8x8 HDMI2.0 Matrix

Support 4K@60hz YUV4:4:4, 18Gbps, HDR

Operating Instruction

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.

SURGE PROTECTION DEVICE RECOMMENDED

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Table of Contents

Dear Customer

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1. Features

- HDMI 2.0 version (Support 4K@60Hz YUV4:4:4)
- Support 3D
- Bandwidth upto 18Gbps
- HDCP2.2 input ,HDCP2.2 output
- HDCP1.4 input, HDCP1.4 output
- Support HDR10
- 8xHDMI Input, 8xHDMI output with 8xSPDIF Audio
- Any one of the 8 Ultra HD sources to any one of the 8 Ultra HD displays
- Support Panel Button, Local IR, RS232 Control with command, IP Control, Web GUI Control
- Support Dolby True HD and DTS-HD master audio
- 1U rack design, easy installment
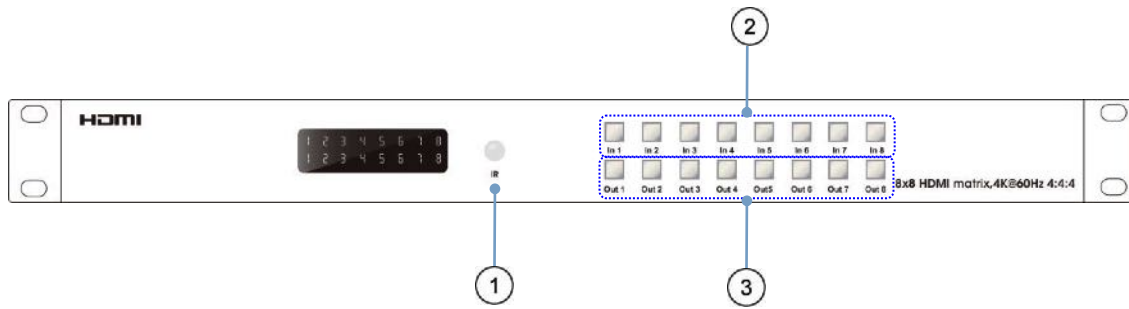- Unit size: L440XW220XH44.5mm

2. Package Contents

1). 1x HDMI Matrix
2). 1x 12V DC power supply
3). 1x Remote control
4). 1x IR Ext RX Cable
5). 1x mounting kit
6). 1x CD for control software & user manual

3. Specifications

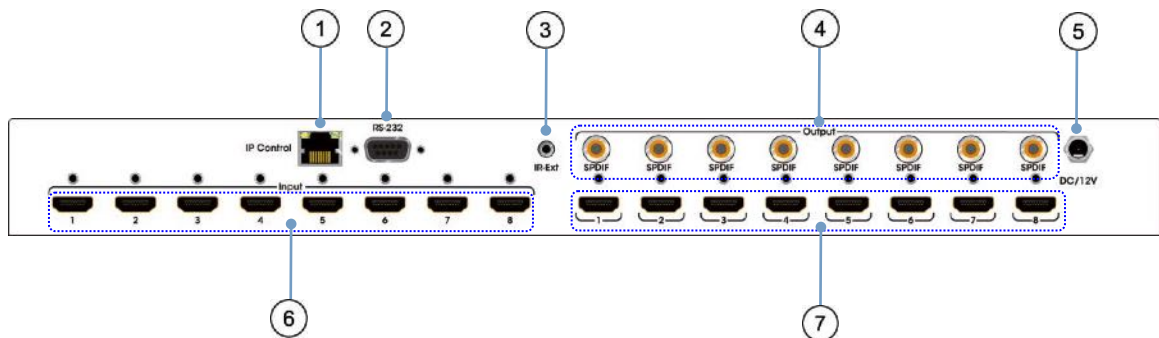| Bandwidth	18 Gbps
Resolution	480p@60hz,576P@50hz,720P@60hz, 1080P@24hz,1080P@50hz,1080P@60hz,4K@24hz,4K@30hz, 4K@60hz YUV4:2:0, 4K@ 60hz YUV4:4:4
Video Input Connectors	8xHDMI Type A, 19-pin, female
Video Output Connectors	8xHDMI Type A, 19-pin, female
RS-232 serial port	DB9, female
Ethernet port (IP control)	RJ45, female
IR Ext port	1x3.5mm stereo jack
Rack-Mountable	Rack ears included
Dimensions(WxHxD)	L440XW220XH44.5mm
Net Weight	2.8kg
Operating Temperature	-4°F to 140°F (-20°C to 60°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)
Power consumption	19W(Max)

Operating Instruction

4. Panel Descriptions

①IR receive window.

②Input button IN1~8: choose the desired input port from ports 1~8.

③Output button OUT1~8: choose the desired output port from ports 1~8.

①IP control.

②RS232 for control.

③For IR external receiver cable.

④SPDIF Audio output.

⑤DC power input.

⑥HDMI input port.

⑦HDMI output port.

Operating Instruction

Check the EDID Information by Panel button

① Press "In4"for 3 seconds ,then press "In1"or "Out1" to check the EDID information for each HDMI input.
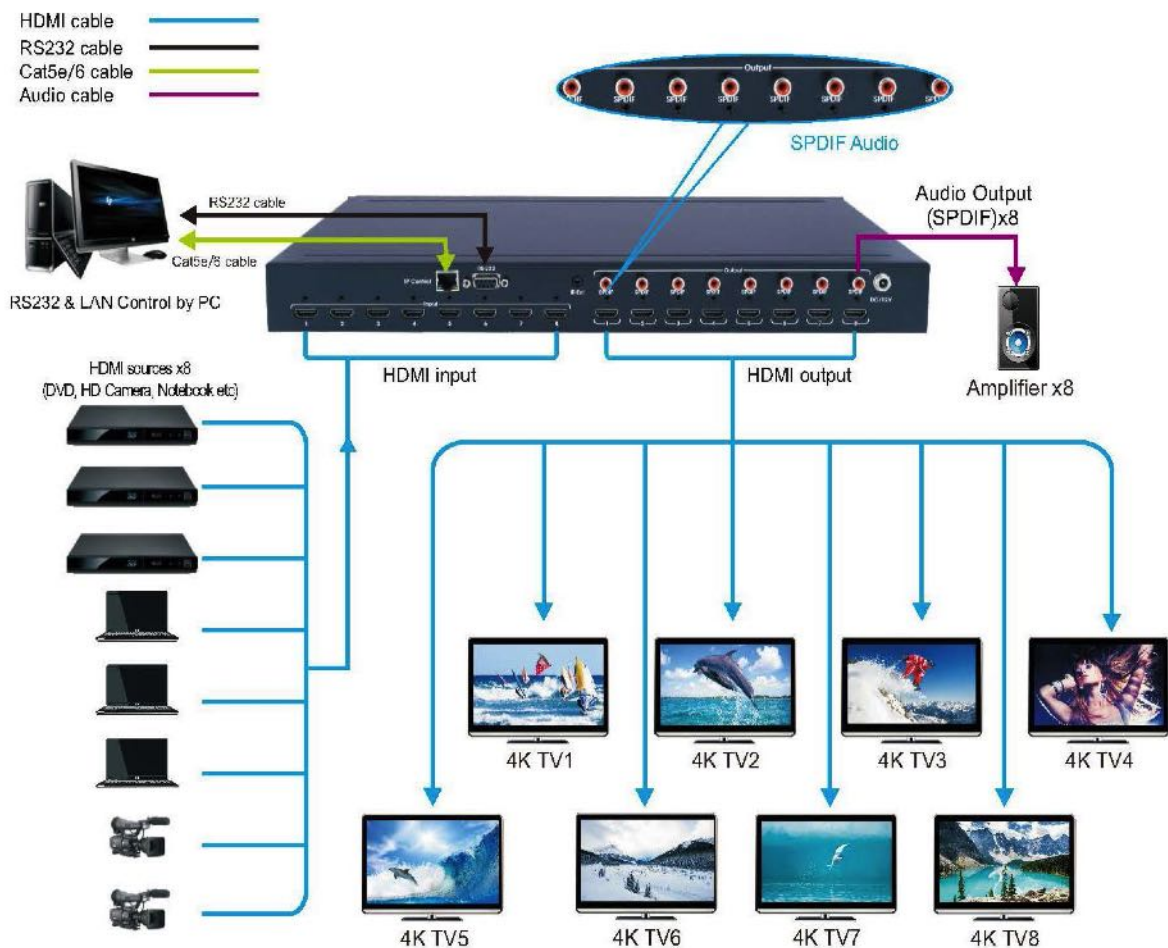
```
EDID1:
1080P
```

```
EDID8:
4K2K@60 4:4:4
```

②Press "In5" for 3 seconds, then press "In1" or "Out1" to check the device name , IP address and DHCP status.

```
8*8HDMI2.0Matrix
192.168.0.45
```
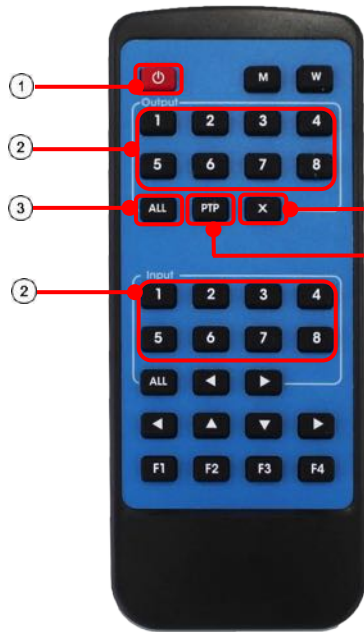
```
DHCP:OFF
```

5. Connecting and Operating

1. Connect source devices to input ports of the matrix

2. Connect HDMI output ports to TV or other HDMI sink devices.

3. Optional: connect RS232 cable from PC RS232 port.

4. Optional: connect an Ethernet cable from the TCP/IP port on the matrix to a local area network.

5. Connect 12V POWER supply to DC power socket.

6. Power on the matrix, HDMI sources and displays.

6. Application Diagram

7. Remote Control Description

① Standby Mode.
② OUTPUT-X select INPUT-Y:
    Press OUTPUT-X (X means 1 to 8 of outputs)
    Press INPUT-Y (Y means 1 to 8 of inputs)
③ All outputs select INPUT-Y:
    Press ALL button in zone OUTPUT
    Press INPUT-Y button (Y means 1 to 8 of inputs),
    then INPUT-Y switched to ALL OUTPUTS.
④ Cancel Button: Cancel the switching operation
⑤ PTP button: Mirror all inputs and outputs
(Ex. Input 1 to output 1, input 2 to output 2, etc):
Press PTP button in Zone OUTPUT.

8. RS232 Pin Assignment

Matrix			Remote Control Console	
PIN	Assignment		PIN	Assignment
1	NC		1	NC
2	Tx		2	Rx
3	Rx		3	Tx
4	NC		4	NC
5	GND		5	GND
6	NC		6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Baud Rate: 115200 bps
Data Bits: 8 bit Parity: None Stop Bit: 1 bit
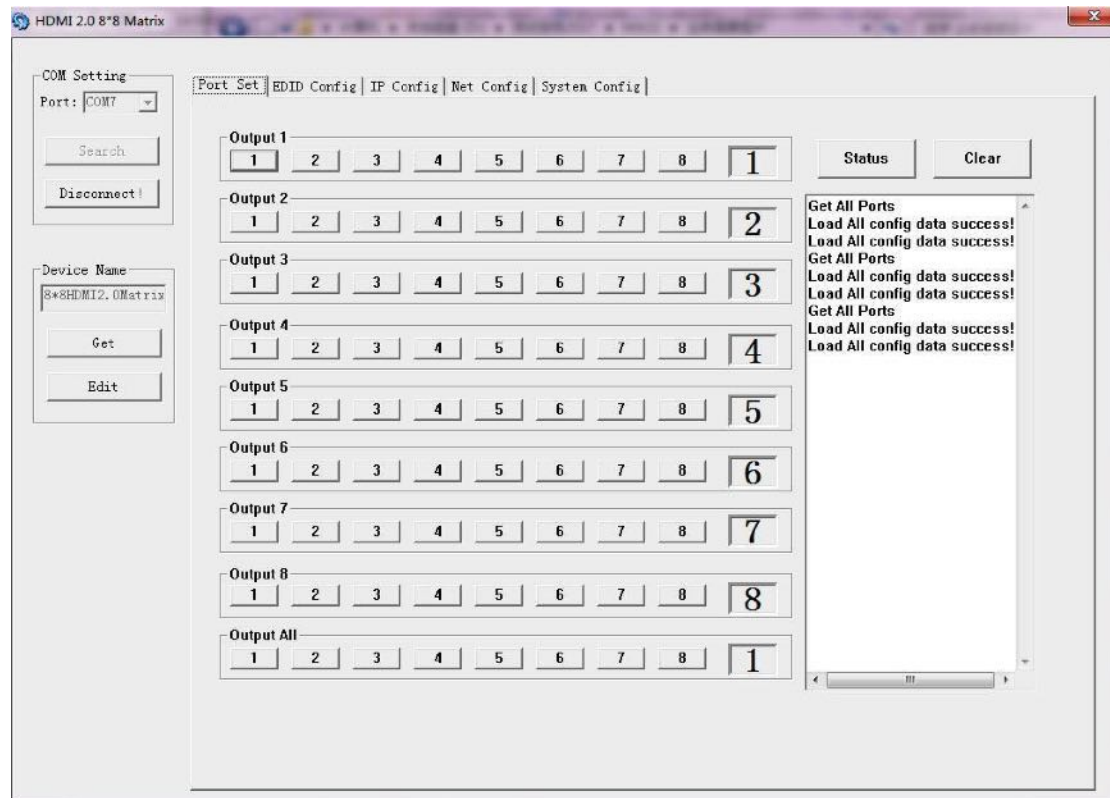Flow Control: None

9. RS232 Control

9.1 Software control

Connect the 8x8 Matrix to PC with a RS232 cable, open the software on your PC. On the COM Setting session, select the COM port according to your PC and click Connect to get connected.
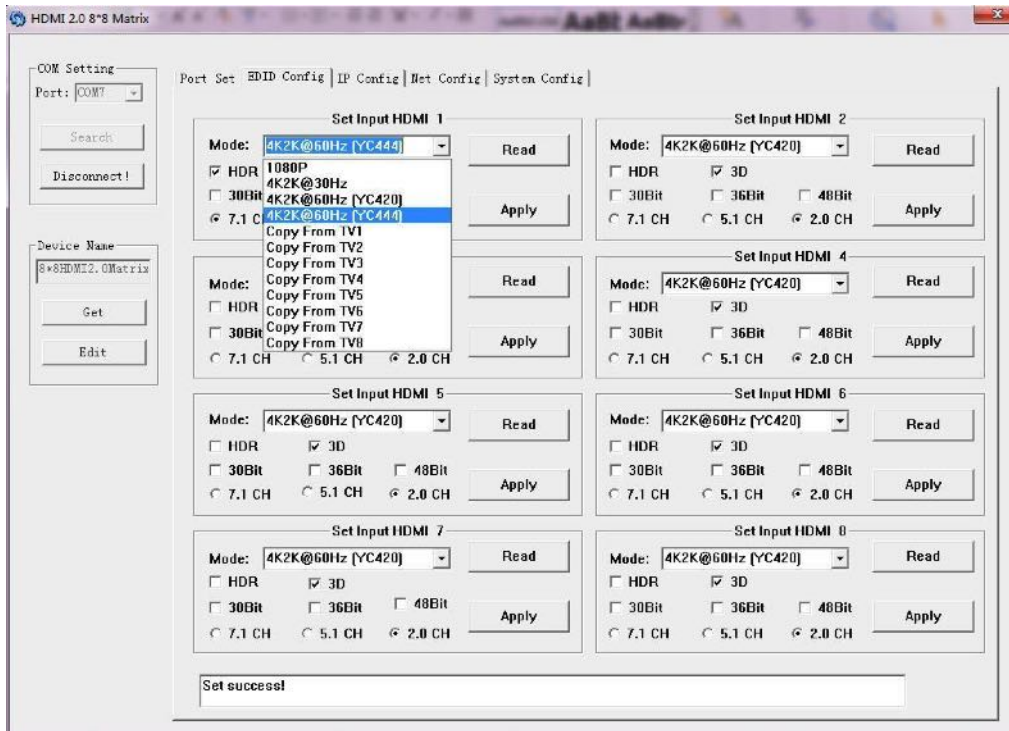
On this COM setting session, you can also change the Device name, Device name support up to 16 characters. Save or edit your status by clicking the Edit button.

Come to Port Set session to select or switch your input sources for each output, We can read the current status by clicking the "Status" button, or Clear our historical operating record by clicking "Clear" button. The right down blank shows the operating history.
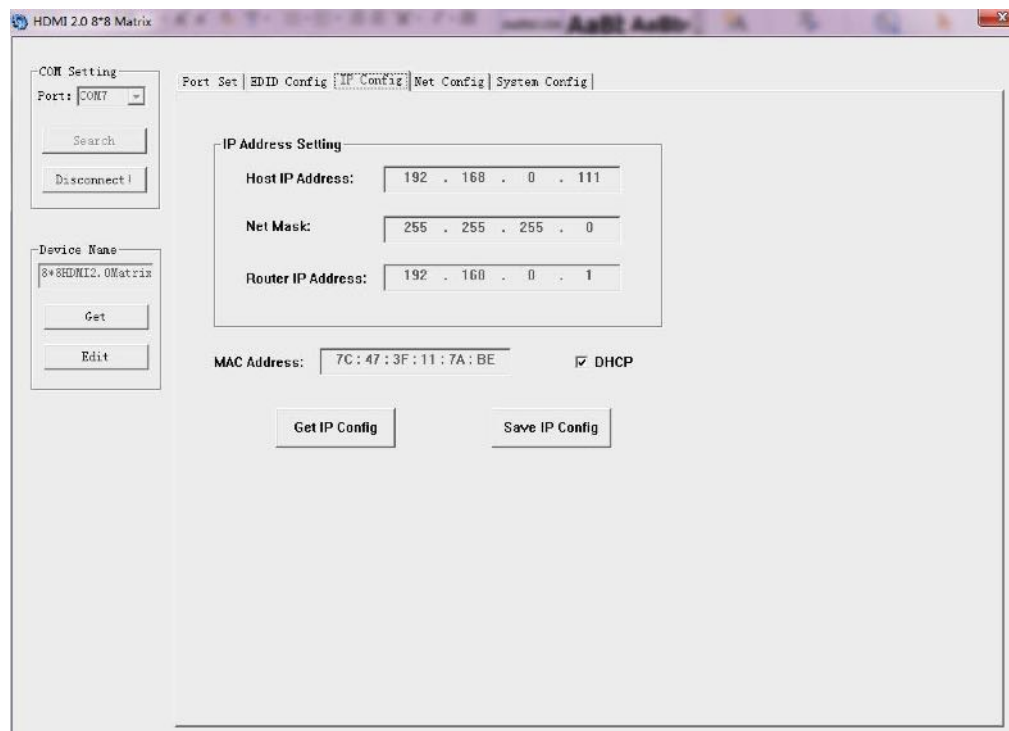

Picture 1

The EDID session helps us to Read and Configure EDID for each input, such as HDR, 3D, Data rates and Audio channel.
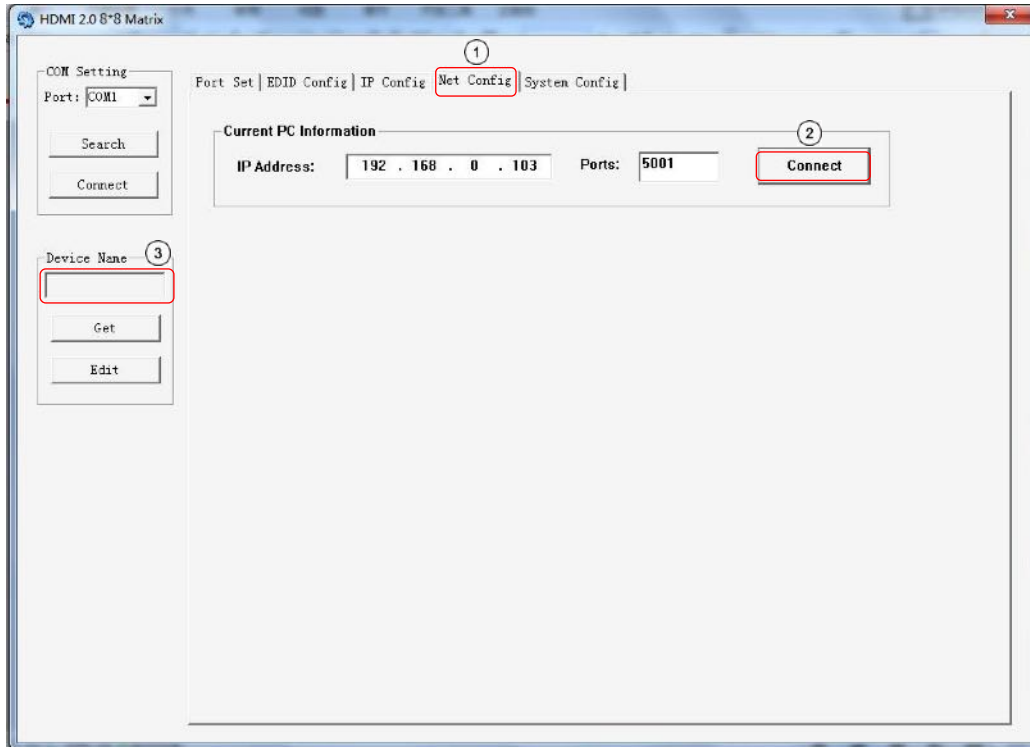

Picture 2

The IP configure session helps to read and configure the IP address and MAC of the Matrix. Check DHCP if you want the router assign an automatic IP for the Matrix.
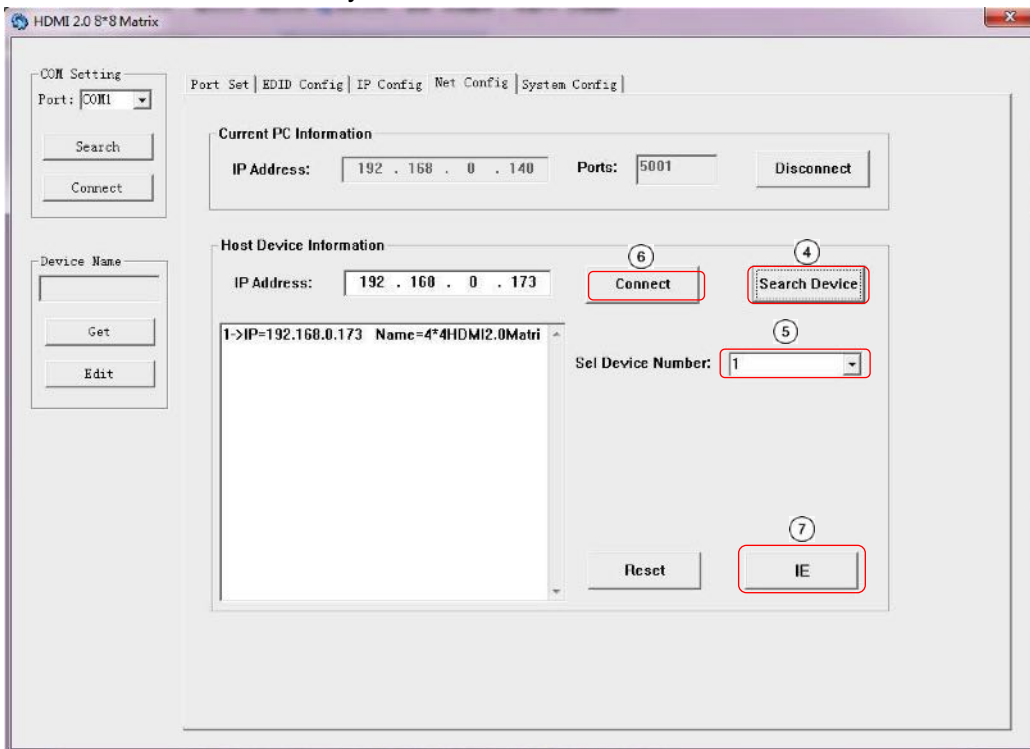
The Net Config session allows us to configure the PC and Matrix in the same LAN with the IP Address and connection.

Click "Net config" → "Connect" → "Search Device" → "Sel Device Number" →"Connect" then you can see the device name, it meas connect successfully.
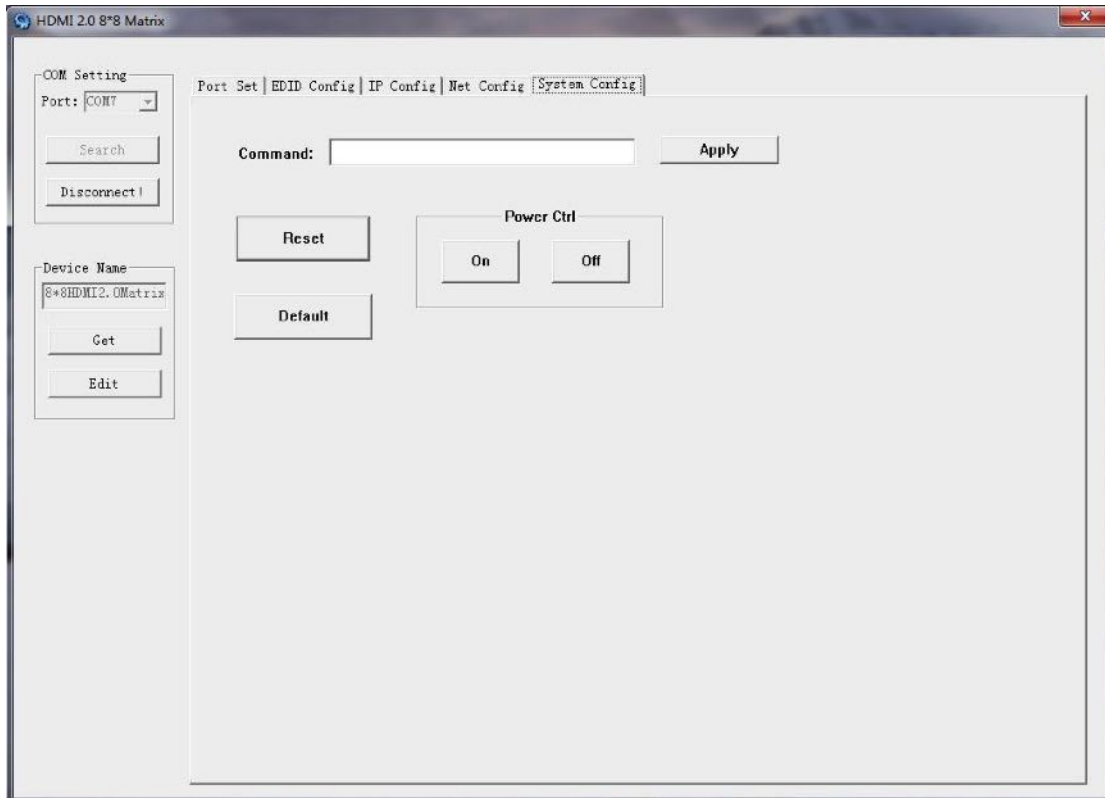

Picture 4

You can also click "IE", easy and click to enter into web.

Picture 5

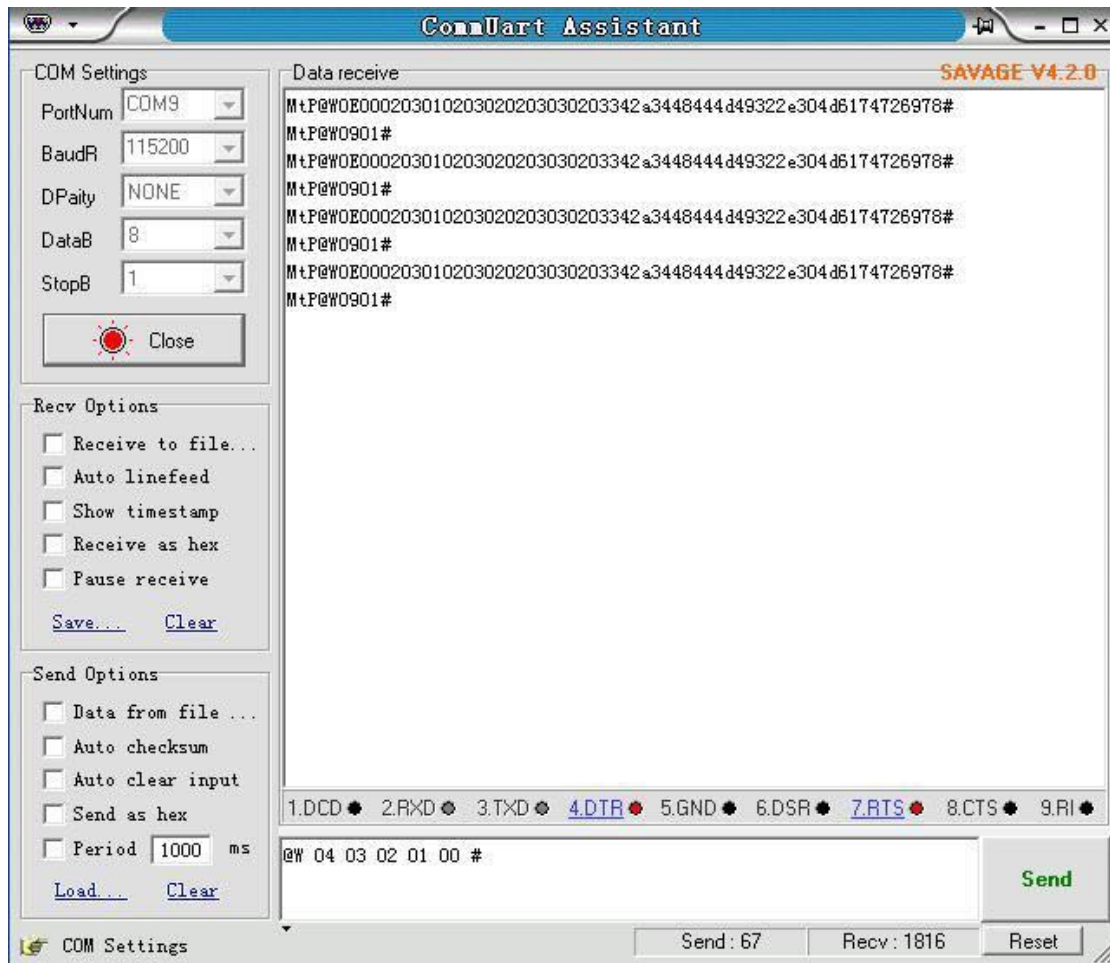The last session is System Config, which allows power ON/OFF or reset, default the Matrix.

Picture 6

9.2 Command Control

1). Open CommUart Assistant.

2). Comport setting:

Baud Rate:	115200 bps
Parity:	None
Data Bits:	8 bit
Stop Bits:	1 bit

Operating Instruction

3). Enter Port Command in Send options.

Picture 7

4). Command

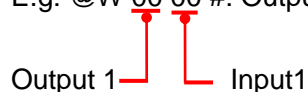| Command	Function	Note
@W 04 00 01 02 03 04 05 06 07 #	PTP Function	Mirror all inputs and outputs (Ex. Input 1 to output 1, input 2 to output 2, etc)
@W 50 #	Reboot	
@W 51 #	Restore Factory Setting	
@W 0F 00 #	Standby	00: Standby Mode 01: Cancel "Standby Mode"

Operating Instruction

5). Select HDMI input for HDMI output

Command	Description
00	Output1
01	Output2
02	Output3
03	Output4
11	Output5
12	Output6
13	Output7
14	Output8
04	All Output
00	Input1
01	Input2
02	Input3
03	Input4
04	Input5
05	Input6
06	Input7
07	Input8

E.g: @W 00 00 #: Output 1 display Input1

Output 1 ⌐─┴─┐ Input1

6). EDID Setting
@W XX AA BB #:
Parameter Description:
XX for configuration of **"INPUT EDID"**

Command	05	06	07	08	15	16	17	18
Description	Input1	Input2	Input3	Input4	Input5	Input6	Input7	Input8

AA for selecting **"Video Mode"**

Command	00	01	02	03
Description	1080P	4K2K_30	4K2K_60(YC420)	4K2K_60(YC444)
Command	04	05	06	07
Description	Copy From TV1	Copy From TV2	Copy From TV3	Copy From TV4
Command	08	09	0a	0b
Description	Copy From TV5	Copy From TV6	Copy From TV7	Copy From TV8

BB for selecting belowing function

Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
HDR	48Bit	36Bit	30Bit	7.1CH	5.1CH	2CH	3D
1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0

"1" : select the function, "0" : not select the function.
E.g: 11001001: HDR, 48Bit, 7.1CH, 3D
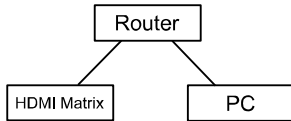Chang Binary code "11001001" to hexadecimal format "C9".

E.g: @W 05 03 C9 #
The EDID of input 1 is: 4K2K_60(YC444)、HDR、48Bit、7.1CH、3D.

Operating Instruction

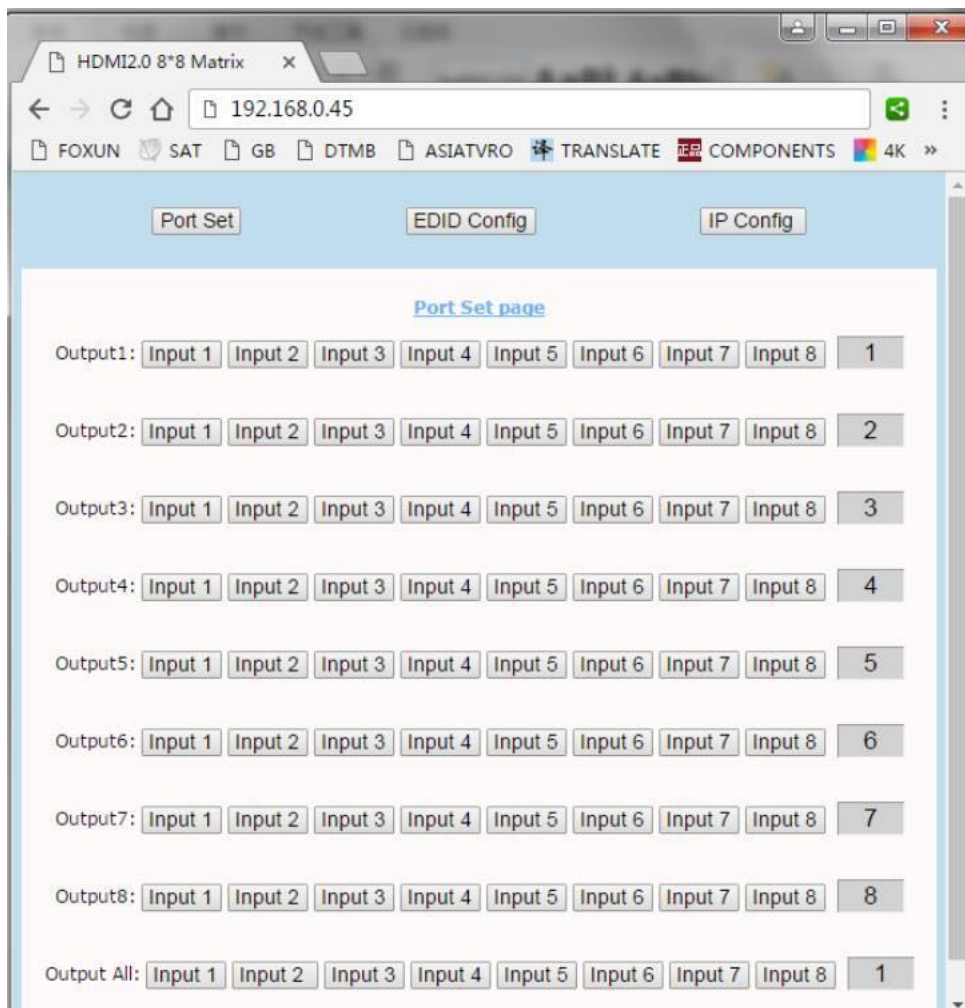## 10. Web Control

1). Connect the HDMI Matrix and PC to the LAN.

Router

HDMI Matrix   PC

2). Open the PC tool (included in the CD).

PC tool   2017-01-16 17:47

3). Search the IP address of HDMI Matrix, please refer to picture 4 & picture 5.

4). Open the web browser and enter the IP address you searched, then you can set the function as below pictures:

Picture 8: Port Setting Page

Picture 10: IP Configuration Page

Operating Instruction