failure was not apparent on reasonable inspection by the Customer, within a reasonable time after discovery of the defect or failure, but, in any event, within 6 months of delivery.

1.16 If delivery is not refused, and the Customer does not notify the Company accordingly, the Customer may not reject the goods and the Company shall have no liability and the Customer shall pay the price as if the goods had been delivered in accordance with the Agreement.

1.17 THE MAXIMUM LIABILITY OF THE COMPANY UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT.