

# USER MANUAL

# CSW-HD440EXT

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# HDMI SWITCH SPLITTER

## 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

This 4X4 Matrix HDMI SWITCH SPLITTER by cat5e/6 offers unprecedented flexibility and convenience by routing high definition audio/video from any of four HDMI video sources to any of 4 displays over HDMI cable or 4 remote displays over inexpensive, standard CAT5e/6 cable. It eliminates the need to disconnect and reconnect sources to a display equipped with one input.

Four receivers work with the Switch Splitter as a full functional module. Full High-Resolution HDTV signals are supported up to a resolution of 1080p over HDMI cable 15m or at a maximum distance of .40M over two pieces of CAT5e/6 cable. The 4X4 Matrix HDMI SWITCH SPLITTER works with HD-DVD players, TiVo systems, HT PCs, and satellite set-top boxes that connect to an HDMI display. Every source and display is accessible at all times by selecting it with an IR remote or through RS232 port.

## 1.1 FEATURES

This product has many features that enable it to perform in a superior manner. Among those features you will find:

- I Allows any HDMI display to view any source at any time
- I Allows any source to be displayed on multiple displays at the same time
- I HDMI or DVI to HDMI cables are used to connect the inputs and the matrix output
- I Each Output includes one HDMI output and UTP output over cat5e/6, but only one way is available at a time.
- I Each UTP output is connected to a Receiver.
- I UTP output extends signal up to 40m for 1080p by CAT-6 cable.
- I Each Input includes an infrared Emitter, which is used to control the long-distance source device by Remote Control.
- I Each display's inputs can be switched with the IR remote control or through RS232
- I Support HDMI1.3b
- I Support highest video resolution 1080p.
- I Support 225MHz/2.25Gbps per channel (6.75Gbps all channel) bandwidth.
- I Support 12bit per channel (36bit all channel) deep color.
- I Support HDCP
- I Support uncompressed audio such as LPCM.
- I Support compressed audio such as DTS Digital, Dolby Digital (including DTS-HD and Dolby True HD) .

## 2.0 SPECIFICATIONS

<b>Signal Inputs/Output</b>	
HDMI Connector	type A 19 pin female
Input DDC Signal	5 volts p-p (TTL)
Control Port	RS-232 Female, Mini-Stereo
Output Signal	HDMI output, UTP output
<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 of HDMI Switch Splitter (L-W-H)	441\$ 202\$ 45MM
Weight of HDMI Switch Splitter (Net)	2218g
<b>Warranty</b>	
Limited Warranty	2 Years Parts and Labor
<b>Environmental</b>	
Operating Temperature	0 % to +70%
Operating Humidity	10% to 85 % RH (no condensation)
Storage Temperature	-10% to +80%
Storage Humidity	5% to 90 % RH (no condensation)
<b>Power Requirement</b>	
Power Supply for HDMI switch splitter	5.5V DC@4A; 20W
Power Supply for Receiver	5V DC@2A; 5W
<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	English version

**Note:** Specifications are subject to change without notice.

## 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:

### Packaging of Main Unit

- 1) HDMI 4X4 Switch Splitter

- 2) Remote Control
- 3) IR extension cable.(IR)
- 4) 5.5V@4A DC Power Supply
- 5) User's Manual.

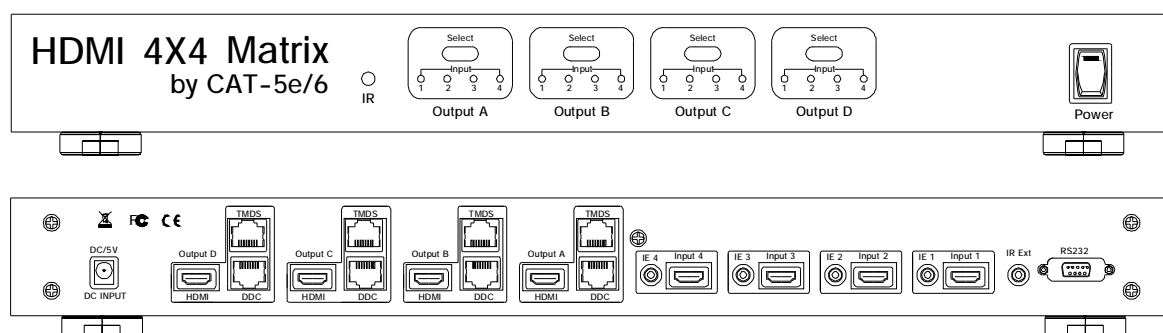
#### Packaging of Accessories

- 6) Four Receivers
- 7) Four pieces of Remote Control for Receivers
- 8) Four pieces of External infrared emitter (IE)
- 9) Four pieces of 5V DC @2A Power Supply.

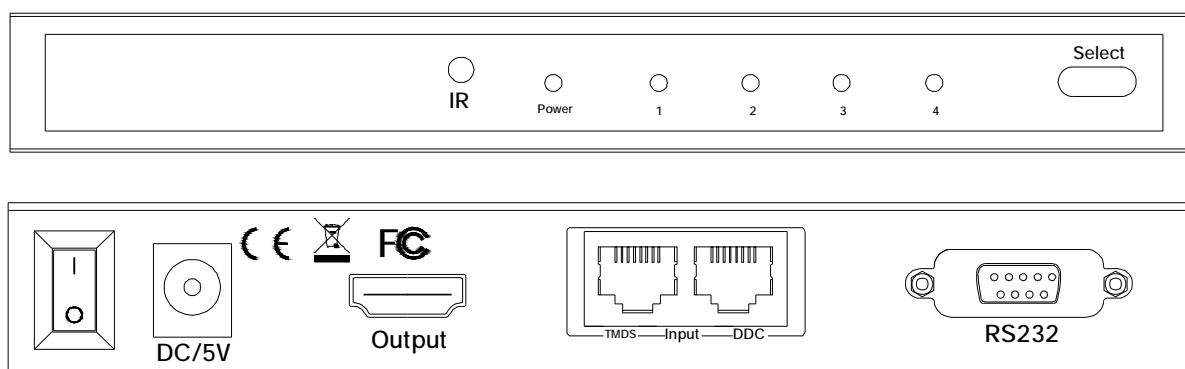
## 4.0 PANEL DESCRIPTIONS

Please study the panel drawings below and become familiar with the structure.

### HDMI 4X4 Matrix Switch Splitter



### Receiver



## 5.0 Connection and Operation

### 5.1 Connection

- 1) Connect all source devices to the HDMI inputs on the Switch Splitter..
- 2) Either HDMI or UTP can be selected as signal output for Output A/B/C/D. When choosing the HDMI as signal output, connect displays and main unit directly over HDMI cable. When choosing UTP as signal output, connect

receivers and main unit over cat5e/6 cable, and then connect output of receivers to displays. (Note: HDMI and UTP of each output can not be connected simultaneously)

- 3) Connect the 5.5V@4A power supply to the Switch Splitter, and 5V@2A power supply to each receiver.

Attention: Insert / Extract cable gently.

## 5.2 Operation

- 1) The automatic connection when supplied with power

The available outputs will automatically connect to the available inputs according to their sequence number. Meanwhile, the redundant available ports (input or output) or unavailable ports will not be connected.

For example:

1. If outputs A, B, D are connected to three power-on TVs separately, and the four inputs are all have its own source devices (work-on mode), then the power-on Switch Splitter will make a connection as follow:

1→A    2→B    3→D

(Output C and input 4 are not connected)

2. If outputs A, C, D are connected to three power-on TVs separately, and only three inputs have its source devices (work-on mode), then the power-on Switch Splitter will make a connection as follow:

1→A    3→C

(Output B, output D, input2 and input4 are not connected)

- 2) Selecting source devices by buttons

Four buttons on the Switch Splitter are used to select source devices circularly for inputs A, B, C, and D. Once you press the button, it will select next available source device.

- 4) Selecting source devices by IR remote

1. Power button

The power button of the IR remote can control the power of the Switch Splitter. Pressing this button, the power-on unit will be turned off. If you press it again, the unit will be turned on.

2. Other buttons

Depending on outputs A, B, C, D, the other buttons of the IR remote can be divided into four groups. Each group has five buttons: 'off'— turn off its outputs. 1, 2, 3, 4 are used to select input port accordingly.

- 5) Selecting source devices by RS232

- ①. Introduction of RS232 remote operation:

RS232 remote operation is mainly based on the “super terminal” of Windows operation system. Its parameter should be: **ANSI 4800 8-N-1-non**

- ②. Operation

A. Connect the switch splitter to the COM of PC with a RS232 cable.

B. Chose the right COM when you setting “super terminal” and then set the

parameter as follow:

Baud frequency: 4800

Data bit: 8

Parity bit: N

Stop bit: 1

Data stream: NON

C. Inputting your instruction. The instruction should be two or three letter, and finish with "Enter" button.

Please input next instruction in three seconds or the "**Overtime instruction**" will appear.

The input instruction should be right, or you will be rejected with the "**wrong instruction**"

If the input or output that you chose is not connected to devices or not in power-on mode, "**ineffective instruction**" will inform you.

If your instruction is performed, you can see the instruction of "**successful operation**".

③. Instruction input method

A. Selecting source device

**Sequence number of output (A/B/C/D) + sequence number of the input (1/2/3/4) + "Enter"**

For example: If you want display B to view source 3, then you can input "B3" and finish with "Enter".

B. Turning off an output

**C + Sequence number of the output that you want to turn off (A/B/C/D) + "Enter"**

For example: If you want to turn off output B, then you can input CB, and finish with "Enter".

C. Turning off the Switch Splitter:

**OFF + "Enter"**

D. Turning on the Switch Splitter:

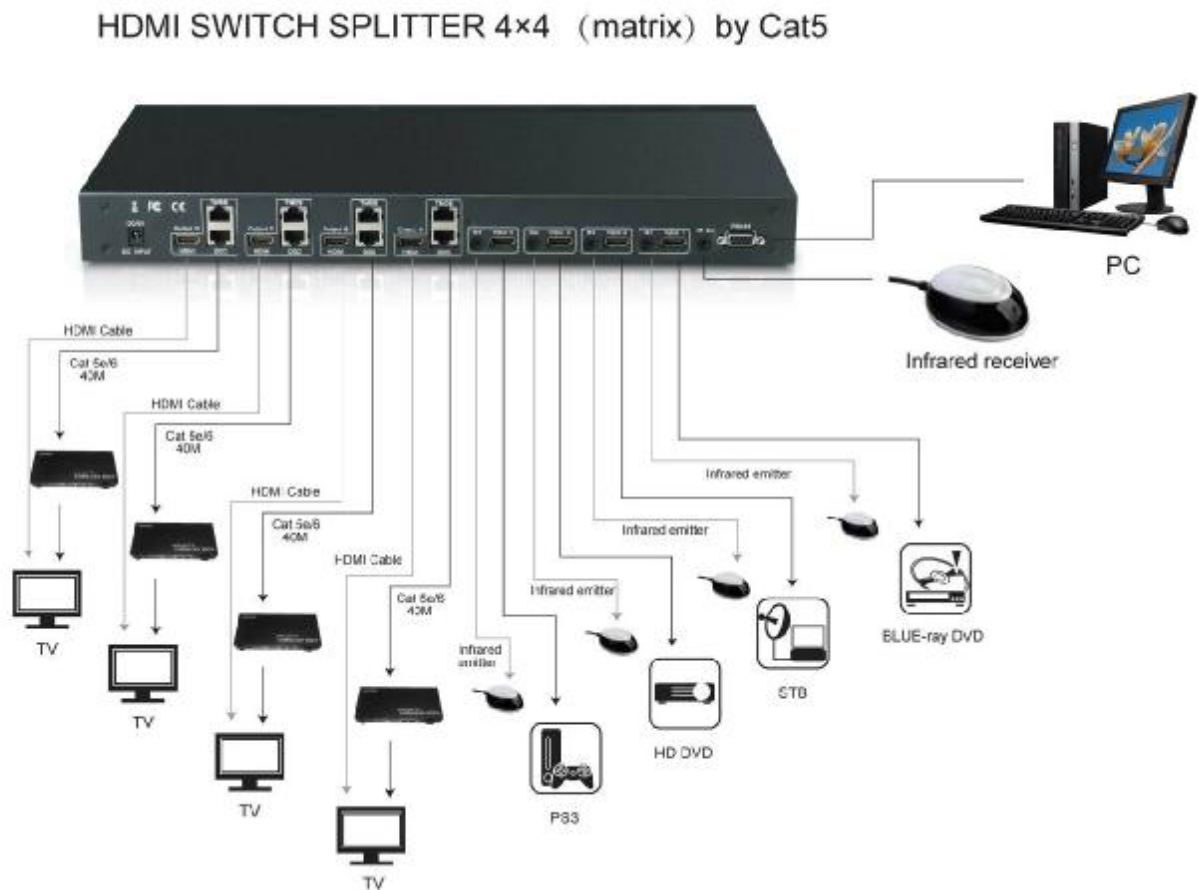
**ON + "Enter"**

E. Inquiry:

**QS + "Enter"**

This order enables you know which input and output are available and the connections of input and output.

## 5.3 CONECTION DIAGRAM



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