

SP-5002Q

1x2 HDMI 2.1 Splitter with Built-in & User Adjustable EDID Management and Audio Extractor

User Manual

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rev: 220317
Made in Taiwan

INTRODUCTION

The **SP-5002Q 1x2 HDMI 2.1 Splitter with Built-in & User Adjustable EDID Management and Audio Extractor** provides the most cost effective and state-of-the-art HDMI splitter solution in the market, by which the high-definition video and high quality audio can be transmitted to 2 different locations without losing any quality. SP-5002Q also supports HDR and the true 8K60 video! In addition, this device supports the separation of high-quality digital S/PDIF (Toslink) audio & stereo analog audio from the incoming HDMI signal to provide a quick path to external audio equipment and applications.

With built-in USB firmware update mechanism, the compatibility among countless HDMI sources and receivers can be further guaranteed. With the upmost HDR/8K60 4:2:0 8bits and high-definition audio support, SP-5002Q is suitable for high-quality HDMI 2.1 broadcasting, e-sports, digital signage and education applications!

FEATURES

- HDMI2.1 compliant
- Supports up to 8K60 4:2:0 8bits, 8K30 4:4:4/4:2:2/4:2:0 & 4K2K 120Hz 4:4:4/4:2:2/4:2:0
- Supports HDR¹, which is 4K2K@60 4:2:0 10bits/12bits²
- Supports VRR(Variable Refresh Rate) & ALLM(Auto Low Latency Mode)
- Supports CEC pass-through on input & output 1
- HDCP 2.3 and 1.4 compliant
- Wide frequency range: 25MHz~1188MHz
- Video bandwidth: 40G
- Supports audio extraction via Toslink & stereo
- Supports resolution downscaling from 8K to 4K & 4K to 1080P.
- Supports default EDID and EDID learning from display
- Supports xvYCC, x.v.Color & Deep Color
- Micro-USB firmware update for expanding compatibility
- Supports Dolby Digital, DTS-HD and Dolby TrueHD audio
- 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.



* If the output does not have image, please press "reset button" about 1-2 seconds to reset the device.

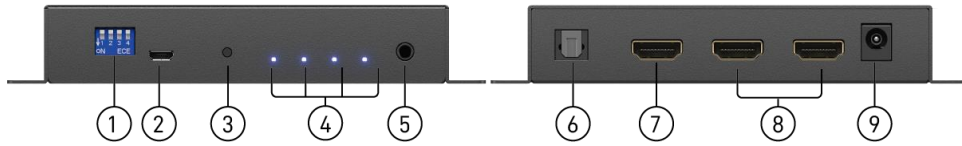
PACKAGE CONTENTS

- 1x SP-5002Q
- 1x DC 5V wall wart
- 1x User Manual

SPECIFICATIONS

Model Name		SP-5002Q
Technical		
Role of usage		1x2 Distribution Amplifier (Splitter)
HDMI compliance		HDMI 2.1
HDCP compliance		HDCP 2.3 / 1.4
Video bandwidth		Up to FRL 5 (40G)
Video support		Up to 8K60 4:2:0 8bits, 8K30 4:4:4/4:2:2/4:2:0 & 4K2K 120Hz 4:4:4/4:2:2/4:2:0
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		2x HDMI + 1x TOSLINK + 1x 3.5mm phone jack
HDMI connector		Type A [19-pin female]
Dip switch		EDID Mode selection
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	140 x 63 x 23mm [5.5" x 2.5" x 0.9"]
	Package	175 x 128 x 134mm [6.9" x5" x5.3"]
	Carton	662 x 366 x 290mm [2'2" x 1'2" x 1']
Weight	Model	108g [3.8 oz]
	Package	282g [9.9 oz]
Fixedness		Wall-mounting case
Power supply		5V DC
Power consumption		3 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. Dip Switch for EDID/scaling MODE:

DIP Switch Position				Description
Off [↑]	Off [↑]	-	-	8K Ultra HD(8K@60/4K@120) – 8bit video & 2ch audio
Off [↑]	On [↓]	-	-	4K Ultra HD(4K@60) – 8bit video & 2ch audio
On [↓]	Off [↑]	-	-	Learning EDID from output 1
On [↓]	On [↓]	-	-	User defined EDID
-	-	On [↓]	-	Enable scale up on output 1*
-	-	Off [↑]	-	Normal(Bypass)
-	-	-	On [↓]	Enable scale down on output 2*
-	-	-	Off [↑]	Normal(Bypass)

(*Please refer to "Notes")

- 2. Micro-USB Port:** for F/W update/ software control
- 3. Push Button:** Reset the device
- 4. LED Indicator:** LED from left to right are Input FRL format LED, Input Signal LED, Output 1 Signal LED, Output 2 Signal LED
- 5. Stereo(3.5mm) Out**
- 6. S/PDIF(Toslink) Out**
- 7. HDMI IN:** Connect to a HDMI input source
- 8. HDMI OUT 1-2:** HDMI outputs to HDMI displays [HDMI OUT1: EDID Learn Port]
- 9. +5V DC** Connect to 5V DC power supply unit



- Learning EDID mode will mask display DSC information.
- If user wants to learn completed EDID included display DSC information, please use "user defined EDID" mode to learn EDID from display

*Notes:

Supported Resolution

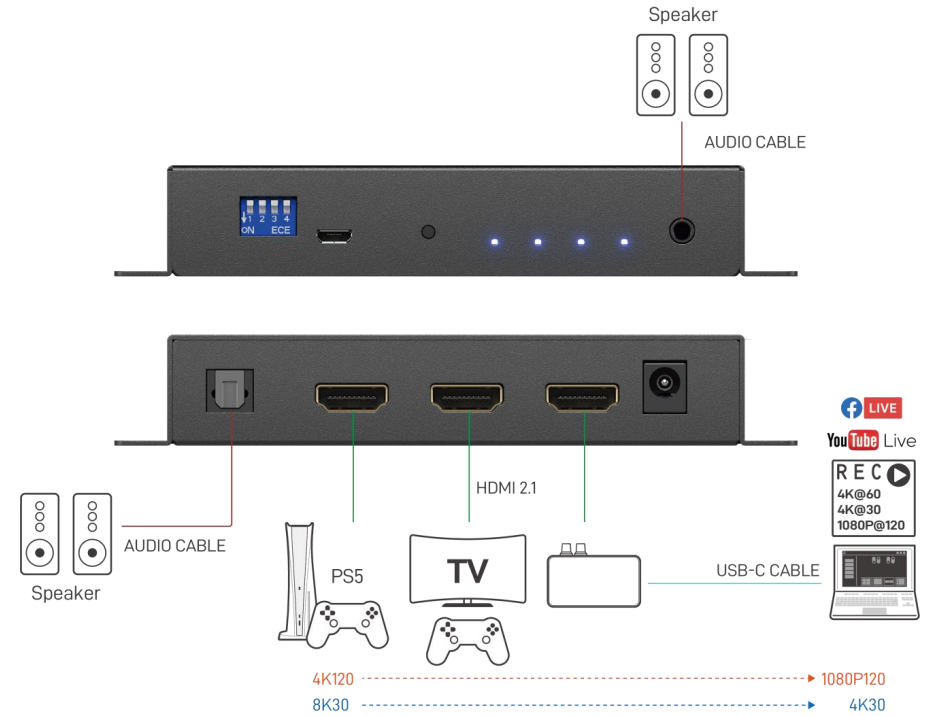
Scale up

4K2K(4:2:0) to 8K4K(4:2:0)
1080P to 4K2K
2560x1080 to 5120x2160

Scale down

8K4K(4:2:0) to 4K2K(4:2:0)
4K2K to 1080P
5120x2160 to 2560x1080

CONNECTION DIAGRAM



Play on 8K@30 while Capturing / Streaming at 4K60/30 & 1080P120

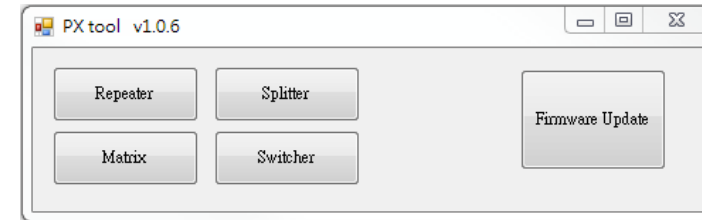
HARDWARE INSTALLATION

Broadcasts HDMI signal to 2 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.

OPERATION APPROACH

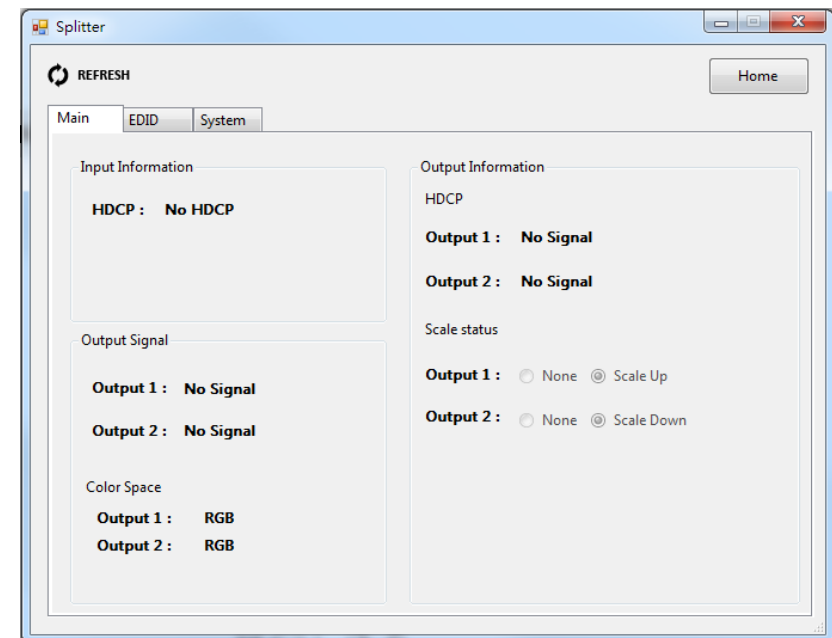
When clicking on the executable file, the following windows will pop-up. Click "Splitter" button to enter splitter control interface.



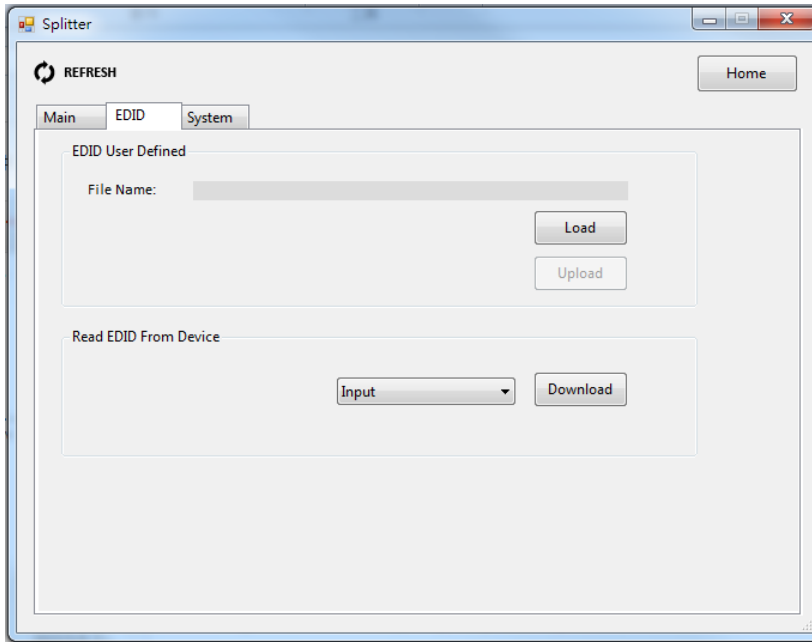
1. Splitter Control Interface

1) Main Tab

In this section, the software will show the input/output information.



2) EDID Tab



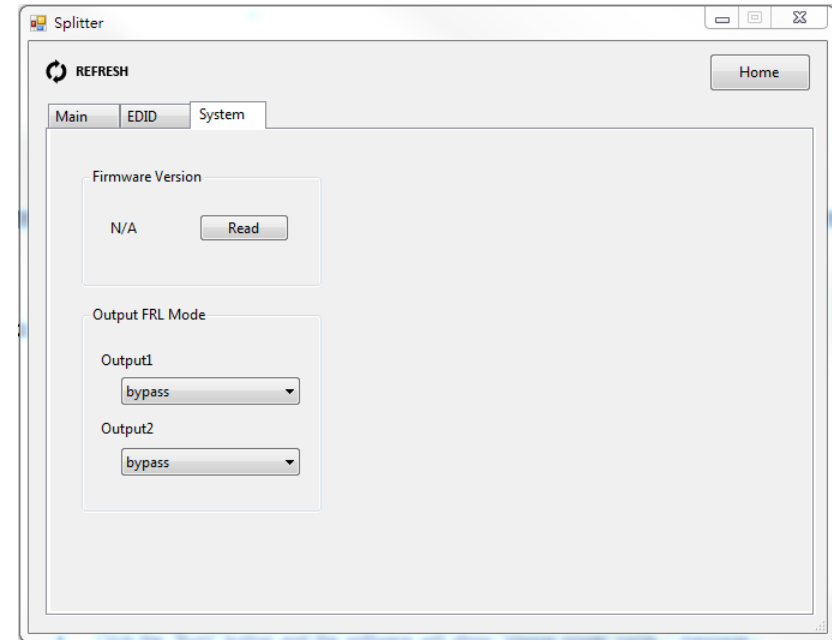
a) EDID User Defined

- Set the dip switch to "[pin1,pin2,pin3,pin4]=[↑ - ↑ - ↑ - ↑]"(normal mode)
- Click "Load File" button to select the EDID file from computer
- Click "Learn" button to load EDID File and learn to input
- Set the dip switch to "[pin1,pin2]=[↓ - ↓]" to apply user defined EDID

b) Read EDID From Device

- Select Input ,Sink 1 or Sink 2
- Click "Download" button to load EDID File

3) System Tab



a) Firmware Version

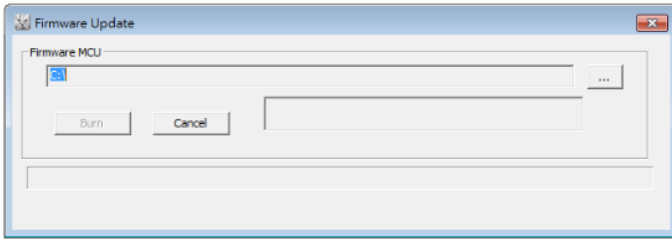
Click "Read" button to get firmware version information

b) Output FRL Mode

Select bypass, 3Lanes/3G, 3Lanes/6G, 4Lanes/6G, 4Lanes/8G, 4Lanes/10G or 4Lanes/12G on output 1 & output 2

2. Firmware Update

Click "Firmware Update" button to enter F/W update interface.



- Click the "..." button to select the file which you want to write into device.
- Click the "Burn" button and the software will show "please power cycle..." message.
- Unplug the micro-USB cable and power cable from device.
- Plug the micro-USB cable into the micro-USB port, then plug in power supply to power cycle the device, the firmware will start to update
- After updating, the software will show "Firmware Update Success!" message.

WARRANTY

The SELLER warrants the **SP-5002Q 1x2 HDMI 2.1 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-5002Q features and specifications is subject to change without further notice.**