

SP-5004IZM-D

1x4 HDMI 2.0a Splitter with Built-in & User Adjustable EDID Management and Audio Extractor

User Manual



**7.1 CH
AUDIO**



rev: 190226
Made in Taiwan

x.v.Color



Safety and Notice

The **SP-5004IZM-D 1x4 HDMI 2.0a Splitter with Built-in & User Adjustable EDID Management and Audio Extractor** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **SP-5004IZM-D** 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.



TABLE OF CONTENTS

INTRODUCTION	1
FEATURES	1
PACKAGE CONTENTS	2
SPECIFICATIONS	2
PANEL DESCRIPTIONS	3
HARDWARE INSTALLATION	4
CONNECTION DIAGRAM	5
NOTICE	6
WARRANTY	8

The **SP-5004IZM-D 1x4 HDMI 2.0a Splitter with Built-in& User Adjustable EDID Management and Audio Extractor** provides the most cost effective and advanced HDMI splitter solution in the market, by which the high definition video and high quality audio can be transmitted to 4 different locations without losing any quality.SP-5004IZM-D also supports HDR and the true 4K2K video! Besides, this device supports the separation of high quality digital S/PDIF (Toslink & RCA) audio from the incoming HDMI signal without losing any active audio channels from audio bit-stream

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-5004IZM-D is suitable for high quality HDMI broadcasting, digital signage and education applications!

FEATURES

- HDMI2.0a compliant
- Supports 4K2K@60 4:4:4 8bits
- Supports HDR¹, which is 4K2K@60 4:2:0 10bits²
- Controllable 4K to 1080P downscale using dip switch
- HDCP 2.2 and 1.4 compliant
- Wide frequency range: 25MHz~600MHz
- Video bandwidth: 18Gbps
- Supports audio extraction via Toslink & RCA
- Supports resolution downscaling from 4K2K to 1080P[!]
- Supports default EDID and EDID learning from display
- Supports xvYCC, x.v.Color& Deep Color
- Micro-USB firmware update for expanding compatibility
- HDMI Audio Format: PCM2/5.1/7.1, Dolby 5.1/7.1, DTS 5.1/7.1
- Optical Audio Format: PCM2, Dolby 5.1, DTS 5.1
- Easy installation



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



1. NOT supports
 - (1) Resolution downscaling from 4K2K@60 4:2:2 to 1080P
 - (2) Frame rate conversion
 - (3) 4K2K@60 4:2:2 to 4K2K@60 4:2:0
2. SP-5004IZM-D can bypass 4K HDR data content, but can NOT process it and make HDR content 100% fit into 1080p

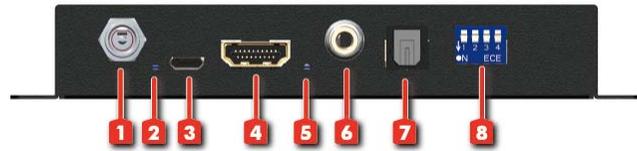
- 1x SP-5004IZM-D
- 1x DC 5V wall wart
- 1x User Manual

SPECIFICATIONS

Model Name	SP-5004IZM-D
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, LPCM
ESD protection	Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
Firmware update	Feasible via Micro-USB port
Input	1x HDMI
Output	4x HDMI + 1x TOSLINK + 1x RCA
HDMI connector	Type A [19-pin female]
RCA connector	50Ω female
Optical audio connector	TOSLINK
Dip switch	EDID Mode selection
Mechanical	
Housing	Metal enclosure
Fixedness	Wall-mounting case
Power supply	5V 2A DC
Power consumption	6 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

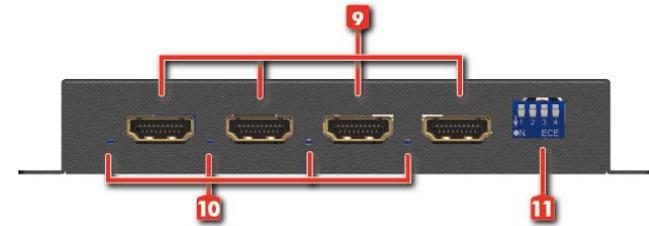
Front Panel



1. **+5V DC:** Connect to the +5V DC power supply unit
2. **Power LED:** Lights on when device is ready
3. **Micro-USB Port:** For F/W update
4. **HDMI IN:** Connect to a HDMI input source
5. **Signal LED:** Input signal LED indicator
6. **S/PDIF(RCA) output**
7. **S/PDIF(Toslink) output**
8. **Dip Switch**

DIP Switch Position				Description
PIN #1	PIN #2	PIN #3	PIN #4	
Off [↑]	Off [↑]	--	--	F/W update (for system)
On [↓]	Off [↑]	--	--	F/W update (for audio)
--	On [↓]	Off [↑]	Off [↑]	Ultra HD(4K2K@60) – 8/10/12bit 3D HDR video & 7.1ch audio
--	On [↓]	On [↓]	Off [↑]	Ultra HD(4K2K@60) – 8/10/12bit 3D HDR video & 2ch audio
--	On [↓]	Off [↑]	On [↓]	Full HD(1080p@60) – 12bit 3D video & 7.1ch audio
--	On [↓]	On [↓]	On [↓]	Learning EDID from output 1

Rear Panel



9. **HDMI OUT 1-4:** HDMI outputs to HDMI displays
10. **Signal LED:** Output 1-4 signal LED indicator
11. **Dip Switch for Auto/Forced downscale**

DIP Switch Position		Description
PIN #1	Off [↑]	Auto downscale 4K content to 1080p on output 1
	On [↓]	Forced downscale 4K content to 1080p on output 1
PIN #2	Off [↑]	Auto downscale 4K content to 1080p on output 2
	On [↓]	Forced downscale 4K content to 1080p on output 2
PIN #3	Off [↑]	Auto downscale 4K content to 1080p on output 3
	On [↓]	Forced downscale 4K content to 1080p on output 3
PIN #4	Off [↑]	Auto downscale 4K content to 1080p on output 4
	On [↓]	Forced downscale 4K content to 1080p on output 4



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

HARDWARE INSTALLATION

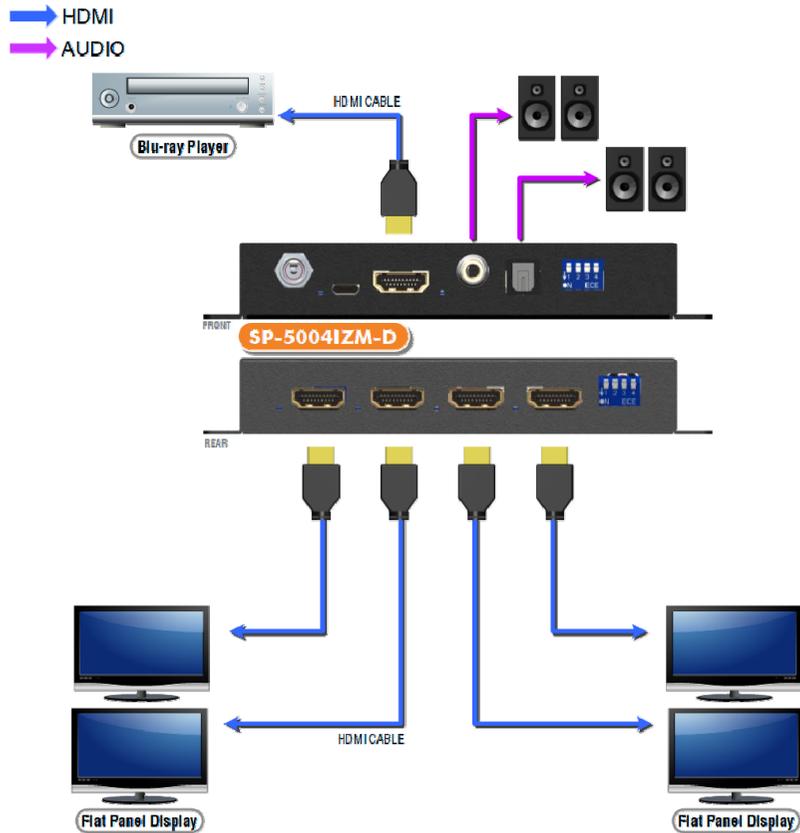
Broadcasts HDMI signal to 4 HDMI displays!

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



NOTICE

1. If somehow user cannot get video output, please try to adjust EDID dip switch to "[pin3, pin4]=[↑-↓]" or "[pin3, pin4]=[↓-↓]" for trouble shooting. Under "[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 "[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 [pin3, pin4]=[↑-↓] - Full-HD(1080p@60) – 12bit 3D video & 7.1ch audio

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

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

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

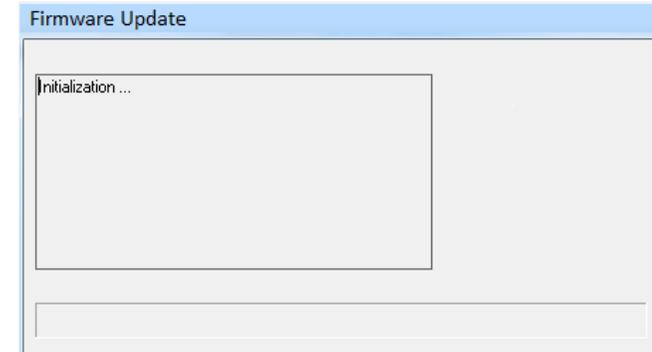
[NOTE]

If the user wants to change EDID mode, please power cycle the device after setting dip switch.

2. Firmware update is proceeded through Micro-USB.

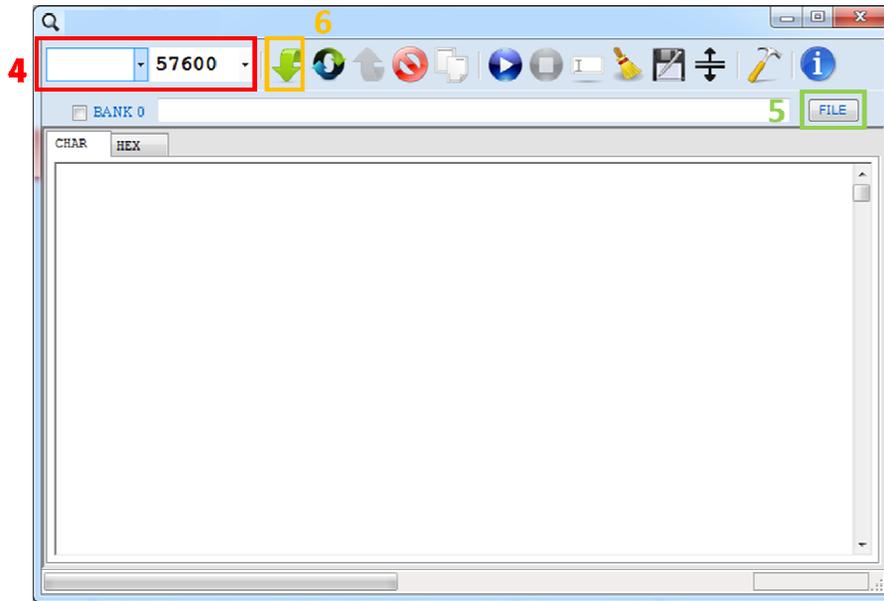
System firmware update

- (1) Save the firmware file (.bin) & software in the same folder.
- (2) Please try to adjust dip switch [pin1, pin 2]=[↑ - ↑]
- (3) Connect the Micro-USB cable between PC and device
- (4) Open firmware update software and then device will start to update firmware automatically.
- (5) After update process is done, software will show "Success" message and then be closed automatically.
- (6) Power cycle the device



System (for audio) firmware update

- (1) Please adjust dip switch [pin1, pin 2]=[↓ - ↑]
- (2) Connect the Micro-USB cable between PC and device
- (3) Open the firmware update software
- (4) Set the correct COM port and baud rate (57600 is recommended)
- (5) Click the FILE button to load firmware file (.hex or .bin file)
- (6) Press Program MCU symbol to do firmware update
- (7) Once update process is done, please power cycle the device and set the dip switch [pin 1, pin 2] to [↓ - ↓]



The SELLER warrants the **SP-5004IZM-D 1x4 HDMI 2.0a Splitter with Built-in & User Adjustable EDID Management and Audio Extractor** 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-5004IZM-D features and specifications is subject to change without further notice.**