KanexPro™

SP-4KPROSLIM1X2

Ultra Slim 4K HDMI 2-Port Splitter

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Version: SP-4KPROSLIM1X2_2014V1.1

ULTRA HD 4K RESOLUTION

SAFETY PRECAUTIONS

To insure the best 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.

NOTICE: Pictures shown in this manual is for reference only, different model and specifications are subject to real product.

This manual is for operation instruction only, not for any maintenance usage. The functions described in this version are updated till December 2014. Any changes of functions and parameters since then will be informed separately. Please refer to the dealers for the latest details.

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All product function is valid till 2014-12-09.

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1. Introduction

1.1 Introduction to the Worlds Slimmest 1x2 HDMI Splitter

The KanexPro 1x2 HDMI Splitter is an ultra-slim, space saving 4K@30Hz compliant distribution amplifier which lets you duplicate one HDMI source signal to two UHD 4K displays without losing signal integrity and resolution. Incredibly thin aluminum design with only 0.4 inches thick this professional splitter is ready to fit in any installation environment whether it's behind a flat-panel TV, under the lectern or just your conference room table. This HDCP compliant splitter provides Ultra HD resolutions from HD 1080p to 4K/30Hz with support for Deep colors, full 3D and internal EDID management for various display resolutions up to 3840x2160@30Hz.
Ideal for numerous AV applications such as classrooms, lobbies, conference rooms, board rooms and lecture halls where space is limited and you want to split 4K UHD signals to two displays.

1.2 Features

- Ultra Slim 1x2 HDMI Splitter with 4K UHD resolutions
- Incredibly thin design – only 0.4" (11 mm) thick
- Perfect for installing behind a thin bezel display
- Supports UHD 4K/30Hz resolutions
- Transmit HD 1080p up to 15m (50ft.)
- High-bandwidth 10.2 Gbps
- HDCP 1.4 compliant
- Auto-identifies input resolutions to match displays
- Supports EDID management
- LED status for connection and HDCP
- Firmware update via micro USB

1.3 Package List

- 1 x 4K HDMI Splitter 1x2
- 2 x Mounting ears (separate from 4K HDMI Splitter 1x2)
- 4 x Screws
- 4 x Plastic cushions
- 1 x Power Adapter (DC 5V 1A)
- 1 x User Manual

Notes：Please confirm if the product and the accessories are all included, if not, please contact with the dealers.

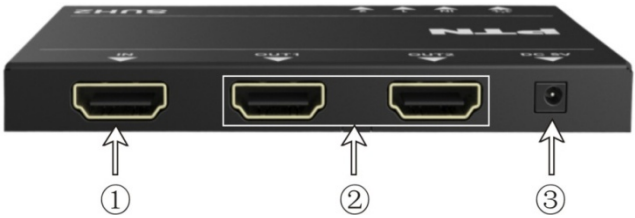
2. Panel Description

2.1 Front Panel

No.	Name	Description
□	Power indicator	Illuminate red once powered on
□	Input HDCP compliant Indicator	Indicate the HDCP compliant status of the input signal ➢ Iluminate green when the input signal is with HDCP ➢ Blink green when the input signal is not with HDCP ➢ Remain off when there is no input signal
□	Output signal Indicators	Illuminate green when there is HDMI output, correspond to HDMI OUTPUT 1~2 separately
□	FIRMWARE	USB port, used for firmware update.

Note: Output HDCP compliant status depends on input signal. When the input signal is with HDCP, then output signal is with HDCP and vice versa.

2.2 Rear Panel



No.	Name	Description
□	IN	HDMI input port. Connect with HDMI or DVI source device such as DVD/ Blue-ray
□	OUT	HDMI output ports, connect to HDMI displays, automatically capture the input resolution
□	DC 5V	Power socket, plug a DC 5V power adapter into this socket and tighten the screw.

Note:

a) Pictures shown in this manual are for reference only; different model and specifications are subject to real product.

b) HDMI signal contains both HDMI video signal and embedded audio signal (PCM, Dolby Digital, DTS, DTS-HD), while DVI signal contains solely video signal.

c) 4K HDMI Splitter 1x2 is capable to switch input signal format according to the displays.

For example, when the input signal is HDMI and the display can only support DVI signal, 4K HDMI Splitter 1x2 will switch the signal into DVI format.

d) EDID Management: automatically manage output signal (e.g. output resolution) to fit all displays.

3. System Connection

3.1 Usage Precautions

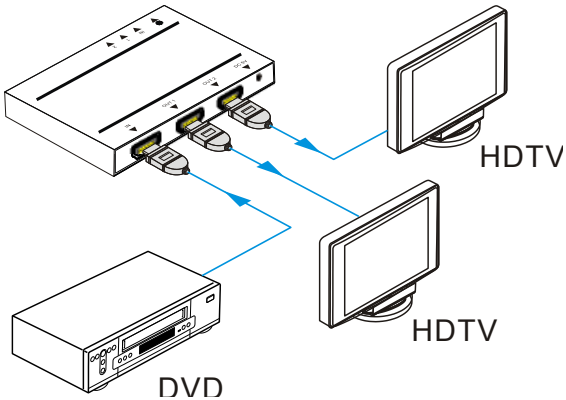
1) System should be installed in a clean environment and has a proper temperature and humidity.

2) All of the power switches, plugs, sockets and power cords should be insulated and safe.

3) All devices should be connected before power on.

3.2 System Diagram

The following diagram illustrates typical input and output connections that can be utilized with 4K HDMI Splitter 1x2:



3.3 Connection Procedures

Step1. Connect a HDMI/ DVI source device (e.g. Blue-ray DVD) to the **HDMI INPUT** socket of 4K HDMI Splitter 1x2 with HDMI cable.

Step2. Connect HDMI displays to **HDMI OUTPUT** sockets of 4K HDMI Splitter 1x2 with HDMI cable.

Step3. Plug a DC 5V power adapter to the power port of 4K HDMI Splitter 1x2.

Note: All the ports support hot-plug. It's important to know that hot plugging a display may result in splash screen at output ends.

3.4 EDID Management

4K HDMI Splitter 1x2 comprises 1 HDMI input port & 2 HDMI output ports, EDID management helps distributing and routing signals from the source at the resolution of the first detected display (detecting from output 1~2).

For example: when output 1 connects with a 1080p display, 4K HDMI Splitter 1x2 will select 1080p as output resolution and distribute 1080p signal to displays connected to output 1~2.

Note: If the display connected to output 2 don't support 1080p signal, there will be no output on the display.

3.5 Application

4K HDMI Splitter 1x2 has a good application in various occasions, such as computer realm, monitoring, conference room, big screen displaying, television education, command & control center and smart house etc.

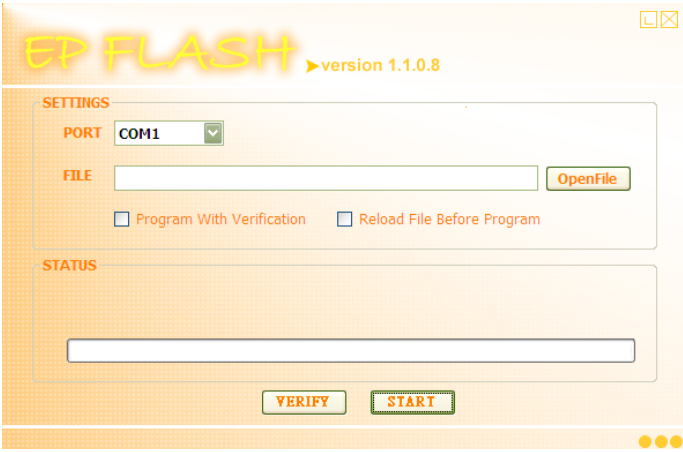
3.6 Firmware Upgrade

4K HDMI Splitter 1x2 boasts a USB port for online firmware upgrade. Follow these steps to upgrade firmware:

Step1. Copy the latest upgrade file (.hex) to PC.

Step2. Connect the USB ports of 4K HDMI Splitter 1x2 and the PC via USB cable.

Step3. Launch the upgrade software by double-click the icon of EPFlash.exe, it will enter the upgrade interface shown as below:



Step4. Select the right port number in the dropdown list of PORT, and click **OpenFile** to load the upgrade file. Click **Start** to start firmware upgrading.

4. Specification

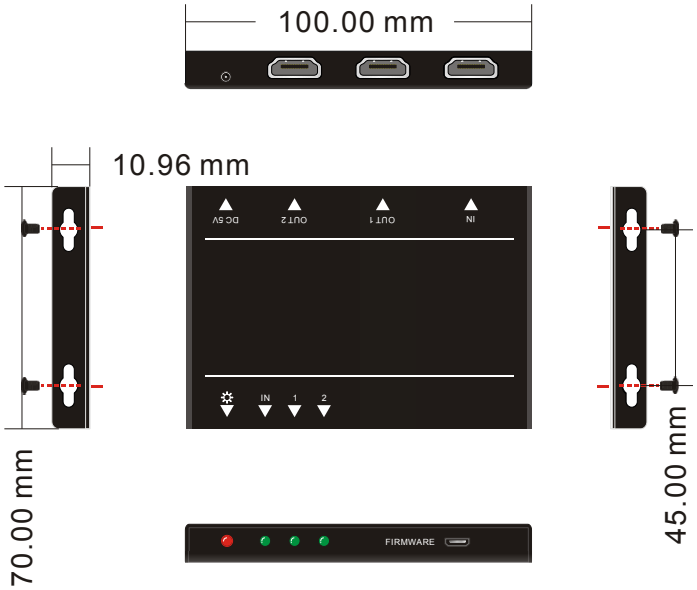
Video Input			
Input	1 HDMI		
Input Connector	1 female type A HDMI 1.4		
Min/ Max Signal Level	T.M.D.S. 2.9V~3.3V		
Input Impedance	Differential 100Ω		
Video Output			
Output	2 HDMI		
Output Connector	1 female type A HDMI 1.4		
Min/ Max Signal Level	T.M.D.S. 2.9V~3.3V		
Output Impedance	Differential 100Ω		
Video General			
Max data rate	10.2Gbit/s		
Max Resolution	4Kx2K, 1080P 3D@60Hz		
Max Pixel Clock	340MHz		
Gain	0dB		
HDCP	Compliant with HDCP1.4		
EDID	In-built EDID management		
General			
Temperature	0~ 55℃	Reference Humidity	10% ~ 90%
Power Consumption	2.5 W	Power	DC 5V 1A
Weight	0.08kg	Dimension (W*H*D)	100x 11x 70mm

4.1 Supported Input Video Formats

Input Resolution	HDMI	DVI
720 x 480@60Hz	☑	☑
720 x 480I@30Hz	☑	☑
720 x 576@50Hz	☑	☑
720 x 576I@25Hz	☑	☑
1280 x720@50Hz	☑	☑
1280 x720@60Hz	☑	☑
1920 x 1080@25Hz	☑	☑
1920 x 1080@50Hz	☑	☑
1920 x 1080@60Hz	☑	☑
1920 x 1080I@25Hz	☑	☑
1920 x 1080I@30Hz	☑	☑
3840 x 2160@25Hz	☑	
3840 x 2160@30Hz	☑	
1080P 3D@60Hz	☑	

Note: 4K HDMI Splitter 1x2 supports 4K & 3D HDMI signals, please adopt quality HDMI cables compliant with HDMI1.4 for better transmission when connecting 4K or 3D sources.

5. Panel Drawing



6. Troubleshooting & Maintenance

Problems	Causes	Solutions
Color 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 SUH4 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.

If your problem persists after following the above troubleshooting steps, seek further help from authorized dealer or our technical support.

7. After-sales Service

If there appear some problems when running 4K HDMI Splitter 1x2, please check and deal with the problems referring to this user manual. Any transport costs are borne by the users during the warranty.

1) **Product Limited Warranty:** We warrant that our products will be free from defects in materials and workmanship for **three years,** which starts from the first day you buy this product (The purchase invoice shall prevail).
   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 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
     - Any other causes which does not relate to a product defect
   - Delivery, installation or labor charges for installation or setup of the product

3) **Technical Support:** Email to our after-sales department or make a call, please inform us the following information about your cases.
   - Product version and name.
   - Detailed failure situations.
   - The formation of the cases.

Remarks: For any questions or problems, please try to get help from your local distributor or AV dealer.

8. Warranty

KanexPro® warrants that (a) its products (the “Product”) will perform greatly in agreement with the accompanying written materials for a period of 36 months from the date of receipt (3 years) and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years.

B. CUSTOMER REMEDIES

KanexPro entire liability and Customer’s exclusive remedy shall be, at KanexPro option, either return of the price paid for the product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to KanexPro with a copy of customers’ receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period of 3 years, whichever is longer.

C. NO OTHER WARRANTIES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, KANEX DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCT AND ANY RELATED WRITTEN MATERIALS. THIS LIMITED WARRANTY GIVES CUSTOMERS SPECIFIC LEGAL RIGHTS. CUSTOMERS MAY HAVE OTHER RIGHTS DEPENDING ON THE JURISDICTION.

D. NO LIABILITY FOR DAMAGES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL KANEX BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES FOR PERSONAL INJURY, LOSS OF BUSINESS PROFITS, BUSINESS INTERRRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF KANEX HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

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