



# 4+1 PORT HDMI VIDEO SWITCH



**User Manual**  
**DS-45320**

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## **DEAR CUSTOMER**

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

## **1.0 INTRODUCTION**

It is a Home Entertainment System with very powerful functions. It supports 4 HDMI inputs and 1 HDMI output. With Built-in HDCP engine for Instant Port Switching (IPS), 4 Ports switching can be very fast because there is no need to redo HDCP authentication when port switching occurs. With the built-in HEC (HDMI Ethernet) and ARC (Audio Return Channel) chips, it can split HEC which is from HDTV to Ethernet signals and can split ARC which is also from HDTV to Coaxial, Toslink, Stereo audio signals that are also from source device through ARC ON/OFF button on the Remote Control.

## **1.1 FEATURES**

- HDMI with HEAC, 3D, CEC.
- Supports 4 HDMI inputs and 1 HDMI output.
- Built-in HDCP engine for Instant Port Switching (IPS), 4 Ports switching can be very fast because there is no need to redo HDCP authentication when port switching occurs.
- Supports Audio Return Channel (ARC) from sink device. Connects ARC port to Amplifier Receiver.
- Supports digital audio Toslink and COAX output simultaneously and Stereo audio output from source device. Connects these ports to Amplifier Receiver.
- Supports 3D all format, including 1080p@23.98/24Hz, 720p@59.94/60Hz/50Hz, bandwidth up to 225MHz.
- Supports CEC.
- Supports highest video resolution 1080p.
- Supports 225MHz/2.25Gbps per channel (6.75Gbps all channel) bandwidth.
- Supports 12bit per channel (36bit all channel) deep color.
- Supports uncompressed audio such as LPCM.
- Supports compressed audio such as DTS Digital, Dolby Digital (including DTS-HD and Dolby True HD) .

## 2.0 SPECIFICATIONS

<b>Signal Inputs/Output</b>	
Input DDC Signal	5 volts p-p (TTL)
Input and Output Signal	HDMI with HEAC,3D
Output Audio Signal	Toslink, Coaxial, Stereo
<b>Operating Frequency</b>	
Vertical Frequency Range	50/60Hz
Video Amplifier Bandwidth	2.25Gbps/225MHz
<b>Resolutions(HDTV)</b>	
Interlaced(50&60Hz)	480i,576i,1080i
Progressive(50&60Hz)	480p,576p,720p,1080p
<b>Mechanical</b>	
Size(L-W-H)	157mm x 70mm x 23mm
Weight(Net)	260g
<b>Warranty</b>	
Limited Warranty	1 Year Parts and Labor
<b>Environmental</b>	
Operating Temperature	0°C to +70°C
Operating Humidity	10% to 80 % RH (no condensation)
Storage Temperature	-10°C to +80°C
Storage Humidity	5% to 90 % RH (no condensation)
<b>Power Requirement</b>	
External Power Supply	5V DC @2A
Power Consumption (max)	5 W
<b>Regulatory Approvals</b>	
Converter Unit	FCC,CE,UL
Power Supply	UL,CE,FCC
<b>Accessories Adapter</b>	
AC Power Adapter	US standard, UK standard and so on
User Manual	

**Note: Specifications are subject to change without notice. Weight and dimensions are approximate.**

## 3.0 PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

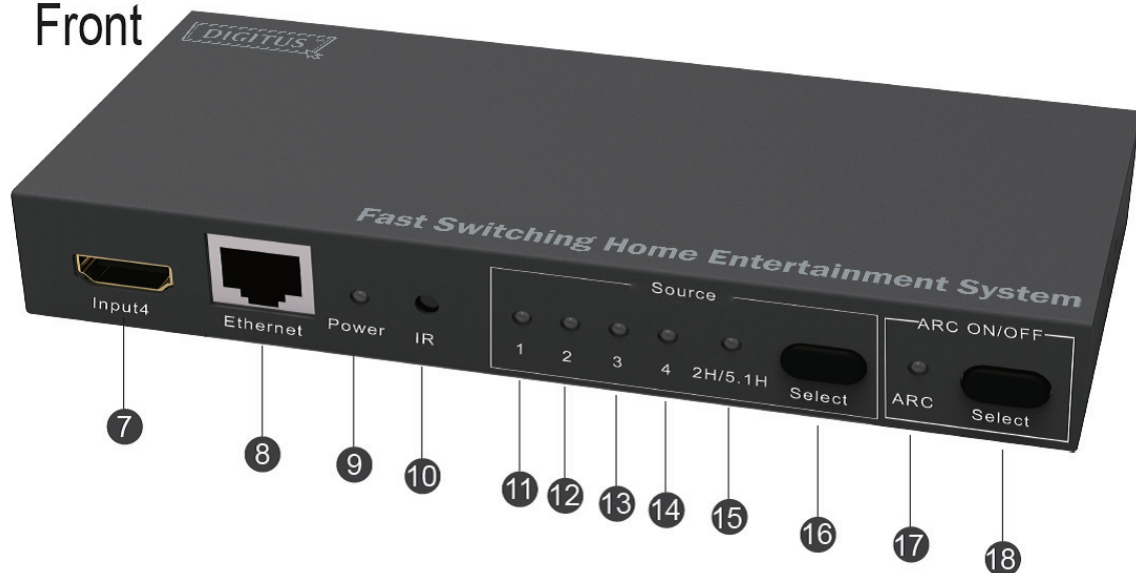
- 1) Main unit
- 2) 5V/2A DC Power Supply x1
- 3) User's Manual
- 4) Remote Control x1

## 4.0 PANEL DESCRIPTIONS

Back



Front



1. DC/5V  
Connect this port to Power Supply
2. Audio Port  
Connect the three ports to Amplifier Receiver, through Remote Control or button, you can select ARC ON or OFF.
  - 2.1 Toslink and Coaxial Port  
When selecting ARC ON, Toslink and Coaxial will output audio from Sink device, such as HDTV with ARC.  
When selecting ARC OFF, Toslink and Coaxial will output audio from Source
  - 2.2 Stereo Port  
It only can output audio from source device (such as blu-ray DVD, PS3), and cannot be controlled by ARC ON/OFF button.  
Note: Stereo can't support compressive audio format because of the limitation itself.

- 3. HDMI Output**  
Connect this port to HDTV
- 4-7. HDMI Input**  
Connect these ports to source devices.
- 8. Ethernet**  
Connect this port to PC. When HDTV with HEC enables HEC function, PC will be connected to Ethernet.
- 9. Power LED**  
When the switching is working, LED turns blue; when it is standby, LED turns red;
- 10. IR**  
Receive the signal from Infrared Remote Control.
- 11-14. Input LED**  
LED will turn on when input port is selected.
- 15. 2CH/5.1CH LED**  
LED will turn on when 5.1CH button is pressed; LED will turn off when 2CH button is pressed.
- 16. Select**  
Press this button to select 4 inputs circularly.
- 17. ARC ON/OFF LED**  
LED will turn on when ARC ON button is pressed, then this product will enable ARC function, and audio signal will be from HDTV; LED will turn off when ARC OFF button is pressed, then ARC function will be turned off, and audio signal will be from source devices.
- 18. Select**  
Press this button to select ARC on or off.

## **5.0 CONNECTION AND OPERATION**

### **5.1 CONNECTION**

- 1) Connect HDMI input of the product to source devices. (Input cables are optional)
- 2) Connect HDMI output of the product to HDTV.
- 3) Connect audio port to Amplifier Receiver.
- 4) Connect Ethernet port to PC
- 5) Insert the DC side of 5V power supply into the unit and then connect the AC side of the power supply into the wall outlet.
- 6) Turn on the power.

### **5.2 OPERATION**

- 1) Source Select  
Press "Select" button or remote control to switch Input sources from Input1 to Input4 manually.
- 2) 2CH/5.1CH Audio Output Select  
Note: Only when the source supports 5.1CH output (including CD), this function is effective and it realizes through the 2.1CH and 5.1CH buttons on the remote control. Press "2CH" button, the product outputs 2CH audio and the LED turns off; press "5.1CH" button, the product outputs 5.1CH audio and the LED turns on. When provided with power, it automatically selects 5.1CH audio output. If the source can only supports 2CH audio output, the "5.1CH" button will become invalid, that is to say, although you press "5.1CH" button, the product still outputs 2CH audio and the LED is still on.
- 3) ARC ON/OFF  
When selecting ARC ON, audio output is from HDTV with ARC.  
When selecting ARC OFF, audio output is from Source device.

**Attention: Insert / Extract cable gently.**

## 5.3 CONECTION DIAGRAM

