

SX-8800 Seamless UHD Matrix

Version 1.0



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1 Introduction

SX-8800 provides seamless switching of up to (8) HDMI 2.0 inputs and outputs and incorporates the latest technologies available on the market including HDR and HDCP 2.2 compliance. The SX-8800 matrix switchers also feature a built-in web page interface/software allowing convenient set-up, user access, control, and operation. It

also features audio extraction as well as audio insertion. Together with video wall function/advanced EDID management and added security features, the SX series

delivers a true, first-in-class Ultra HD multi-zone signal distribution solution ideal for corporate conferencing, education, and hospitality environments, to name a few.

SX-8800 key features:

- HDMI 2.0/HDCP 2.2
- seamless switching
- video wall
- IR matrix
- HDMI audio extract
- external LR audio insert on HDMI stream
- EDID management
- HDMI video output resolution up to 3840x2160@60
- Front panel, RS232, TCP/IP (LAN 10M/100M) and Windows Matrix program control

2 Front Panel Control

PureLink	0 0 0	
OUT IN	R POWER LOCK	ALL RES EDID NEXT
SX-8800 4K/UHD Seamless Matrix/Video Wall Syst	em	SAVE RECALL CLEAR TAKE

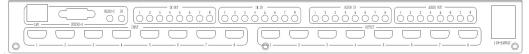
OUTPUT/INPUT buttons

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

- Press button POWER and hold for 5 seconds, to make the matrix enter standby state.
 Press button POWER and hold for 1 seconds to power on the matrix.
- Press button LOCK more than 2 seconds and less than 6 seconds, to lock or un-lock front buttons. When locked, the Lock LED will be solid on;
 Press button LOCK more than 6 seconds, enter into the input output lock menu, then press IN n. Or OUTPUT button to toggle the input or output lock status, then press TAKE to set,
 Press CLEAR to exit.
- Press buttons ALL + INPUT m + TAKE by sequence, to switch input m to all outputs.
- Press button SAVE + OUTPUT n to save current routing scene as scene n. There are eight scene memories available.
- Press button RECALL + OUTPUT n to recall routing scene n.
- Press button RES + OUTPUT n + NEXT + TAKE, to change 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 option:
 - Manual
 - 3840x2160@60
 - 3840x2160@30
 - 1920x1200@60
 - 1920x1080@60
 - 1280x1024@60
 - 1280x720@60
 - 1024x768@60
 - Manual EDID is loaded by PC Tool

3 Rear Panel

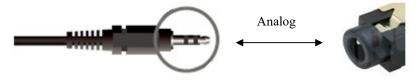


- LAN(10M/100M), RS232 for PC control
- Analog Audio IN/OUT ports bind to corresponding HDMI ports.

Example:

If HDMI 1 audio source is selected with External LR by PC Tool, then analog AUDIO IN LR1 (with ϕ 3.5mm jacket) 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, then will use the original embedded audio of input HDMI 1 as its audio data stream.

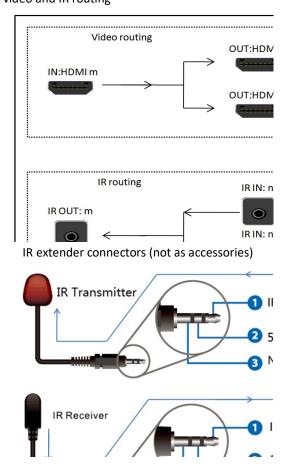
If input is DVI signal, no matter how it is set up, system will get external analog audio input. Analog AUDIO OUT n will always output the same audio content with HDMI OUTPUT n Analog Audio IN/OUT connection



• IR IN and IR OUT

IR IN/OUT is for remote control routing, and follow the video routing.

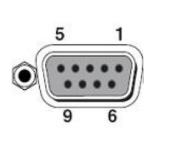
For example, if input HDMI m is routed to output HDMI n1 and n2 ports, then IR IN n1 and n2 ports will be routed to IR OUT m port. Please refer bellow illustration. Relationship between video and IR routing



4 RS232/LAN Control

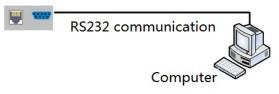
4.1 RS232 connector

- RS-232 control, baud rate 9600, DB9 connector
- Port RS232-1 is DB9 female connector, Pins layout as bellow. User need use the corresponding cable, directly/straight RS232 cable



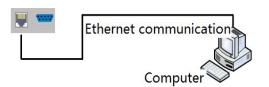
1	Pin
1	N/u
2	Tx(Matrix \rightarrow
3	Rx(Matrix
4	N/u
5	Gnd
6	N/u
7	N/u
8	N/u
9	N/u

Baud rate 9600



• RS232-2 and IR-EXT ports are reserved for future development

4.2 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

5 PC tool user guide

5.1 Account's authentication

When you run the PC tool, there needs password to authenticate.

Password Authenticat	tion
Account	Administrator
Password	
Login	Cancel Modify
Password Authenticat	tion
Account	User •
Password	
Login	Cancel Modify

Default password of Administrator (access to all features): 111111

Default password of User (access to all features, except OSD function): 000000 NOTE: In case of password lost, there's a admin password to login and modify password: Smartsecuri@2010

5.1.1 Password modification

- 1. Click drop-down list to select account: Administrator or User.
- 2. Input current password, then click the 'modify' button to authenticate.
- 3. Input new password twice, then click the 'modify' button.

NewPasswd •••••	Account	Administrator 👻
Confirm •••••	NewPasswd	•••••
	Confirm	•••••

5.2 Connect with PC tool

1. The default PC tool's UI style as bellow

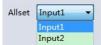
Matrix-PC-te	ool-v5.0.	77						-		-				х
Matrix Switch	Advanc	ed Switch	Signal	Setting	FineTun	e: TV W	all Netv	vork Sett	ing				Englis	sh 🔻
Input Output Name	Name	Input1	Input2	Input3	Input4	Input5	Input6	Input7	Input8					
Output1	01													
Output2	0 2													
Output3	03													
Output4	04													
Output5	0 5													
Output6	06													
Output7	• 7													
Output8	08													
Allert Toront	•		all Mod	e1 🔻		veAs Ma		-	EDID			Swit	ch UI	1
Allset Input1	•	Reca	all Mod	ei 🔻	Sa	veas Mic	del	`	EDID					
Ctrl Mode	Networl	Port		Ţ	St	atus <mark>Dis</mark>	connecte	d	Reset				^	
Device Name		IP Add	ress		MA	C Addre	ss	Ve	rsion					
													÷	
				Find via	UART									

- 2. User 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), follow below steps:
 - Query IP address info via UART, please refer to Appendix A.
 Or query IP address info via Network, please refer to Appendix B.
 - b) Set IP info via UART, please refer to Appendix C.
 Or set IP info 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 route/switch (please refer to Appendix G)
 - e) Click **Connected** button to setup link and connect.
- 4. When connect with PC Tool, User sometimes may encounter connection failure, please refer to . **Appendix H**, Troubleshoot with Network control to fix.

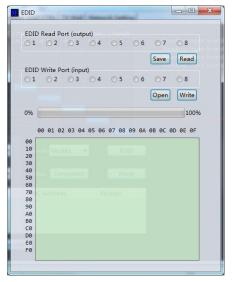
5.3 Matrix Switch page

latrix Switch	Advance	d Switch	Signal	Setting	FineTun	e: TV W	all Netv	ork Sett	ing		English
Input Output Name	Name	PC	Input2	Input3	Input4	Input5	Input6	Input7	Input8		
Output1	01										
Output2	02										
Output3	3										
Output4	04					1					
Output5	05										
Output6	06										
Output7	07										
Output8	08										
Allset Input1	•	Reci	all Mod	e1 🔻	Sa	veAs <mark>Ma</mark>	de1 ·	2	EDID	-	itch UI
Ctrl Mode	_	٦					de1 •		EDID Reset		<u>^</u>
Allset Input1 - Ctrl Mode — • UART • Device Name	Network	٦	COM		St		onnected			Reading: Output Board7 ->Signal Type success Reading: Output Board7 ->Signal Resolution succ Reading: Output Board7 ->Signal Resolution succ	ess 🔺
Ctrl Mode O UART	Network	Port	COM		St	atus Co	onnected		Reset	Reading: Output Board7 -> Signal Type success Reading: Output Board7 -> Signal Resolution succ	cess cess

- 1. There are 3 options for Matrix Switch page, users can press Switch UI button to change the UI style.
- 2. There is a shortcut button to switch one input port to all output ports, that is Allset.
- 3. For example, switch input 1 to all outputs, user can select.



- 4. Recall mode: Recall a inputs/outputs routing scene which already be saved previously. The device supports maximum of 8 scenes.
- 5. Save mode: Save current inputs /outputs routing in one index. Maximum 8 modes supported. Note:Save/Recall here button here works the same with front panel save/recall control
- 6. System reset: The PC tool support reset system to recover to factory configuration.
- 7. EDID Control: Click the 'EDID' button on Matrix Switch page, then opens a EDID control window



- 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
- c) the input port, and click the 'Write' button to write EDID.
- d) Save EDID: After reading EDID successfully, Click 'Save' button to save
- e) This EDID for one input port is act as the Manual EDID, which can be selected or deselected .
- f) by the front panel

5.4 Signal Setting page

atrix	Switch Advar	nced Switch Signa	al Setting	Finel	fune _ TV Wall	Network Setting							
nput	Board-Rea	d All						Outpu	t Board-Rea	d All			
bel	Input Type	Input Format	Audio	Select	Output Type	Output Format		Label	Input Type	Input Format	Output Type	Output Format	٦
1	UHD-HDI -	No Signal	Auto	•			Read	1			UHD-HDI -	4K2Kp30	▼ Re
2	UHD-HDI -	No Signal	Auto	•			Read	2			UHD-HDI -	4K2Kp30	▼ Re
3	UHD-HDI -	No Signal	Auto	•		· · · · ·	Read	3			UHD-HDI -	4K2Kp30	▼ Re
4	UHD-HDI -	No Signal	Auto	•		-	Read	4			UHD-HDI -	4K2Kp30	▼ Re
5	UHD-HDI -	No Signal	Auto	•			Read	5			UHD-HDI -	4K2Kp30	▼ Re
6	UHD-HDI -	No Signal	Auto	•		· · ·	Read	6			UHD-HDI -	4K2Kp30	▼ Re
7	UHD-HDI -	No Signal	Auto	•		· · ·	Read	7			UHD-HDI -	4K2Kp30	▼ Re
8	UHD-HDI -	No Signal	Auto	•		Ψ.	Read	8			UHD-HDI -	4K2Kp30	▼ Re

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, and 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:

- A. UHD-HDMI (HDCP OFF): HDCP Off
- B. UHD-DVI
- C. UHD-HDCP-1.4,
- D. UHD-HDCP-2.2
- 3. Output Format

User can set output resolution here:

- 1) 3840x2160@60
- 2) 3840x2160@50
- 3) 3840x2160@30
- 4) 3840x2160@25,
- 5) 1920x1200@60
- 6) 1920x1080@60
- 7) 1920x1080@50
- 8) 1600x1200@60
- 9) 1400x1050@60
- 10) 1366x768@60
- 11) 1360x768@60
- 12) 1280x1024@60
- 13) 1280x768@60
- 14) 1280x720@60
- 15) 1280x720@50
- 16) 1024x768@60

5.5 Fine Tune

User can read and set the brightness/contrast/saturation/sharpness of each output.

Select PQ FineTun	e Porte Output2	2	Select Positi			nputl -
Brightness	0 50	\frown	Read the input	source	Read	
Contrast	-0 50	Read	Input	board: (mponent picture position adjust
Saturation	50	Reset	H Start	+1	-1	
Sharpness	50		V Start	+1	-1	Read
Temperature Cool	▼ Read		H Size	+1	-1	Reset
R-Gain C			V Size	+1	-1	
G-Gain C		Read			VGA inpu	t position adjust
B-Gain C		Reset	H Start	+1		
R-Offset C			V Start	+1	-1	Read Reset
G-Offset		Read	H Size	+1	-1	Auto-Config
B-Offset 0		Reset	V Size	+1	-1	ON OFF

NOTE:

If none special occasions, do not change the default settings; If there is a problem after the change, click Reset to return to the factory settings.

5.6 Video Wall

Set the Video wall display quantity, rows and columns of panels to be layout

Matri	ix-PC-tool-v	5.0.182				
Matrix Switch	Advanced Switch	Signal Setting	FineTune:PQ	Video Wall Net	work Setting	
Vide	oWall Setting —	Vi	deo Wall			
Rows 2	-0					
Columns 4 Available 8	-0	-	Screen 1	Screen 2	Screen 3	Screen 4
Available 8	Read					
501						
E	ezel Setting	_	Screen 5	Screen 6	Screen 7	Screen 8
Туре: 💿 /	А 🔘 В	_				
Left(Pixels)						
Right(Pixels)						
Top(Pixels) Bottom(Pixel	c)					
Bottom(Fixer	Set					
Scer	ne Save/Load —					
Save scer	ne Load scen	•				

5.6.1 Build a wall

Select one screen, right click, can see a menu as the following picture shows:

- Input Select: Select the input port, for the displayer to display (Input 1 ~ Input 8);
- Output Select: Set the output port that connect to the display, need set according to the Video wall connect status; It means which output port connect to the display;
- Output Format: Set the output resolution;

Matrix Switch Advanced Switch	Signal Setting FineTune	PQ Video Wall	Network Setting			
	Video Wall					
Rows 2						
Columns 4	Screen	1 Screen	2 Screen 3	Screen 4		
Available 8	-0					
Set Read						
		Screen 1	Not In Screen Stitching			
Bezel Setting	Screen	Input Select	Input 1	Screen 8		
Type: 💿 A 💿 B		Output Select	Output 1			
Left(Pixels)		Output Type Output Format	UHD-HDMI-1.4 1280x720@60			
Right(Pixels)		Left(Pixels)	0 Pixel			
Top(Pixels)		Right(Pixels)	0 Pixel			
		Top(Pixels) Bottom(Pixels)	0 Pixel 0 Pixel			
Bottom(Pixels)		Bottom(Fixels)	UFIXEI			
Set						

Click to select the screen, then drag, select the screens to splice, right-click, and click Screen Stitching to splicing;

Matrix-PC-tool-v5.0.182						-		×
Matrix Switch Advanced Switch Signal Setting	Matrix Switch Advanced Switch Signal Setting FineTune:PQ Video Wall Network Setting							
VideoWall Setting	Video Wall							
Columns 4	Screen 1	Screen 2	Screen 3	Screen 4				
Set Read		Screen Stitching Cancel Stitching						
Bezel Setting	Screen	Screen 1 - Cancel Stitching Screen 8						
Type: A B Left(Pixels)		Input Select		•				
Right(Pixels)		Output Select		•				
Top(Pixels)		Output Type		•				
Bottom(Pixels)		Output Format		•				
Set	_	Sync lock						
Scene Save/Load Save scene Load scene								

To cancel Video WALL, first select the wall which is splicing, right click, then select **Cancel Stitching**.

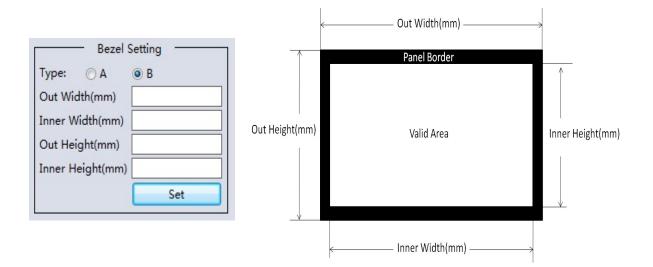
5.6.2 Bezel adjust

There are two options to set bezel:

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

Bezel Setting						
Type: 💿 A	🔘 В					
Left(Pixels)	100					
Right(Pixels)	100					
Top(Pixels)	100					
Bottom(Pixels)	100					
	Set					

Type B with millimeter setting, see below:



5.6.3 Multi Video wall

SX-8800 support several Video walls at the same time, for example it support one 2x2 wall and one 2x1 wall.

Matrix-PC-to	ool-v5.0.182						-	x
Matrix Switch Advanced	Switch Signal Settin	ng FineTune:PQ	Video Wall Net	work Setting				
VideoWall Settin Rows 2	·9	Video Wall						
Columns 4	Read	Screen 1	Screen 2	Screen 3	Screen 4			
Bezel Setting Type: O A @ B Out Width(mm)		Screen 5	Screen 6	Screen 7	Screen 8			
Inner Width(mm) Out Height(mm) Inner Height(mm)	Set							
Scene Save/Loa	d ad scene							

Each wall has its own bezel setting. Click one wall and then set bezel one by one

5.6.4 Multi View with TV Wall

atrix Switch Advanced Switch Signa	Setting FineTune:PQ	Video Wall N	etwork Setting	
VideoWall Setting	Video Wall			
Rows 2	Screen 1	Screen 2	Screen 3	Screen 4
Available 8 Gead				
Bezel Setting	Screen 5	Screen 6	Screen 7	Screen 8
Type: A B Out Width(mm)		Screen Stitching Cancel Stitching		
Inner Width(mm) Out Height(mm)		Screen 5 - Cance Input Select	I Stitching	
Inner Height(mm)		Output Select	+	
Scene Save/Load		Output Type Output Format	*	
Save scene Load scene		Sync lock		

Above is one 2x2 wall, for example. If want screen 5 to separately display another video source, user can select **Screen 5 - Cancel Stitching**, then select the same or another video source for screen 5 to display. This separate screen is a full display screen

Screen 1	Screen 2	Screen 3	Scree	en 4
Screen 5	Screen 6	Screen 7	Scree	en 8
	Screen Stitch Cancel Stitchi ✓ Screen 5 - Ca			Input 1
	Output Type	Output Select		
	Sync lock		_	Input 6 Input 7 Input 8



Multi View with Video Wall

5.6.5 Save scene/ Load scene

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

5.7 Advanced route switch page

Please refer to Appendix I for this section.

6 Control via Web

- 1) Directly Input the IP address in the web browser, then press 'Enter' key.
- 2) Input the username: admin.
- 3) Input the password: admin.
- 4) Login and then you can control the matrix switch function use the website.
- 5) Please note, on website control, user only can control basic operation.

7 Electrical parameters

Electrical parameter	
Interface	HDMI-A
HDMI /DP /VGA Version	HDMI2.0,HDCP2.2
Bandwidth	18Gbps
Input	800x600@60Hz,1024x768@60Hz, 1280x768@60Hz, 1280x800@60Hz,1280x1024@60Hz,1360x768@60Hz, 1366x768@60Hz,1400x1050@60Hz,1440x900@60Hz, 1600x1200@60Hz,1680x1050@60Hz, 1920x1200@60Hz,480p,576p,720p,1920x1080i, 1920x1080p,3840x2160@24Hz/25Hz/30Hz/50Hz/60Hz, 4096x2160@24Hz/25Hz/30Hz/50Hz/60Hz.
Output	3840x2160@60Hz, 3840x2160@50Hz, 3840x2160@30Hz, 3840x2160@25Hz, 1920x1200@60Hz,1920x1080@60Hz, 1920x1080@50Hz,1600x1200@60Hz, 1400x1050@60Hz,1366x768@60Hz, 1360x768@60Hz, 1280x1024@60Hz, 1280x768@60Hz, 1280x720@60Hz, 1280x720@50Hz, 1024x768@60Hz
HDMI Amplitude	T.M.D.S +/- 0.4Vpp
Differential impedance	100±15ohm
RS232/Ethernet control	
Baud rate and protocol	Baud rate: 9600, data bit: 8,
	stop bit: 1,no parity checking
Ethernet	IE10.0+,HTML5
Power	
Max Consumption	100W, 110-240VAC
Matrix Mechanical dimensions	
Size(mm)	430(L)X300(W)X44 (H)
Weight	5Kg
Operating temperature	0 to 40°C
Storage temperature	-20 to 70°C
Permissible humidity	10%-50%

7. Package Contents

Item	Quantity
SX-8800 4K UHD Matrix / Video Wall Solution	1
User Manual	1
AC Power Cord	1

8 Appendix A: Query IP info via UART

Method A: After connected to the device via UART, Click the 'Find via UART' button at 'Matrix Switch' page to read the IP information.

Otrl Mode ● UART ○ Network	Port COM3 -	Status Connected	Reset			
Device Name	IP Address	MAC Address	Version			
USR-K3	STATIC,192.168.0.247	D8 B0 4C B9 47 DF	V1.1.0			
Find via UART						

Method B: After connected to the device via UART, Click the 'Find via UART' button at 'Network Setting' page to read the IP information.

Matr	Matrix-PC-tool-v5.0.77								
Matrix	Matrix Switch Advanced Switch Signal Setting FineTune:PQ&Position OSD CTRL TV Wall Network Setting								
	6						Select config port		
	Search List (Clic	k device to load config	uration)				Port 0 Port 1	O Port 2	
	Device Name	IP Address	MAC Addre	55	Version		Baud Rate	9600 -	
	USR-K3	STATIC,192.168.0.	247 D8 B0 4C B	9 47 DF	V1.1.0		Parity/Data Bit/Stop Bit	None - 8 - 1 -	
							Stream Control	None	
							Device Port	23]
		Search Device Open	Website Find via	UART			PC Port	0]
		[content of [open		C. att			PC IP/Domain	192.168.0.201]
	Basic config						Work Mode	TCP Server	
	UPNP Port	6432	Device Name	USR-K3]	TCP Server connect cou	8 -	
	HTTP Port	80	MAC Address	D8 B0 4	C B9 47 DF]	TCP Server style	Transparent transmis: 👻	
	Device ID	1	IP Туре	Static IP]	ModbusTCP	None	
	Device ID Type	0	Static IP	192.16	58.0.247		Package time(ms)	0]
	User Name	admin	Subnet Mask	255.25	55.255.0		Package Length(Byte)	0]
	Password	admin	Gateway	192.16	58.0.1		✓ Sync BaudRate(RFC22	17 similar)	
			Save Config				Save	Config	
						_]

9 Appendix B: Query IP address info via Network

After connecting to the device via network, we can query information as follows.

Method A: Switch to 'Matrix Swtich ' page, then click 'Search Device' button to query IP address information.

Ctrl Mode O UART O Network	Port 🗾	Status Disconnected	Reset		
Device Name	IP Address	MAC Address	Version		
USR-K3	192.168.0.247	D8 B0 4C B9 47 DF	3013		
Search Device					

Method B: 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 address information.

Matri	Matrix-PC-tool-v5.0.112							
Matrix	Matrix Switch Advanced Switch Signal Setting FineTune:PQ&Position OSD CTRL TV Wall Network Setting							
	Select config port							
	∞ Search List (Clic	k device to load configu	ration)			Port 0 O Port 1	O Port 2	
	Device Name	IP Address	MAC Addre	ss	Version	Baud Rate	9600 -	
2	USR-K3	192.168.5.247	D8 B0 4C B	9 47 DF	3013	Parity/Data Bit/Stop Bit	None • 8 • 1 •	
						Stream Control	None 👻]
						Device Port	23]
	1	Search Device Open	Website Find via	UART		PC Port	23]
						PC IP/Domain	192.168.0.201]
	Basic config					Work Mode	TCP Server 👻]
	UPNP Port	6432	Device Name	USR-K3		TCP Server connect cou	8 -]
	HTTP Port	80	MAC Address	D8 B0 40	C B9 47 DF	TCP Server style	Transparent transmis: 👻]
	Device ID	1	IP Type	Static IP]	ModbusTCP	None 👻]
	Device ID Type	0	Static IP	192.16	8.0.247	Package time(ms)	0]
	User Name	admin	Subnet Mask	255.25	5.255.0	Package Length(Byte)	0]
	Password	admin	Gateway	192.16	8.0.1	Sync BaudRate(RFC22	217 similar)	
			Save Config			Save	Config	

10 Appendix C: Set IP info via UART

After connected to the device via UART, switch to 'Network Setting' page:

- 1. Click 'Find via UART' button to read IP information
- 2. Modify IP address type to Static IP or Auto IP(DHCP). If IP address type modified to Static IP, then input IP address, subnet mask and gateway information.
- 3. Click 'Save Config' button to save.
- 4. Click 'Find via UART' button again to read IP information to make sure the modification is successful.

11 Appendix D: Set IP info via Network

After connecting to the device via network, we can query information as follows.

- a) Switch to 'Network Setting' page, then click the 'Search Device' button to search devices.
- b) 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)
- c) Modify the IP address or the IP address type or other configuration.
- d) Click the 'Save Config' button to save data.
- e) When the software shows a message of 'Success', click 'Search Device' button to load configuration again to make sure your modification is saved successfully.

12 Appendix E: Set IP address on Windows 7 or XP

1. Windows 7: Open 'Network and Sharing Center':



Modify static IP address: (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
Inte 🛞 Disable	Networking	General
Status Diagnose Bridge Connections Create Shortcut Delete	Connect using: Connect using: Connection Configure This connection uses the following items: Configure for Macasaft Networks	Vou 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. Obtain an IP address automatically 4. Enter IP address 3. Use the following IP address:
🛞 Rename	Grent for Microsoft Networks	IP address: 192 . 168 . 0 . 1
Properties 2.Click	File and Printer Sharing for Microsoft Networks Anternet Protocol Version 5 (TCP/IPv6) Anternet	Obtain DNS server address automatically
	Igstall Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	Use the following DNS server addresses: Preferred DNS server: Alternate DNS server: Validate settings upon exit Advanced
	6 ОК Сапсе	5 OK Cancel

2. Windows XP: Open 'Network Connections:



Local Area Connection Properties nternet 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 this capability. Otherwise, you need to ask your network administrator for the anomonate IP settings. W VMware Accelerated AMD PCNet Ad 🕫 🔍 Network Connections LAN or High-Speed Internet This connection uses the following items O Obtain an IP address automatically 4. Input IP address Client for Microsoft Networks
 Client and Printer Shaing for Microsoft Networks
 Client and Printer Shaing for Microsoft Networks
 Client Scheduler
 Scherter Protocol (CPAP)
 S. Double Click Use the following IP address: 🛐 Create a new IP address: 192.168.0.1 Set up a home or small office network Status Subnet mask: 255.255.255.0 al Area Netwo . Default gateway: hange Windows rewall settings 192.168.0.1 Bridge Connections Install... Uninstall Properties • able this network **Bluetooth Net** Create Shortcut **5** Repair this connection Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. Use the following DNS server addresses Preferred DNS server: õ View status of this Alternate DNS server: Show icon in notification area when connected Notify me when this connection has limited or no connectivity 💽 C1 ange se Advanced... 6 DK Cancel 5 OK Cancel Matrix-PC-tool-v5.0.125 Matrix Switch Advanced Switch Signal Setting FineTune:PQ&Position OSD CTRL TV Wall Network Setting Select config port Qî. Search List (Click device to load configuration) Port 0
 Port 1 O Port 2 Device Name IP Address MAC Address Version 9600 192.168.0.247 D8 B0 4C B9 47 DF 3013 USR-K3 Parity/Data Bit/Stop Bit None × 8 × 1 × None 23 Matrix-PC-tool-v5.0.125 23 23 Search Device Open Website Find via UART Save Config: success! 192.168.0.201 Basic config TCP Server 6432 Device Name USR-K3 8 确定 80 MAC Address D8 B0 4C Transparent transmis: **IP** Туре Static IP • None Device ID Type 0 Static IP 192.168.0.247 admin Subnet Mask 255 . 255 . 255 . 0 Package Length(Byte) 0 admin Gateway 192.168.0.1 Sync BaudRate(RFC2217 similar) Save Config Save Config

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

NOTE:

- When selecting the device, it will display the matrix's network board information. User can
 edit the device's name, in order to better identify matrix. User can set dynamic IP/ static IP,
 subnet mask, gateway and other network information. At the same time, user can also set
 the device port. Serial port baud rate is 9600 (the user cannot change the baud rate,
 otherwise it will lead to the network control failed).
- 2. 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 F: Direct connect via Ethernet cable

Operation steps are as follows:

- 1) Connect the PC and device directly via an Ethernet cable.
- 2) Manually setting up the IP address of the PC, and the IP address of the PC and the device should be in a same network segment (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).
- 3) Run the PC control software (If the IP address of the PC changed after running the software, you should close it and run it again)
- 4) Click to switch 'Ctrl Mode' to 'Network'.
- 5) Click the 'Search Device' button
- 6) Click the device you want to control in the result list (When you click it, the software will read the network configuration such as network port and so on of the device automatically)
- 7) Click the 'Disconnected' button (which is right to 'Status') to connect to the device
- 8) After connected successfully, the button right to 'Status' will be 'Connected' (If you click it now, it will disconnect from the device)

nected
1

Note: The default IP address is 192.168.0.247, and the default subnet mask is 255.255.255.0

14 Appendix G: Connect via network route /switch

Operation steps are as follows:

- 1) Connect the PC and the device to a same network router.
- 2) Setting up the IP address of the PC. Either manual (Static) mode or automatic (DHCP) mode
- 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)
- 4) Run the PC control software(If the IP address of the PC changed after running the software, need close it and run it again)
- 5) Click to switch 'Ctrl Mode' to 'Network'.
- 6) Click the 'Search Device' button
- 7) Click the device you want to control in the result list (When you click it, the software will read network configuration such as network port and so on of the device automatically)
- 8) Click the 'Disconnected' button (which is right to 'Status') to connect to the device.
- 9) After connected successfully, the button right to 'Status' will be 'Connected' (If you click it now, it will disconnect from the device)

Ctrl Mode	Ð			
O UART	Network	Port	-	Status Disconnected

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

15 Appendix H: Troubleshoot with Network control

- 1) Unable to find the SX-8800 on the network:
 - a) Cause A: The IP address type of the device is obtained automatically (DHCP), but currently connected direct via Ethernet cable or connected to a network device(router or switch and so on) which not support HDCP function.

Solution A: Setting up the IP address type of the device to static mode or connecting the device to a network router which support HDCP function.

- b) Cause B: The device is not power 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 whether is ok.
- d) Cause D: The IP address type of the PC is obtained automatically(DHCP), but currently connected direct via Ethernet able or connected to a network device(router or switch and so on) which not support HDCP function.

Solution D: Setting up the IP address type of the PC to static mode or connecting the device to a network router which support HDCP function.

e) Cause E: Unknown

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

- 2) The software shows a message of 'device response timeout' after connected to the device.
 Cause A: The IP address of the PC and the device are not in a same network segment.
 Solution A: Setting up the IP address of both, make sure the IP address are in a same network segment.
- 3) The software shows a message of 'TCP connection failed! Error Code: xxxx' after connected 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: Setting up the IP address of both, make sure the IP address are in the same network segment.
 - c) Cause B: Firewall is enabled, and PC tool is not admitted through.
 - d) Solution B: Disable firewall or add PC tool to white list so can switch can pass through.

Note: If the device's IP address type is Auto (DHCP), it cannot be connected to the device via UART, click the 'Find Via UART' button to read the device's IP address. If the IP address of the device is 255.255.255, it means that the network device (the device connected to) does not support HDCP function.

16 Appendix I: Advanced routing switch

PC tool support automatically switch the input source periodically for the output port in order to facilitate the demonstration functions needed in some scenaries.

Operation guide is as follows:

1. Click the output port that need configure (Also user can press 'Ctrl' or 'Shift' first ,then click to select more output ports)

Matrix Switch	Advanced Switch	Signal Setting	FineTune	TV Wall	Network	Setting
Usage note:	1. Add input to out	put 2. Tick ou	utput and	then start	sending lo	op
Input	Custom name	e <u>O</u> i	utput	Cust	om name	Input Signal
Input 1	-		Output	L	-	
Input 2	170		Output 2	2	-	
Input 3	-		Output	3	-	
Input 4	-		Output 4	1	-	
Input 5	2 <u>-</u> 3		Output 3	5	-	
Input 6	-		Output (5	-	
Input 7	-		Output	7	-	
Input 8			Output	3	-	

2. Press 'Ctrl' or 'Shift' first, then click to select input ports

Matrix Switch	Advanced Switch	Signal Setting	FineTune	TV Wall	Network	Setting		
Usage note:	1. Add input to out	put 2. Tick ou	itput and th	nen start s	sending lo	ор		
Input	Custom name	e Ou	itput	Custo	om name	Input Signal		
Input 1	-		Output 1		-			
Input 2	-		Output 2		-			
Input 3	-		Output 3		-			
Input 4	-		Output 4		-			
Input 5	-		Output 5		-			
Input 6	-		Output 6		-			
Input 7	-		Output 7		-			
Input 8	-		Output 8		-			

3. Click "-->" button to add the input ports selected in step 2 .

Matrix Switch	dvanced Switch	Signal Setting	FineTune	TV Wall	Network	Setting
Usage note: 1	. Add input to out	put 2. Tick ou	utput an <mark>d</mark> t	hen start s	ending lo	op
Input	Custom name	e Ou	itput	Custo	om name	Input Signal
Input 1	-		Output 1		-	Input 1,2,3,4,6,8
Input 2			Output 2		-	
Input 3	-		Output 3		-	Input 1,2,3,4,6,8
Input 4	-		Output 4		-	Input 1,2,3,4,6,8
Input 5	-		Output 5		-	
			Output 6		-	
Input 7	-		Output 7	-		
Input 8	-		Output 8		-	

4. Check the output ports that need to automatically switch input source periodically.

Matrix Switch	Advanced Switch	Signal Setting	FineTune	TV Wall	Network	Setting
Usage note:	1. Add input to out	put 2. Tick o	utput an <mark>d t</mark>	hen start s	ending lo	ор
Input	Custom name	e 0	utput	Custo	om name	Input Signal
Input 1	-		Output 1		-	Input 1,2,3,4,6,8
Input 2			Output 2		-	
Input 3	-		Output 3		-	Input 1,2,3,4,6,8
Input 4	-	v	Output 4		-	Input 1,2,3,4,6,8
Input 5	-		Output 5		-	
Input 6	-		Output 6		-	
Input 7	-		Output 7		-	
Input 8	-		Output 8		2	

5. Configure automatic switching.

Switch frequency: default 2000ms

All outputs send combine: default not checked.

- a) unchecked: Switch all output ports one by one.
- b) checked: Switch all output ports' input at the same time in a switch operation.
- c) NOTE: Switch one input one by one if there are many input ports selected.

Wait others to finish then start next loop: Only can be set when 'All outputs send combined' is checked.

- a) unchecked: When the number of the selected input ports of some output is not the same, immediately start next loop when one output finished a switching loop.
- b) checked: All outputs start a new loop together. When the number of the selected input ports of some output is not the same, not start next loop until other outputs finish the current switching loop.

Send cmd only one loop: stop automatically switch when a loop is finished.

Select all outputs: Quickly check or uncheck all output ports.

Send cmd periodly at 2000 ms
All outputs send combined
Wait others finished then start next loop
Send cmd only one loop
Select all outputs
Start Stop

- 6. Click 'Start' button to start automatically periodically switch.
- 7. Automatically periodically switch is ongoing...

Click 'Stop' button to stop automatically periodically switch if needed. If 'Send cmd only one loop' is checked, it will stop after one loop is finished.

If you have further questions, please contact your PureLink dealer, call PureLink at 201-488-3232, or visit <u>www.purelinkav.com</u>

