

SP-5004IZ

1x4HDMI 2.0a Splitter with Built-in & User Adjustable EDID Management

User Manual



7.1 CH
AUDIO



 **x.v.Color**

rev: 171121
Made in Taiwan



Safety and Notice

The **SP-5004IZ 1x4 HDMI 2.0a Splitter with Built-in & User Adjustable EDID Management** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **SP-5004IZ** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



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INTRODUCTION

The **SP-5004IZ 1x4 HDMI 2.0a Splitter with Built-in & User Adjustable EDID Management** provides the most cost effective and advanced HDMI splitter solution on the market, by which the high definition video and high quality audio can be transmitted to 4 different locations without losing quality. SP-5004IZ supports HDR and the true 4K2K video!

With built-in USB firmware update mechanism, the compatibility among countless HDMI sources and receivers can be further guaranteed. With the upmost HDR/4K2K@60 4:4:4 8bits and high definition audio support, SP-5004IZ is suitable for high quality HDMI broadcasting, digital signage and education applications!

FEATURES

- HDMI 2.0a compliant
- Supports 4K2K@60 4:4:4 8bits
- Supports HDR*, which is 4K2K@60 4:2:0 10bits**
- HDCP 2.2 and 1.4 compliant
- Wide frequency range: 25MHz~600MHz
- Video bandwidth: 18Gbps
- Supports resolution downscaling from 4K2K to 1080P***
- Supports default EDID and EDID learning from display
- Supports xvYCC, x.v.Color & Deep Color
- Mini-USB firmware update for expanding compatibility
- Supports Dolby Digital, DTS-HD and Dolby TrueHD audio
- Easy installation



* HDR = High Dynamic Range.

** The video bandwidth of 4K2K@60 4:2:0 10bits (HDR) is 384 MHz, and the 4K2K@60 4:4:4 8bits is 594MHz.

*** NOT supports resolution downscaling from 4K2K@60 4:2:2 to 1080P

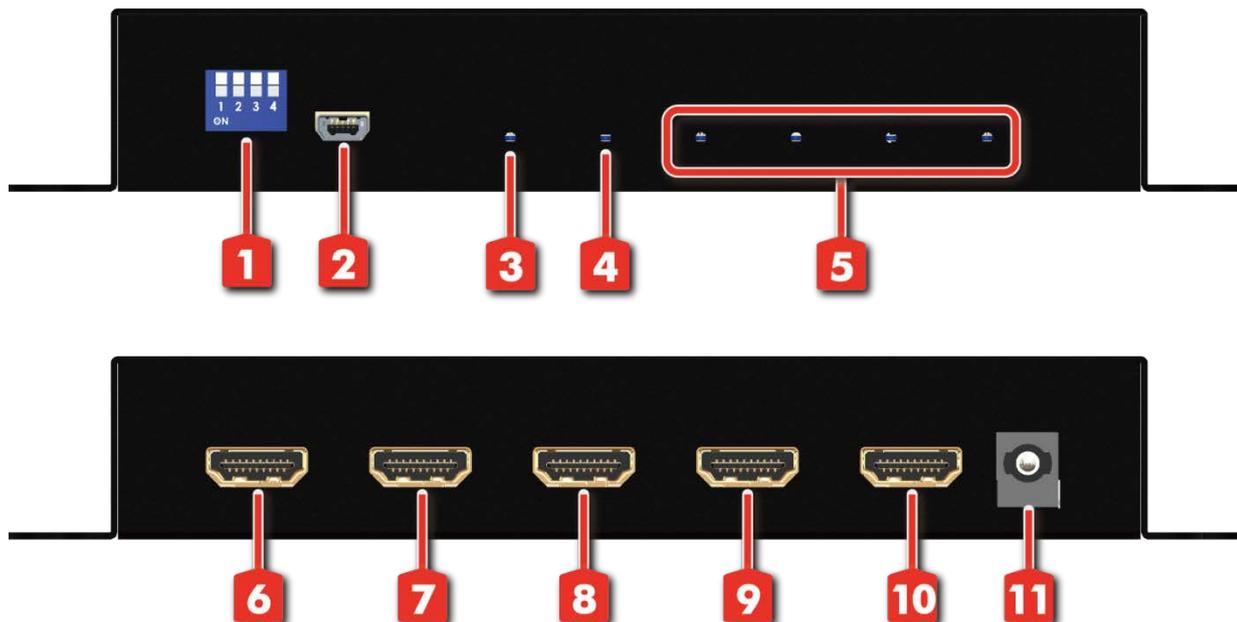
PACKAGE CONTENTS

- 1x SP-5004IZ
- 1x DC 5V wall wart
- 1x User Manual

SPECIFICATIONS

Model Name		SP-5004IZ
Technical		
Role of usage	1x4 Distribution Amplifier (Splitter)	
HDMI compliance	HDMI 2.0a	
HDCP compliance	HDCP 2.2 / 1.4	
Video bandwidth	Single-link 600MHz [18Gbps]	
Video support	HDR 4K2K@60(4:2:0 10bits) / 4K2K@60 (4:4:4 8bits)	
Audio support	DTS-HD Master Audio, Dolby TrueHD Dolby Digital, DTS, DVD-Audio, LPCM, SACD, MPCM	
ESD protection	Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]	
PCB stack-up	4-layer board [impedance control — differential 100Ω; single 50Ω]	
Firmware update	Feasible via Mini-USBport	
Input	1x HDMI	
Output	4x HDMI	
HDMI connector	Type A [19-pin female]	
Dip switch	EDID Mode selection	
Mechanical		
Housing	Metal enclosure	
Dimensions [L x W x H]	Model	135 x 62 x 20mm[5.3" x 2.4" x 0.8"]
	Package	264x170x77mm [10.4" x 6.7" x 3."]
	Carton	430 x 358 x 291mm [16.9" x 14.1" x 11.5"]
Weight	Model	230g [8.1 oz]
	Package	773g [1.7 lbs]
Fixedness	Wall-mounting case	
Power supply	5V 2A DC	
Power consumption	10 Watts [max]	
Operation temperature	0~40°C [32~104°F]	
Storage temperature	-20~60°C [-4~140°F]	
Relative humidity	20~90% RH [no condensation]	

PANEL DESCRIPTIONS



1. **EDID MODE:** See more detail in the DIP SWITCH SETTING section
2. **Mini-USB:** For technical support only [firmware update]
3. **Power LED:** Lights on when device is ready
4. **Signal LED:** Input signal LED indicator
5. **Signal LED:** Output 1-4 signal LED indicator
6. **HDMI IN:** Connect to a HDMI input source
7. **HDMI OUT1:** HDMI outputs to HDMI displays
8. **HDMI OUT2:** HDMI outputs to HDMI displays
9. **HDMI OUT3:** HDMI outputs to HDMI displays
10. **HDMI OUT4:** HDMI outputs to HDMI displays
11. **+5V DC:** Connect to the +5VDC2A power supply unit



Signal LED light on when device is connect to source and display.

DIP SWITCH SETTING

DIP Switch Position			Description
Pin 2	Pin 3	Pin 4	
Off [↑]	Off [↑]	Off [↑]	Ultra HD(4K2K@60) – 8/10/12bit 3D HDR video & 7.1ch audio
On [↓]	Off [↑]	Off [↑]	Ultra HD(4K2K@60) – 8/10/12bit 3D HDR video & 2ch audio
Off [↑]	On [↓]	Off [↑]	Ultra HD(4K2K@30)(4K2K@60 420) – 8bit 3D HDR video & 7.1ch audio
On [↓]	On [↓]	Off [↑]	Ultra HD(4K2K@30)(4K2K@60 420) – 8bit 3D HDR video & 2ch audio
Off [↑]	Off [↑]	On [↓]	Full-HD(1080p@60) – 12bit 3D video & 7.1ch audio
On [↓]	Off [↑]	On [↓]	Full HD(1080p@60) – 8bit 2D video & 2ch audio
Off [↑]	On [↓]	On [↓]	Learning EDID from output 1
On [↓]	On [↓]	On [↓]	Auto EDID analysis learning mode*

DIP Switch Position	Description
Pin 1	
Off [↑]	Working Mode
On [↓]	Firmware Update mode



*Automatic EDID learning will detect all the connected HDMI equipped monitors and analyze all the content of EDID. The EDID with maximal resolution support will be the reference EDID for incoming HDMI source players.

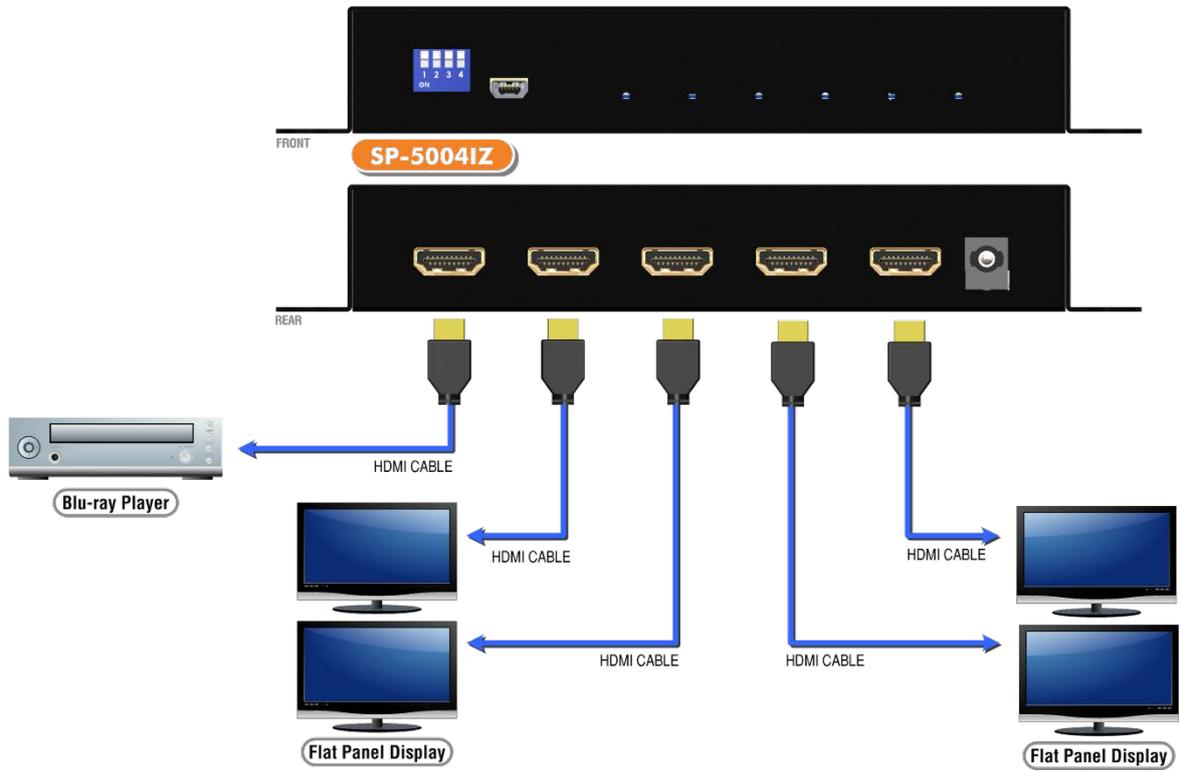
HARDWARE INSTALLATION

Broadcasts HDMI signal to 4 HDMI displays!

1. Switch off all devices, including monitors.
2. Connect to the displays.
3. Connect an HDMI source (such as a Blu-ray Disc player) to the HDMI In.
4. Plug in 5V DC power supply.
5. Power on the HDMI monitors.
6. Power on the HDMI source.

CONNECTION DIAGRAM

→ HDMI



NOTICE

1. If somehow user cannot get video output, please try to adjust EDID dip switch to “[pin2,pin3,pin4]=[↓ - ↑ - ↓]” or “[pin2,pin3,pin4]=[↑ - ↓ - ↓]” for trouble shooting. Under “[pin2,pin3,pin4]=[↓ - ↑ - ↓]”, there will be video output. The only requirement is that the display has to support at least Full HD. If default Full-HD EDID still cannot work, user can switch to “[pin2,pin3,pin4]=[↑ - ↓ - ↓]” to learn the EDID from output 1 to customize the EDID information. **(Please note that the display with lowest resolution must be connected to output 1)**

Select to [pin2,pin3,pin4]=[↓ - ↑ - ↓] - Full-HD(1080p@60) – 8bit 2D video & 2ch audio

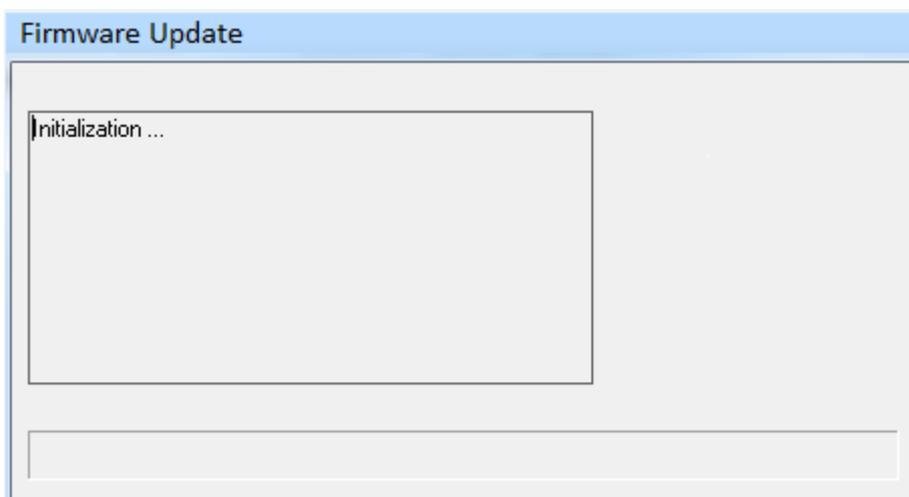
- 1) Set the dip switch to “[pin2,pin3,pin4]=[↓ - ↑ - ↓]”
- 2) Power on the device

Select to [pin2,pin3,pin4]=[↑ - ↓ - ↓]– Learning EDID from output 1

- 1) Set the dip switch to “[pin2,pin3,pin4]=[↑ - ↓ - ↓]”
- 2) Power on the device
- 3) It will automatically learn EDID from output 1

[NOTE]

- a. If the user wants to change EDID mode, please power cycle the device after setting dip switch.
2. While connecting a new monitor to the splitter under “[pin2,pin3,pin4]=[↓ - ↓ - ↓]”(under auto EDID analysis learning mode), experiencing a short period of time without displaying might be expected. The splitter will do Automatic EDID learning and generate the best EDID among all connected monitors
 3. Firmware update is proceeded through Mini-USB.
 - 1) Save the firmware file(.bin) & software in the same folder.
 - 2) a) Power on the device, b) connect the Mini-USB cable between PC and device, & c) set the PIN1 dip switch to “On [↓]”(firmware update mode)
 - 3) Open firmware update software and then device will start to update firmware automatically.
 - 4) After update process is done, software will show “Success” message and then be closed automatically.
 - 5) Set the PIN1 dip switch to “Off [↑]”(working mode)
 - 6) Power cycle the device



WARRANTY

The SELLER warrants the **SP-5004IZ 1x4 HDMI 2.0a Splitter with Built-in & User Adjustable EDID Management** free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the SP-5004IZ features and specifications is subject to change without further notice.**