# 4x4 Seamless HDMI matrix 4K@60hz 2.0 version with 2x2 video wall



### **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.

## **Table of Contents**

Introduction	1
Features	1
Package Contents	1
Specifications	2
Operation Controls and Functions	4
RS232/LAN Control	5
RS232 Connector	5
Ethernet Control and Connection	5
PC Tool User Guide	5
Account's Authentication	5
Connect with PC Tool	6
Matrix Switch Page	7
Advanced Switch Page	
Signal Setting Page	9
FineTune Page	10
Video Wall Page	11
CEC control Page	
Control via Web	
Appendix A: Query IP Info via UART	
Appendix B: Query IP Info via UART	15
Appendix C: Set IP Info via UART	
Appendix D: Set IP Info via Network	
Appendix E: Set IP Address on Windows 7 or XP	
Appendix F: Direct Connect via Ethernet Cable	20
Appendix G: Connect via Network Router /Switch	21
Appendix H: Troubleshoot with Network Control	22
Connection Diagram	23

## Introduction

CA44M-VS is a 4K@60hz 4:4:4 HDMI 2.0 version 4x4 matrix, it support seamless function, switching no delay time.Support CEC and IR function and support front panel keys control, IR and IP control(PC tool, Web GUI). It offers solutions for home, office, digital entertainment center, control center, conference room, school and corporate training environments.

## Features

- 1.HDMI 2.0 version matrix 4x4 with 2x2 video wall.
- 2.Support 4K@6hz 4:4:4 18Gbps.
- 3.Seamless switching, no delay time.
- 4. Support CEC audio extraction and IR.
- 5.Smart EDID management.
- 6.Support control via front keys,Rs232,TCP/IP control (PCtool and WEB GUI).
- 7.Power max 60W, weight 5KG, dimensions :430mm (W)×220mm (D)×44mm (H)

## **Package Contents**

- 1 x 4x4 seamless UHD Matrix
- 1 x AC Power Cord
- 1 x Matrix IR Remote
- 4 x IR Receiver cable (1.5 meters)
- 4 x IR Blaster cable (1.5 meters)
- 1 x 3-pin Phoenix Connector

## Specifications

Technical	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K60 4:4:4
Color Space	RGB, YCbCr 4:4:4/4:2:2
HDMI Amplitude	T.M.D.S +/- 0.4Vpp
Differential Impedance	100±150hm
ESD Protection	Human-body Model: ±8kV (Air-gap discharge), ±4kV (Contact discharge)
RS232/Ethernet Control	
Baud rate and Protocol	Baud rate: 9600, data bit: 8 Stop bit: 1, no parity checking
Ethernet	IE10.0+,HTML5
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	430mm (W)×300mm (D)×44mm (H)
Weight	5Kg
Power Supply	AC 110 - 240V
Power Consumption	60W (Max)
Operating Temperature	$0^{\circ}C \sim 40^{\circ}C / 32^{\circ}F \sim 104^{\circ}F$
Storage Temperature	$-20^{\circ}C \sim 70^{\circ}C / -4^{\circ}F \sim 158^{\circ}F$
Relative Humidity	10%~50% RH (non-condensing)

## **Operation Controls and Functions**

#### **Front Panel**



#### **Output/Input buttons:**

Press buttons OUTPUT n + INPUT m+ TAKE by sequence, switch the matrix input m to output n.

Press button LOCK more than 2 seconds and less than 6 seconds, to lock or unlock front buttons. When locked, the Lock LED is on;

Press button LOCK more than 6 seconds, enter into the input output lock menu, then press INPUT

Or OUTPUT button to toggle the input or output lock status, then press TAKE to confirm. Press CLEAR to exit.

Press buttons ALL + INPUT m + TAKE by sequence, to switch input m to all the outputs.

Press buttons SAVE + OUTPUT n to save current routing/video wall scene as scene n. Up to 8 scenes can be saved.

Press buttons RECALL + OUTPUT n to recall routing scene n as the current routing.

Press buttons RES + OUTPUT n + NEXT + TAKE, to change the output resolution of OUTPUT n.

#### **Resolution options:**

3840x2160@60,3840x2160@50,3840x2160@30,3840x2160@25, 1920x1200@60,1920x1080@60,1920x1080@50,1600x1200@60, 1400x1050@60,1366x768@60,1360x768@60,1280x1024@60, 1280x768@60,1280x720@60,1280x720@50,1024x768@60 Press buttons EDID + INPUT m + NEXT + TAKE, change the EDID mode of port INPUT m EDID options: Manual, 3840x2160@60, 3840x2160@30, 1920x1200@60, 1920x1080@60, 1280x1024@60, 1280x720@60, 1024x768@60 Manual EDID is loaded by PC Tool

#### **Rear Panel**



LAN(10M/100M), RS232 are for PC control.

Analog Audio IN/OUT ports bind to corresponding HDMI ports.

For example:

If HDMI 1 audio source is selected with External LR, then analog AUDIO IN LR1 (with phoenix connector) will be selected to replace the embedded audio of the HDMI input 1 data stream. If HDMI 1 audio source is selected with AUTO by PC TOOL or command, then the original embedded audio of input HDMI 1 will be used as its audio data stream. If the input is DVI signal, no matter how it is set up, system will get external analog audio input. Analog AUDIO OUT n will always output the same audio content with HDMI OUTPUT n.

IR IN and IR OUT

IR IN/OUT routing follows the video matrix routing, no need to separately control IR matrix.





Audio Input

4 3-pin Phoenix connectors to input external analog LR audio, user can select this audio to replace the corresponding embedded HDMI audio.

Audio Output

4 5-pin Phoenix connectors to output balanced LR audio, and 4 mini Toslink jackets to output analog LR audio and digital Spdif audio.

The 4 sets of Audio output (LR and Toslink) channels can be independent of video and switched by PC Tool or commands.

## 1.RS232/LAN Control 1.1 RS232 Connector

RS232 control, baud rate 9600, 3-pin Phoenix connector.



TX pin, Matrix--->PC RX pin, Matrix<---PC

### **1.2 Ethernet Control and Connection**



#### Note: Factory default network setting:

IP Туре	Static IP 🔻
Static IP	192.168.0.247
Subnet Mask	255.255.255.0
Gateway	192.168.0.1

## 2. PC Tool User Guide

#### 2.1 Account's Authentication

Before running the PC tool, the password is needed for authentication.

Account	Administrator 🔻
Password	
Login	Cancel Modify
rd Authentica	ation
rd Authentica	ation
rd Authentica Account	User
rd Authentica Account Password	User 🔹

Default password of Administrator: 111111 Default password of User: 000000

**NOTE:** In case of password lost, there's a super password to login and modify password: Smartsecuri@2010

You can modify the password by following steps:

Step 1. Click the drop-down list to select account: Administrator or User.

Step 2. Input the current password, then click the "modify" button to authenticate.

Step 3. Input the new password twice, then click the "modify" button.

Account	Administrator
NewPasswd	•••••
Confirm	•••••
Login	Cancel Modif

#### 3.1 Connect with PC Tool

1. The default PC tool's UI style is as below.

Vide	0	Input1	Input2	Input3	Input4		Audi	io	Input1 O L/R O Auto	Input2 C L/R Auto	Input3 • L/R • Auto	Input4
ideo-Output1	01				1	Audio	o-Output1	01				
ideo-Output2	02	ļ		_		Audio	o-Output2	02				
ideo. Outout?	03					The second se	o-Output3	03				
ideo-outputs					_	Audio		1				
/ideo-Output4	4					Audio Audio	o-Output4 o Only Unav	ailable	Switch	Mode @ I	Follow Vid	eo () M
liset Input1	• 4	Recall M	ode1	Sa	aveAs Mode1	Audio Audio Audio	o-Output4	e 4 ailable	Switch	Mode @ I	Follow Vid	eo ⊙ M
liset Input1 Ctrl Mode © UART () Netw	• 4 • vork	Recall M Port CC	ode1 ·	• Sa • St	atus Disconnect	Audio Audio EDID	p-Output4 p Only Unav	ailable	Switch	Mode	Follow Vid	eo () M

2. You can select UART (with RS232 cable) or Network to connect, baud rate is 9600 bps.

- **3**. **Network** control (with cat5/6 cable, default IP address: 192.168.0.247) includes the following operations:
  - a) Query IP information via UART, please refer to Appendix A.Or query IP information via Network, please refer to Appendix B.
  - b) Set IP information via UART, please refer to Appendix C.Or set IP information via Network, please refer to Appendix D.
  - c) Set IP address on Windows 7/XP, please refer to Appendix E.
  - d) User can directly connect via Ethernet cable (please refer to Appendix F). Or connect via network router/switch (please refer to Appendix G).
  - e) Click Connected button to setup link and connect
- 4. When the product is connected with PC Tool, there may be connection failure, please refer to **Appendix H**: Troubleshoot with Network Control.

#### Matrix-PC-tool-v1.0.223 Matrix Switch Advanced Switch Signal Setting FineTune:PQ Video Wall CEC Control Network Setting UART Setting English Input2 Input3 Input4 Video Audio 2 3 04 Video-Output1 01 0.1 Video-Output2 02 2 0 3 • 3 11+2 Video-Output4 .4 Audio Only Unavailable Switch Mode Follow Video Manual Allset Input1 -Recall Mode1 -SaveAs Mode1 -EDID Ctrl Mode UART O Network Port COM3 -Status Connected Reset Reading ... Reading: Matrix Size 4x4 success Reading: Matrix Route success Reading: Screen Combine success Reading: All Information success! MAC Address Device Name ID Address Version Find via UART

4.1 Matrix Switch Page

1. There is a shortcut button to switch one input port to all output ports, that is Allset, For example, switch input 1 to all outputs, user can select



- 2. Recall mode: Recall a input/output routing scene which already be saved before. The device supports maximum 8 scenes.
- Save mode: Save the current input/output routing in one index. Maximum 8 modes supported.
   Note: Save/Recall button here works the same with front panel save/recall control and also the same with Save/Load function on video wall page.
- 4. System reset: The PC tool supports reset system to recover to factory configuration.

5. Audio Switch mode: Follow Video mode or Manual mode

When selecting Manual mode, user can separately switch L/R(Phoenix interface) and Toslink output.

User also can select to use HDMI embedded or corresponding external LR audio.

6. EDID Control: Click the "EDID" button on Matrix Switch page, there will be a pop-up EDID



- a) Read EDID: Select the output port, then click the "Read" button to read EDID.
- b) Write EDID: First read a EDID from output port, or open a EDID file that saved before, then select the input port, and click the "Write" button to write EDID.
- c) Save EDID: After reading EDID successfully, Click "Save" button to save.
- d) This EDID for one input port acts as the Manual EDID, which can be selected or deselected by the front panel.

#### 5.1 Advanced Switch Page

put	Custom name	Output	Custom name	Input Signal	Send cmd periodly at 2000 ms
put 1	-	🗐 Output 1	Video-Output1		All outputs send combined
put 2	12	Output 2	Video-Output2		Wait others finished then start part loop
put 3		Output 3	Video-Output3		wait others infished then start flext loop
put 4	15	Output 4	Video-Output4		Send cmd only one loop
					Select all outputs
					Start Stop

The Advanced Switch page will repeatedly send a batch of matrix selection commands at the interval specified in the value box after **Send cmd periodly** at text.

- 1. Select one or more outputs.
- 2. Select one input.
- 3. Use the arrow button "-->" to assign that input to the selected output or outputs.
- 4. After completing all required selections, click the "Start" button to run the commands.

The available options are:

All outputs send combined – Combine all outputs that have the same input number as a single command.

**Wait others finished the start next loop** – Wait for all commands in the previous pass to complete before sending the next batch of commands.

Send cmd only one loop - Only send a single batch of commands. Select

all outputs – Select all outputs when the option is checked. Start – Begin

the command cycles.

 ${\bf Stop}-{\bf Stop}$  the command cycles.

#### 6.1 Signal Setting Page

Matrix	Switch Advar	nced Switch Signa	Setting Fine	Tune   TV Wall   Ne	etwork Setting	
Label	t Board Rea	d All Input Format	Audio Select	Output Type	Output Format	
1		No Signal	Auto		4K2Kp30 -	Read
2		No Signal	Auto		4K2Kp30 🔻	Read
3		No Signal	Auto	UHD-HDI -	4K2Kp30 -	Read
4		No Signal	Auto		4K2Kp30 -	Read

1. Audio Select

There are two options for input Audio Select.

- a) Auto: If the input source is HDMI signal, system will get the embedded audio; if the input source is DVI signal, the system will get the corresponding analog audio.
- b) External: System will get the corresponding analog audio.
- 2. Output Type

There are four options for input Output Type: UHD-HDMI (HDCP OFF), UHD-DVI, UHD-HDCP-1.4, UHD-HDCP-2.2.

3. Output Format

User can set the output resolution: 3840x2160@60, 3840x2160@50, 3840x2160@30, 3840x2160@25, 1920x1200@60, 1920x1080@60, 1920x1080@50, 1600x1200@60, 1400x1050@60, 1366x768@60, 1360x768@60, 1280x1024@60, 1280x768@60, 1280x720@60, 1280x720@50, 1024x768@60.

#### 7.1 Fine Tune Page

You can read and set the Brightness/Contrast/Saturation/Sharpness of each output.

Matrix Switch Advanced Switch Signal Setting FineTune TV Wall Ner	twork Setting
Select PQ FineTune Port Output2	Select Position FineTune Port-Input1
Brightness 50	Read the input source Read
Contrast 50 (Read)	Input board: CVBS or Component picture position adjust
Saturation 50 Reset	H Start 1
Sharpness 50	V Start +1 -1 Read
Temperature Cool   Read	H Size +1 -1 Reset
R-Gain	V Size +1 -1
GrGein C	VGA input position adjust
B-Gein C Reset	
ReOffset	H start +1 -1 Read Reset
Groffset C	V start +1 -1 Asto-Gonfig
B-Offset C	INTER T

Note: Do not change the default settings without special conditions;

If there is a problem after changing, click "Reset" to return to the factory settings.

#### 8.1 Video Wall Page

Set the video wall display by setting the rows, columns and quantity of layout.

latrix Switch	Advanced Switch	Signal Setting	FineTune:PQ	Video Wall	CEC Control	Network Setting
- Video	Wall Setting -	Vi	deo Wall			
Rows 2	-0					
Columns 2	-0		Screen 1	Screen	2	
Available 4		-0				
Set	Read					
Be	zel Setting		Screen 3	Screen	٨	
Type: O A	⊙ B					
Left(Pixels)						
Right(Pixels)				_	_	
Top(Pixels)						
Bottom(Pixels	)					
	Set					
- Scene	e Save/Load -					
Save scen	e Load scen	e				

#### **Build a Wall**

Select one screen, right click, there will be a sub menu as the following picture shows: **Input Select:** Select the input port, for the screen to display (Input 1 ~ Input 8). **Output Select:** Set the output port that connects to the display according to the video wall

connect status.

**Output Format:** Set the output resolution.

Matrix Switch — Vide	Advanced Switch oWall Setting -	Signal Setting	FineTune:PQ deo Wall	Video Wall	CEC Control	Network Settin
Rows 2 Columns 2 Available 4 Set	-0		Screen 1	Screen 2	2	
B Type: A Left(Pixels) Right(Pixels) Top(Pixels) Bottom(Pixels)	ezel Setting		Screen 3	Screen 1 Input Select Output Selec Output Type Output Forn Left(Pixels) Right(Pixels) Top(Pixels) Bottom(Pixe	Not In S Input 1 Physical Action HDMI National 1024x76 0 Pixel 0 Pixel 0 Pixel 1s) 0 Pixel	icreen Stitching 1 188p60
Scen	Set					

Click to select one screen, then drag, select the screens to be spliced, right click, and select "Screen Stitching" to splice.

ows 2 "0	_	_	-	
olumns 2 "	Screen 1	Screen 2	2	
vailable 4				
Set Read		-		
			Screen Stitching	
Bezel Setting	Screen 3	Scree	Cancel Stitching	
ype: OA OB			Screen z - cancer sutching	
ett(Pixeis)			Input Select	- 1
ight(Pixels)			Output Select	- F
op(Pixels)			Output Type	- <b>F</b>
ottom(Pixels)			Output Format	- F
Set				

If you want to cancel one TV WALL, first select the wall which is splicing, right click, then select "Cancel Stitching".

#### Bezel adjust

There are two options to set bezel.

Type A with pixels setting, maximum number is 255, see below:

Type: 💿 A	⊖ B
.eft(Pixels)	100
Right(Pixels)	100
Top(Pixels)	100
Bottom(Pixels)	100
	Set

Type B with millimeter setting, see below:



#### One more TV Wall

The product supports multiple TV wall at the same time, for example two 2x1 walls. Each wall has its own bezel setting. Click one wall and then set bezel one by one.

#### PIP with TV Wall

The following is one 2x2 wall, for example. If you want screen 3 to separately display another video source, you can right click Screen 3 and select "Screen 3 - Cancel Stitching", then select the same or another video source for screen 3 to display. This separate screen is a full display screen.





Multi-view in video wall

#### Save Scene/ Load Scene

On the Video Wall page, you can save or load one splicing wall scene, including input/output routing and wall layout.

#### **CEC Control Page**

Matrix Switch	Advanced Switch   Signal Setting	FineTune:PQ Video Wal	CEC Control	Network Setting			
Auto Power	ON						
	Input				Output		
Input 1	Power ON Power OFF	Output 1	Power O	N Power OFF	Volume+	Volume-	Mute/Unmute
Input 2	Power ON Power OFF	Output 2	Power O	N Power OFF	Volume+	Volume-	Mute/Unmute
Input 3	Power ON Power OFF	Output 3	Power O	N Power OFF	Volume+	Volume-	Mute/Unmute
Input 4	Power ON Power OFF	Output 4	Power O	N Power OFF	Volume+	Volume-	Mute/Unmute

If **Auto Power On** is enabled, every time when the product is turned on, it will turn on all the sources and displayers which are connected to it.

The product supports CEC function, including Power on/off, Volume+/-, Mute/Unmute.

## 9. Control via Web

The product supports Web control.

Enter the Web GUI by the following steps:

Step 1. Directly input the IP address in the web browser, then press 'Enter' key.

Step 2. Input the username: admin.

Step 3. Input the password: admin.

Step 4. Login and then you can control the matrix switch via the web.

Note: On web control, you can only control basic operation.

## 10. Appendix A: Query IP Info via UART

**Method 1:** After connecting to the device via UART, click the "Find via UART" button at "Matrix Switch" page to read the IP information.

Device Name	IP Address	MAC Address	Version
USR-K3	STATIC,192.168.0.247	D8 B0 4C B9 47 DF	V1.1.0

**Method 2:** After connecting to the device via UART, click the "Find via UART" button at "Network Setting" page to read the IP information.

nx Switch   Advance	d Switch   Signal Setting   F	ineTune:PQ&Positic	on OSD CTRL TV W	all Network Setting		
2				Select config port		
Search List (Click	device to load configuration	on)		Port 0 Port 1	Port 2	
Device Name	IP Address	MAC Address	Version		9600	-
USR-K3	STATIC, 192.168.0.247	D8 B0 4C B9 47	DF V1.1.0	Parity/Data Bit/Stop Bit	None + 8 + 1	*
					None	-
				Device Port	23	
	Search Davies Onen Wel	heita Find via LIAR	T	PC Port	0	
	[Journ Device] [Open wes	The via one	<u></u>		192.168.0.201	
Basic config				Work Mode	TCP Server	-
UPNP Port	6432	Device Name US	R-K3		8	-
HTTP Port	80	MAC Address D8	B0 4C B9 47 DF		Transparent transmis:	-
Device ID	1	IP Type Sta	ntic IP 👻	ModbusTCP	None	-
Device ID Type	0	Static IP 19	2.168.0.247	Package time(ms)	0	
User Name	admin	Subnet Mask 25	5 255 255 0	Package Length(Byte)	0	
Password	admin	Gateway 19	2,168.0.1	Sync BaudRate(RFC22	217 similar)	
		Canfa ]		- Court	Config	

## 11. Appendix B: Query IP Info via UART

After connecting to the device via network, we can query information through two methods. **Method 1:** Switch to "Matrix Swtich" page, then click "Search Device" button to query IP information.

x Switch Adv	anced Switch   Signal S	etting FineTune:PQ&Posi	ition OSD CTRL TV W	all Network Setting		
Search List (	Click device to load co	onfiguration)		Select config port Port 0 Port 1	Port 2	
Device Nar	ne IP Address	MAC Address	s Version	Baud Rate	9600	-
USR-K3	192.168.5.247	D8 B0 4C B9	47 DF 3013		None + 8 + 1	*
					None	-
				Device Port	23	
	1 Search Device	)pen Website Find via U	ART	Device Port PC Port	23 23	
	1 Search Device	Open Website Find via U	ART	Device Port PC Port PC IP/Domein	23 23 192.168.0.201	
Basic config	1 Search Device	Open Website Find via U	ART	Device Port PC Port PC IP/Domein Work Made	23 23 192.168.0.201 TCP Server	
Basic config UPNP Port	1 Search Device C	Open Website Find via U	JSR-K3	Device Port PC Port PC IP/Domain Wark Mode TCP Server connect cor	23 23 192.168.0.201 TCP Server 8	
Basic config UPNP Port HTTP Port	1 Search Device C 6432 80	Dpen Website Find via U Device Name L MAC Address [	JSR-K3 28 B0 4C B9 47 DF	Device Port PC Port PC JP/Domain Work Made TCP Server connect cor TCP Server style	23 23 192.168.0.201 TCP Server 8 Transparent transmiss	
Basic config UPNP Port HTTP Port Device ID	1 Search Device C 6432 80 1	Open Website Find via U Device Name L MAC Address C IP Type §	JSR-K3 38 B0 4C B9 47 DF Static IP	Device Port PC Port PC IP/Domain Wark Made TCP Server connect cor TCP Server style ModbusTCP	23 23 192.168.0.201 TCP Server 8 Transparent transmiss None	•
Basic config UPNP Port HTTP Port Device ID Device ID Ty	1 Search Device C 6432 80 1 26 0	Dpen Website Find via U Device Name L MAC Address IP Type Static IP	JSR-K3 28 B0 4C B9 47 DF Static IP - 192, 168, 0 , 247	Device Port PC Port PC IP/Domain Wark Made TCP Server connect cor TCP Server style ModbusTCP Package time(ms)	23 192.168.0.201 TCP Server 8 Transparent transmiss None 0	
Basic config UPNP Port HTTP Port Device ID Device ID Ty User Name	1 Search Device ( 6432 80 1 98 (0 admin	Dpen Website   Find via U Device Name   MAC Address   IP Type   Static IP Subnet Mask	JSR-K3 28 B0 4C B9 47 DF Static IP 192, 168, 0, 247 255, 255, 255, 0	Device Port PC Port PC IP/Domain Wark Made TCP Server connect cor TCP Server style ModbusTCP Package time(ms) Package Length(@yte)	23 192.168.0.201 TCP Server 8 Transparent transmiss None 0 0 0	

**Method 2:** After switching to "Network Setting" page, click "Search Device" button to search devices, then click one device in the result list to load its IP information.

## 12. Appendix C: Set IP Info via UART

Set IP information via UART by doing the operation below:

Step 1. After connecting to the device via UART, switch to "Network Setting" page.

Step 2. Click "Find via UART" button to read IP information.

**Step 3.** Modify IP address type to Static IP or Auto IP(DHCP). If IP address type is modified to Static IP, then input IP address, subnet mask and gateway information.

Step 4. Click "Save Config" button to save.

**Step 5.** Click "Find via UART" button again to read IP information to make sure the modification is completed successfully.

	nced Switch   Signal Setting	FineTune:PQ&Position	OSD CTRL TV Wall	Network Setting		
1				Select config port		
Search List (C	lick device to load configura	tion)		Port 0 Port 1	Port 2	
Device Name	e IP Address	MAC Address	Version	Baud Rate	9600 -	
USR-K3	STATIC,192.168.0.247	D8 B0 4C B9 47 D	F V1.1.0		None + 8 + 1 +	
				Stream Control	None -	
				Device Port	23	]
	Search Device Open W	absite Find via LIART		PC Port	0	]
	Contraction open w	This via OAIT			192.168.0.201	]
Basic config				Work Mode	TCP Server +	
UPNP Port	6432	Device Name USR-	K3		8 -	
	80	MAC Address D8 B0	0 4C B9 47 DF	TCP Server style	Transparent transmis: 👻	
	1	IP Type Static	IP 🔹	ModbusTCP	None +	
	é 0	Static IP 192	168, 0, 247	Package time(ms)	0	]
User Name	admin	Subnet Mask 255	255.255.0	Package Length(Byte)	0	]
	admin	Gateway 192	168.0.1	Sync BaudRate(RFC2)	217 similar)	
	_					

**Note:** Configuration via UART only support modify IP address or IP address type. If you want to modify other configuration, please configure it via Network.

## 13. Appendix D: Set IP Info via Network

Set IP information via network by doing the operation below:

Step 1. After connecting to the device via network, switch to "Network Setting" page.

Step 2. Click "Search Device" button to search devices.

**Step 3.** Click the device you want to configure in the result list (When you click it, the software will read the network configuration of the device automatically).

Step 4. Modify the IP address, the IP address type or other configuration.

Step 4. Click "Save Config" button to save.

**Step 5.** When the software shows a message of "Success", click "Search Device" button to load configuration again to make sure your modification is saved successfully.

				Select config port		
Search List (Click	device to load configu	(ration)		Port 0 Port 1	Port 2	
Device Name	IP Address	MAC Addre	ess Version		9600 -	
USR-K3	192.168.5.247	D8 B0 4C B	9 47 DF 3013		None + 8 + 1 +	
					None -	
				Device Port	23	
1	Search Device	Website Find via	HART	PC Port	23	
	ocuren pencer open	The she	<u>ontri</u>		192.168.0.201	
Basic config				Work Mode	TCP Server 👻	
UPNP Port	6432	Device Name	USR-K3		8 -	
HTTP Port	80	MAC Address	D8 B0 4C B9 47 DF		Transparent transmis: *	
Device ID	1	IP Type	Static IP 🔹		None +	
Device ID Type	0	Static IP	192,168,0,247		0	
Jser Name	admin	Subnet Mask	255,255,255,0		0	
Password	admin	Gateway	192,168,0,1	Sync BaudRate(RFC2	217 similar)	
-PC-tool-v5.0.1 witch Advance	25 d Switch   Signal Settir	Save Config	Position   OSD CTRL   ח	Saw / Wall Network Setting Select config port	c Config	-
-PC-tool-v5.0.1 witch   Advance earch List (Click	25 d Switch   Signal Settin device to load config	Save Config	Position OSD CTRL   T	V Wall Network Setting Select config port @ Port 0 Por	a Config	-
-PC-tool-v5.0.1 witch   Advance earch List (Click Device Name	25 d Switch Signal Settir device to load config IP Address	Save Config 1g Fine Tune: PQ& urstion) MAC Add	Position OSD CTRL T	/ Wall Network Setting Select config port @ Port 0 Port Baud Rate	2 Config 11 Port 2 9600	-
-PC-tool-v5.0.1 witch Advance earch List (Click Device Name USR-K3	25 d Switch Signal Settir device to load config IP Address 192.168.0.247	Save Config Ig FineTune:PQ& uration) MAC Add D8 B0 4C	Position OSD CTRL T Iress Version B9 47 DF 3013	V Wall Network Setting Select config port @ Port 0 Port Band Kine Parts//Data Britste	s Config 11 Port 2 9600 p:Bit. None v 8 v	-
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**Note:** When selecting the device, it will display the matrix's network board information. You can edit the device's name, in order to better identify matrix. You can set dynamic IP/ static IP, subnet mask, gateway and other network information. At the same time, you can also set the device port. Serial port baud rate is 9600 (You cannot change the baud rate, otherwise it will lead to network control failure).

## 14. Appendix E: Set IP Address on Windows 7 or XP

1. Windows 7: Open "Network and Sharing Center" on PC.



Modify the static IP address of PC (e.g. 192.168.0.1):

Local Area Connection Network 5 1. Right Click	Local Area Connection Properties	Internet Protocol Version 4 (TCP/IPv4) Properties
<ul> <li>Inte P Disable</li> <li>Status</li> <li>Diagnose</li> <li>Bridge Connections</li> <li>Create Shortcut</li> <li>Delete</li> <li>Rename</li> </ul>	Networking Connect using: Intel(R) PRO/1000 MT Network Connection Configure This cognection uses the following tems: Clert for Microsoft Networks Clert for Microsoft Networks Clert for Microsoft Networks Clert for Microsoft Networks	General         You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.         O Obtain an IP address automatically         Que the following IP address:         IP address:         19 address:         19 address:         19 address:         19 address:         19 address:
Properties 2.Click	☑         Bite and Printer Sharing for Microsoft Networks           ☑         → Internet Protocol Version 6 (TCP/IPVs)           ☑         → Internet Protocol Version 6 (TCP/IPVs)           ☑         → Internet Protocol Version 4 (TCP/IPVs)	Subnet mask: 255 . 255 . 255 . 0 Default gateway: 192 . 168 . 0 . 1 Obtain DNS server address automatically (a) Use the following DNS server addresses: Preferred DS server:
	Description Transmission Control Protocol/Internet Protocol. The default wide area reveals protocol that provides communication across diverse interconnected networks.	Alternate DNS server: Valdate settings upon exit Advanced 5 OK Cancel

2. Windows XP: Open "Network Connections" on PC.



Modify the IP address of "Local Area Connection" (e.g. 192.168.0.1):

S Network Connections	🛶 Local Area Connection Properties 💦 🔀 Internet Protocol (TCP/IP) Properties 😰
File Edit View Favorites Tools Advanced Help	General Advanced
🕝 Back - 🕥 - 🏂 🔎 Search 🍋 Folders 🛄 -	Connect using. You can get IP settings assigned automatically if your network supports
Address 🔍 Network Connections	Where Accelerated AMD PONet Ad     Gonfigure     the appropriate IP settings.
Network Tasks	This connection uses the following items: O Obtain an IP address automatically 4. Input IP address
Constant and the connection     Connection	Clear to Microsoft Networks     Clear to Microsoft Network     Clear to Microsoft Ne
	6 OK Cancel 5 OK Cancel

## 15. Appendix F: Direct Connect via Ethernet Cable

Operation steps are as follows:

Step 1. Connect the PC and device directly via an Ethernet cable.

**Step 2.** Manually set up the IP address of the PC, which should be in the same network segment with the device (The default IP address of the device is 192.168.0.247, and the default network mask of the device is 255.255.255.0).

Step 3. Run the PC control software (If the IP address of the PC is changed after running the software, you should close it and run it again).

Step 4. Click to switch "Ctrl Mode" to "Network".

Step 5. Click the 'Search Device' button.

**Step 6.** Click the device you want to control in the result list (When you click it, the software will read the network configuration of the device automatically).

**Step 7.** Click the "Disconnected" button (which is right to "Status") to connect the device. **Step 8.** After connected successfully, the button right to "Status" will turn to "Connected" (If you click it now, it will disconnect from the device).

1101 R 100 R 10	NAMES OF TAXABLE PARTY.		
UART	Network	Port	 Status Disconnected

**Note:** The default IP address of the device is 192.168.0.247, and the default subnet mask is 255.255.255.0.

## 16. Appendix G: Connect via Network Router /Switch

Operation steps are as follows:

Step 1. Connect the PC and device to a same network router.

Step 2. Set up the IP address of the PC. Either manual (Static) mode or automatic (DHCP) mode.

**Step 3.** Just make sure the IP address of the PC and the device are in a same network segment (When the IP type is obtained automatically, the network router that PC and device connected to should support HDCP function)

**Step 4.** Run the PC control software (**If the IP address of the PC is changed after running the software, you should close it and run it again**).

Step 5. Click to switch "Ctrl Mode" to "Network".

Step 5. Click the 'Search Device' button.

**Step 6.** Click the device you want to control in the result list (When you click it, the software will read the network configuration of the device automatically).

**Step 7.** Click the "Disconnected" button (which is right to "Status") to connect the device. **Step 8.** After connected successfully, the button right to "Status" will turn to "Connected" (If you click it now, it will disconnect from the device).



**Note:** If the IP type of the device is Dynamic (DHCP) mode, the network router or switch must support HDCP function, otherwise the device will not be able to obtain a valid IP address, or the device will not be found. If the device can be found but not able to be connected successfully, please make sure the IP address of the PC and the device are in a same network segment. (e.g. if the subnet mask is 255.255.255.0, then 192.168.0.1 and 192.168.0.2 are in a same network segment.)

## 17. Appendix H: Troubleshoot with Network Control

- 1. Can't find any devices:
  - a) Cause A: The IP address type of the device is obtained automatically (DHCP), but the device is currently connected directly via an Ethernet cable or connected to a network device (router or switch) which does not support HDCP function.
     Solution A: Set up the IP address type of the device to static mode, or connect the device to a network router which supports HDCP function.
  - b) Cause B: The device is not powered on. Solution B:Please power on the device.
  - c) Cause C: The Ethernet cable is bad contact. Solution C: Check the Ethernet cable's connection.
  - d) Cause D: The IP address type of the PC is obtained automatically(DHCP), but the PC is currently connected directly via an Ethernet able or connected to a network device (router or switch) which does not support HDCP function.

Solution D: Set up the IP address type of the PC to static mode, or connect the PC to a network router which supports HDCP function.

e) Cause E: Unknown

Solution E: When connecting directly via Ethernet cable, please set up the IP address type both of the PC and the device to static mode, and the IP address of the both should be in a same network segment. Or when connecting via LAN, connect the PC and the device to a same network router which supports HDCP function.

- 2. The software shows a message of "device response timeout" after connecting to the device. Cause A: The IP address of the PC and the device are not in a same network segment. Solution A: Set up the IP addresses of the PC and the device, make sure they are in a same network segment.
- **3**. The software shows a message of "TCP connection failed! Error Code: xxxx" after connecting to the device.
  - a) Cause A: The IP address of the PC and the device are not in a same network segment.
  - b) Solution A: Set up the IP address of the PC and the device, make sure they are in the same network segment.
  - c) Cause B: Firewall is enabled and PC tool is not admitted to passthrough.
  - d) Solution B: Disable firewall or add PC tool to white list so that it can be admitted to pass through.
- **Note:** If the device's IP address type is Auto (DHCP), we can connect the device via UART firstly, then click the "Find Via UART" button to read the device's IP address. If the IP address of the device is 255.255.255 by this way, it means that the network device (the device connected to) does not support HDCP function.

#### Diagram :

HDMI cable \_\_\_\_\_ Rj45 cable \_\_\_\_\_ Audio cable \_\_\_\_\_



Laptop

2x2 video wall