HDMI Matrix Switcher

User Manual

Model : **HE04M**

4 x 4 HDMI (HDBaseT)CAT5e Matrix Switcher

Introduction

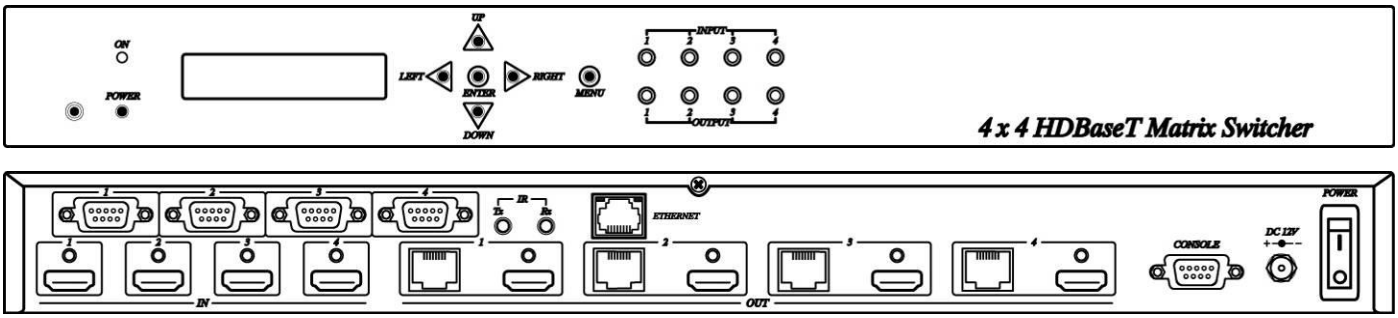
HE04M is a 4 x 4 HDMI matrix switcher which supports the resolution up to 1080p@60Hz 12bit. The matrix can not only route 4 sources to 4 displays but also extend 4 HDMI and IR signal for 100M over HDBaseT™ technology.
With HE04M, you're able to route different HDMI sources using mobile APP, Web GUI, IR remote, RS232 and front panel at will.

Features

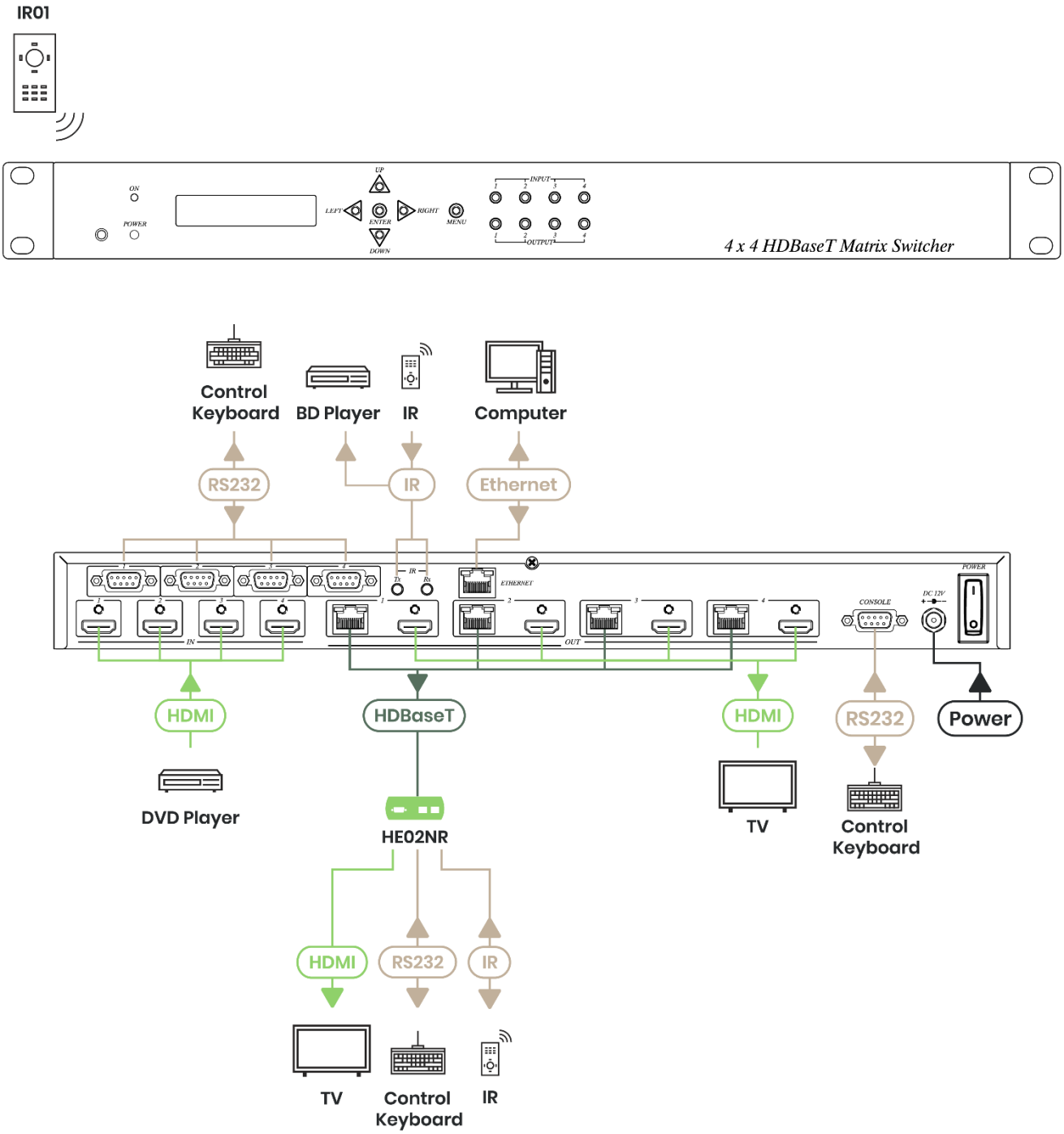
- Resolution up to 1080p@60Hz.
- Signal extension up to 100 meters over CAT5e/6.
- Built-in 4 HDMI local loop-out ports and 4 remote HDBaseT™ RJ45 ports.
- Supports IR distributing function to control connected monitors.
- Managed via front panel buttons, IR remote, RS232, Ethernet, mobile Android/ iOS APP.

1.0 HE04M Panel View

HE04M



2.0 HE04M Connection View



* Under dual Output connection: local HDMI port or remote RJ45 termination
Once you link both HDMI & HDBaseT connection, the output will be effected HDMI port only. For HDBaseT active output, you must disconnection HDMI output link.

3.0 Keypad and Leds

3.1 Back Panel Switch

POWER	Light on	Power on
	Light off	Power off

3.2 Front LED Indication

ON		BLUE	Power on
		RED	Standby
		LED off	Power Off
INPUT	1, 2, 3, 4	BLUE	Presence signal indication
		LED off	No signal incoming
OUTPUT	1, 2, 3, 4	BLUE	HDMI output indications
		RED	HDBaseT output indication
		LED off	Output unlink

3.3 Standby Mode

The IR Remote only could control POWER on/off.

Front Button Function

Power	Power on/standby
UP	Up
DOWN	Down
LEFT	Left
RIGHT	Right
ENTER	Select confirm key
MENU	Back to main menu

*When the sub-menu setting changed, press the ENTER key to complete the setting.
If no press ENTER key, then the setting will be failed.

3.4 LCM Panel Function

Power on Main Screen

When the power is on and the main screen appears

4 X 4 HDMI MATRIX

Channel Setting on Main Screen

The Matrix will jump to channel setting screen after 10 seconds, press the MENU key to enter the main.

OUT	1	2	3	4
IN	1	2	3	4

Main MENU Option

*1. SWITCH
2. RS-232
3. IR TX
4. IR RX
5. HDBaseT IR ID
6. MATRIX IR ID
7. ETHERNET
8. EDID
9. VERSION
10. KEYLOCK
11. SCENEE

Operation

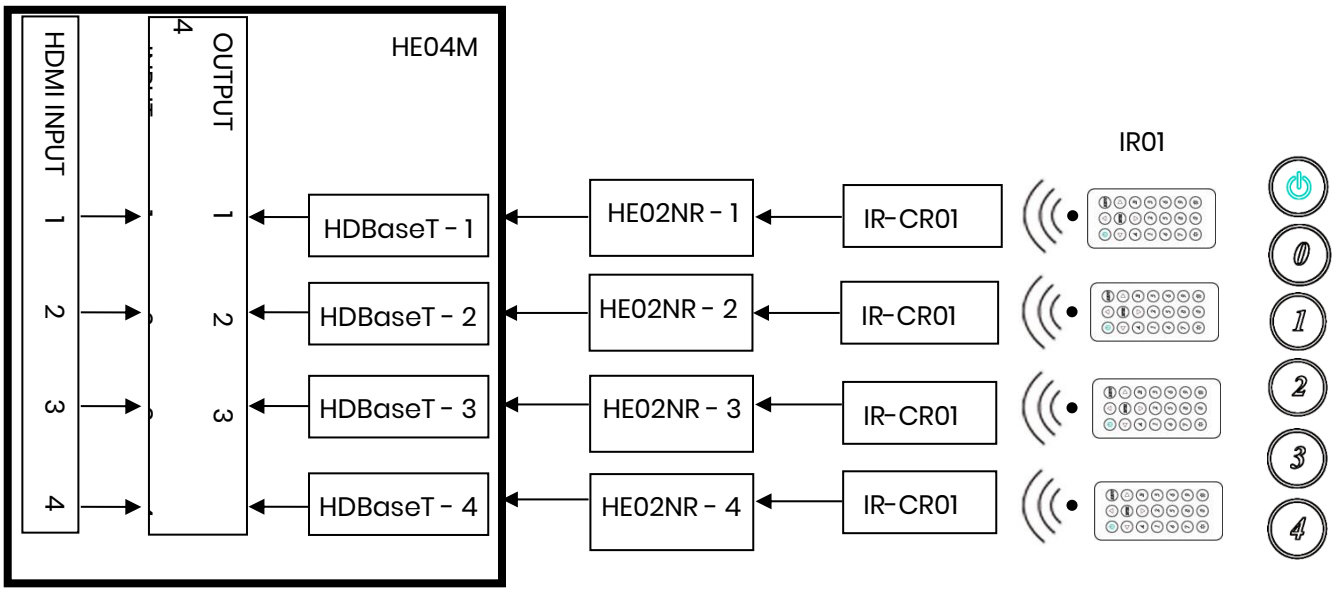
- Press UP or DOWN key to move * to select an item for setting and press ENTER key to enter into subpage.
- In MENU you could use key 1~11 of IR remote control to select the functions.
- When the selected sub-page setting is completed, press the MENU button to return to the main page

4.0 LCM Main MENU Function Operation

4.1 Switch (Default: 1 2 3 4)

OUTPUT	1	2	3	4
INPUT	1	2	3	4

This function is used to switch the input/output port. Enter the SWITCH menu. Press the ENTER key, then the LCM second line INPUT will flash. Press LEFT or RIGHT button to select the output to be modified. Then press UP or Down button to select the input port. After that, press ENTER to confirm setting.
At HDBaseT remote port you could use IR01 remote control to do a quick input selection 1 ~ 4 represent select HDMI input ports 1~4. Press ⏻ or 0 to turn off the video output.
(See cap. 4.5 HDBaseT IR ID)

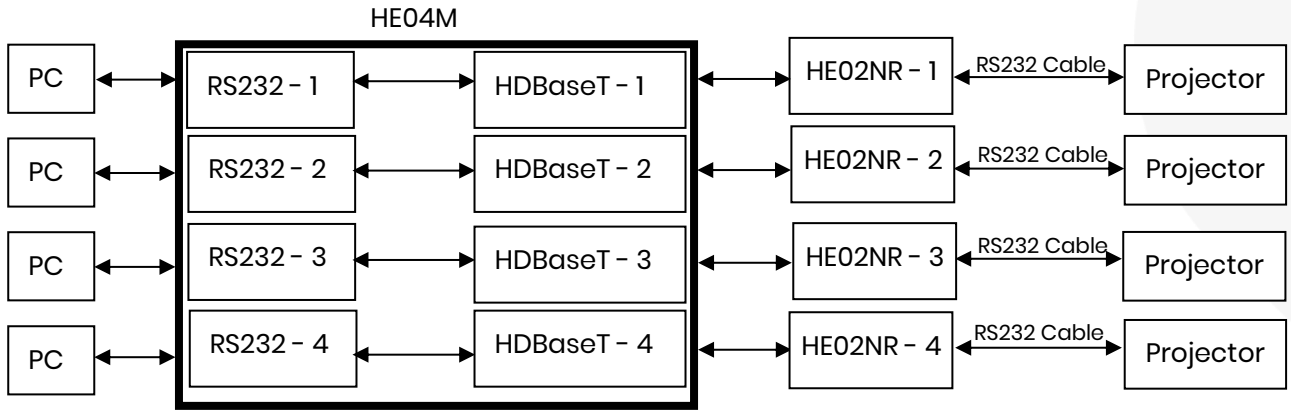


4.2 RS-232 (Default: FIX MODE)

HDBaseT RS-232 extender function works in two mode. Enter RS-232 MENU, press ENTER. The * will flash, then press UP or DOWN button to select FIX MODE or MATRIX MODE. Press ENTER key to confirm setting.

FIX MODE is one to one transmission, RS-232 port 1 only work with HDBaseT port 1, RS-232 port 2 only work with HDBaseT port 2, and so on...

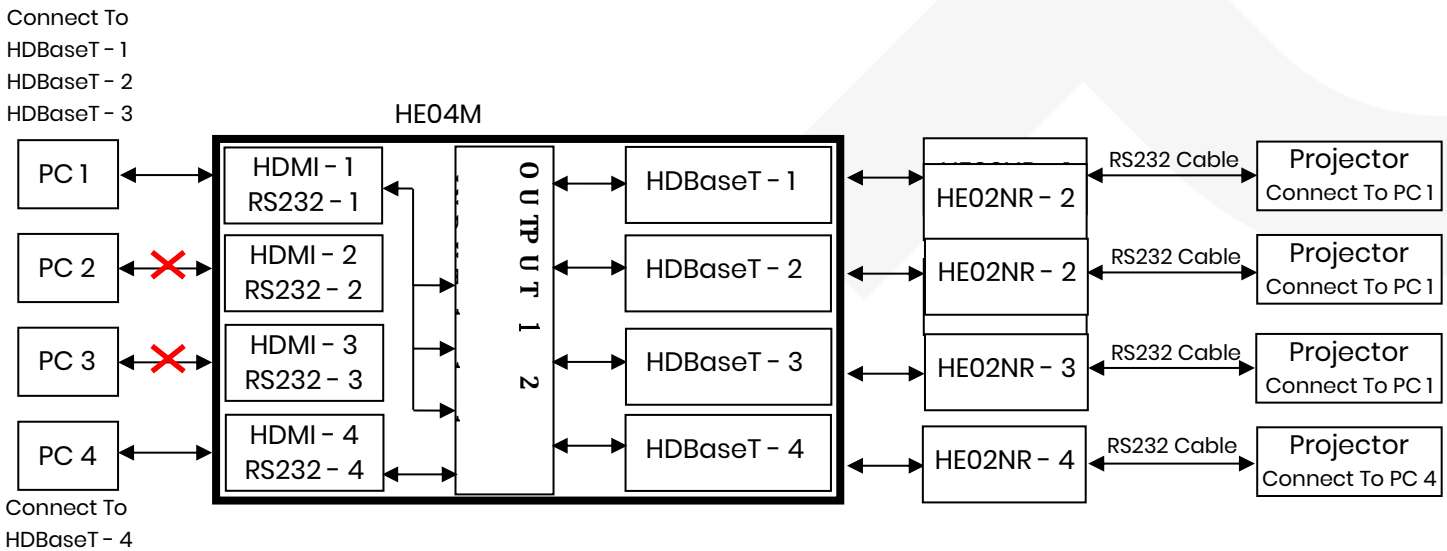
```
*   FIX    MODE
    MATRIX MODE
```



RS-232 SETTING : FIX MODE

RS-232 MATRIX MODE is based on the Status of the Matrix. The RS-232 transmission will follow the HDMI switching. In the example below, RS-232 port 1 work with HDBaseT port 1, 2 and 3. RS-232 port 4 works with HDBaseT port 4

```
    FIX    MODE
*   MATRIX MODE
```



RS-232 SETTING : MATRIX MODE

4.3 IR TX (From matrix to remote locations) (Default IR TX: O O O O)

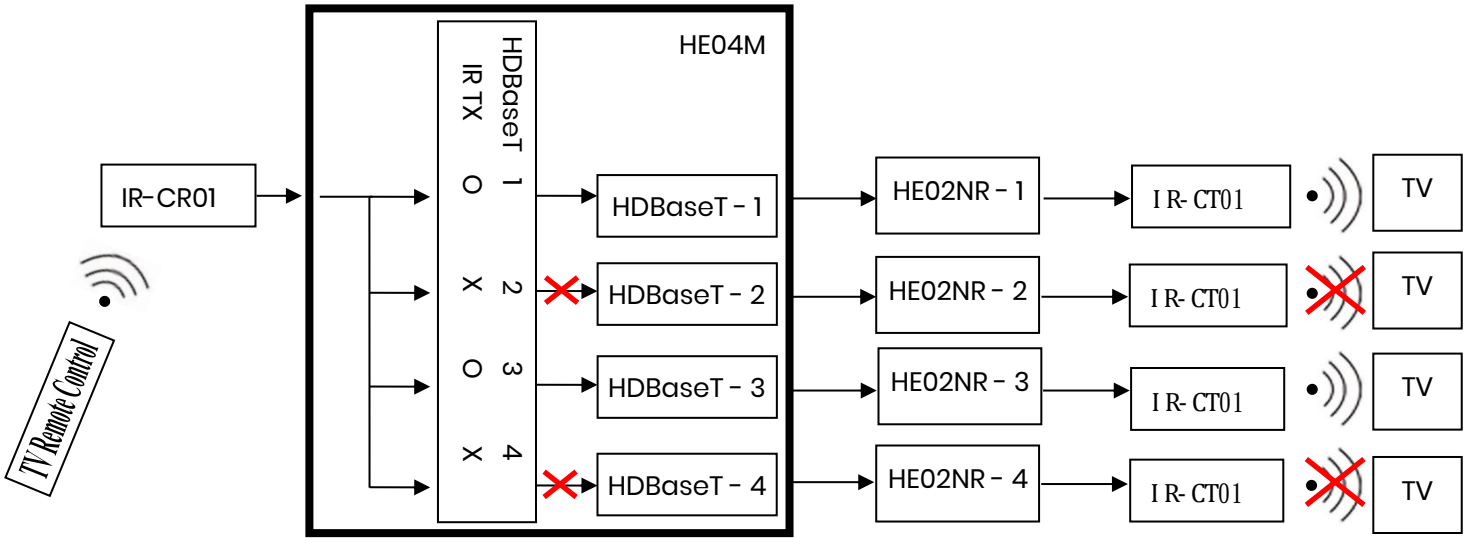
This function setup the IR signal whether from MATRIX, by IR Rx input jack, is sent to HDBaseT ports. Setting O the transmission is enabled, setting X transmission is off.

This is the typical application when the user wants to control from the matrix side the remote destination like a TV.

After entering IR TX menu, press ENTER. Then LCM second line of text will flash. Press RIGHT or LEFT button to select the IR TX output to be modified Press press UP or DOWN button to select O or X. Then press ENTER to confirm setting.

HDBaseT	1	2	3	4
IR TX	O	X	O	X

O : on X : off



4.4 IR RX (Default IR RX: O O O O)

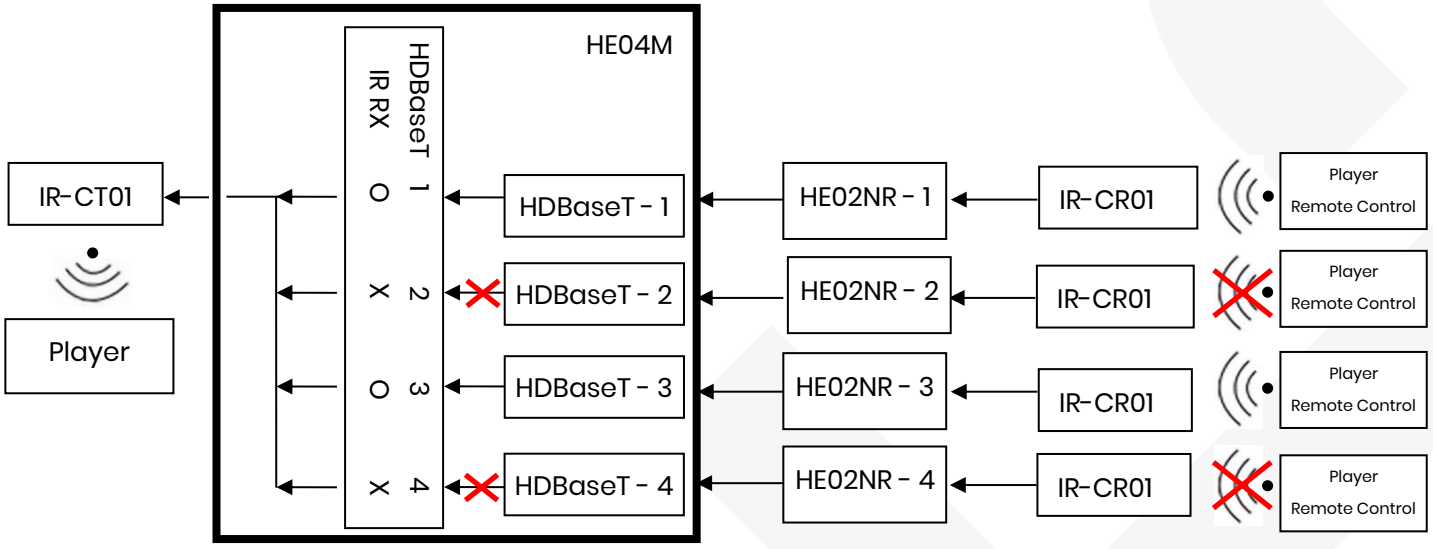
This function setup the IR signal whether from HDBaseT location is sent to MATRIX to control local device through the IR Tx output jack. Setting O the transmission is enabled, setting X transmission is off.

This is a typical application when the user wants to control from the remote location a source like a DVD player.

After entering IR RX menu, press ENTER. Then LCM second line of text will flash. Press RIGHT or LEFT button to select the IR RX input to be modified. Press UP or DOWN button to select O or X. Then press ENTER to confirm setting.

HDBaseT	1	2	3	4
IR RX	O	X	O	X

O : on X : off



4.5 HDBaseT IR ID (Default IR ID: 0 1 2 3)

HDBaseT	1	2	3	4
IR ID	0	1	2	3

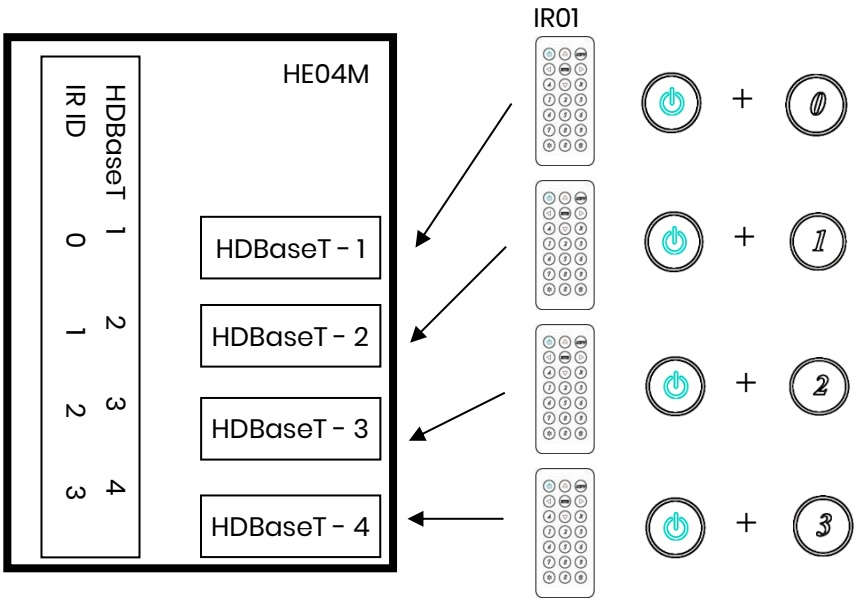
This function must be set to have different ID in order to avoid HDBaseT remote control IR01 conflicts with other devices remote control.

After entering HDBaseT IR ID menu, press ENTER. Then LCM second line of text will flash. Press RIGHT or LEFT button to select the IR ID input to be modified. Press UP or DOWN button to select the ID. Then press ENTER to confirm setting.

When you finish the HDBaseT IR ID setting, the HDBaseT remote controls IR01 must also be set with the same ID in order to perform the right operations. (See 5.2)

Remote IR ID setting mode: Press and hold the POWER button, then press the number button which can be set from 0 to 9, total 10 groups. (See 5.2)

These settings on IR01 remote control have to be done the first time you use the IR01 or when you change the batteries.



4.6 Matrix IR ID (Default IR ID: 4)

MATRIX IR ID 4

This function must be set to match the Matrix remote control IR01 with the matrix itself. Conflicts with other devices remote control is therefore avoided.

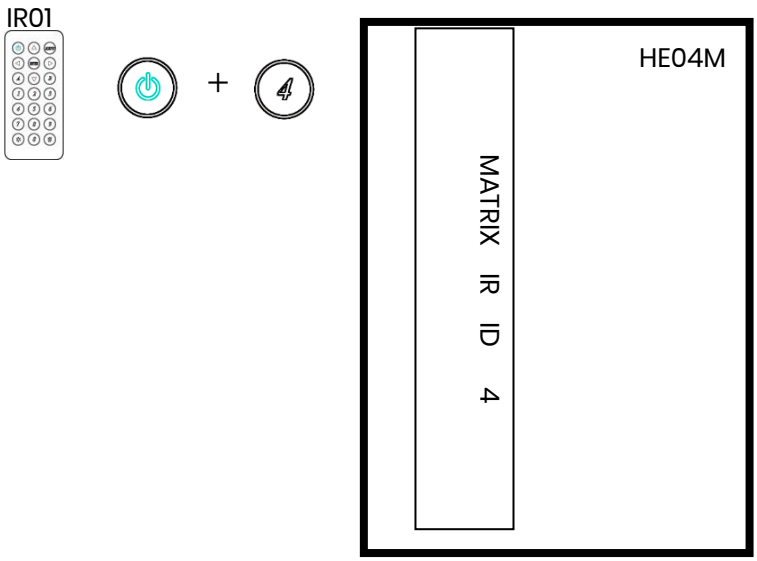
After entering MATRIX IR ID menu, press ENTER, the LCM LINE 1 number will flash. Then Press UP or DOWN button to select the number, and then press ENTER to confirm.

When finish MATRIX IR ID setting, MATRIX remote control IR01 must also set the same ID in order to operation in normal.

When you finish the MATRIX IR ID setting, the remote control IR01 that will control locally the matrix, also is set with the same ID in order to perform the right operations. (See 5.1)

Remote IR ID setting mode: Press and hold the POWER button, then press the number button which can be set from 0 to 9, total 10 groups. (See 5.1)

These settings on IR01 remote control have to be done the first time you use the IR01 or when you change the batteries.



4.7 Ethernet

* IP Address
Subnet Mask
Gateway
DHCP Client
Media Type
MAC Filter

IP Address: (Default: 192.168.0.200)

IP Address
192.168. 0.200

This function can be setup MATRIX host intranet "IP Address", press the ENTER, the left-most number of second row will flash, then press the UP or DOWN button to change the numbers, , press LEFT or RIGHT to move to another location, the move to a position number will flash, press ENTER to complete the setting.

Subnet Mask: (Default 255.255.255.0)

Subnet Mask
255.255.255.000

This function can be setup MATRIX host intranet "Subnet Mask", press the ENTER, the left-most number of second row will flash, then press the UP or DOWN button to change the numbers Press the ENTER, , press LEFT or RIGHT to move to another location, the move to a position number will flash, press ENTER to complete the setting.

Gateway: (Default 192.168.0.1)

Gateway 192.168. 0. 1

This function can be setup MATRIX host intranet “Gateway”, press the ENTER, the left-most number of second row will flash, then press the UP or DOWN button to change the numbers Press the ENTER, , press LEFT or RIGHT to move to another location, the move to a position number will flash, press ENTER to complete the setting.

DHCP Client: (Default Disable)

DHCP Client Disable

When DHCP Clients setup at “Enable”, the MATRIX host will automatically get IP Address, Subnet Mask, Gateway, if setup at “Disable”, the MATRIX Host IP Address need go through “ ETHERNET” menu to set IP Address, Subnet Mask, Gateway, to press the ENTER, the second row will flash, then press the UP or DOWN to select DISABLE, ENABLE, then press ENTER to complete the setting.

Media Type: (Default 100M)

Media Type 100M

This function can be setup MATRIX host intranet “Media Type, press the ENTER, the second row will flash, then press the UP or DOWN button to select 10M, 100M, AUTO, press ENTER to complete the setting.

MAC Filter: (Default Disable)

MAC Filter can be setup with registered MAC Address in order to connect the MATRIX host Web UI, MAC Address required by the Web page to fill in, this function can only be setup at “DISABLE”, “ENABLE”, then to press the ENTER, the second row will flash, then press the UP or DOWN to select DISABLE, ENABLE, then press ENTER to complete the setting.

4.8 EDID (Default: LPCM-2CH)

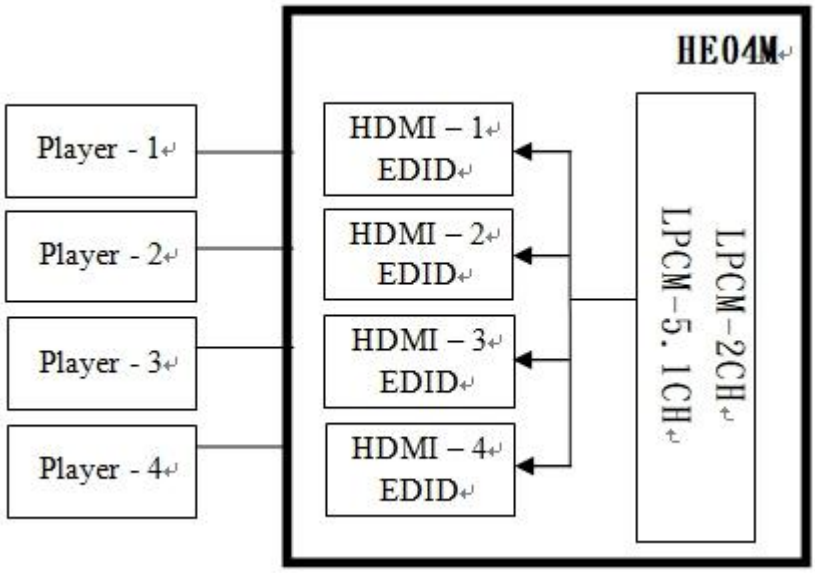
Because the player output display resolution will be based on TV EDID, this Matrix provides four default EDID modes:” BUILD-IN MODE”, “COPY MODE”, “I. EDID MODE” and “PC EDID MODE”.

BUILD-IN MODE COPY MODE

4.8.1 Build-in Mode

This mode supports video resolution 480p, 720p, 1080i / p at 24/50/60Hz, support LPCM two-channel audio and 5.1 channel . After enter BUILD-IN MODE menu, press UP or DOWN key to select LPCM-2CH or LPCM-5.1CH, then press ENTER to confirm setting.

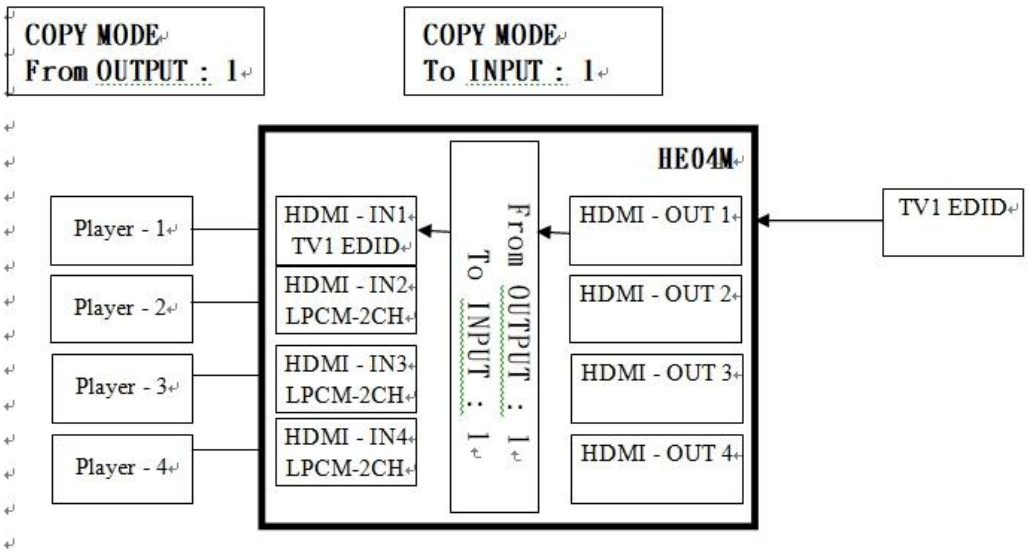
LPCM-2CH LPCM-5.1CH



4.8.2 Copy Mode

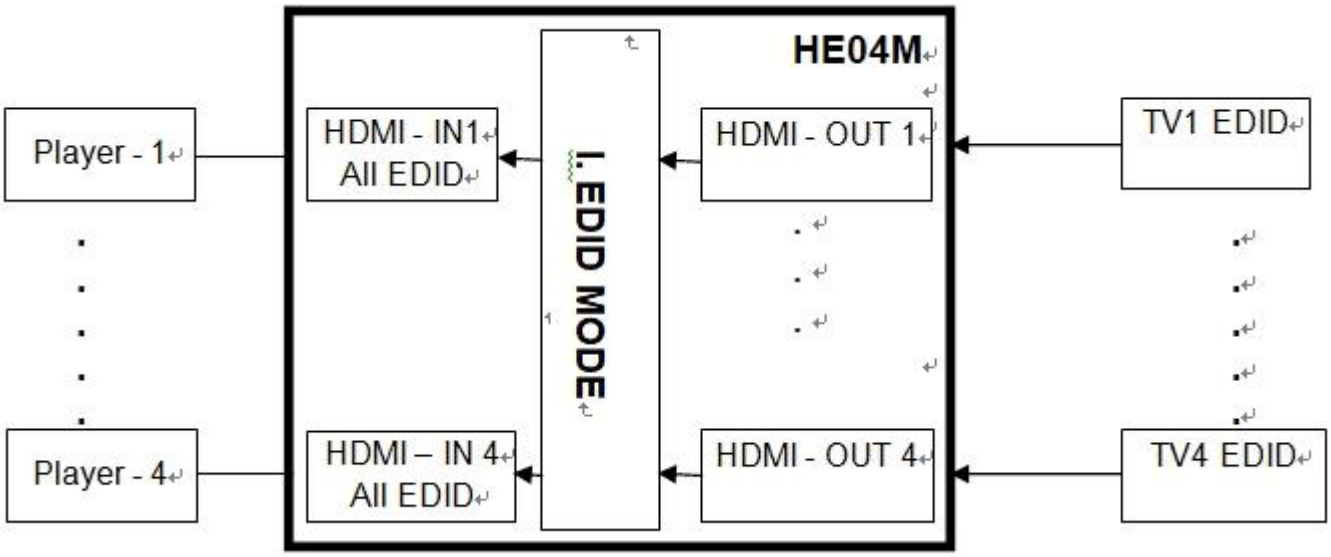
To fully support the TV resolution and audio mode, the matrix provides “copy mode” to copy TV EDID for input source reference. When use the copy mode, recommend to copy the lowest resolution TV EDID. Otherwise it may cause no picture display if the TV resolution is not able to support higher resolution.

After entering COPY MODE menu, press UP or DOWN button to select the OUTPUT (1 to 4) and press ENTER, then press UP or DOWN button to select the INPUT (1 to 4 or ALL) and press ENTER to confirm. Only connected output will be shown in OUTPUT list.



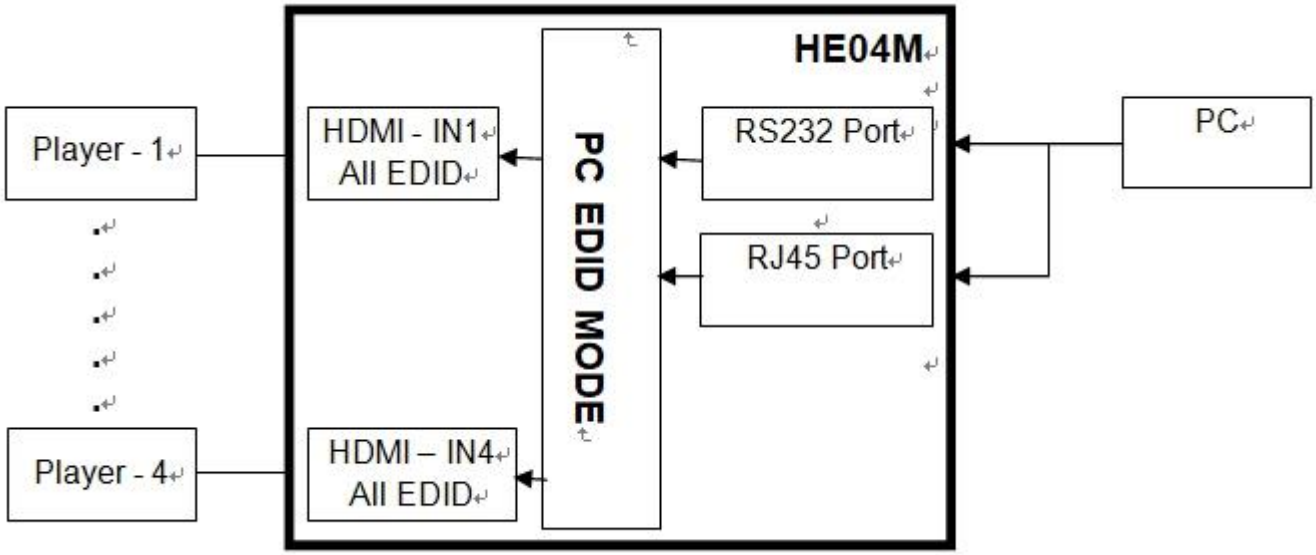
4.8.3 I. EDID Mode

In this mode MATRIX will integrate EDID from all HDMI OUTPUT to a greatest common factor resolution to all HDMI INPUT.



4.8.4 PC EDID Mode

In this mode you could upload EDID file from RS232 or RJ45 port of PC to MATRIX, please refer user manual of EDID Loader



4.9 Version

Display HE04M Matrix firmware version

4.10 Key lock

Panel button/IR remote lock function is to avoid any wrong button press. Under key lock mode press "POWER + MENU" to unlock

4.11 Scene

SCENE function provides 10 sets of channel setting to fast reload for different application.

LOAD SAVE

LOAD

Reload saved scene, press UP or DOWN to select the number of setting ENTER to load. At main screen you could use IR01 remote button A for quick load function, button 1~0 to select port number to load.

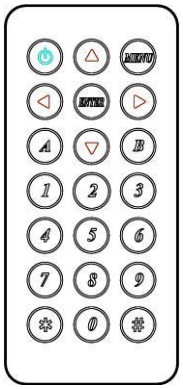
LOAD 1 1 2 3 4 5 6 7 8 9 10

SAVE

Save current channel setting, press UP or DOWN to select the number and ENTER to save.
At main screen you could use IR01 remote button B for quick save function, button 1~0 to select port number to save.

SAVE 1

5.0 Remote Control Function (IR01)



To command the matrix locally, setup the remote control IR01 ID with the same code of the Matrix (see 4.6). The default code is 4. (Power+4)
To command from remote HDBaseT output which input port must be routed on the output, setup the remote control IR01 according to chapter 4.5
-Power+0 enable to work on Output 1
-Power+1 enable to work on Output 2

-Power+2 enable to work on Output 3
-Power+3 enable to work on Output 4

Warning
These settings have to be done the first time you use the IR01 or when you change the batteries.

IR ID setup
Press and hold POWER button, then press Number key.

Remote control button define

[Symbol]	[Local Side]	[Remote Side]
Power	On/Standby(same as Matrix)	Turn off output
LEFT	Left (same as Matrix)	No function
RIGHT	Right (same as Matrix)	No function
UP	Up (same as Matrix)	No function
DOWN	Down (same as Matrix)	No function
ENTER	Confirm (same as Matrix)	No function
MENU	Menu (same as Matrix)	No function
A	LOAD	No function
B	SAVE	No function
	Quick key 1	Select input 1
	Quick key 2	Select input 2
	Quick key 3	Select input 3
	Quick key 4	Select input 4
	Quick key 5	No function
	Quick key 6	No function
	Quick key 7	No function
	Quick key 8	No function
	Quick key 9	No function
	Quick key 0	Turn off output

Local Side (HE04M Matrix) Remote Control Quick Key Operation

For example: to connect output port 1 to input port 4, press the quick key 1 (OUTPUT 1) and then press the quick key 4 (INPUT 4).

Remote side (HDBaseT) remote control quick key operation:
Press 1 to 4 to select the source input, press 0 to turn off the output.

* Under using quick key operation, LCM screen will jump to the output / input setting page, it won't allow to use the front panel button to operate the HE04M Matrix.

6.0 Remote Control Function

HE04M support RS232 and TCP/IP control by same command as below:

6.1 RS232 Console

Connect the RS232 CONSOLE port to the COM port of the host by an F/M RS232 straight cable (pin 2 to pin 2; pin 3 to pin 3; pin 5 to pin 5).
Communication format is 9600, 8, N, 1 (9600 bps, 8 data bits, no parity check, 1 stop bit)

For Ethernet TCP/IP (Winsock), default IP address is 192.168.0.200, Port: 47011.

6.2 Operation Instruction format

Command + ∆(Space) + Parameter + Enter

[Command]	[Description]
POWER∆[y]	Power on/off
TX[n]∆[n]	Set RXn to TXn
RX[n]∆[m,m,m,m...]	Set RXn to multiple TXm,m,m,m...
RS232∆[a]	Set RS232 fix or matrix mode
IR_TX∆[b]	Set TX IR on/off
IR_RX∆[b]	Set RX IR on/off
HDBASET_ID∆[p,p,p,p]	Set HDBaseT IR ID
MATRIX_ID∆[p]	Set Matrix IR ID

EDID_COPY△[n]	Copy EDID from TX n
SAVE△[n]	Save setting to #n
LOAD△[n]	Load setting from #n
KEY△[y]	Panel button& IR remote control Lock/Unlock
DHCP△[y]	DHCP client on/off
IP_ADDRESS△[x.x.x.x]	Set Matrix IP address
SUBNET_MASK△[x.x.x.x]	Set Matrix subnet mask
GATEWAY△[x.x.x.x]	Set Matrix gateway
MEDIA_TYPE△[z]	Network speed select
MAC_FILTER△[y]	Mac filter on/off
STATUS	Show connection status
VERSION	Show firmware version
HELP	Help

[Symbol]	[Parameter]
m	01~04, ff=ALL
n	00=off, 01~04=1~4
a	FIX | MATRIX
b	0 or X | 0 or X | 0 or X | 0 or X (0 = on| X = off)
p	00~09=0~9
x	0~255
y	00=off, 01=on
z	00=auto, 01=10M, 02=100M

Example

- To route input 4 to output 1, send the following string.

TX01△04Enter

- To route input 2 to all output, send the following string.

RX02△ffEnter

- To route input 2 to output 1,2,4, send the following string.

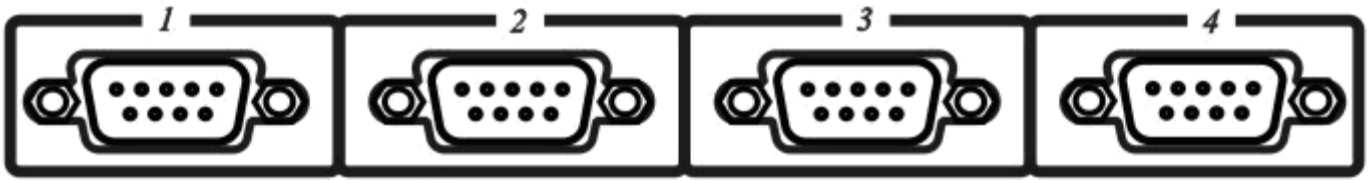
RX02△01,02,04Enter

- To put in standby the matrix, send the following string.

POWER△00Enter

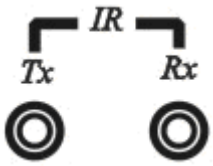
Commands are case insensitive.
The Matrix will reply OK once string is correct, NG in case of incorrect string

7.0 RS-232 Extender Function (Default: FIX MODE)



*Cable connection please refers to the connection view page.
*Transmission baud rate up to 115200 bps.

8.0 Remote Side IR Extender Function



Tx Function

Receiving IR signal via the 4 sets HDBaseT ports, it sends out the IR signal by Tx jack (connect with 3.5 mm IR Emitter) to control source device.

Rx Function

Feeding IR signal to Rx jack (connect 3.5 mm IR Receiver cable) it controls remote destinations at the 4 sets HDBaseT ports at the same time.

HDBaseT IR Function

Use IR01 (remote control) to control the Matrix input port switching from receiver side. (Work with IR-CR01 IR receiver cable). See chap. 4.5

Using remote control of source device or TV to control source device or TV. (Work with IR-CT01 IR emitter cable, IR-CR01 IR receiver cable).

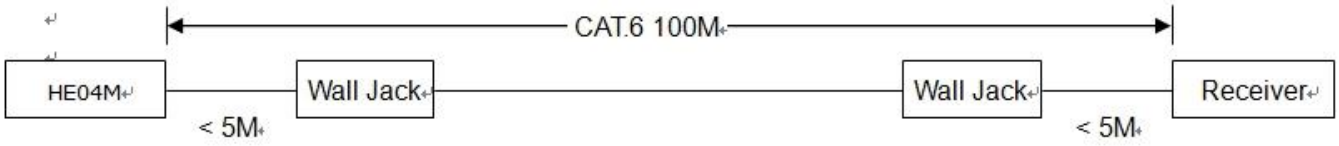
HDBaseT Linking Cable

Recommend to use high quality Cat.5e、Cat.6、Cat.6a UTP / STP or FTP cable.
AWG24 or AWG23 solid type is recommended.

HDBaseT Transmission Distance

Transmission distances up to 100 meters with AWG24 cable. Using a lower resolution won't extend to longer distance.

If the CAT5e/6 cable connections go through wall socket from the wall outlet to HE02R receiver, the cable length must less 5 meters between HE02R receiver and wall socket.
The wiring diagram as below



9.0 HDBaseT RJ45 Pin Define

Video Link (TIA/EIA-568-B)

1. Orange-white	DATA0 +
2. Orange	DATA0 -
3. Green-white	DATA1 +
4. Blue	DATA2 +
5. Blue-white	DATA2 -
6. Green	DATA1 -
7. Brown-white	DATA3 +
8. Brown	DATA3 -

Caution

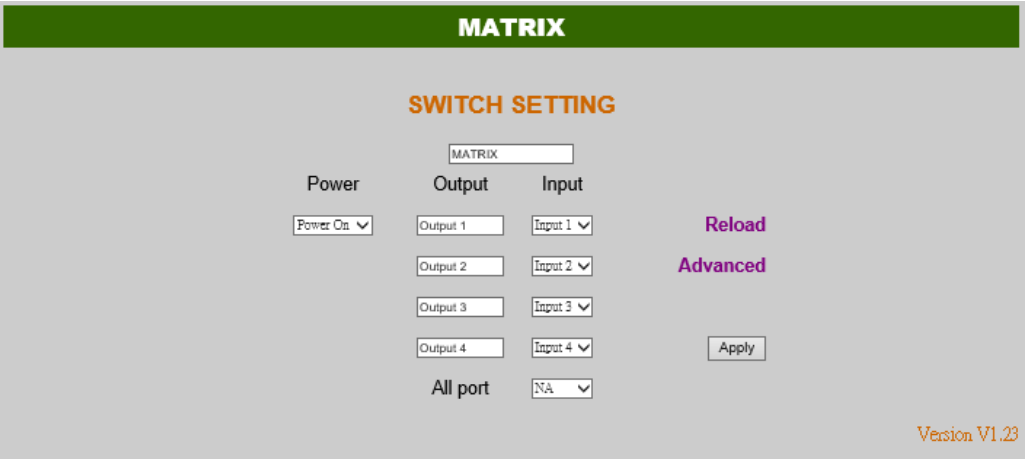
1. First time to use HE04M remote control or change new batteries must set up IR ID.
2. The wiring must away from any equipment with electromagnetic wave, i.e.: microwave, mobile phone, radio equipment, high voltage, Fluorescent light fixtures, power lines, etc.
3. HDBaseT not regular network device, do not connect with any networking equipment to avoid damage.
4. IP Address, Subnet Mask, Gateway, DHCP Client, Media Type, MAC Filter setting made by HE04M ETHERNET MENU.
5. HDBaseT IR operation: Do not make IR emitter and receiver cable too close, to avoid interference and caused wrong operation.
6. HDBaseT RS232 under distribution mode: it not able to send two devices simultaneously.

10. Ethernet Control Function

Initial IP Configuration

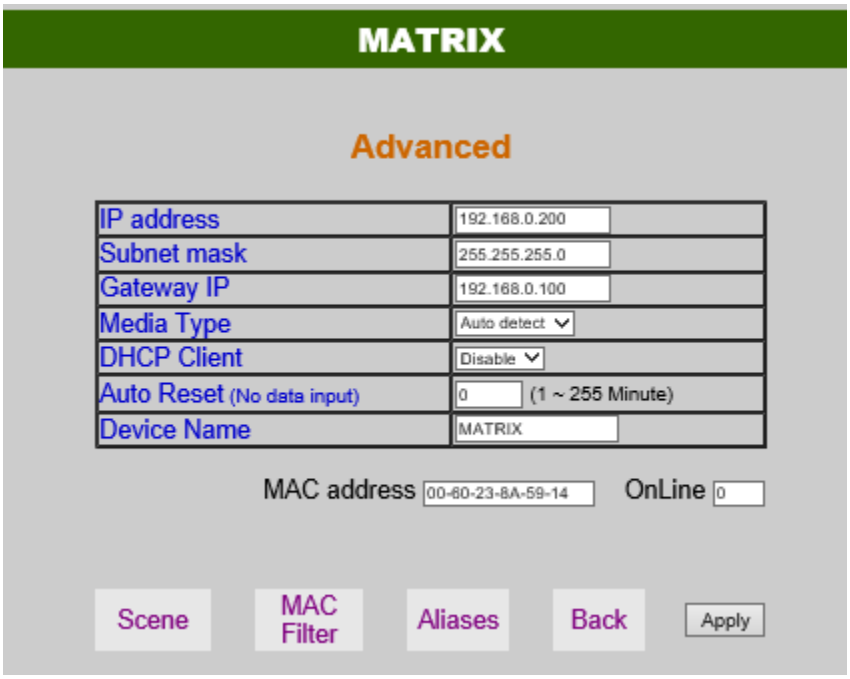
1. Setup MATRIX IP Address same as your PC with same domains. (Default 192.168.0.200)
2. MATRIX IP Address method, please refer to “ETHERNET” Chapter.
3. Input IP Address on a web page, you could link to the Web UI of the MATRIX host.
4. Web UI Operation

Switch Setting



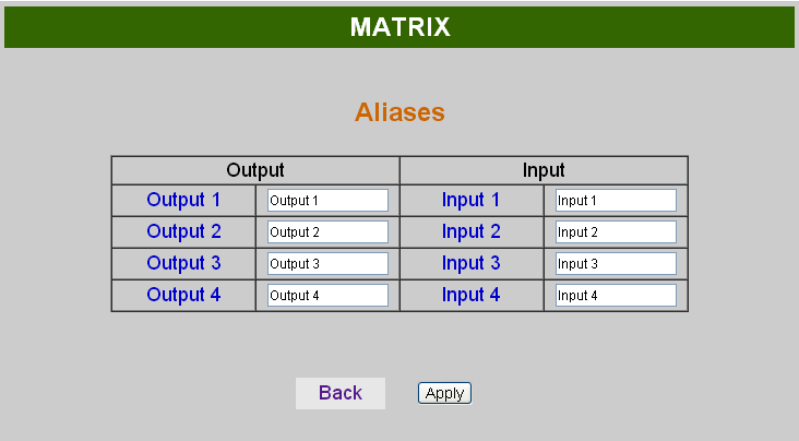
- Power: Control MATRIX power on and standby.
- Output: Display output 1~4, it can change the display name by the Aliases page.
- Input: Display input 1~4, this field is a drop down menu, this field is a drop-down menu, a drop-down menu include Input 1 ~ 4 and OFF, It can change the display name by the Aliases page.
- Reload: Get MATRIX host message.
- Advanced: Enter into the “Advanced” page.
- Apply: Complete the setting.
- All Port: Set all output from input 1~4 or off at once.

Advanced



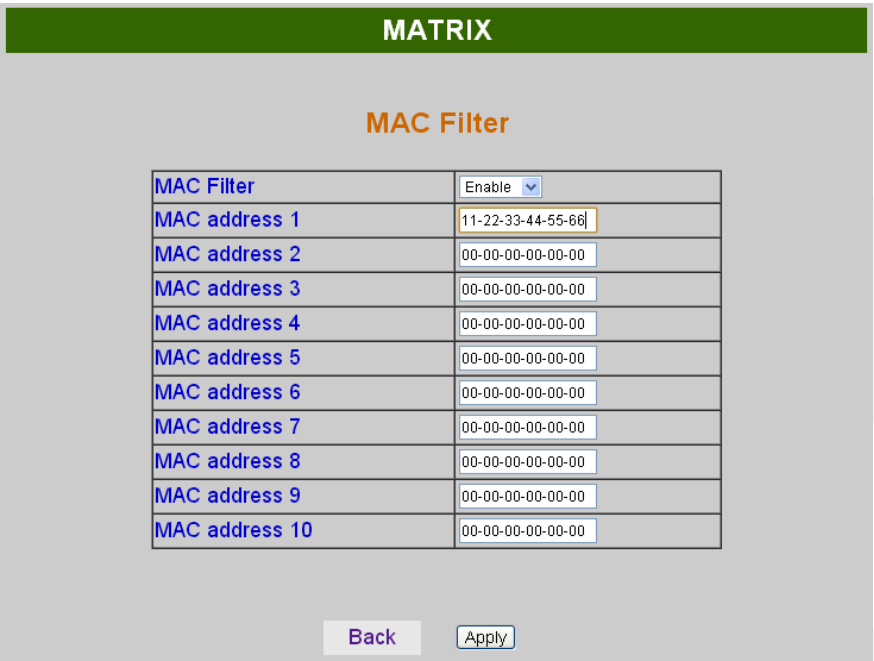
- IP address: Change IP address
- Subnet mask: Change Subnet mask
- Gateway IP: Change Gateway IP
- Media Type: Change 10 / 100 / Auto detect
- DHCP Client: When setup at Enable, the MATRIX host will automatic get IP Address、Subnet Mask、Gateway, If setup at Disable, the MATRIX host IP Address、Subnet Mask、Gateway need to set from Advanced page.
- Auto Reset: The terminal connection people will be 4 users on line at same time, this function could setup the linking time to avoid long time linking and other user cannot use. When over the setting link time, the terminal will automatically disconnect the link. . (0: no time setup, 1 ~ 255 Minute time range that can be setup)
- Scene: Click to enter Scene setup page
- MAC Filter: Enter to MAC Filter to setup page
- Aliases: Enter to Aliases to setup page
- Device Name: Can change device name
- Back: Jump back SWITCH SETTING page
- Online: Terminal connection users display, the max. 4 users on line.

Aliases



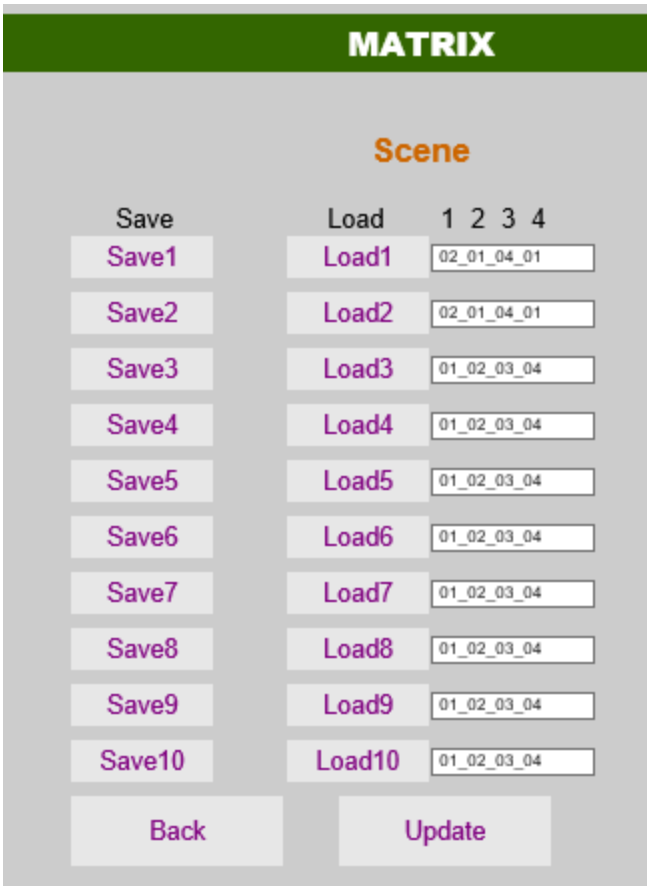
- Aliases page can change input/output name, enter Apply to finish the setting after change The new name will update and correspond to SWITCH SETTING page Output / Input.
- Press Back jump back to advanced page.

MAC Filter



- MAC Filter can be setup as registered MAC Address to link MATRIX host Web UI, the max. up to 10 groups MAC Address
- After MAC Address fill in, select Enable and press Apply to complete the setting.
- Press Back jump to advanced page.

Scene



- Save: Save 10 set of channel settings.
- Load: Reload 1 of the channel settings.
- Update: Refresh the status of Load.
- Back: Back to Advanced page.

11. Android APP Function

APP name: Matrix Controller

System Requirement

Android 4.0 and up
Size: 1.2M
Language: English, Traditional Chinese, Simplified Chinese

Google Play Download Link

https://play.google.com/store/apps/details?id=sct.com.matrixcontroller

Google Play Download QR code

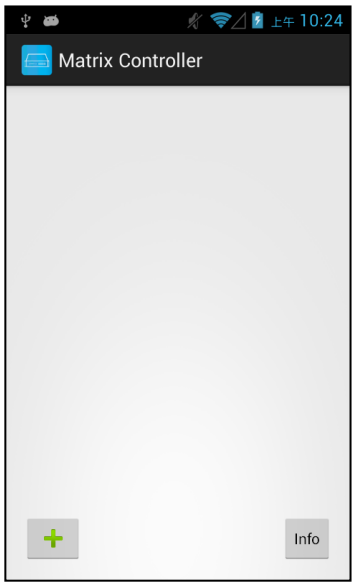
System Setting

Connect mobile phone to Wi-Fi and set the IP/ subnet mask same with matrix network segment
Default IP address of 10 by 10 matrix is 192.168.0.10
Default IP address of 4 by 4 matrix is 192.168.0.200
Default subnet mask is 255.255.255.0
You could also set to DHCP mode, please refer user manual

There are two ways to get the IP address of matrix:

1. Use APP function: Scan Device to get the IP address.
2. Use panel button or IR remote control by press [MENU], select to [ETHERNET] function and press [ENTER] to enter [IP Address] function than press [ENTER], it will show IP Address in the LCD panel of matrix

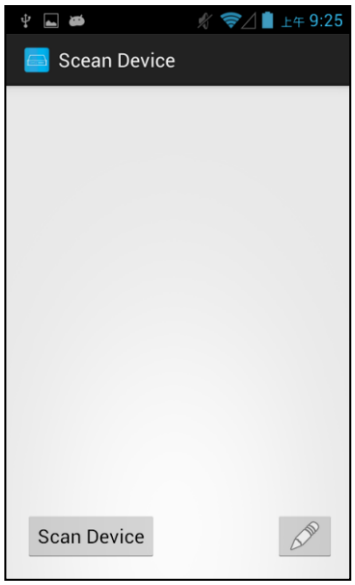
Main Page



When first time enter the APP will see the main page

Bottom left「+」to add matrix
Bottom right「Info」to show information

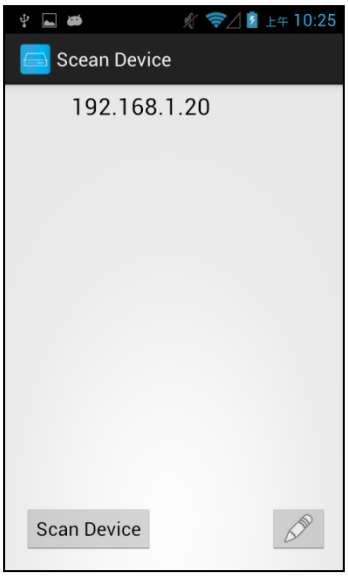
Scan Device



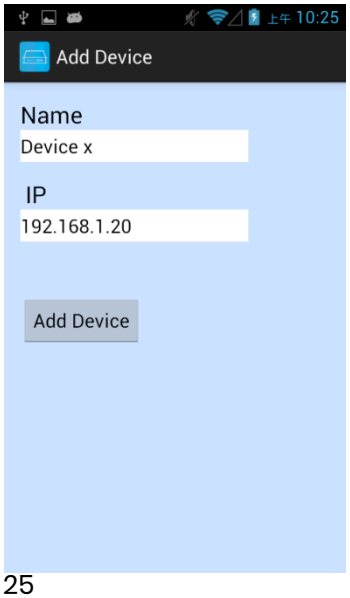
Touch「+」button at main screen to enter「Scan Device」page

Touch bottom left「Scan Device」to start scan
Touch bottom right pen icon to input the IP address manually

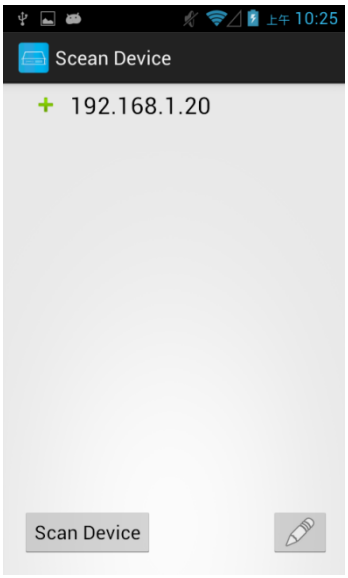
Add Matrix



After scanning it will show all matrixes in the list
Touch the IP in list to enter「Add Device」page



Enter the name of matrix then touch「Add Device」to finish setting
Notice：Name should be unique, not allow duplicate.

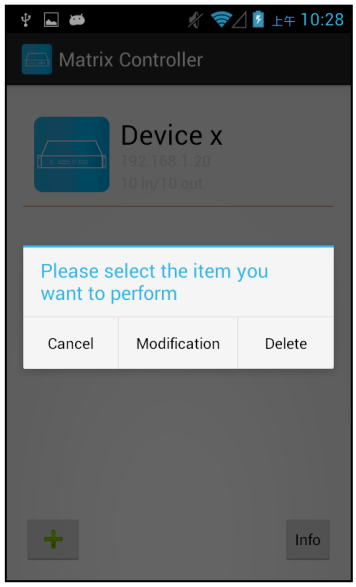


It will show「+」icon in front of the IP address when finished

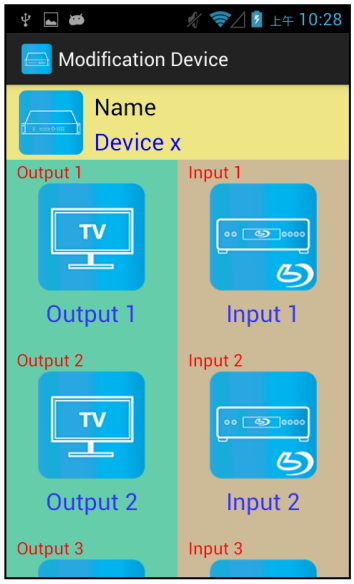
Return to main screen you will see the matrix which just add

Modify Device

Press the matrix name to show pop-up dialog

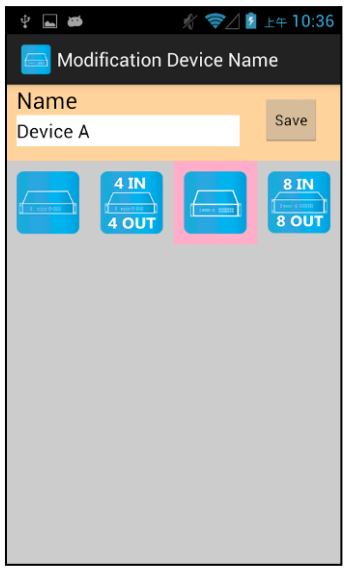


Touch「Modification」to enter modification page.

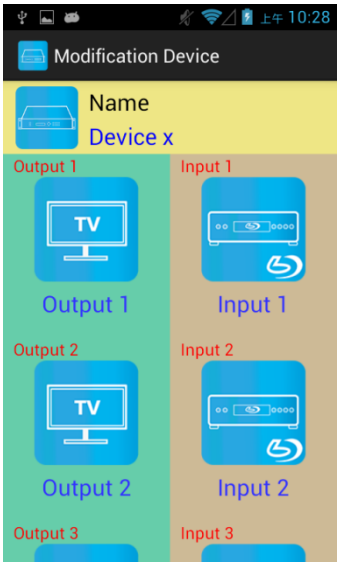


Yellow block shows matrix name and icon

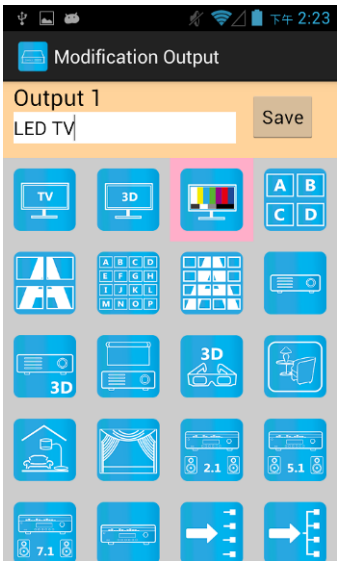
Green block shows name and icon of output devices
Brown block shows name and icon of input devices



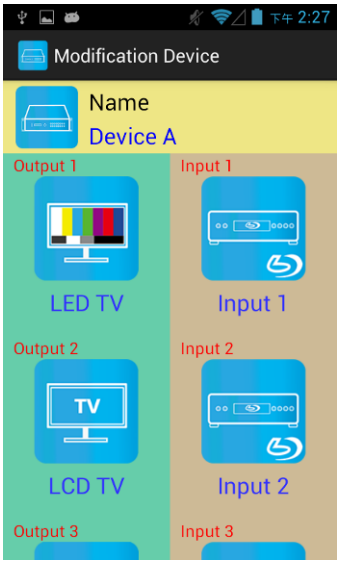
Touch yellow block to modify matrix name and icon
Input the name and select the icon you prefer then touch「Save」to finish



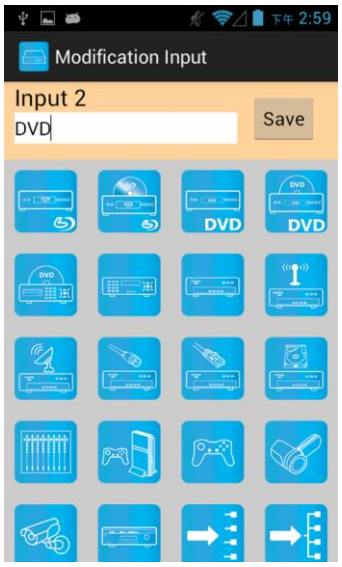
Return to Modification page you will see the matrix have been changed



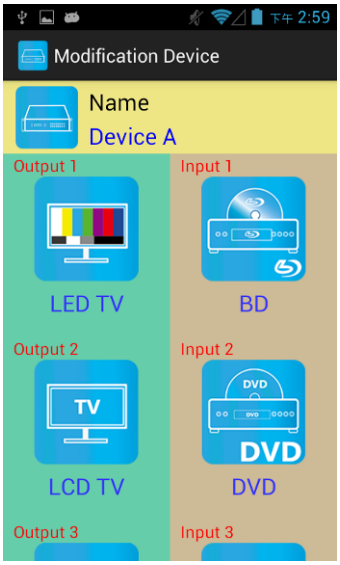
Touch green block to modify output name and icon
Input the name and select the icon you prefer then touch「Save」to finish



Return to Modification page you will see the output have been changed

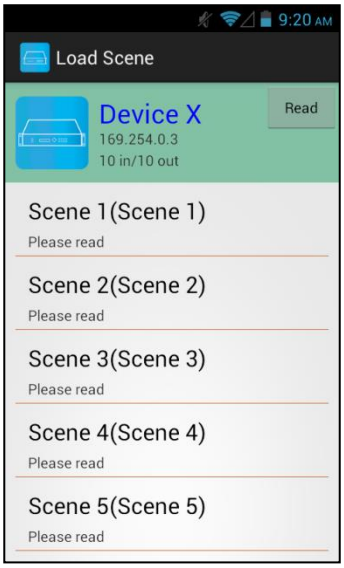


Touch brown block to modify input name and icon
Input the name and select the icon you prefer then touch「Save」to finish



Return to Modification page you will see the input have been changed

Channel Switching mode (load scene, input selection, output selection)



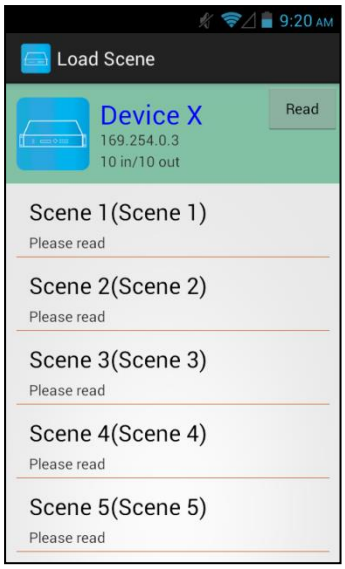
Click device name in list to enter load scene page

Slide right from load scene page to enter input selection mode (as before)

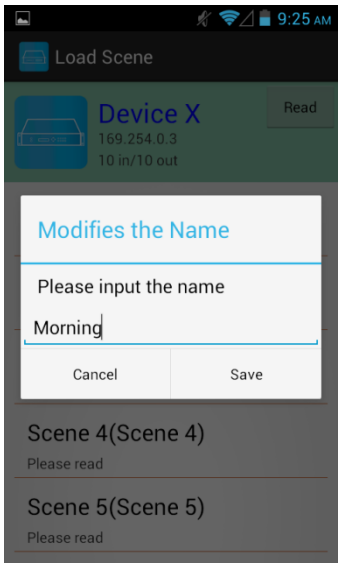
Slide left from load scene page to enter output selection mode (support multiple selection)

Load scene

Modify scene name



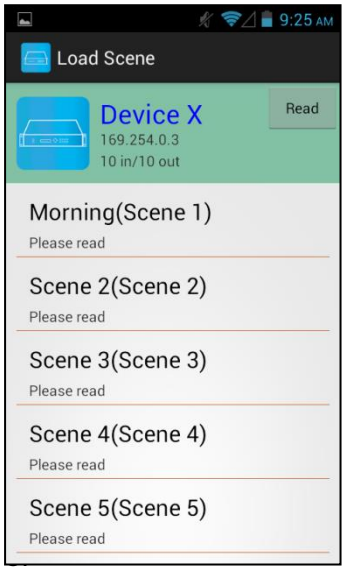
Press scene column to show pop-up dialog to modify scene name



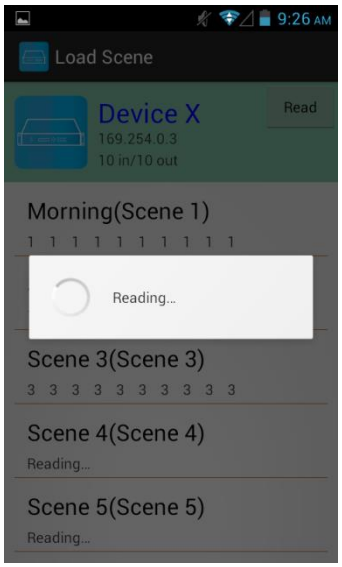
After modification touch 「Save」 to save scene name
It will return to Load Scene page automatically.

Notice：Name should be unique, not allow duplicate or empty.

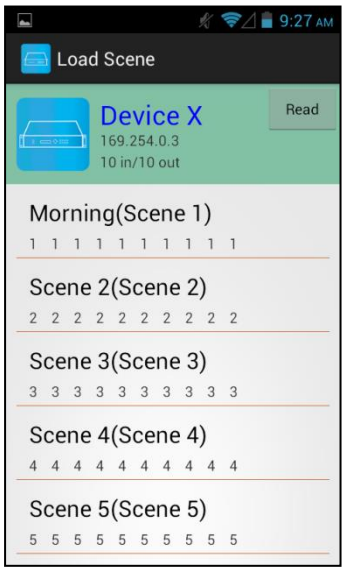
Read scene status



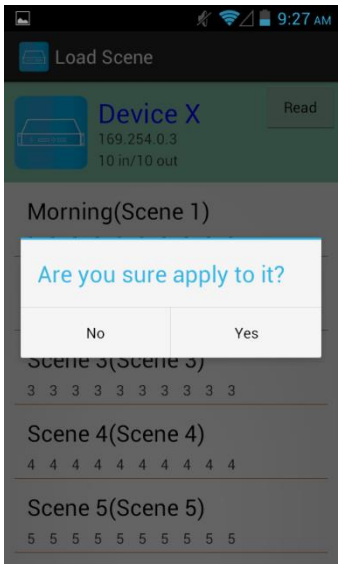
Touch top right 「Read」 to renew the scene status



It will show pop-up message 「Reading...」
After reading it will refresh scene status

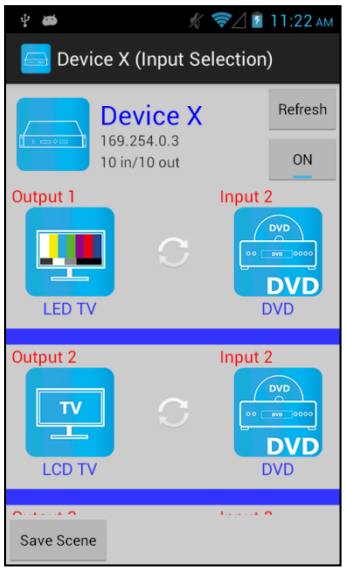


Touch the column name to show pop-up dialog



Touch 「Yes」 to apply scene

Input Selection Mode



Top right「Refresh」to renew the status of matrix
Below「Refresh」button to power on/off the matrix

The block under device are Output 1~ Output 10
(4 by 4 matrix only shows Output 1~Output 4)
Left side shows output device name
Right sideshows current input device name

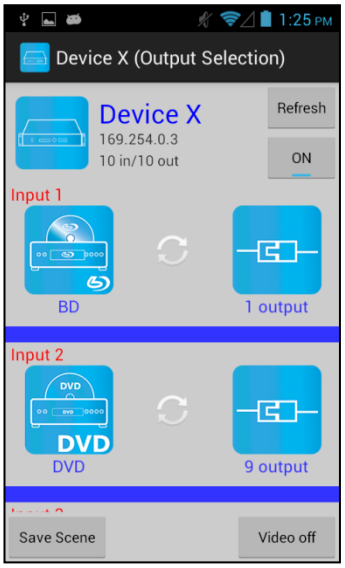
Bottom left「Save Scene」to save the scenes

Touch output block to enter Channel Selection page

Touch input device to switch or ON/OFF icon to power on/off

It will return to Input Selection page after switching and you will see the input have been changed

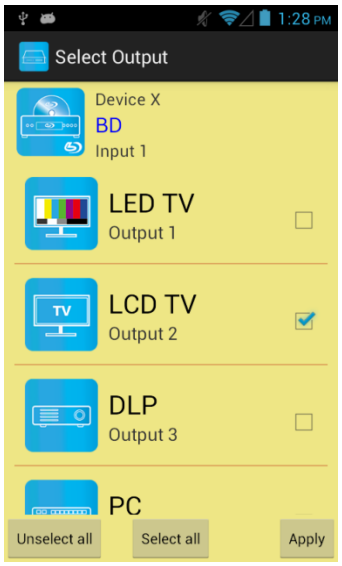
Output Selection Mode



Top right 「Refresh」 to renew the status of matrix
Below「Refresh」button to power on/off the matrix

The blocks under device are Input 1~ Input 10
(4 by 4 matrix only shows Input 1~Input 4)
Left side shows input device name
Right side shows current output numbers of devices

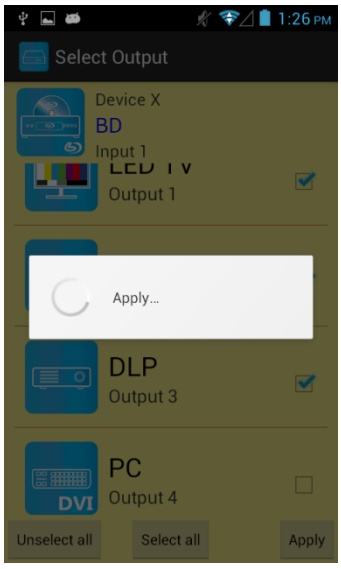
Bottom left「Save Scene」to save the scenes
Bottom right「Video off」to turn off video output



Touch input block or「Video off」to enter Output Selection page

It will show connected output of current input

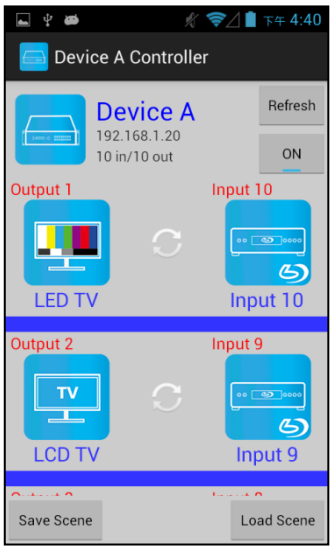
Bottom left「Unselect all」to clear all output box
Bottom center「Select all」to check all output box
Bottom right「Apply」to apply output setting



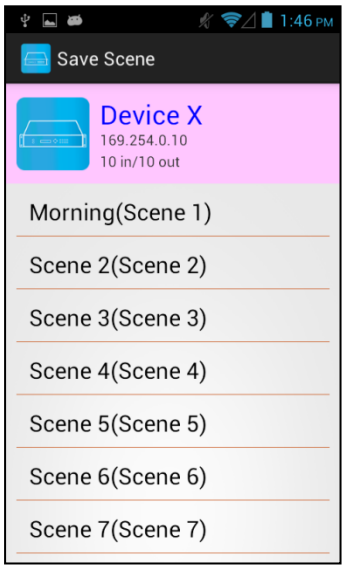
After touch 「Apply」 it will show pop-up message 「Apply...」

It will return to Input Selection page after switching and you will see the numbers of output have been changed

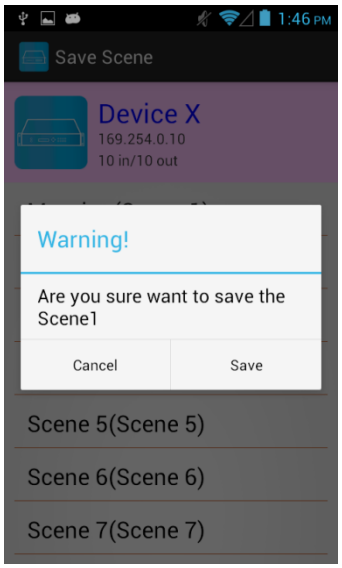
Save Scene



In Input or Output Selection page touch bottom left「Save Scene」to enter Save Scene page

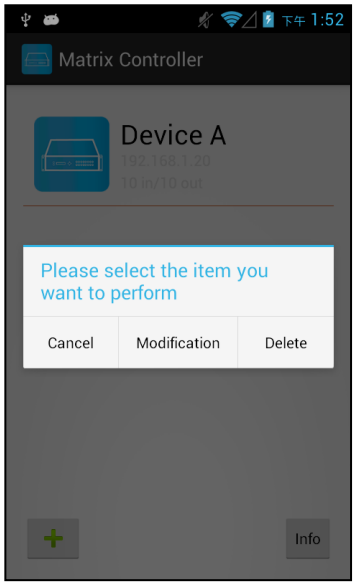


Touch the Scene column to show pop-up dialog

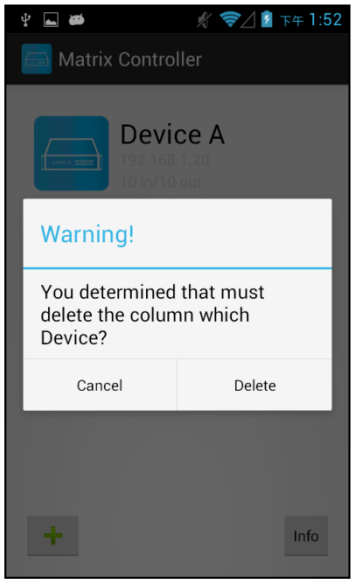


Touch 「Save」 to save current channels setting for all output
It will return to Save Scene page automatically.

Delete Matrix



Press the block of matrix in Controller page to show pop-up dialog then touch「Delete」



Touch「Delete」to delete the matrix

12. iOS APP Function

APP name: Matrix Controller

System Requirement

iOS 7.1 and up
Size: 2.3M
Language: English, Traditional Chinese, Simplified Chinese

iTunes Download Link

https://itunes.apple.com/us/app/matrix-control/id904487754?l=zh&ls=1&mt=8

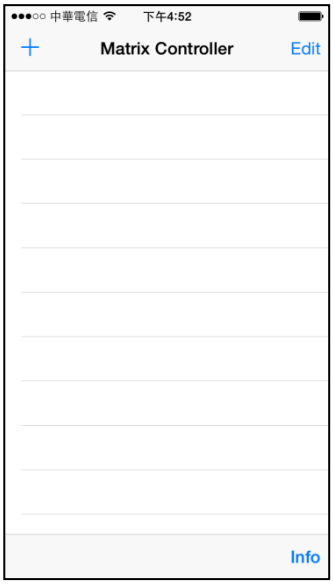
iTunes Download QR code

System Setting

Connect mobile phone to Wi-Fi and set the IP/ subnet mask same with matrix network segment
Default IP address of 10 by 10 matrix is 192.168.0.10
Default IP address of 4 by 4 matrix is 192.168.0.200
Default subnet mask is 255.255.255.0
You could also set to DHCP mode, please refer user manual

There are two ways to get the IP address of matrix:
1. Use APP function: Scan Device to get the IP address.
2. Use panel button or IR remote control by press [MENU], select to [ETHERNET] function and press [ENTER] to enter [IP Address] function than press [ENTER], it will show IP Address in the LCD panel of matrix

Main Page



When first time enter the APP will see the main page

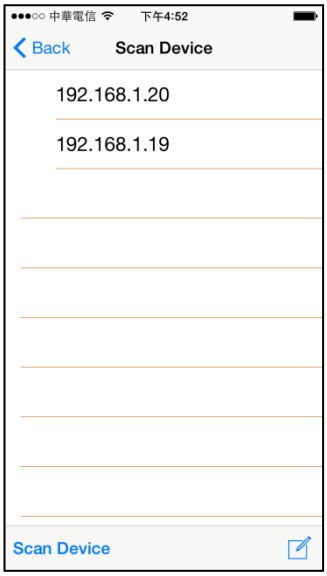
Bottom left「+」to add matrix
Bottom right「Info」to show information

Scan Device

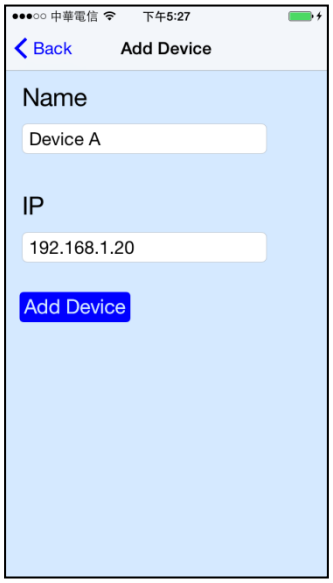
Touch「+」button at main screen to enter「Scan Device」page

Touch bottom left「Scan Device」to start scan
Touch bottom right pen icon to input the IP address manually

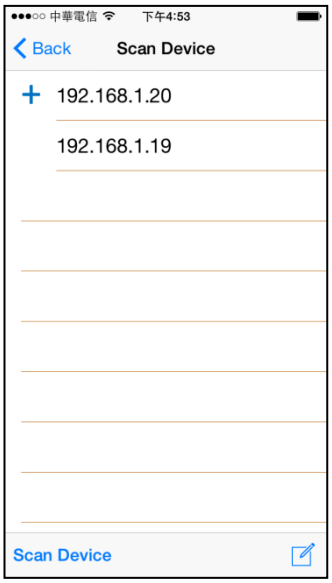
Add Matrix



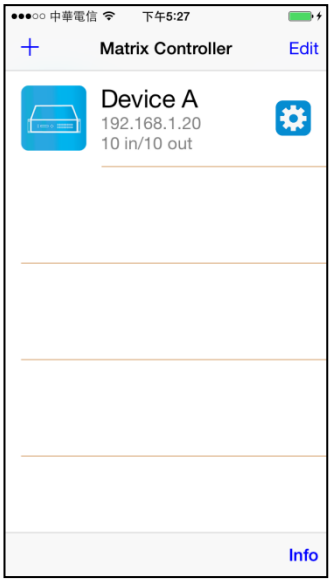
After scanning it will show all matrixes in the list
Touch the IP in list to enter「Add Device」page



Enter the name of matrix then touch「Add Device」to finish setting
Notice：Name should be unique, not allow duplicate

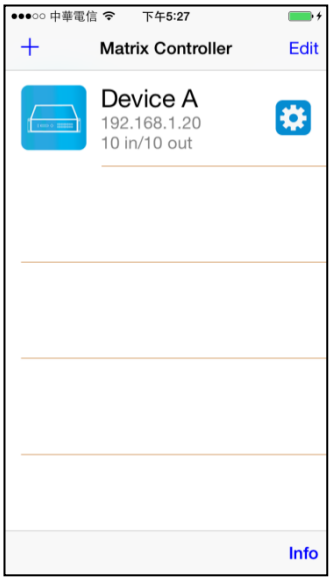


It will show「+」icon in front of the IP address when finished

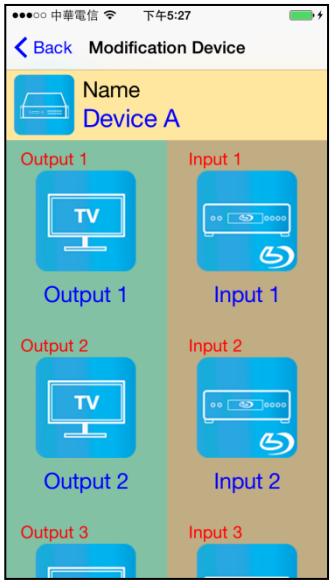


Return to main screen you will see the matrix which just add

Modify Device

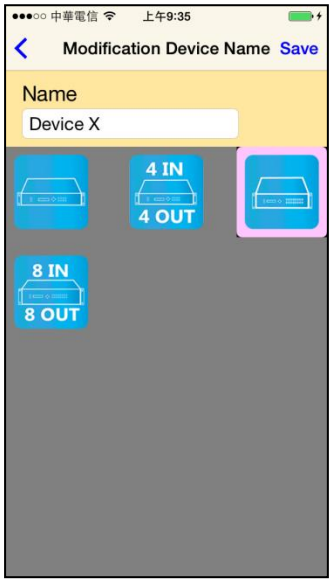


Touch the gear icon to enter Modification page

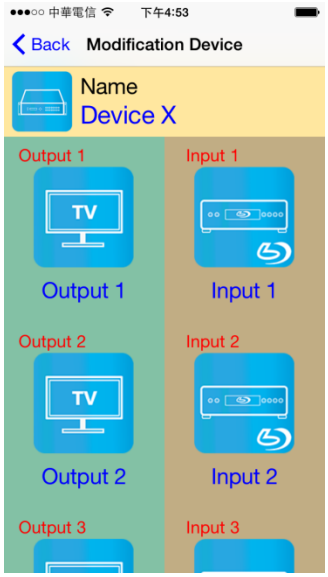


Yellow block shows matrix name and icon

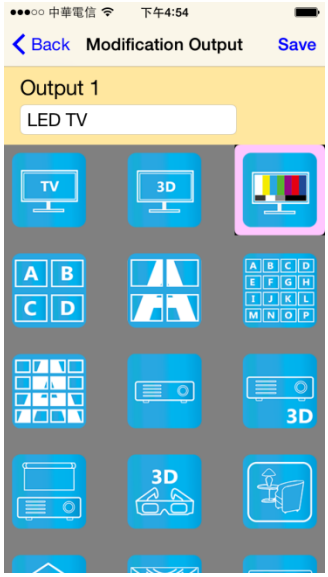
Green block shows name and icon of output devices
Brown block shows name and icon of input devices



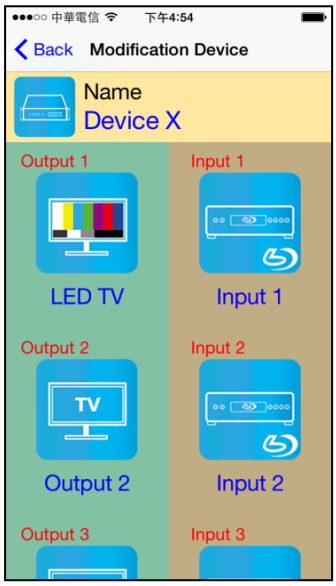
Touch yellow block to modify matrix name and icon
Input the name and select the icon you prefer then touch「Save」to finish



Return to Modification page you will see the matrix have been changed

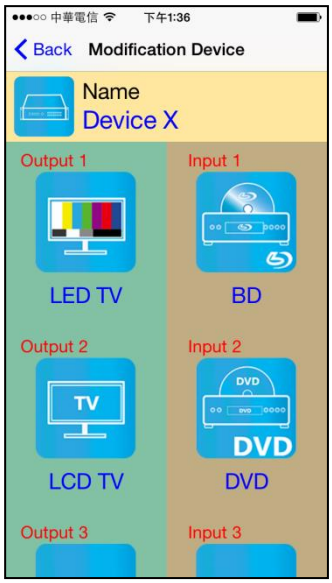


Touch green block to modify output name and icon
Input the name and select the icon you prefer then touch「Save」to finish



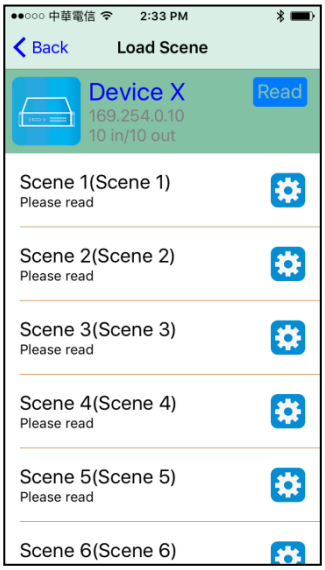
Return to Modification page you will see the output have been changed

Touch brown block to modify input name and icon
Input the name and select the icon you prefer then touch「Save」to finish

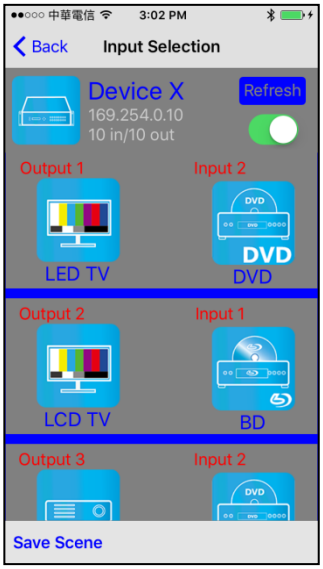


Return to Modification page you will see the input have been changed

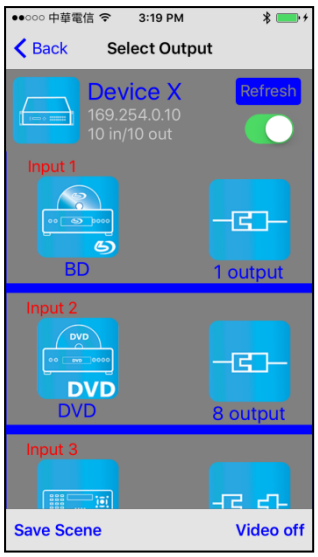
Channel Switching mode (load scene, input selection, output selection)



Click device name in list to enter load scene page



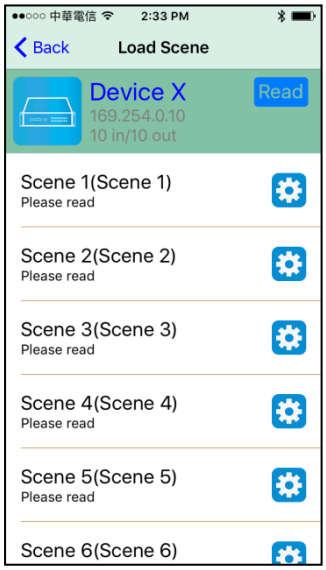
Slide right from load scene page to enter input selection mode (as before)



Slide left from load scene page to enter output selection mode (support multiple selection)

Load scene

Modify scene name

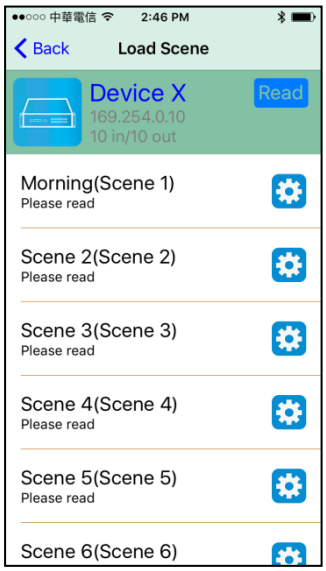


Touch the gear icon to enter modify scene name

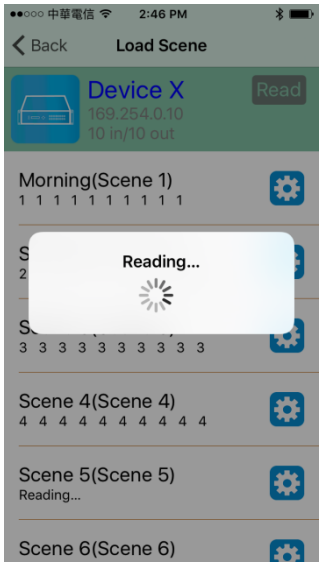
After modification touch 「Save」to save scene name
It will return to Load Scene page automatically.

Notice：Name should be unique, not allow duplicate or empty.

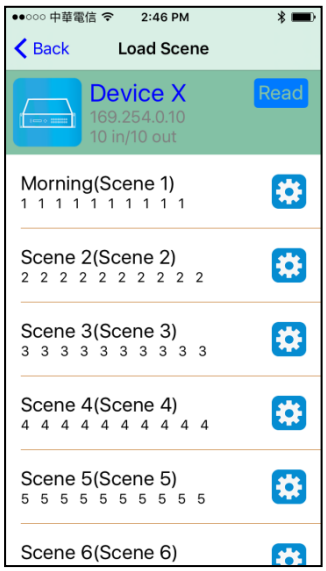
Read scene status



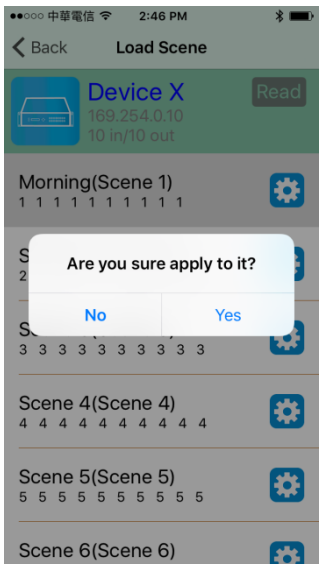
Touch top right 「Read」to renew the scene status



It will show pop-up message 「Reading...」
After reading it will refresh scene status

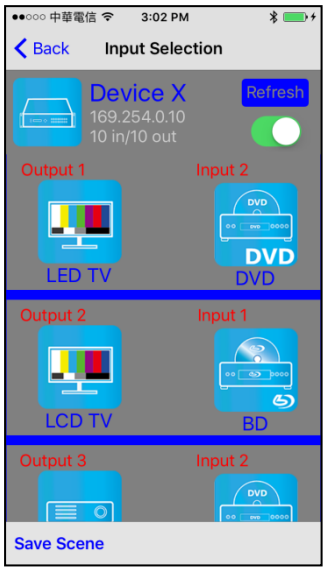


Touch the column name to show pop-up dialog



Touch 「Yes」 to apply scene

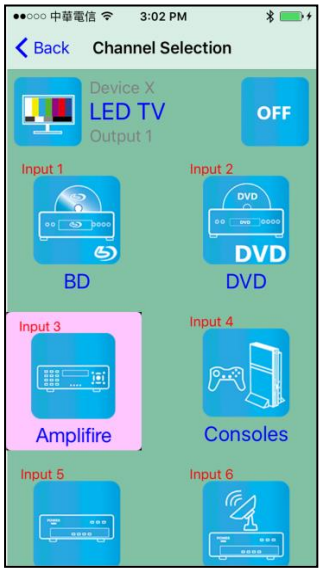
Input Selection Mode



Top right「Refresh」to renew the status of matrix
Below「Refresh」button to power on/off the matrix

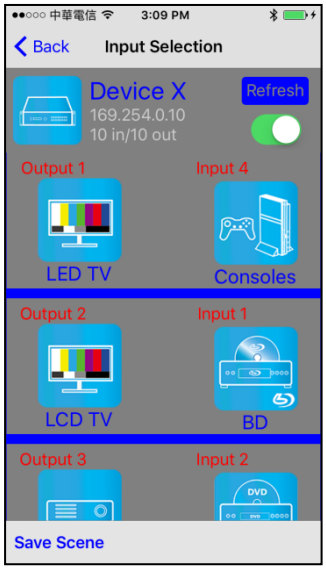
The block under device are Output 1~ Output 10
(4 by 4 matrix only shows Output 1~Output 4)
Left side shows output device name
Right sideshows current input device name

Bottom left「Save Scene」to save the scenes



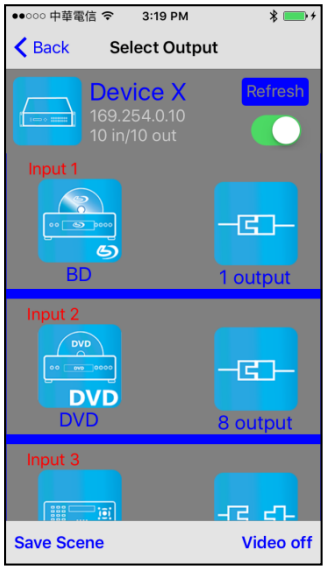
Touch output block to enter Channel Selection page

Touch input device to switch or ON/OFF icon to power on/off



It will return to Input Selection page after switching and you will see the input have been changed

Output Selection Mode



Top right 「Refresh」to renew the status of matrix
Below「Refresh」button to power on/off the matrix

The blocks under device are Input 1~ Input 10
(4 by 4 matrix only shows Input 1~Input 4)
Left side shows input device name
Right side shows current output numbers of devices

Bottom left「Save Scene」to save the scenes
Bottom right「Video off」to turn off video output

Touch input block or「Video off」to enter Output Selection page

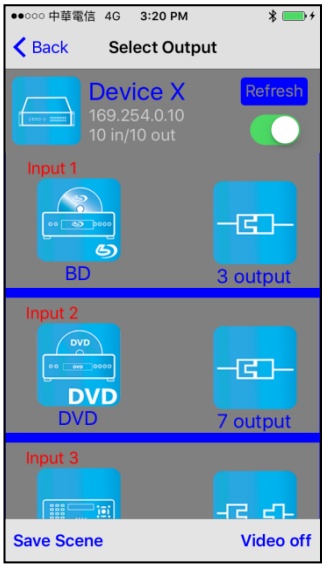
It will show connected output of current input

Bottom left「Unselect all」to clear all output box
Bottom center「Select all」to check all output box
Bottom right「Apply」to apply output setting

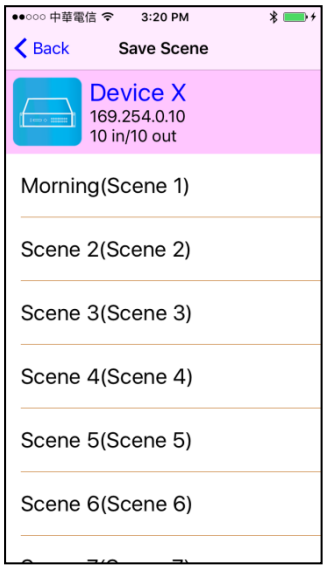
After touch 「Apply」 it will show pop-up message 「Apply...」

It will return to Input Selection page after switching and you will see the numbers of output have been changed

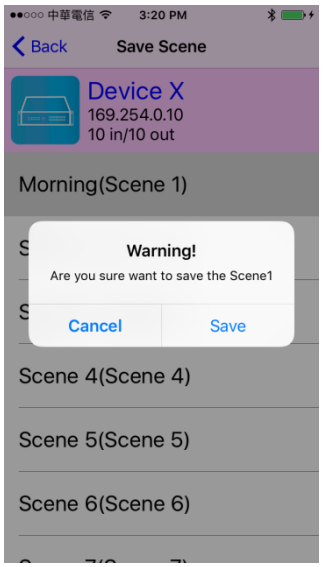
Save Scene



In Input or Output Selection page touch bottom left「Save Scene」to enter Save Scene page

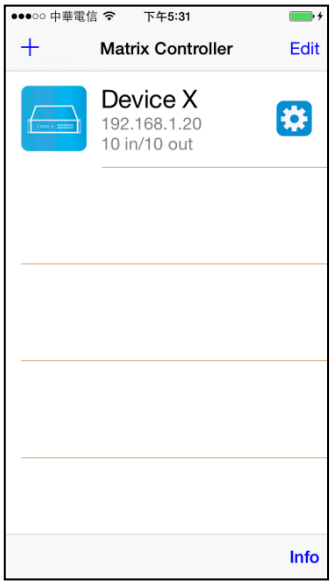


Touch the Scene column to show pop-up dialog

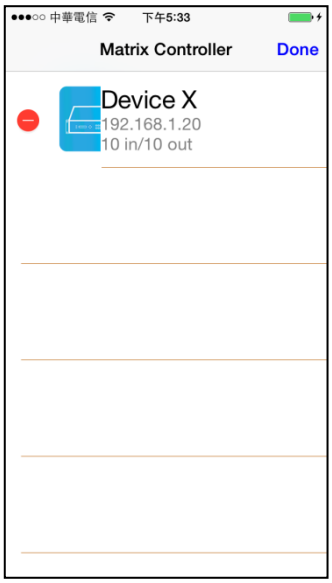


Touch 「Save」to save current channels setting for all output
It will return to Save Scene page automatically.

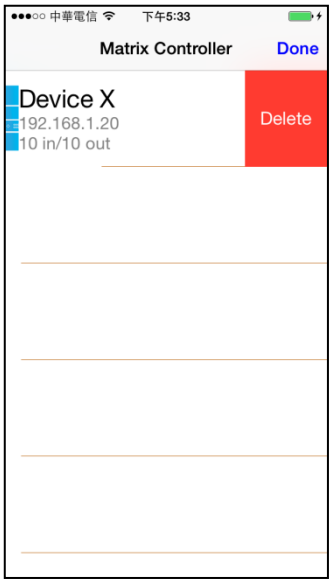
Delete Matrix



Touch top right「Edit」button to enter delete mode



Touch 「-」button in the left of matrix



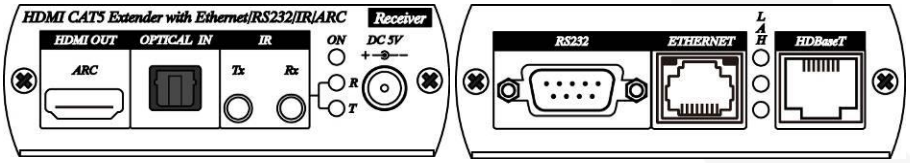
Touch「Delete」to delete the matrix
Touch top right 「Done」to exit

13. HE04M Standard Package Include

HE04M Matrix x 1 pcs
IR01 IR Remote Control x 1 pcs
IR Emitter Cable x 1 pcs
IR Receiver Cable x 1 pcs
Power Adapter x 1 pcs
CD Software x 1 pcs

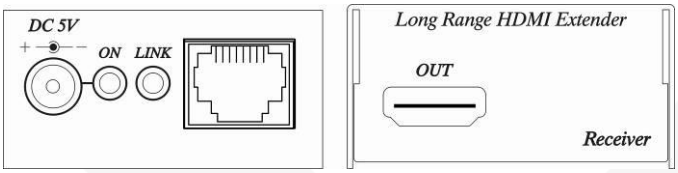
14. HE04MK Package Include

HE04M Matrix x 1 pcs
HE02NR HDMI Receiver x 4 pcs
IR01 IR Remote Control x 5 pcs
IR Emitter Cable x 5 pcs
IR Receiver Cable x 5 pcs
Power Adapter x 5 pcs
CD Software x 1 pcs



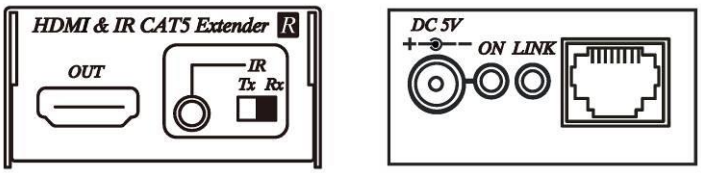
15. HE04MEK Package Include

HE04M Matrix x 1 pcs
HE02ER HDMI Receiver x 4 pcs
IR01 IR Remote Control x 1 pcs
Power Adapter x 5 pcs
CD Software x 1 pcs



16. HE04MEIK Package Include

HE04M Matrix x 1 pcs
HE02EIR HDMI Receiver x 4 pcs
IR01 IR Remote Control x 5 pcs
IR Emitter Cable x 1 pcs
IR Receiver Cable x 4 pcs
Power Adapter x 5 pcs
CD Software x 1 pcs



17. Specification

ITEM NO.	HE04M
Support	
Compliance	HDMI 1.4, HDCP, 3D
Max. Video Resolution	1080p@60Hz 12bit
Max. Transmission Distance	100M over CAT5e or greater cable
Audio Format	LPCM 7.1, Dolby TrueHD, DTS-HD Master Audio
RS232 Baud Rate	115200 bps
IR Support	30-60Khz, ±45°, 5M
Ports & Interfaces	
Video Input	4 x HDMI Type A
Video Output	4 x HDMI Type A
Ethernet Interface	1 x RJ45
IR Interface	2 x 3.5mm Phone Jack
RS232 Interface	5 x DB9
Link Interface	4 x HDBaseT
Power	
Power Supply	DC 12V 4.2A
Power Consumption	2.6 A (Max)
Ambient Temperature	
Operation	0 to 55℃
Storage	-20 to 85℃
Humidity	up to 95%
Physical Characteristics	
Dimensions	483 x 197 x 44mm
Weight	2400g

ITEM NO.	HE02NR	HE02ER	HE02EIR
Support			
Max. Video Resolution	4K@30Hz 4:4:4 8bit		
Max. Transmission Distance	100M	100M	70M
Ethernet Bandwidth	10/ 100Mbps		
IR Support	30-60KHz, ±55°, 5M		30-60KHz, ±55°, 5M
RS-232 Baud Rate	115200bps/ Full Duplex		
Interfaces & Ports			
Video Input	1 x RJ45	1 x RJ45	1 x RJ45
Video Output	1 x HDMI Type A	1 x HDMI Type A	1 x HDMI Type A
Digital Audio Interface	1 x TOSLINK		
RS-232 Interface	1 x DB9 Male		
Ethernet Interface	1 x RJ45		
Link Interface	1 x HDBaseT		
Power			
Power Supply	DC 5V 2A Regulated		
Power Consumption	1200mA (Max)	1200mA (Max)	820mA (Max)
Ambient Temperature			
Operation	0 to 55℃		
Storage	-20 to 85℃		
Humidity	Up to 95%		
Physical Characteristics			
Dimension	88 x 120 x 30mm	49 x 92.3 x 25mm	49 x 92.3 x 25mm
Weight	280g	135g	135g