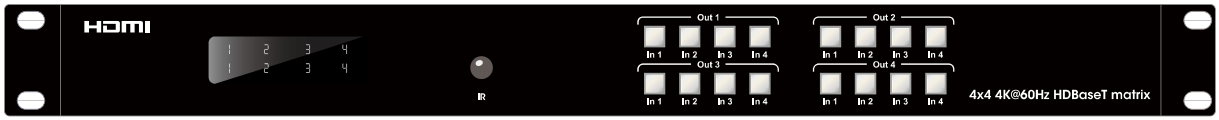
4K HDBaseT 4x4 Matrix, HDCP 2.2 compliant

Operating Instructions



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.

Features

- HDMI 2.0 version (Support HDMI2.0 4K50/60Hz YUV420).
- Support high definition resolutions 4K@60, 4K@30, 1080P, 1080i, 720P and standard video format.
- Transmit up to 70m under 1080p, 35m under 4K@30Hz.
- HDCP 2.2/1.4 compliant.
- 4 HDMI input ports, 4 HDBaseT output ports.
- Any one of the 4 sources to any one of the 4 Displays.
- With wide-band Bi-Direction IR routed control(38~56KHz)

  IR extension from Sender to Receiver or from Receiver to Sender.
- Support Panel Button, IR Routing, RS232 Control, IP Control Via Telnet.
- POC (Receiver powered by HDBaseT Matrix).
- 1U rack design, easy installment.

Notice

Our company reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

⚠ Warning

To reduce the risk of fire, electric shock or product damage:

1. Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

6. Clean this apparatus only with dry cloth.

2. Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.

7. Unplug this apparatus during lightning storms or when unused for long periods of time.

3. To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.

8. Protect the power cord from being walked on or pinched particularly at plugs.

4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Only use attachments / accessories specified by the manufacturer.

5. Do not place sources of naked flames, such as lighted candles, on the unit.

10. Refer all servicing to qualified service personnel.

TABLE OF CONTENTS

Package Contents

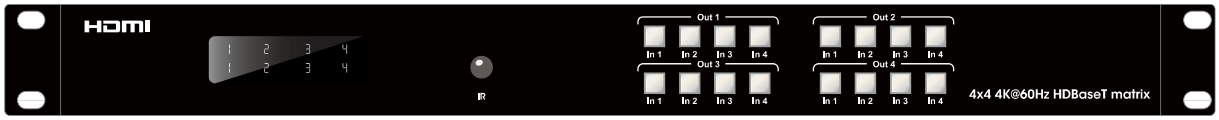
① Main unit. (HDBaseT Matrix).
② 12V3A DC Power Supply. x2
③ 1x Remote controller.
④ 1x IR Extension cable; 4x Wide-Band “IR In” cables; 4x “IR Out” cables.
⑤ Operating Instructions.
⑥ 2x Mounting Ear.

Specifications

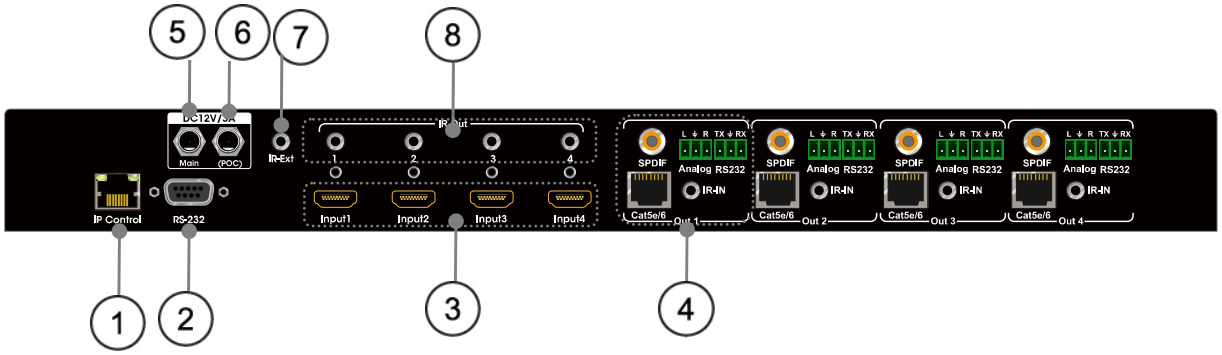
Operating Temperature Range	-5 to +35°C(-41 to +95 °F)
Operating Humidity Range	5 to 90 % RH (no condensation)
Input Video Signal	0.5-1.0 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Signaling Rate	3.0Gbit/s
Video Format Supported	4K@60/4k@30/1080P/1080i/720P/576P/480P/ 576i/480i
HDCP Compliant	HDCP2.2 and HDCP1.4
Output Video	HDMI2.0 and HDMI 1.4 (over HDBaseT)
Audio Format Supported	DTS-HD、Dolby trueHD
Maximum Transmission Distance	1080P 70m, 4K 35m
Power Consumption	25wtts (Max.)
Dimensions	L440 x W166 x H42 mm
Mass (Main Unit)	2.0kg

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

Panel Descriptions



Front Panel



Rear Panel

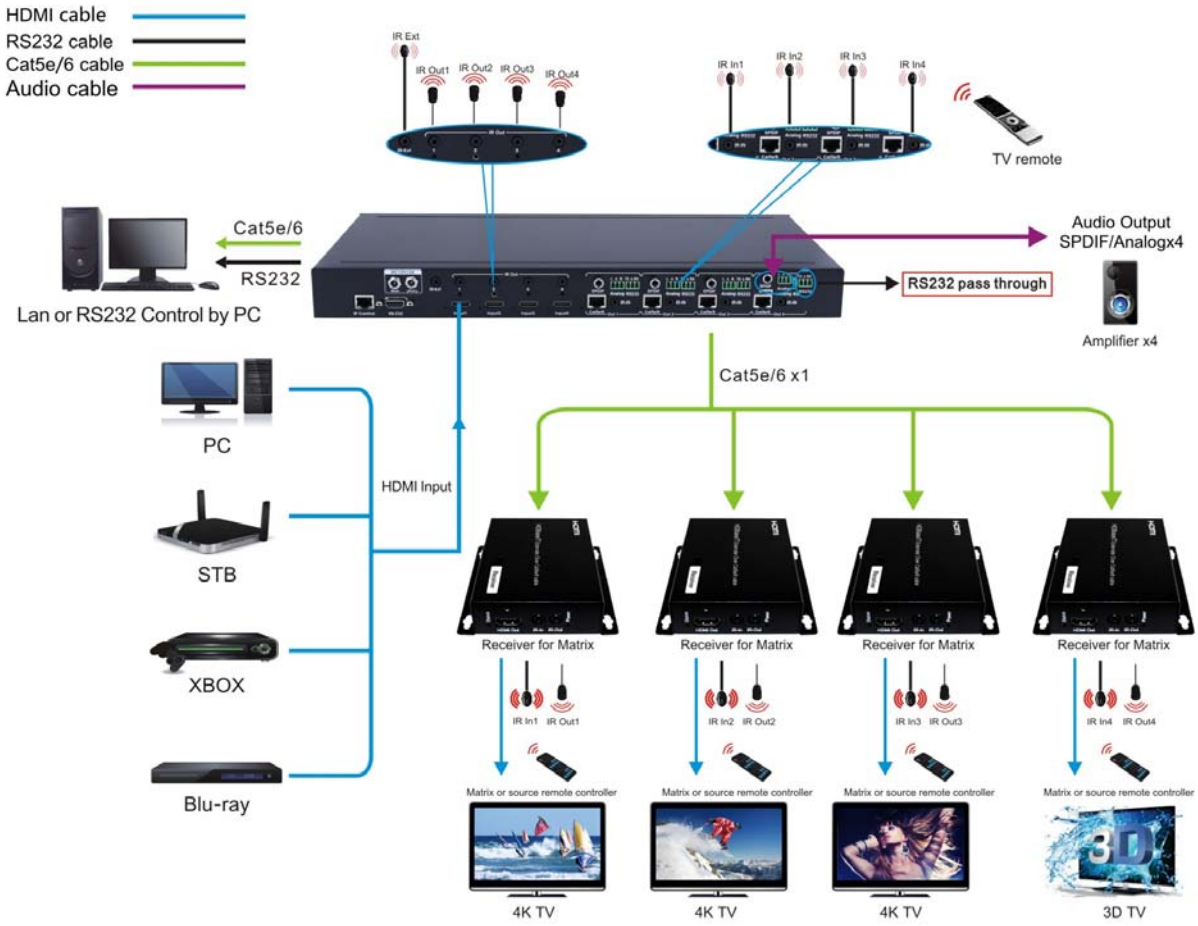
① Ethernet control.
② RS232 for control.
③ HDMI input port.
④ Output port (HDBaseT output, IR in, RS232, analog audio L/R).
⑤ Main Power.
⑥ POC power input.
⑦ IR ext.
⑧ IR out.

Connecting and Operating

1) Connect the HDMI input sources (such as HD-DVD, PS3, STB etc) into HDBaseT Matrix.
2) Connect Cat5e/6 cable to HDBaseT output port of HDBaseT Matrix and HDBaseT input of Receiver.
3) Connect HDMI sink devices (such as HD-LCD, HD-DLP) to the Receiver.
4) Power on the input source you want to show.
5) Connect the power supply into HDBaseT Matrix and turn on the display you want to watch.
6) Use remote or push the button to choose input source.

📖 **Attention:** Insert / Extract cables gently.

Typical Application



Operation

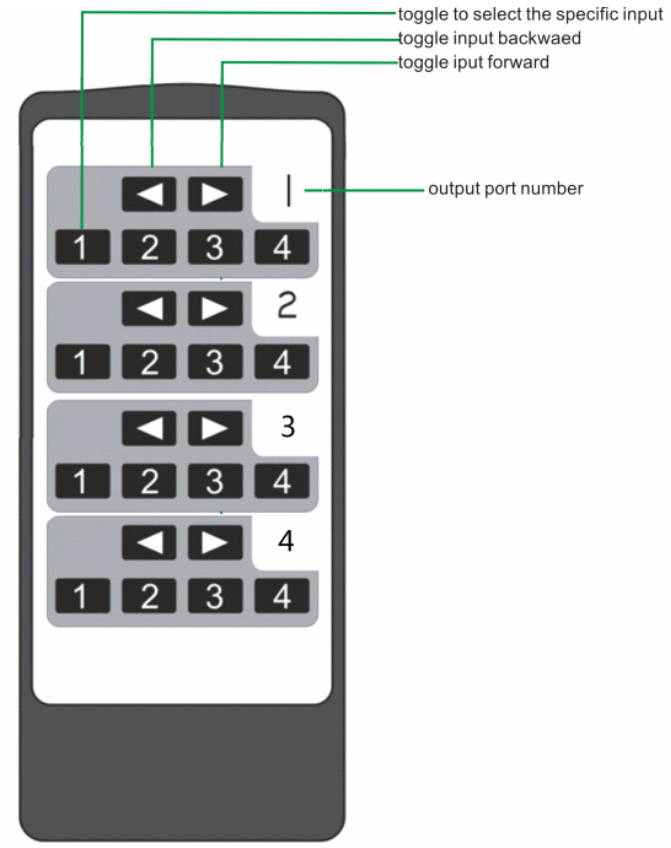
1. Front panel control.

The front panel to select inputs to the various outputs.

Change source for output port:

Pressing input button of one of the output will change the output source to the selected input.

2. Local IR remote control.



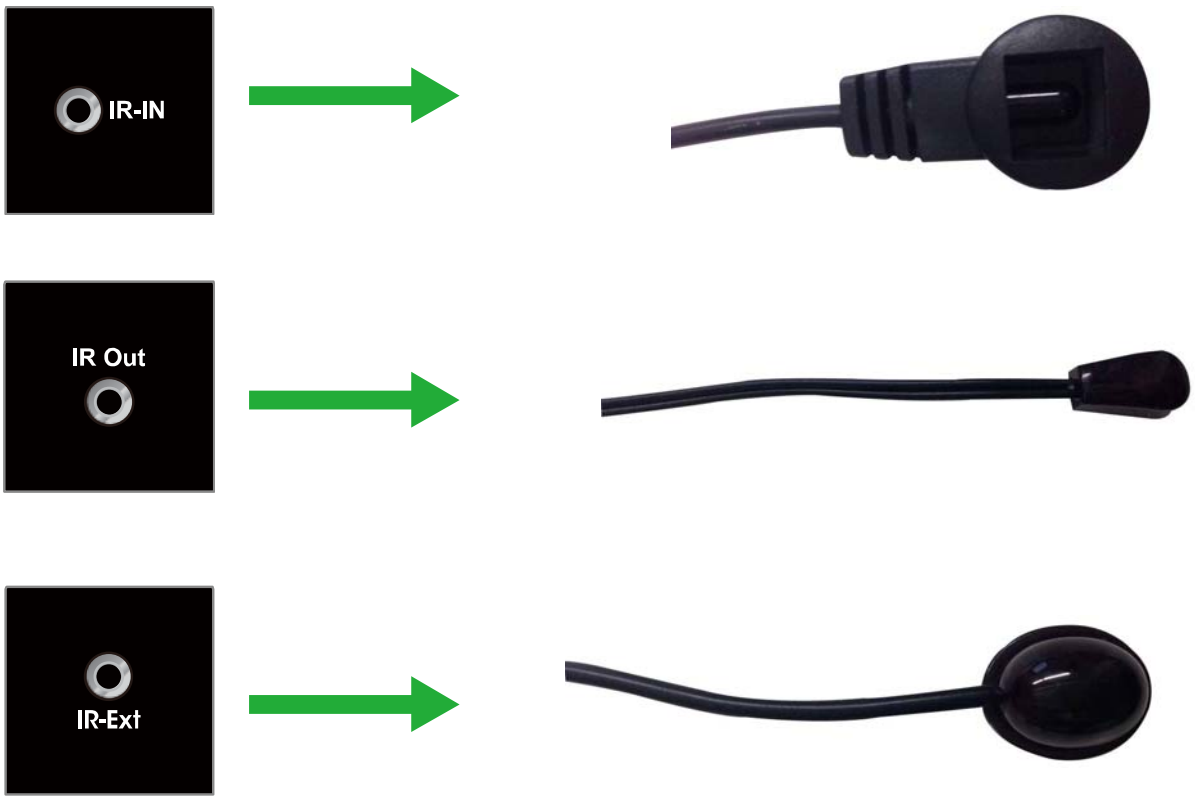
User can control the HDMI route of the matrix by using the IR remote.
There are four group key pads for four output ports. For each output port source selection, there are 4 number keys and two arrow keys. Press number keys to select specific input port. Left arrow button to backward the input port, and right arrow to forward input port.

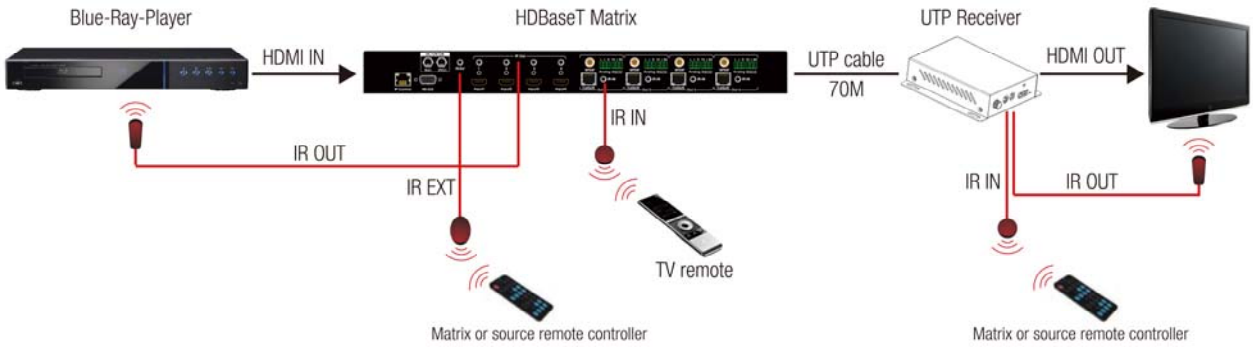
3. IR extender control.

User can use the IR receiver cable to change the IR receiver position.
If controlling the HDBaseT Matrix through the 1/8” (3.5 mm) input jack on the rear panel, connect the IR cable directly to the matrix rear IR receiver extension sockets.

4. IR system.

The matrix can pass the IR signal through the IR system to the HDMI source or pass the IR signal from the HDMI source to the HDMI sink





1) Control the sources from the sinks

Step1: Connect 4pcs “IR Out” cables to “IR Out” ports on the matrix, connect 4pcs “IR In” cables to the “IR In” ports on the receivers.

Step2: Affix the 4xIR emitter of “IR out” cables to the IR window of the 4xHDMI source

Step3: Aim the remote control of HDMI source which you choosed to the “IR In” cable which connected to the receiver.

For example:

If you choosed HDMI source1, then just aim the remote control of HDMI source1 to the “IR In” cable which connected to the receiver.

2) Control the sinks from the sources

Step1: Connect 4pcs “IR Out” cables to “IR Out” ports on the receivers, connect 4pcs “IR In” cables to the “IR In” ports on the matrix.

Step2: Affix the 4xIR emitter of “IR out” cables to the IR window of the 4xHDMI Sink.

Step3: Aim the remote of HDMI sink to related IR receiver of HDMI Matrix.

For example:

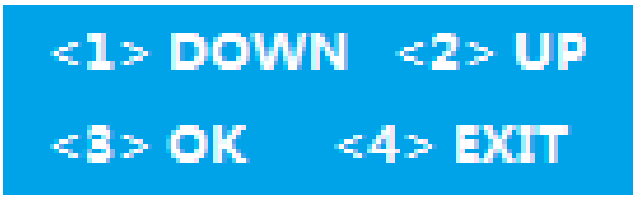
If you need control HDMI Sink1, then just aim the remote of HDMI Sink1 to the first “IR In” port of HDMI Matrix.

3) Control the HDBaseT Matrix from the sinks

Aim the remote of the HDBaseT Matrix to the “IR In” cable which connected to the receiver.

5. Information shown on LCD panel

Pressing button in4 of output2 and in4 of output4 simultaneously for 3 seconds to enter EDID setting menu.



Note: The digital 1, 2, 3 or 4 are for in1, in2, in3 or in4 of out1

5.1 EDID setting

EDID can be set via the EDID menu.

There are 12 sets of embedded EDID data, 4 set of user EDID. Or copy EDID from TV on one of the output port.

1：1080P_2CH(PCM) ---(see note2)

2：1080P_ audio5.1

3：1080P_ audio7.1

4：1080P_3D_2CH(PCM)

5：1080P_3D_ audio5.1

6：1080P_3D_ audio7.1

7：4K30Hz_3D_2CH(PCM)

8：4K30Hz_3D_ audio5.1

9：4K30Hz_3D_ audio7.1

10：4K60Hz(Y420)_3D_2CH(PCM)

11：4K60Hz(Y420)_3D_ audio5.1

12：4K60Hz(Y420)_3D_ audio71

USER EDID 1

USER EDID 2

USER EDID 3

User EDID can be set via RS232.

The EDID data read from one of output port will be saved to USER EDID1.

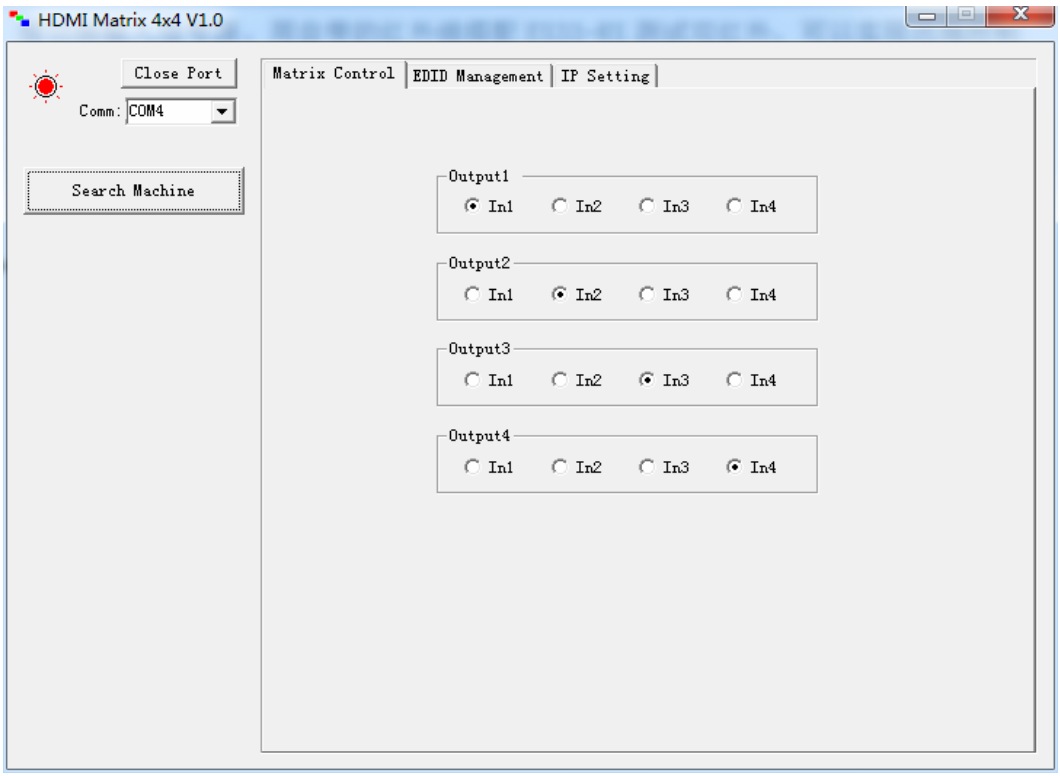
5.2 Check the “Version Status”

5.3 Check the “Network Status”

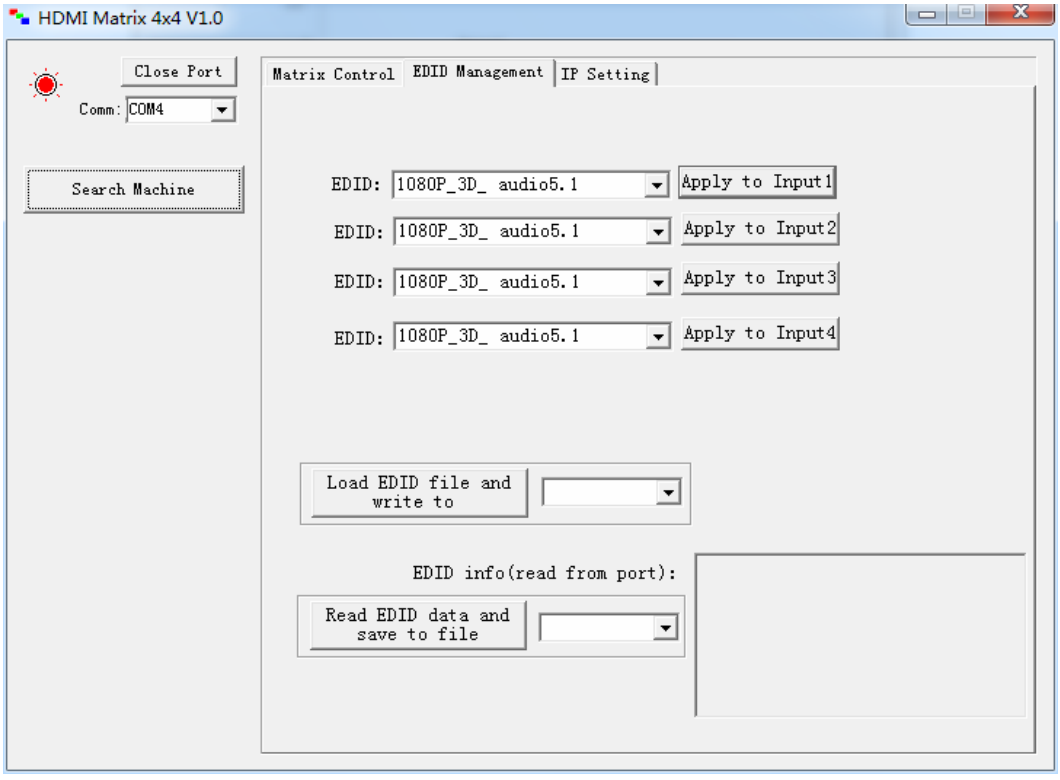
6. Software Control

1). Connects a computer with HDBaseT Matrix by USB to RS232 cable, open the software and click Search Machine.

2). You can control HDBaseT Matrix as following picture showed:

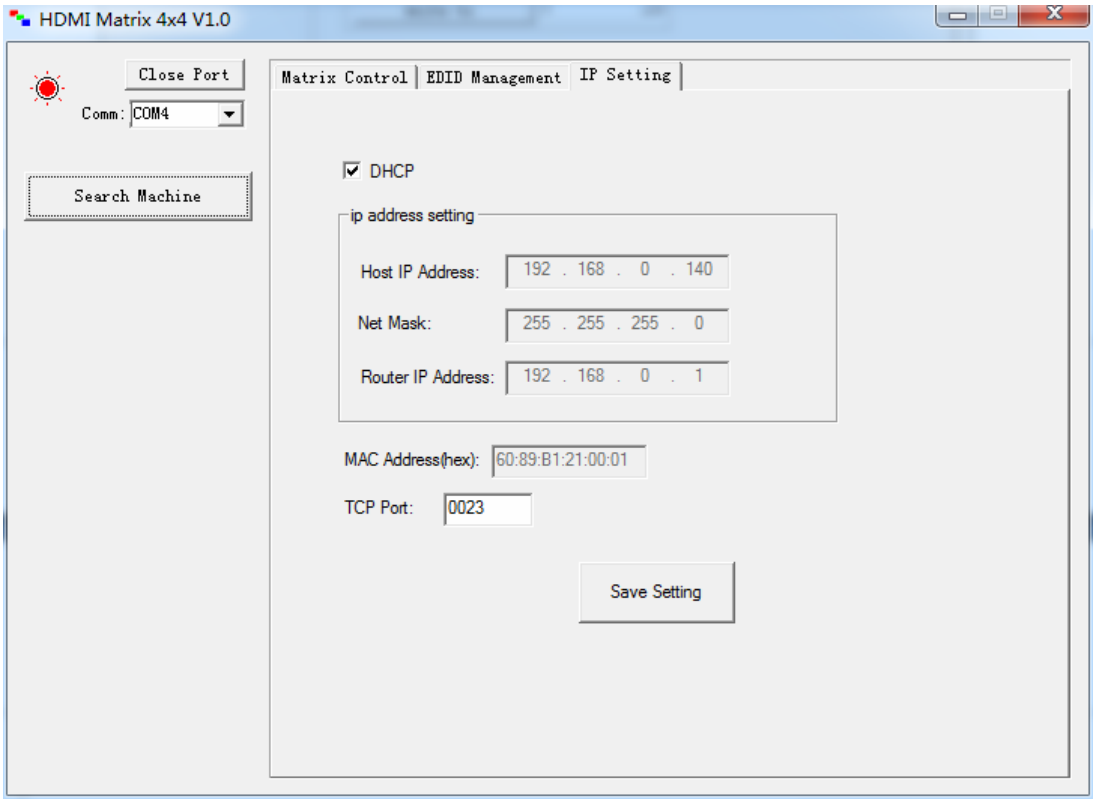


3). Set the EDID of 4 HDMI inputs:

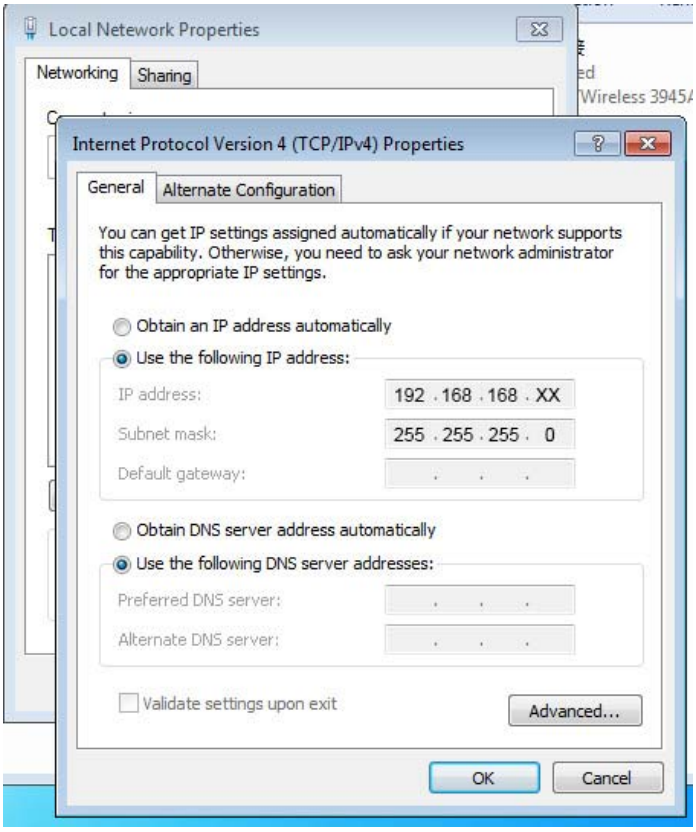


7. IP Control

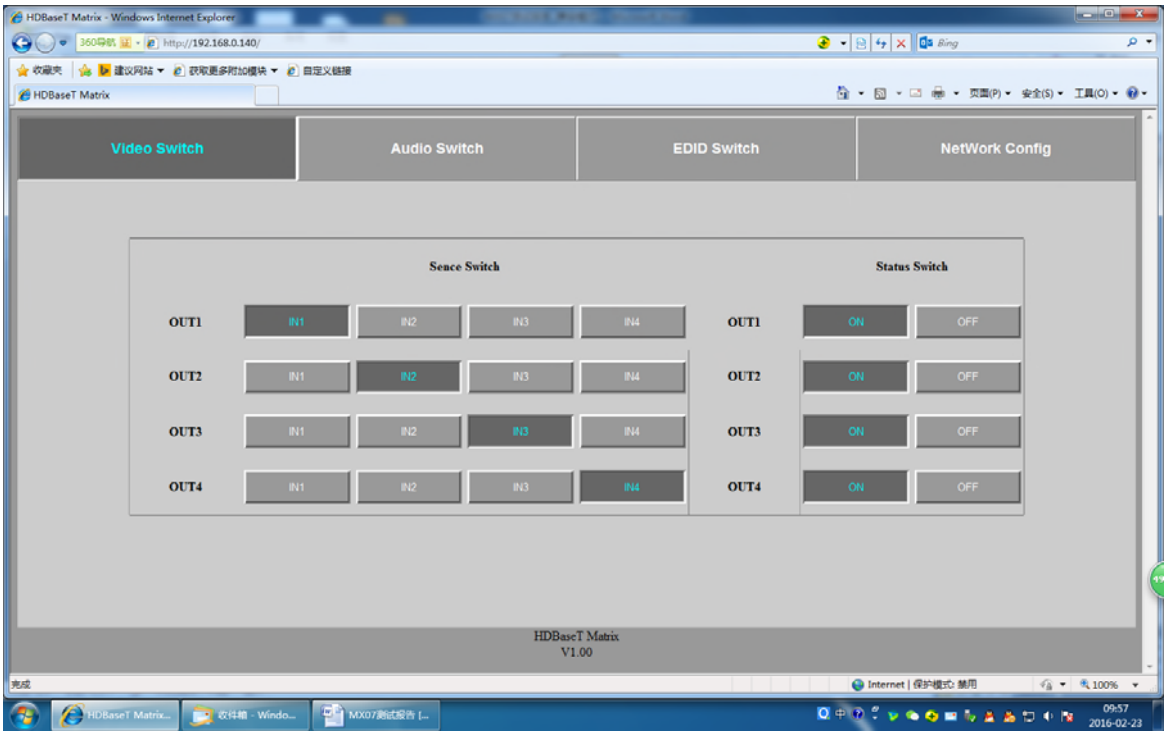
1). Click “DHCP”, then the switch will assign IP address automatically. You can also set the IP address manually.



2). If you set the static IP, you need set the IP of computer as below.

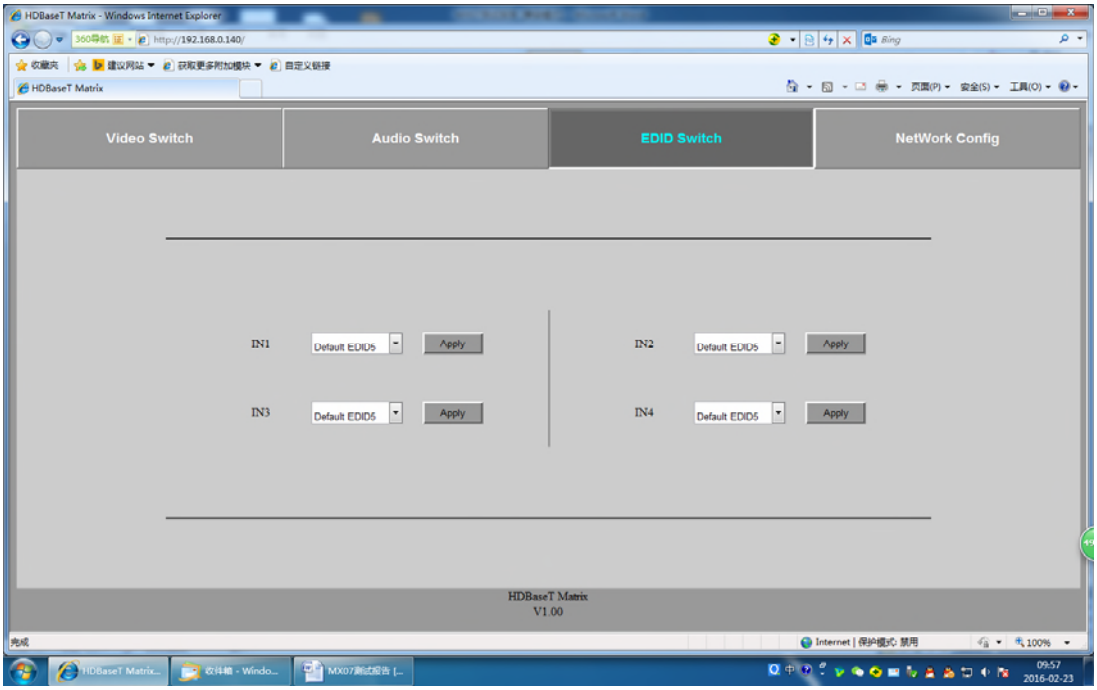


3). Open web browser, and enter the IP address you set.

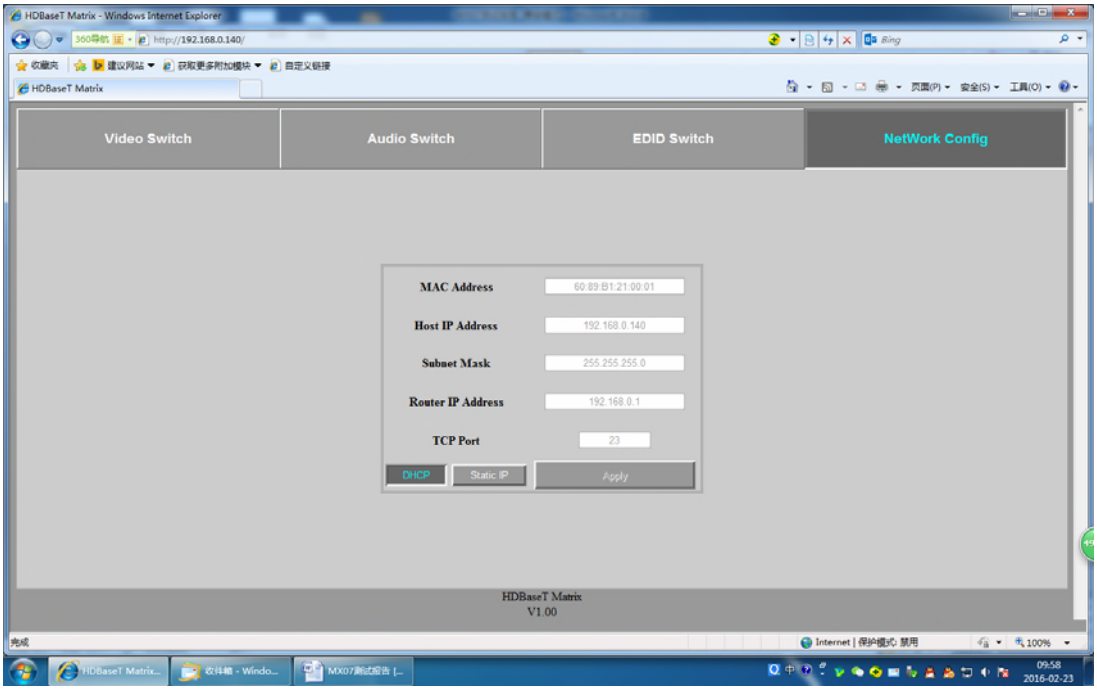


4). Turn on/off the audio:

5). Set the EDID of 4 HDMI inputs:



6). Network config:



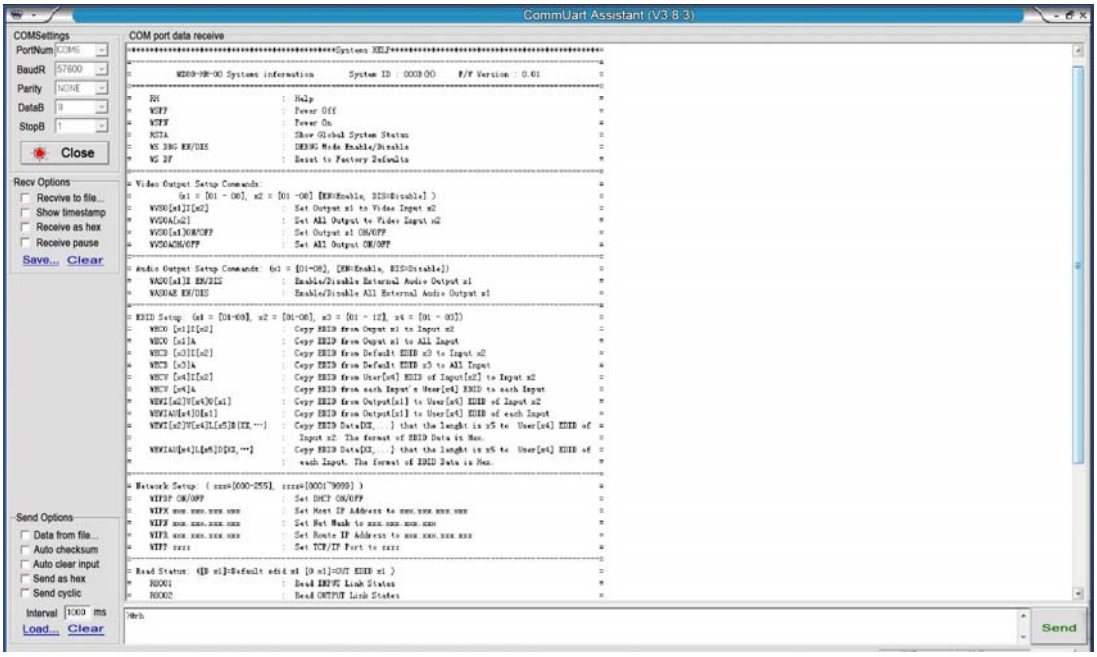
8. Telnet/RS232 Command Control

1). Open CommUart Assistant.

2). Comport setting:

Baud Rate:	57600 bps
Parity:	None
Data Bits:	8 bit
Stop Bits:	1 bit

3). Enter Port Command in Send options.



4). If you need check the command, enter “>@ RH” and “enter” key, then click “Send”.

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=-------------------------------------------------------------------------------------------------------------=
=    RH                          :  Help                                                                     =
=    WSPF                        :  Power Off                                                                =
=    WSPN                        :  Power On                                                                 =
=    RSTA                        :  Show Global System Status                                                =
=    WS DBG EN/DIS               :  DEBUG Mode Enable/Disable                                                =
=    WS DF                       :  Reset to Factory Defaults                                                =
=-------------------------------------------------------------------------------------------------------------=
= Video Output Setup Commands:                                                                               =
=          (x1 = [01 - 08], x2 = [01 -08] [EN=Enable, DIS=Disable] )                                         =
=    WVSO[x1]I[x2]               :  Set Output x1 to Video Input x2                                          =
=    WVSOA[x2]                   :  Set All Output to Video Input x2                                         =
=    WVSO[x1]ON/OFF              :  Set Output x1 ON/OFF                                                     =
=    WVSOAON/OFF                 :  Set All Output ON/OFF                                                    =
=-------------------------------------------------------------------------------------------------------------=
= Audio Output Setup Commands: (x1 = [01-08], [EN=Enable, DIS=Disable])                                      =
=    WASO[x1]E EN/DIS            :  Enable/Disable External Audio Output x1                                  =
=    WASOAE EN/DIS               :  Enable/Disable All External Audio Output x1                              =
=-------------------------------------------------------------------------------------------------------------=
= EDID Setup: (x1 = [01-08], x2 = [01-08], x3 = [01 - 12], x4 = [01 - 03])                                   =
=    WECO [x1]I[x2]              :  Copy EDID from Ouput x1 to Input x2                                      =
=    WECO [x1]A                  :  Copy EDID from Ouput x1 to All Input                                     =
=    WECD [x3]I[x2]              :  Copy EDID from Default EDID x3 to Input x2                               =
=    WECD [x3]A                  :  Copy EDID from Default EDID x3 to All Input                              =
=    WECU [x4]I[x2]              :  Copy EDID from User[x4] EDID of Input[x2] to Input x2                    =
=    WECU [x4]A                  :  Copy EDID from each Input's User[x4] EDID to each Input                  =
=    WEWI[x2]U[x4]O[x1]          :  Copy EDID from Output[x1] to User[x4] EDID of Input x2                   =
=    WEWIAU[x4]O[x1]             :  Copy EDID from Output[x1] to User[x4] EDID of each Input                 =
=    WEWI[x2]U[x4]L[x5]D{XX,…}   :  Copy EDID Data{XX,...} that the lenght is x5 to  User[x4] EDID of       =
=                                :   Input x2. The format of EDID Data is Hex.                               =
=    WEWIAU[x4]L[x5]D{XX,…}      :  Copy EDID Data{XX,...} that the lenght is x5 to  User[x4] EDID of        =
=                                :    each Input. The format of EDID Data is Hex.                            =
=-------------------------------------------------------------------------------------------------------------=
= Network Setup: ( xxx=[000-255], zzzz=[0001~9999] )                                                         =
=    WIPDP ON/OFF                :  Set DHCP ON/OFF                                                          =
=    WIPH xxx.xxx.xxx.xxx        :  Set Host IP Address to xxx.xxx.xxx.xxx                                   =
=    WIPN xxx.xxx.xxx.xxx        :  Set Net Mask to xxx.xxx.xxx.xxx                                          =
=    WIPR xxx.xxx.xxx.xxx        :  Set Route IP Address to xxx.xxx.xxx.xxx                                  =
=    WIPP zzzz                   :  Set TCP/IP Port to zzzz                                                  =
=-------------------------------------------------------------------------------------------------------------=
= Read Status: ([D x1]=Default edid x1 [O x1]=OUT EDID x1 )                                                   =
=    R8001                       :  Read INPUT Link States                                                   =
=    R8002                       :  Read OUTPUT Link States                                                  =
=    R8003                       :  Read INPUT HDCP States                                                   =
=    R8004                       :  Read OUTPUT HDCP States                                                  =
=    R8006                       :  Read OUTPUT Channel Set States                                           =
=    R8007                       :  Read OUTPUT ON/OFF States                                                =
=    R8008                       :  Read External Audio Output Enable States                                 =
=    R8009                       :  Read INPUT EDID Set States                                               =
=    R8010[x1]                   :  Read INPUT x1 EDID Data                                                  =
=    R8011[x1]                   :  Read OUTPUT x1 EDID Data                                                 =
=    R8012                       :  Read Network States                                                      =
=-------------------------------------------------------------------------------------------------------------=
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