

User Manual



Hybrid Card Modular Matrix Switcher



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Version: MPX-1616-LM_2026V1.0

Safety Precautions

To ensure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Keep the module away from liquids.
- Refer all servicing to qualified service personnel.
- Unplug the power cord when left unused for a long period of time.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not twist or pull by force ends of the cable. It can cause malfunction.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



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Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated by May, 2025. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

This manual uses the **MPX-32X32 Hybrid Card Modular Matrix Switcher** effect diagram as an example. And it is applicable for the following types of hybrid card matrix switchers:

No.	Name	Height	Number of Input/ Output Channels	RS-232	IR	TCP/IP
1	MPX-88-LM Hybrid Card Matrix Switcher	2U	8	Support	Support	Support
2	MPX-1616-LM Hybrid Card Matrix Switcher	3U	16	Support	Support	Support
3	MPX-3232-LM Hybrid Card Matrix Switcher	5U	32	Support	Support	Support

1. Product Introduction

The hybrid card matrix switcher is a high-performance professional switching device for audio and video signals. It is compatible with input/ output signal cards of different signal types, used for cross-switching of multiple signal input and output. And provide independent audio/ video signal input and output terminals. The seamless signal card types that can be inserted include: HDMI, HDBaseT, SDI and VGA. Combining the functions of different signal cards can solve the problem of comprehensive audio and video.

This series of products are mainly used in broadcasting and television projects, multimedia conference halls, large-screen display projects, TV teaching, command and control centers, etc. They have functions such as power-off memory, audio and video synchronization. And they can be controlled via RS-232 and TCP/IP, which can be easily used with PC, remote control systems or various remoted control devices.

1.1 Features

- Supports EDID learning function.
- Supports 10 groups of scenes saving and calling functions.
- The control mode is flexible with button, RS-232, TCP/IP and IR.
- Adopt LCD display screen and indicator light to show working status in real time.
- Modular design supports any seamless input/ output signal card such as HDMI, HDBaseT, SDI and VGA. It can be matched at will to improve system flexibility.

1.2 Signal Card Classification

According to different occasions and different users' needs, it supports multiple types of signal cards, which are divided into input signal cards and output signal cards.

1.2.1 Input Signal Card

Model	Signal Port	HDCP
MPX-4IUHS-C	HDMI, 3-pin Terminal Block	Support
MPX-4INHD-4K	HDMI, 3-pin Terminal Block	Support
MPX-4I-BTS-C	RJ45, 3-pin Terminal Block, 3.5mm Jack	Not Support
MPX-4I-SS-V	BNC	Not Support
MPX-4I-VA-C	15-pin Type-D, 3-pin Terminal Block	Not Support

1.2.2 Output Signal Card

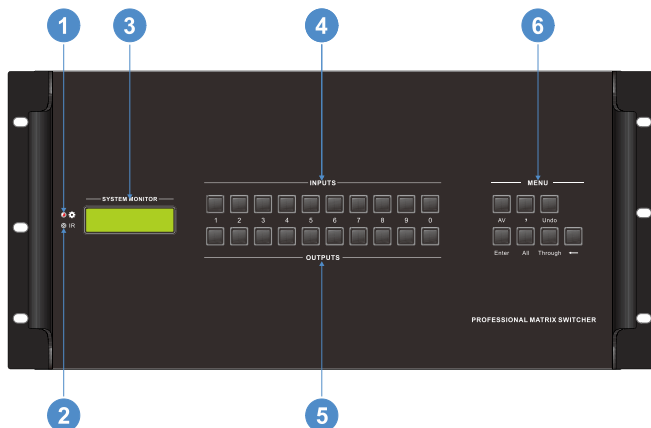
Model	Signal Port	HDCP
MPX-4OUHS-C	HDMI, 3-pin Terminal Block	Not Support
MPX-4OUTH-4K	HDMI, 3-pin Terminal Block	Not Support
MPX-4O-BTS-C	RJ45, 3-pin Terminal Block, 3.5mm Jack	Support
MPX-4O-SS	BNC	Not Support
MPX-4O-VS-C	15-pin D-Sub, 3-pin Terminal Block	Not Support

1.3 Packing List

- 1 x Hybrid Card Matrix Switcher Host (Without signal card)
- 1 x Power Adapter
- 1 x RS-232 Cable
- 1 x Remote Controller (Without batteries)
- 2 x Handle
- 4 x Foot Pad
- 1 x User Manual

2. Device Description

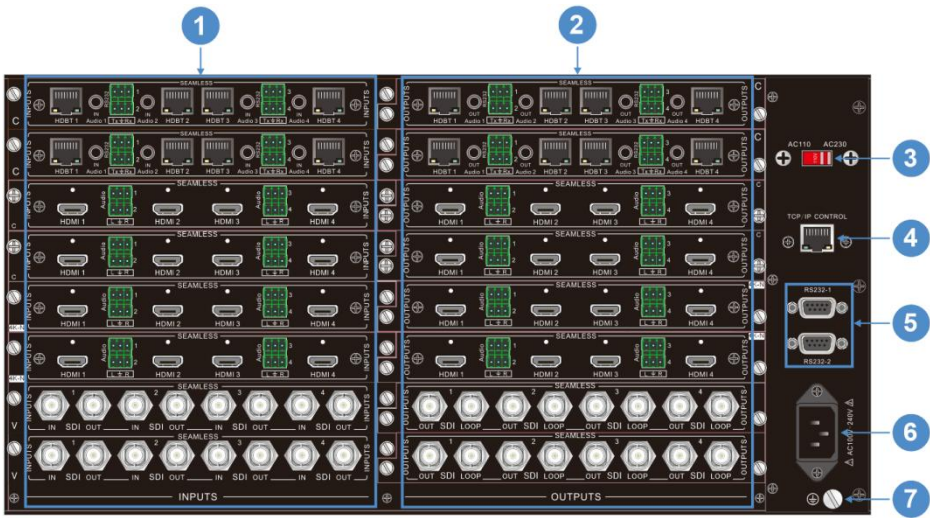
2.1 Front Panel



No.	Name	Description
1	POWER INDICATOR	● Red LED on when working. ● Red LED off when power off.
2	IR RECEIVER	● Built-in IR sensor, receive the IR signal from remote controller to control the device.
3	SYSTEM MONITOR	● LCD with green backlight and black font. ● Display the real-time operation status of the system.
4	INPUTS	● 10 x black buttons, number 0~9 represent input channel. Press the button for switching input channel. Note: The 8-way hybrid card matrix only has 8 buttons. ● Correspond one to one with the input port from left to right, up to down on the rear panel. ● If the number is more than 9, please select the input channel by pressing a combination of buttons. For example, 15 = 1 + 5.
5	OUTPUTS	● 10 x black buttons, number 0~9 represent output channel. Press the button for switching output channel. Note: The 8-way hybrid card matrix only has 8 buttons. ● Correspond one to one with the output port

		from left to right, up to down on the rear panel. ● If the number is more than 9, please select the output channel by pressing a combination of buttons. For example, 15 = 1 + 5.
6	MENU	● AV: Switch button, press it switch the input signal to the output channel. ● , : Interval button, help select multiple channels. ● Undo: Undo button, return to the last command operation. ● Enter: Confirm button, execute the command. ● All: All selected button, choose all channels. ● Through: Pass-through button, match input channels to output channels one by one. ● ←: Backspace button, return to the previous step. Note: For detailed usage, please refer to 6.1 Front Panel Control.

2.2 Rear Panel



No.	Name	Description
-----	------	-------------

1	INPUTS	8 x card slots, for inserting 8 signal input cards.
2	OUTPUTS	8 x card slots, for inserting 8 signal output cards.
3	POWER SWITCH	DIP switch, AC 110V or 230V input available.
4	TCP/IP CONTROL	1 x RJ45 with yellow and green LED, for TCP/IP control.
5	RS-232	2 x DB9, connect to the PC or other hosts to control the device. Note: The 8-way hybrid card matrix only has 1 x DB9.
6	POWER	AC 100-240V.
7	GND	Connect to the ground.

Note: The signal card in the picture is for reference only. Users can replace the signal card.

3. Series Specification

Input			
The 8-way hybrid card matrix with 2 card slots.			
The 16-way hybrid card matrix with 4 card slots.			
The 32-way hybrid card matrix with 8 card slots.			
Output			
The 8-way hybrid card matrix with 2 card slots.			
The 16-way hybrid card matrix with 4 card slots.			
The 32-way hybrid card matrix with 8 card slots.			
Control Method			
RS-232	DB9 to RS-232	TCP/IP	RJ45
IR	Remote controller	Front Panel	Buttons
General			
Working Temp.	0°C ~ +50°C	Relative Humidity	10% ~ 90%

Power	8-way hybrid card matrix: AC 220V. 16-way hybrid card matrix: AC 110-220V. 32-way hybrid card matrix: AC 100-240V. Note: 8/16-way hybrid card matrix without the DIP switch.
Power Consumption (no-load)	8-way hybrid card matrix: 23W. 16-way hybrid card matrix: 31W. 32-way hybrid card matrix: 60W.
Dimension	8-way hybrid card matrix: W436.6mm x D320.0mm x H88.0mm. 16-way hybrid card matrix: W436.6mm x D320.0mm x H132.5mm. 32-way hybrid card matrix: W436.6mm x D320.0mm x H221.5mm. Note: The dimensions of the chassis are without mounting ears. Please refer to the actual product.

4. Signal Card Introduction

The hybrid card matrix switcher can be inserted with signal cards of various signal formats, including HDMI, HDBaseT, SDI and VGA seamless input/output signal cards. The signal card does not support hot plugging, only the signal ports support hot plugging. The following is an introduction to each signal card.

4.1 Compatible Signal Card

Switch Output	
Input	Output
LMX-4IUHS-C	LMX-4OUHS-C, MMX-4O-SS , LMX-4O-UHS-N, LMX-4O-BTS-C,
LMX-4I-UHS-N	LMX-4O-UHS-N, MMX-4O-SS , LMX-4OUHS-C, LMX-4O-BTS-C
LMX-4I-BTS-C	LMX-4O-BTS-C, MMX-4O-SS , LMX-4OUHS-C, LMX-4O-UHS-N
LMX-4I-SS-V	MMX-4O-SS , LMX-4OUHS-C, LMX-4O-BTS-C
LMX-4I-VA-C	LMX-4OUHS-C, LMX-4O-VS-C, LMX-4O-BTS-C, MMX-4O-SS

Switch Input	
Input	Output
LMX-4IUHS-C, LMX-4I-BTS-C, LMX-4I-UHS-N, LMX-4I-SS-V	LMX-4OUHS-C
LMX-4I-UHS-N, LMX-4IUHS-C, LMX-4I-BTS-C	LMX-4O-UHS-N
LMX-4I-BTS-C, LMX-4IUHS-C, LMX-4I-UHS-N, LMX-4I-SS-V	LMX-4O-BTS-C
LMX-4IUHS-C, LMX-4I-BTS-C LMX-4I-UHS-N, LMX-4I-SS-V	MMX-4O-SS
LMX-4IUHS-C, LMX-4I-BTS-C LMX-4I-SS-V, LMX-4I-VA-C	LMX-4O-VS-C

Note: The MMX series signal cards no longer in production.

4.2 4K@30Hz HDMI Seamless Input & Output Signal Card

Input Signal Card		Output Signal Card
Signal	4 x HDMI, 4 x Analog Audio	
Port	HDMI Type-A Female, 3-pin Terminal Block	
Power Consumption	12.5W	
Color Depth	8-bit	
General		
Max Resolution	3840 x 2160p@30Hz	
Bandwidth	10.2Gbps	
Audio Format	Embedded audio format: PCM, Dolby Digital, DTS, and DTS-HD. External audio format: PCM.	
HDMI	HDMI 1.3	
HDCP	Input: Support Output: Not Support	
EDID	Supports EDID learning function	
Gain	0dB	
Max Switching Rate	200ns	
Working Temp.	0°C ~ +50°C	
Relative Humidity	10% ~ 90%	

- Default resolution is 1920 x 1080@60Hz.

- Support HDMI and compatible with DVI-D.
- The output card supports 8 resolution adjustments.
- Input/ output supports stereo audio embedding/ de-embedding.
- The input signal card has a character overlay function, and character-related attributes can be changed through commands. For details on the relevant commands, see the command table.



LMX-4IUHS-C



LMX-4OUHS-C

4.3 4K@60Hz HDMI Seamless Input & Output Signal Card

Input Signal Card		Output Signal Card
Signal	4 x HDMI, 4 x Analog Audio	
Port	HDMI Type-A Female, 3-pin Terminal Block	
Power Consumption	Input: 11.7W Output: 14.5W	
Color Depth	8-bit	
General		
Max Resolution	4096 x 2160p@60Hz	
Bandwidth	10.2Gbps	
Audio Format	Embedded audio format: PCM, Dolby Digital, DTS, and DTS-HD. External audio format: PCM.	
HDMI	HDMI 1.4	
HDCP	Input: Support Output: Not Support	
EDID	Supports EDID learning	

Hybrid Card Matrix Switcher

Gain	0dB
Max Switching Rate	200ns
Working Temp.	0°C ~ +45°C
Relative Humidity	10% ~ 90%

- Default resolution is 3840 x 2160p@30Hz.
- Supports HDMI and compatible with DVI-D.
- The output card supports 8 resolution adjustments.
- Input/ output supports stereo audio embedding/ de-embedding.
- If these 4K signal card are used with other 1080p input/ output cards, the resolution needs to be adjusted by dialing to achieve switching. The default resolution is 3840 x 2160p@30Hz and all dial down.



LMX-4I-UHS-N



LMX-4O-UHS-N

Note:

1. If use the 4K input signal card with the 1080p output signal card, please turn the 4K input signal card dial upwards for normal use.
2. If use the 4K input signal card with the 4K output signal card, please turn the 4K output signal card dial down for normal use.
3. If use the 1080p input signal card with the 4K output signal card, please turn the 4K output signal card dial upwards for normal use.

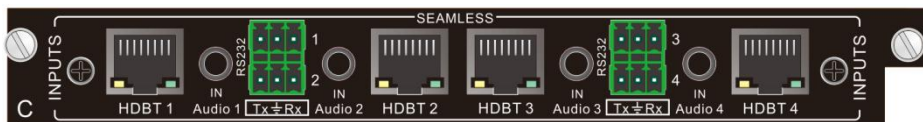
4.4 1080p HDBaseT Seamless Input & Output Signal Card

Input Signal Card	Output Signal Card
Signal	4 x HDBaseT, 4 x Analog Audio, 4 x RS-232
Port	RJ45, 3.5mm Audio Jack, 3-pin Terminal Block
Level	T.M.D.S 2.9V ~ 3.3V

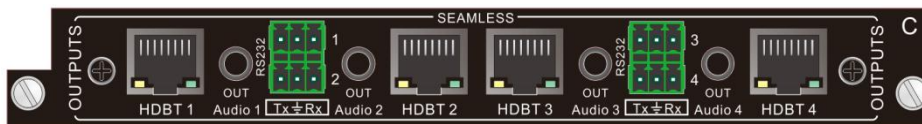
Hybrid Card Matrix Switcher

Impedance	Video: Differential line 100Ω Audio: 75Ω
Frequency Response	20Hz~20KHz
Power Consumption	Input: 10.1W Output: 7.1W
General	
Gain	0 dB
Crosstalk	<-50dB@5MHz
Max Switching Rate	200ns
Max Resolution	1920 x 1080p@60Hz
Bandwidth	10.2Gbps
Transmission Distance	1080p ≤ 70m
Audio Format	Embedded audio format: PCM, Dolby Digital, DTS, DTS-HD External audio format: PCM
HDMI	HDMI 1.3
HDCP	Input: Not Support Output: Support
EDID	EDID manual management
Working Temp.	0°C ~ +45°C
Relative Humidity	10% ~ 90%

- Supports RS-232 pass-through.
- Default resolution is 1920 x 1080p@60Hz.
- The output card supports 22 resolution adjustments.
- The HDBaseT signal card needs to be used with the remote transmitter/ receiver, such as TPUH412T/ TPUH412R.
- Supports audio embedding and de-embedding, the default for input is built-in audio, and the default for output is de-embedded audio.
- The RS-232 serial port can be used in conjunction with a remote transmitter/receiver to achieve two-way serial communication.
- RJ45 port indicator status: After the device is powered on, but the cable is disconnected, the yellow light flashes. When the cable is connected, the yellow light flashes and the green light is always on.



LMX-4I-BTS-C

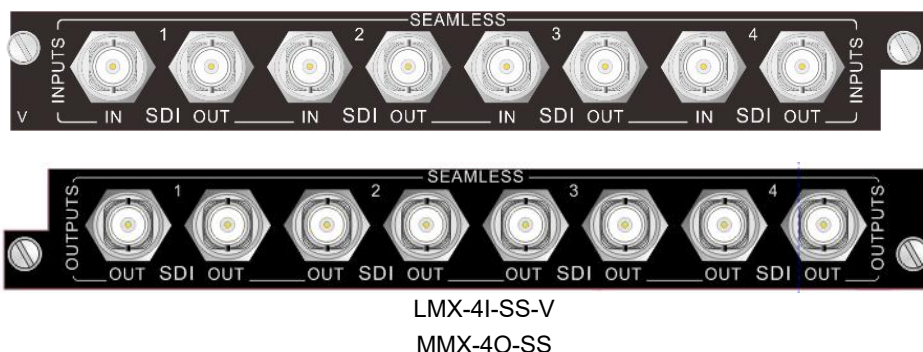


LMX-4O-BTS-C

4.5 1080p SDI Seamless Input & Output Signal Card

Input Signal Card		Output Signal Card
Signal	4 x SDI (Each channel with one SDI loop out)	
Port	BNC	
level	T.M.D.S 2.9V~3.3V	
Impedance	75Ω	
Video	SDI, HD-SDI, 3G-SDI	
General		
Color Depth	8 & 10 & 12-bit	
Max Resolution	1080p@60Hz	
Bandwidth	6.75Gbps	
Transmission Distance	1080p ≤ 100m	
Working Temperature	0℃ ~ +50℃	
Relative Humidity	10% ~ 90%	

- The input resolution is automatically identified.
- The input signal card has a character overlay function, and the character-related attributes can be changed through commands. For details of the relevant commands, please refer to the command table.
- The input signal card can add characters to the video signal. When outputting, the upper right corner of the display screen displays "Channel" by default. Commands can be sent to edit characters, set the character display orientation, and turn off character display. Please refer to the command table for details.



4.6 1080p VGA Seamless Input & Output Signal Card

Input Signal Card		Output Signal Card
Signal	4 x VGA, 4 x Analog Audio	
Port	15-pin D-Sub, 3-pin Terminal Block	
level	0.5~2.0Vp-p	
Impedance	Video: 75Ω Audio: 75Ω	
Frequency Response	20Hz~20KHz	
Power Consumption	Input: 5.2W Output: 7.7W	
General		
Gain	0dB	
Bandwidth	Input: 170MHz Output: 340MHz(-3dB)	
Max Switching Rate	200ns	
Crosstalk	<-50dB@5MHz	
Transmission distance	1080p≤10m	
Working Temperature	0°C ~ +50°C	
Relative Humidity	10% ~ 90%	

- Supports up to 11 resolution outputs.
- Supports embedded audio, and audio and video synchronization.
- The input signal can be scaled to 1080p or 1920x1200 resolution output.
- 4-way stereo audio input can be connected externally, and the audio on/off can be set by command, and the default is off.

- The input signal card has a character overlay function, and the character-related attributes can be changed by command.
- When the output board is switched with other input signal boards, the input signal resolution must be consistent with the output board resolution.



LMX-4I-VA-C



LMX-4O-VS-C

5. System Connection

1. The system installation and use environment should be kept clean and tidy with appropriate temperature and humidity, and ventilated without blocking the heat dissipation holes.
2. All power switches, plugs, sockets and power cords of the equipment in the system must be insulated and safe.
3. Connect peripheral devices and finally power on the system.

5.1 Application Diagram



Note: The pictures are for reference only, please refer to the actual application.

6. Control

6.1 Front Panel Control

- AV: Switch the input to one output.
Example: Input 3 to Output 8
 - Press INPUT 3 + AV + OUTPUT 8 +Enter.

- , : Use it can switch the input to two or more output.
Example: Input 3 to Output 4 and Output 5
 - Press INPUT 3 + AV + OUTPUT 4 + , + OUTPUT 5 + Enter.

- Undo: Return to the last command.
Example: First, operate command 1 that Input 1 to Output 6
Then operate command 2 that Input 2 to Output 6
 - Press Undo, the system status will from command 2 return to command 1.

- Enter: Execute the command.

- All: Switch the input to all output.
Example: Input 3 to all Output
 - Press INPUT 3 + All + Enter.

- Through: Signal pass-through, such as Input 1→ Output1, Input 2→ Output2.
Example 1: All signal pass-through.
 - Press All + Through + Enter.Example 2: Input 3 pass through.
 - Press INPUT 3 + Through + Enter.

- ←: Return to the previous step of the command.
Example: Pressed INPUT 1 + AV + OUTPUT 2
 - Press ← will return to "INPUT 1 + AV"

Note: The input/ output buttons correspond to the ports on the rear panel from left to right and up to down.

6.2 Remote Control

- **INPUTS:** Press the button to select the input channel. If the number of input channel is more than 10, channel can be selected by pressing a combination of numbers. For example, INPUT 15 can be selected by pressing 1 and 5.
- **OUTPUTS:** Press the button to select the output channel. If the number of output channel is more than 10, channel can be selected by pressing a combination of numbers. For example, OUTPUT 15 can be selected by pressing 1 and 5.
- **MENU:** Function selection. The functions are the same as the buttons on the front panel.

6.3 TCP/IP Control

The hybrid card matrix switcher can connect to a non-network computer for single-machine control. It can also connect to network to achieve simultaneous control of multiple computers.

- Default IP address: 192.168.0.178.
- Default Gateway: 192.168.0.1
- Port: 4001

Note: Only IP address and Gateway can be changed.

6.3.1 Non-network Control

The hybrid card matrix switcher connects to a single non-network computer through the TCP/IP network port. Change the computer network segment to be consistent with the hybrid card matrix switcher network segment. For details on how to change the computer IP, please refer to [6.3.3 Change Computer IP](#).

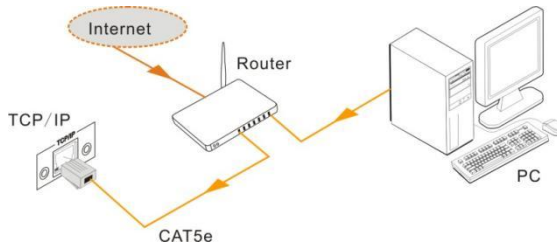
6.3.2 Network Control

The hybrid card matrix switcher needs to connect to the LAN to achieve multiple computers remote control the device in the Ethernet environment. The IP segment of the hybrid card matrix switcher needs to be changed to be consistent with the IP segment of the connected LAN. The operation method is as follows:

- Step 1: Use a cable connects the TCP/IP network port of the hybrid card matrix switcher to the network port of the control computer.
- Step 2: Change the IP segment of the control computer to be consistent with the hybrid card matrix switcher. For details of the change of the control computer IP,

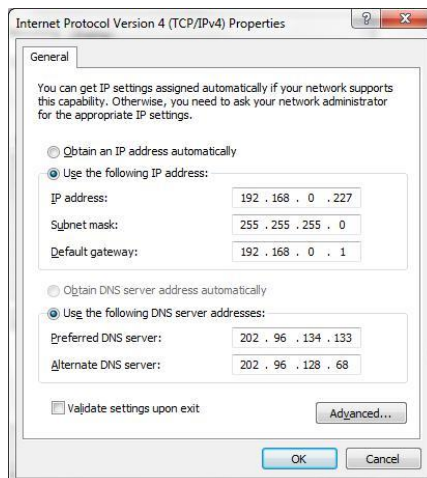
please refer to the [6.3.3 Change Computer IP](#). Only the IP network segment of the control computer consistent with the hybrid card matrix switcher IP, the IP network segment of the hybrid card matrix switcher can be changed through website.

- Step 3: Change the IP segment of the hybrid card matrix switcher to be consistent with the IP segment of the LAN. For details of the change of the hybrid matrix switcher IP gateway, please refer to [6.3.5 Change IP and Upgrade](#).
- Step 4: Change the IP segment of the control computer to the IP segment of the LAN.
- Step 5: Connect the hybrid card matrix switcher and the control computer to the LAN. All computers in the LAN can control the hybrid card matrix switcher, as shown in the figure below.



6.3.3 Change Computer IP

- Step 1: Click "Home" → Click "Network & Internet" → Click "Network and Sharing Centre" → Click "Connections: Ethernet" → Click "Properties" to enter the interface.
- Step 2: Click "Internet Protocol Version 4 (TCP/IPv4)" → Click "Properties" to enter the interface as below.



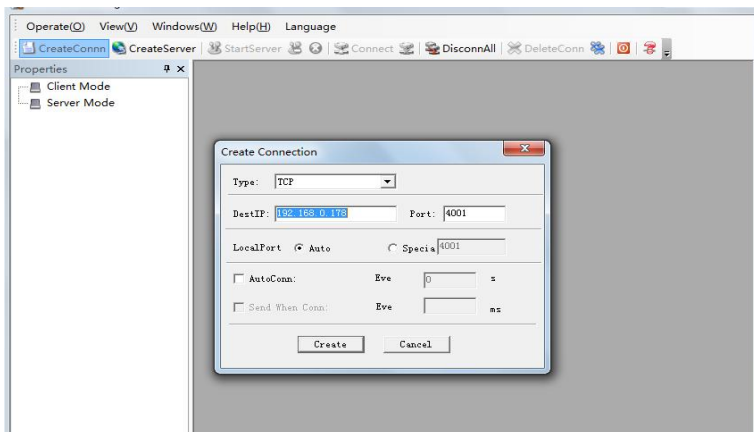
- Step 3: Click “Use the following IP address” → Change the “IP address” and “Default gateway” to the same as the hybrid card matrix switcher.
- Step 4: Click OK and the IP change is complete.

6.3.4 Pass-through

For non-network control, change the control computer network segment to the same as the hybrid card matrix switcher.

For network control, connect to the LAN and change the hybrid card matrix switcher network segment to the same as the LAN.

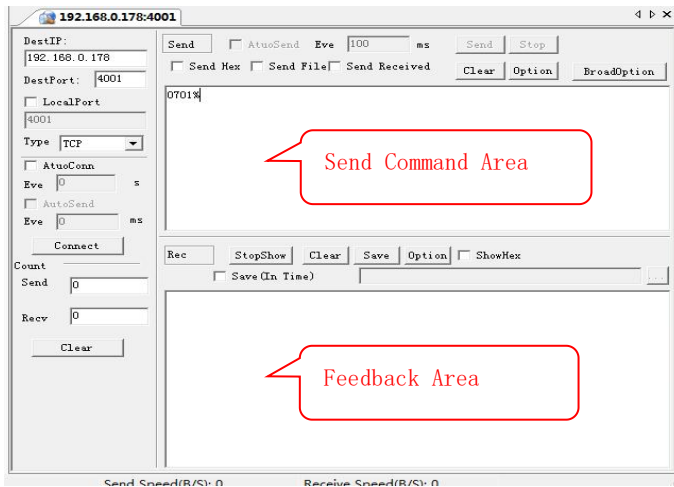
The hybrid matrix switcher can be controlled by sending commands through the transparent transmission software. Here takes the **TCP&UDPDebug** as an example. Run the software and connect the PC to the hybrid card matrix switcher to create a connection, as shown in the figure below:



Enter the hybrid card matrix switcher IP.

- Factory default: 192.168.0.178
- Port number: 4001

Click "Create" to connect the control computer to the hybrid card matrix switcher. Enter the main interface of the control software as shown below, and send commands to control the device.



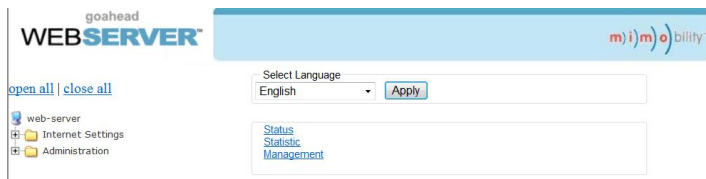
6.3.5 Change Matrix IP and Upgrade

The hybrid card matrix switcher can modify its network parameters through the website, and the TCP/IP control mode can be upgraded. The operation steps are as follows.

- Step 1: Use a cable to connect the hybrid matrix switcher to a computer with the same IP network segment. Open the browser and enter IP: 192.168.0.178:100 to enter the login interface.

Note: The IP must change follow the hybrid card matrix switcher IP.

- Step 2: Enter the username and password. The default username is admin. The default password is admin. click "OK" to enter the main interface.



6.3.5.1 Change IP

Click "Internet Settings" → Click "Wide Area Network" → Select the online mode and modify the parameters which need to be changed → Click "Save" to save the change.

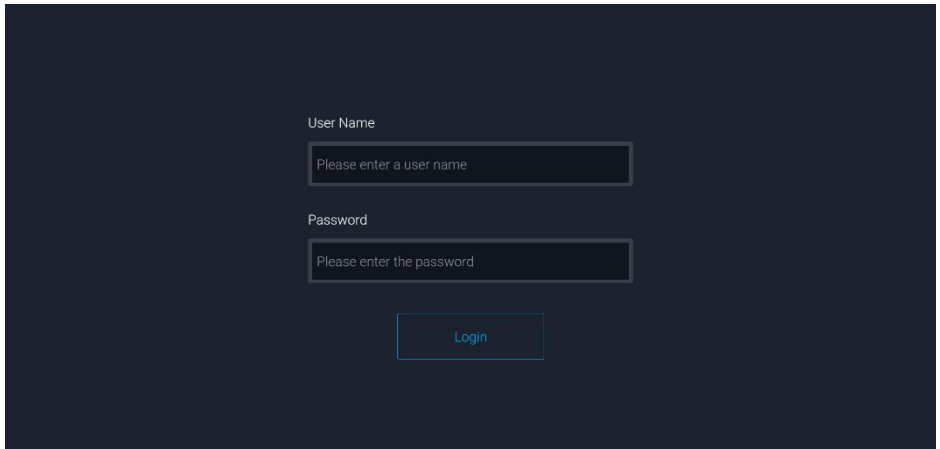
6.3.5.2 Upgrade

Click "Administration" → Click "Upload Program" → Select program file → Start Upgrading → Reboot device to complete the upgrade.

6.3.6 Web-GUI Control

6.3.6.1 Log In

Enter 192.168.0.178 to the URL bar of browser to enter the Web login interface.

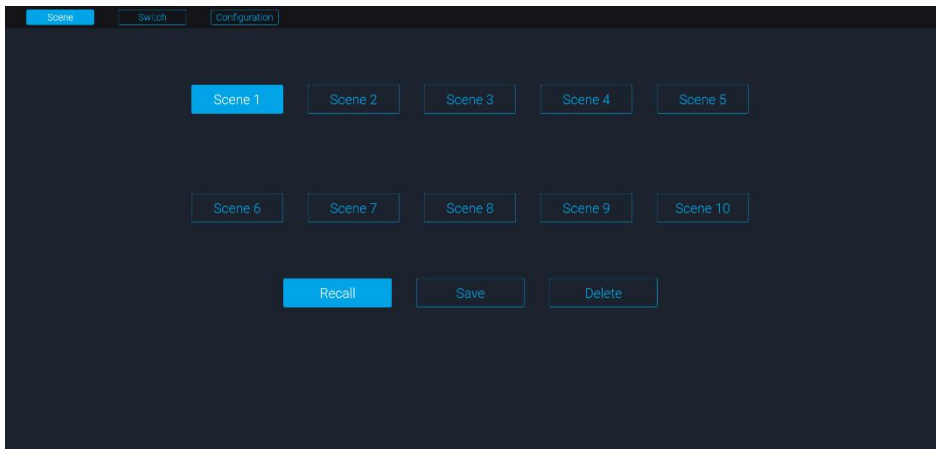
A screenshot of a web login interface with a dark background. It features two input fields: 'User Name' with the placeholder text 'Please enter a user name' and 'Password' with the placeholder text 'Please enter the password'. Below these fields is a 'Login' button.

User Name: admin

Password: admin

6.3.6.2 Scene

After logging in, user can recall/ save/ delete scene via this interface. Support ten scenes to use.

A screenshot of the 'Scene' control interface in the web GUI. At the top, there are three tabs: 'Scene' (selected), 'Switch', and 'Configuration'. Below the tabs, there are ten buttons labeled 'Scene 1' through 'Scene 10'. At the bottom, there are three buttons: 'Recall', 'Save', and 'Delete'.

6.3.6.3 Switch

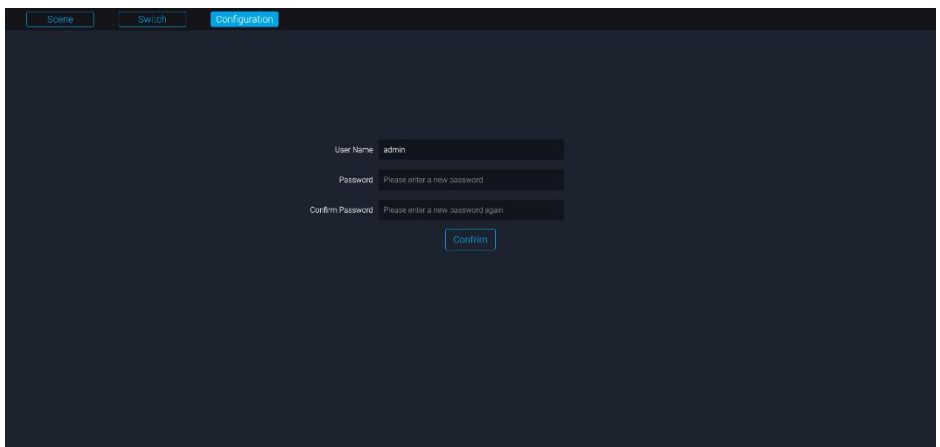
- Real-time display of current channel switching status information.
- Double-click the channel to name the channel. The maximum number of characters

that can be displayed is subject to the current channel button width. If the display range is exceeded, all current characters can be displayed by hovering the mouse.



6.3.6.4 Configuration

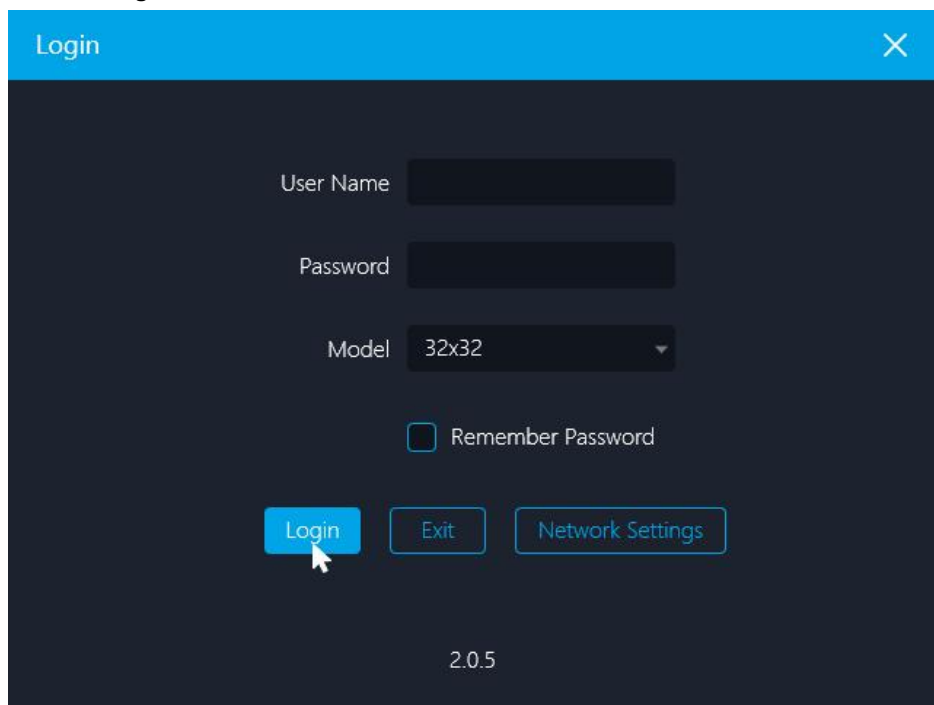
User can modify the User Name and Password through this interface. When the user sets the username and password to be blank, user can log in directly without entering the username and password.



6.3.7 Client Control

Install the hybrid card matrix switcher control software to the PC.

6.3.7.1 Log In



The screenshot shows a login window with a blue header bar containing the text 'Login' and a close button (X). The main area is dark blue and contains the following elements:

- User Name:** A text input field.
- Password:** A password input field.
- Model:** A dropdown menu currently showing '32x32'.
- Remember Password:** A checkbox that is currently unchecked.
- Buttons:** Three buttons at the bottom: 'Login' (highlighted with a mouse cursor), 'Exit', and 'Network Settings'.
- Version:** The text '2.0.5' is displayed at the bottom center.

- User Name: admin
- Password: admin
- Model: Select the corresponding model.
- Login: Click it to enter the 'Card Setting' interface.
- Exit: Close the login interface.
- Network Settings: Before login, please click here to set the network.

6.3.7.2 Network Settings

Select the communication mode through this interface. The connection types are TCP/IP and COM available.



The image shows a 'Network Settings' dialog box with a blue header bar containing the title and a close button (X). The main area is dark blue and contains three settings: 'Connection Type' with a dropdown menu showing 'TCP/IP', 'IP Address' with four input fields containing '192', '168', '0', and '178', and 'TCP Port' with an input field containing '4001'. At the bottom, there are two buttons: 'Save' (blue) and 'Cancel' (dark blue with a light blue border).

Setting	Value
Connection Type	TCP/IP
IP Address	192 . 168 . 0 . 178
TCP Port	4001

6.3.7.3 Card Setting

After click 'Login' will enter the interface as below. Please select the input/ output card type. The input/ output card selection must be consistent with the rear panel.

Card Setting

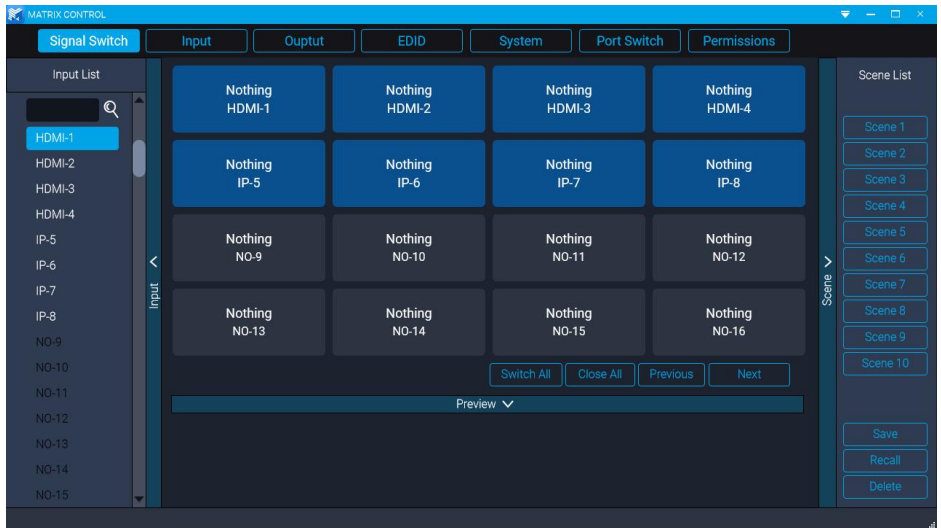
No.	Input Cards	Output Cards
1-4	HDMI	DVI
5-8	IP	VGA
9-12	NONE	NONE
13-16	NONE	NONE
17-20	NONE	NONE
21-24	NONE	NONE
25-28	NONE	NONE
29-32	NONE	NONE

Save

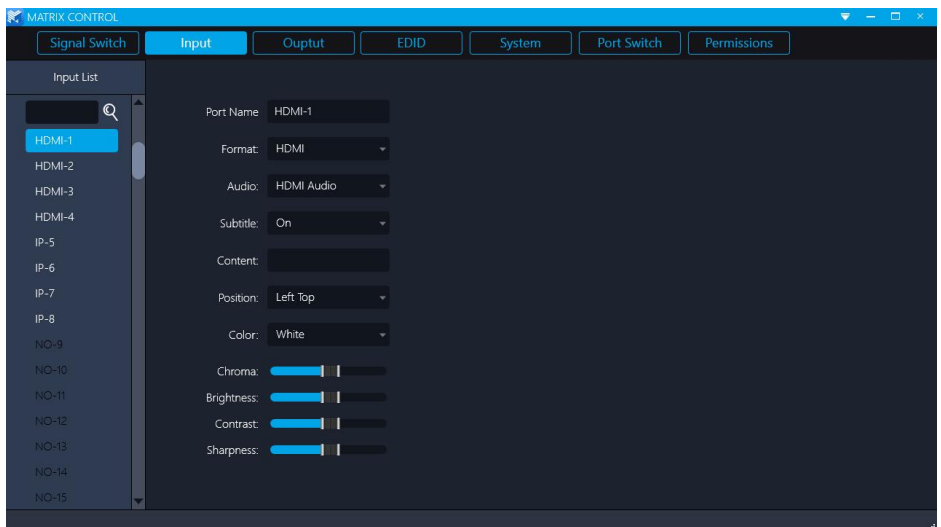
Cancel

6.3.7.4 Signal Switch

Here can complete functions such as input source switching, preview and scene save/ call/ delete.



6.3.7.5 Input

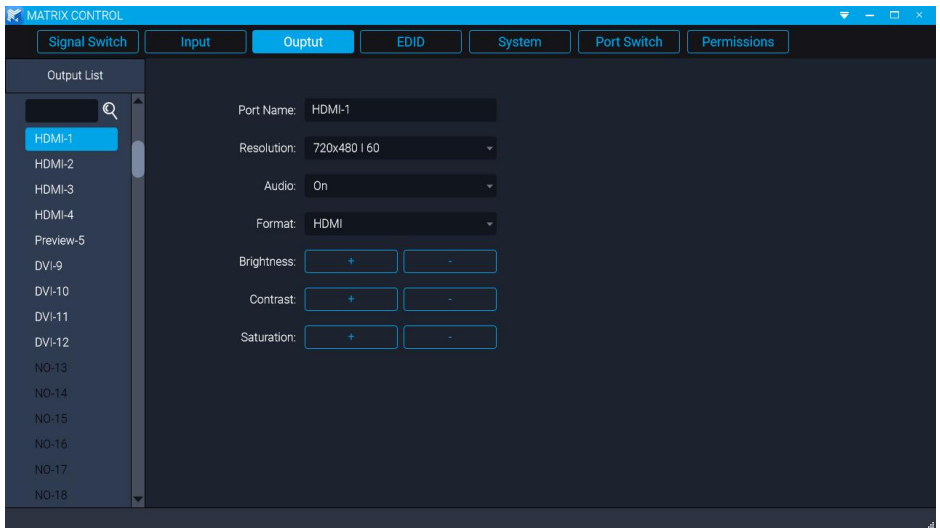


Here use HDMI to introduce.

- Port Name: Rename the input port.
- Format: Select the input signal.

- Audio: Select the audio source.
- Subtitle: Display the content.
- Content: Enter the content to display.
- Position: Subtitle displays position.
- Color: Color of subtitle.
- Chroma/ Brightness/ Contrast/ Sharpness: Adjust input display parameters.

6.3.7.6 Output

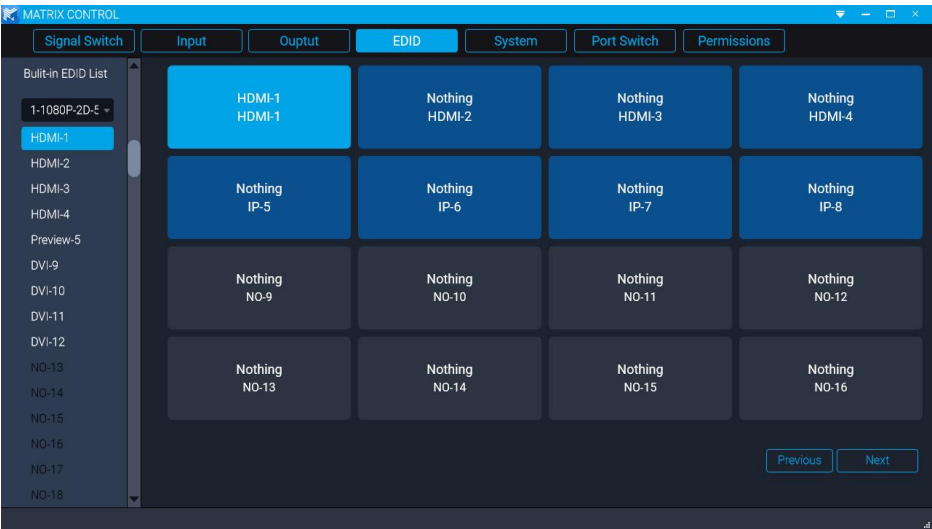


Here use HDMI to introduce.

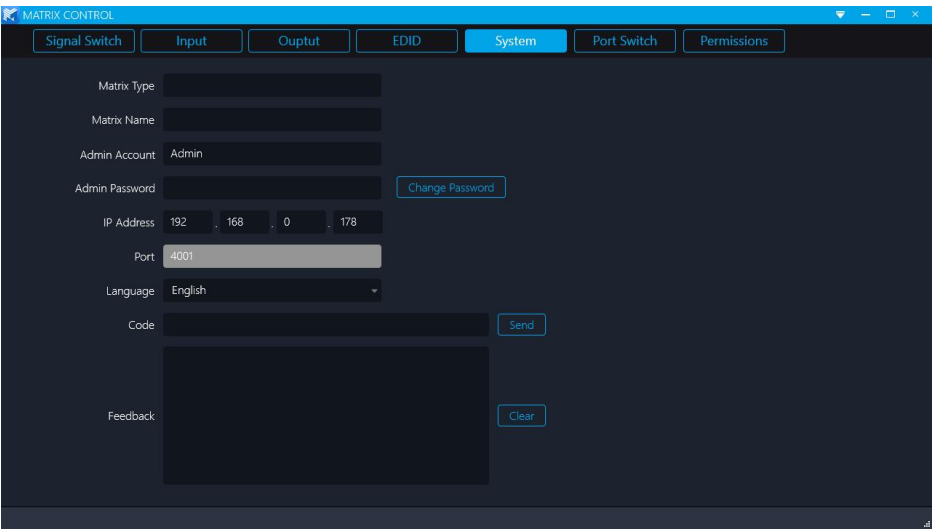
- Port Name: Rename the output port.
- Resolution: Adjust the output resolution.
- Audio: Turn audio on or off.
- Format: Select the output signal.
- Brightness/ Contrast/ Saturation: Adjust output display parameters.

6.3.7.7 EDID

Select any EDID in the built-in EDID list drop-down menu on the left to switch the input EDID to the selected EDID in real time.



6.3.7.8 System

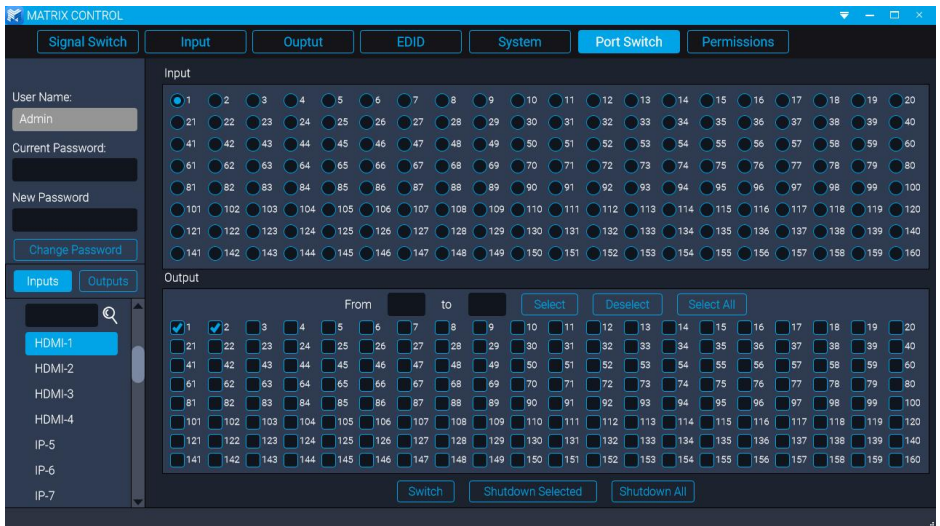


- Matrix Type: Matrix model.
- Matrix Name: Rename the matrix.

- Admin Account: The default value is admin and cannot be changed.
- Admin Password: The default value is admin and can be changed.
- IP Address/ Port: Default value, cannot be changed.
- Language: Two languages available, Simplified Chinese and English.
- Code: Command input area. Click 'Send' to send the input command.
- Feedback: Command feedback information area. The feedback information can be cleared by clicking 'Clear'.

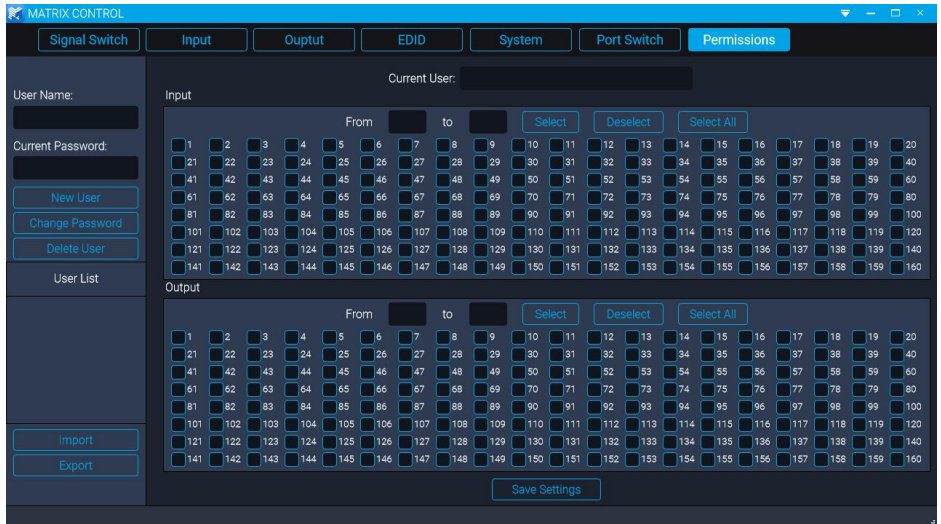
6.3.7.9 Port Switch

Here can modify the password, observe the input and output status of the signal card and switch the input and output ports.



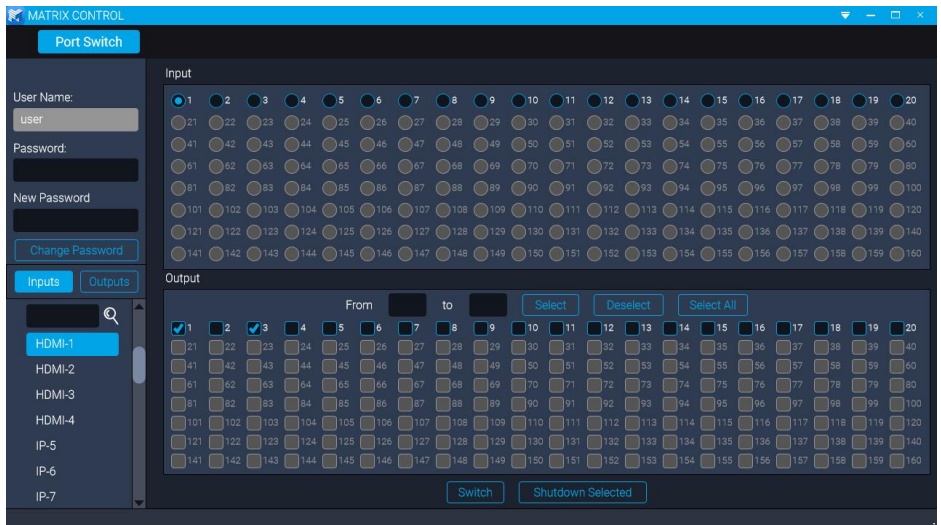
6.3.7.10 Permissions

Add ordinary accounts on the left side of this interface.



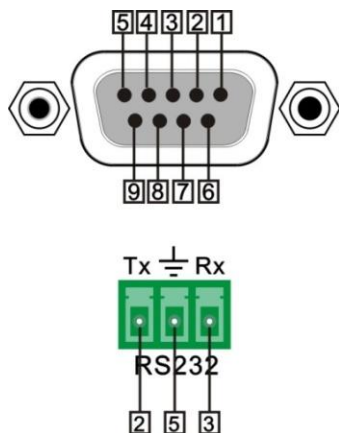
After adding an ordinary account, click the input and output channel to authorize permission them and click 'Save Settings'.

Re-run the software and log in the new ordinary account. Please refer to the figure below for the login interface of the new ordinary account.



6.4 RS-232 Control

After the hybrid matrix switcher connects to the computer, the hybrid matrix switcher can be controlled by RS-232 serial port software. The matrix has a 9-pin female RS-232 port, and some cards have RS232 ports with 3-pin plug-in terminals. The pin description is as follows.



Pin	Name	Function
1	N/u	Blank
2	Tx	Transmit
3	Rx	Receive
4	N/u	Blank
5	GND	GND
6	N/u	Blank
7	N/u	Blank
8	N/u	Blank
9	N/u	Blank

6.4.1 Basic Settings

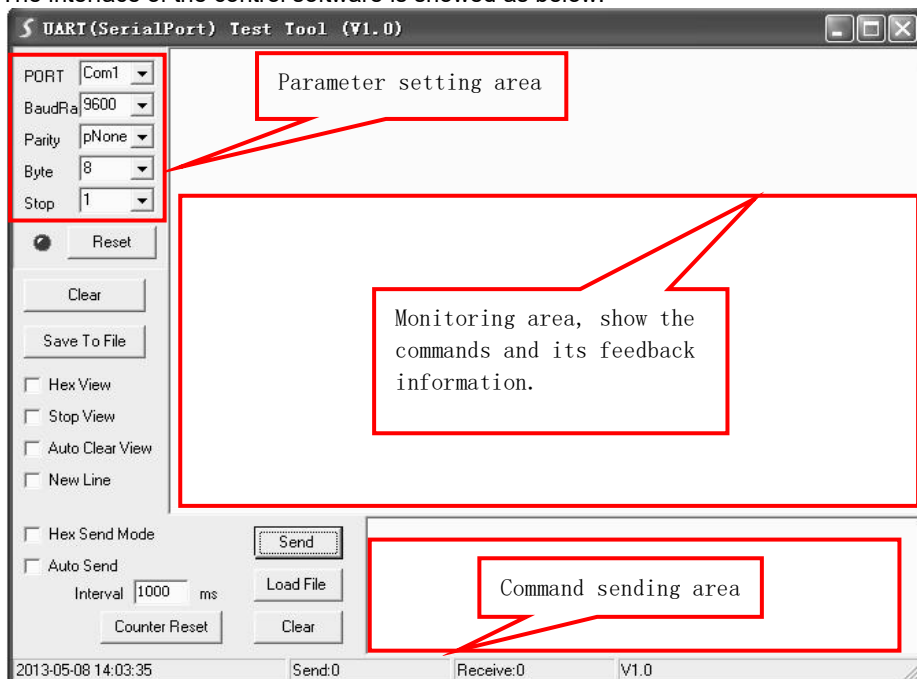
- **Installation:** Copy the control software file to the control PC.
- **Uninstallation:** Delete all the control software files in corresponding file path.

Firstly, connect the hybrid card matrix switcher with necessary input devices and output devices. Then, connect it with a PC installed RS-232 control software. Double-click the software icon to run this software.

Here we take the software CommWatch.exe as example. The icon is showed as below:



The interface of the control software is showed as below:



Set the parameters correctly to ensure reliable RS-232 control. Recommend settings as below:

- Baud rate: 9600
- Byte: 8
- Stop: 1
- Parity: None

6.4.2 RS-232 Command

6.4.2.1 Before Use

1. Each signal card command ([X] indicates the port number).
2. USER/[Y]/[x].****. The command is a card command, where **** is the command filled in by the user. For example, USER/I/[x]:0623%, Y is I, I indicates input, [x] indicates the [x]th input port number.
3. Signal card commands are marked in the command function description for different signal cards.
4. EDID commands are only valid for signal cards that support EDID learning function, including 4K HDMI, 1080p HDBaseT, 1080p HDMI.

5. The color space can be selected only when the output signal is set to HDMI. When set to HDMI output, the color space can be set to YCBCR or RGB.
6. [x] in the command is the valid range of the number of input or output channels. If it exceeds the range, it is treated as a command input error.
7. "[" and "]" in the above commands are non-sending characters.
8. The end character of each command cannot be omitted, such as ".", ",", etc., and it must be the punctuation of the English input method.
9. Pay attention to the capitalization of letters.

6.4.2.2 System Control Command

Command	Function	Feedback
/*Type;	Get the model of the matrix	***
/%Lock;	Lock the front panel buttons	System Locked!
/%Unlock;	Unlock the front panel buttons	System Unlock!
^Version;	Get the software version	V1.0.0
/:MessageOff;	Close the serial port return, only return "Switch Ok!" and other character information.	Closed The Message Return.
/:MessageOn;	Open the serial port return	Enabled The Message Return.
Undo.	Cancel the previous operation and return to the last switch status	Undo OK !
Demo.	Set the system to work in Demo mode. In this mode, each input and output channel will switch in sequence, and the time interval between each switch is 2 seconds. For example, AV1616: After entering Demo mode, it will be 1->1.1->2...1->144.2->1...	Demo Mode AV: 01->001 AV: 01->144 AV: 02->001
Status[x].	Get the signal input status of the [x]th output channel	V: 01->001 A: 01->001
Status.	Get the signal input status of all output channels	V: 01->001 A: 01->001
Save[Y].	Save the current status to the [Y]th group, [Y] is a number key from 0 to 9	Save To F8
Recall[Y].	Call the input and output switching status of the storage unit group [Y], [Y] is a number from 0 to 9	Recall From F8 V: 01->001 A: 01->001

Command	Function	Feedback
		
Clear[Y].	Clear the stored data of the storage unit group [Y], the status is all closed	Clear F8
PWON.	Power on	PWON
PWOFF.	Power off	PWOFF
HDCPON.	Enable the HDCP protocol of the output channel. Not applicable to 1080p DVI output signal card.	HDCPON
HDCPOFF.	Disable the HDCP protocol of the output channel. Not applicable to 1080p DVI output signal card.	HDCPOFF
/V00.	Get the backplane software version number	V1.0.0
GetResolution[x].	Get the resolution of the [x]th output port	
%0911.	Restore the host to factory settings (Only restore the port one-to-one correspondence status, do not restore the scene status, HDCP off status)	
USER/O/[x]:0617%;	Restore the [x]th output signal to factory settings	0617%

6.4.2.3 Switch Signal Command

Command	Function	Feedback
[x]All.	Switch the [x]th input to all outputs	01 To All
All#.	Set all channels to output one by one, such as: 1->1, 2->2...	All Through.
[x]#.	Switch the [x]th input to the [x]th output (audio and video)	01 Through.
All\$.	Close all output channels (audio and video)	All Closed.
[x]\$.	Close the [x]th output (audio and video)	AV: 01 Closed.
All@.	Open all output channels	All Open.
[x]@.	Open the [x]th output channel	01 Open.
[x1]V[x2],[x3],[x4].	Video switching: Switch the [x1]th video input to one or more outputs among [x2], [x3], [x4], and separate multiple output channels with ","	1V1,2

Command	Function	Feedback
[x1]B[x2],[x3],[x4].	Switch audio and video synchronously: Switch the [x1]th audio and video input to one or more outputs among [x2], [x3], [x4], and separate multiple output channels with ","	1AV1,2
Status[x].	Get the signal input status of the [x]th output channel	V: 01->001 A: 01->001
Status.	Get the signal input status of all output channels	V: 01->001 A: 01->001

6.4.2.4 EDID Management Command

Command	Function	Feedback
EDIDUpgrade[x].	Upgrade EDID data via serial port, [x] indicates input port, after sending command, the machine will prompt to send EDID file, file format is .bin, reserve 10s timeout time.	Please send the EDID file
UpgradeIntEDID[y].	Update built-in EDID data, support 6 built-in EDID. After receiving command, the machine will prompt to send EDID file, file format is .bin. Reserve 10s timeout time. y represents EDID value: 1~6: 1. 1080p2D5.1 channel. 2. 1080p2D2.0 channel. 3. 720p2D5.1 channel. 4. 720p2D2.0 channel. 5. 4K x 2K2D5.1 channel. 6. 4K x 2K2D2.0 channel.	Please send the EDID file
EDID/[x]/[y].	Input port [x] uses the built-in EDID numbered [y].	
EDIDG[x].	Get the EDID data of the output port and display it through the serial port [x] output port number.	
EDIDMInit.	Restore the factory EDID data to each input port.	EDIDMInit
EDIDM[X]B[Y].	Copy the EDID of the display connected to the output port [X] to the input port [Y]. If the read error occurs,	EDIDM2B1

Command	Function	Feedback
	it will be configured according to the initialized EDID data.	

6.4.2.5 4K@30Hz HDMI Seamless Input & Output Signal Card Command

Command	Function	Feedback
HDMI IN		
USER//[x]:0711%;	Select the audio input of HDMI itself	0711%
USER//[x]:0712%;	Select the external analog audio input	0712%
USER//[x]:0617%;	Restore the [x]th input signal to factory settings	0617%
USER//[x]:<<*****>>%;	x represents the input port number, which supports up to 15 characters, and ***** represents the text to be added	<<*****>>%
USER//[x]:0900%;	Turn off the superimposed characters	0900%
USER//[x]:0901%;	Turn on the superimposed characters	0901%
USER//[x]:0902%;	Show characters in the upper left corner	0902%
USER//[x]:0903%;	Show characters in the upper right corner	0903%
USER//[x]:0904%;	Show characters in the lower left corner	0904%
USER//[x]:0905%;	Show characters in the lower right corner	0905%
USER//[x]:0906%;	Set the character color to white	0906%
USER//[x]:0907%;	Set the character color to red	0907%
USER//[x]:0908%;	Set the character color to green	0908%
USER//[x]:0909%;	Set the character color to blue	0909%
USER//[x]:0910%;	Set the character color to black	0910%
USER//[x]:02xx%;	Set the image brightness value xx (0~99)	02xx%
USER//[x]:03xx%;	Set image contrast value xx (0~99)	03xx%

HDMI OUT		
USER/O/[x]:0110%;	Set the [x]th output audio to on	0110%
USER/O/[x]:0111%;	Set the [x]th output audio to off	0111%
USER/O/[x]:0103%;	Set the output signal of [x] to HDMI; Note: This command is invalid when	0103%

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	the output signal resolution is 4K@60Hz	
USER/O/[x]:0104%;	Set the output signal of [x] to DVI; Note: This command is invalid when the output signal resolution is 4K@60Hz	0104%
USER/O/[x]:0617%;	Restore the [x]th input signal to factory settings	0617%
USER/O/[x]:0804%;	Set the [x]th output signal source resolution to 720p 60Hz	Resolution Out02 1280x720p
USER/O/[x]:0813%;	Set the [x]th output signal source resolution to 1080p 60Hz	Resolution Out02 1920x1080p
USER/O/[x]:0824%;	Set the [x]th output signal source resolution to 1024x768 60Hz	Resolution Out02 1024*768 60HZ
USER/O/[x]:0828%;	Set the xth output signal source resolution to 1360x768 60Hz	Resolution Out02 1360*768 60HZ
USER/O/[x]:0840%;	Set the [x]th output signal source resolution to 3840x2160 30Hz	Resolution Out02 4K*2K 30HZ
USER/O/[x]:0841%;	Set the [x]th output signal source resolution to 3840x2160 60Hz	Resolution Out02 4K*2K 60HZ
USER/O/[x]:0844%;	Set the [x]th output signal source resolution to 4096x2160 30Hz	Resolution Out02 4K*2K30HZ
USER/O/[x]:0845%;	Set the [x]th output signal source resolution to 4096x2160 60Hz	Resolution Out02 4K*2K 60HZ
USER/O/[x]:0400%;	Set brightness to decrease	0400%
USER/O/[x]:0401%;	Set brightness to increase	0401%
USER/O/[x]:0410%;	Set contrast to decrease	0410%
USER/O/[x]:0411%;	Set contrast to increase	0411%
USER/O/[x]:0116%;	Turn off the display, normal output	0116%
USER/O/[x]:0117%;	Turn off the display and the sound	0117%
USER/O/[x]:0118%;	Unfreeze the display and normal output	0118%
USER/O/[x]:0119%;	Freeze the display	0119%
USER/O/[x]:0112%;	Turn on audio, the analog audio maintains the last state	0112%
USER/O/[x]:0113%;	Turn off audio	0113%

6.4.2.6 4K@60Hz HDMI Seamless Input & Output Signal Card Command

Command	Function	Feedback
HDMI IN		
USER/I/[x]:0711%;	Select the HDMI audio input	0711%
USER/I/[x]:0712%;	Select the external analog audio input	0712%
USER/I/[x]:0617%;	Restore the [x]th input signal to factory settings	0617%
USER/I/[x]:02xx%;	Set the image brightness value xx (0~99), and the brightness change can be seen from the display screen.	02xx%
USER/I/[x]:03xx%;	Set the image contrast value xx (0~99), and the contrast change can be seen from the display screen.	03xx%
USER/I/[x]:04xx%;	Set the image chromaticity value xx (0~99), and the chromaticity change can be seen from the display screen.	04xx%
HDMI OUT		
USER/O/[x]:0110%;	Set the [x]th output audio to on	0110%
USER/O/[x]:0111%;	Set the [x]th output audio to off	0111%
USER/O/[x]:0804%;	Set the [x]th output signal source resolution to 720p 60Hz	Resolution Out02 1280x720p
USER/O/[x]:0813%;	Set the [x]th output signal source resolution to 1080p 60Hz	Resolution Out02 1920x1080p
USER/O/[x]:0824%;	Set the [x]th output signal source resolution to 1024x768 60Hz	Resolution Out02 1024*768 60HZ
USER/O/[x]:0828%;	Set the [x]th output signal source resolution to 1360x768 60Hz	Resolution Out02 1360*768 60HZ
USER/O/[x]:0840%;	Set the [x]th output signal source resolution to 3840x2160 30Hz	Resolution Out02 4K*2K 30HZ
USER/O/[x]:0841%;	Set the [x]th output signal source resolution to 3840x2160 60Hz	Resolution Out02 4K*2K 60HZ
USER/O/[x]:0844%;	Set the [x]th output signal source resolution to 4096x2160 30Hz	Resolution Out02 4K*2K30HZ
USER/O/[x]:0845%;	Set the [x]th output signal source resolution to 4096x2160 60Hz	Resolution Out02 4K*2K 60HZ

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Command	Function	Feedback
USER/O/[x]:0617%;	Restore the factory settings of the [x]th output signal	0617%
USER/O/[x]:0103%;	Set the [x]th output signal to HDMI; Note: This command is invalid when the output signal resolution is 4K@60Hz	0103%
USER/O/[x]:0104%;	Set the [x]th output signal to DVI; Note: This command is invalid when the output signal resolution is 4K@60Hz	0104%
USER/O/[x]:0116%;	Turn off the display, normal output	0116%
USER/O/[x]:0117%;	Turn off the display and the sound	0117%
USER/O/[x]:0118%;	Unfreeze the display and normal output	0118%
USER/O/[x]:0119%;	Freeze the display	0119%
USER/O/[x]:0400%;	Set brightness reduce	0400%
USER/O/[x]:0401%;	Set brightness increase	0401%
USER/O/[x]:0410%;	Set contrast reduce	0410%

6.4.2.7 1080p HDBaseT Seamless Input & Output Signal Card Command

Command	Function	Feedback
HDBaseT IN		
USER/I/[x]:0711%	Set input [x] to HDMI embedded audio	0711%
USER/I/[x]:0712%	Set input [x] to external analog audio input	0712%
USER/I/[x]:02xx%	Set input [x] to image brightness value xx (00-99)	02xx%
USER/I/[x]:03xx%	Set input [x] to image contrast value xx (00-99)	03xx%
USER/I/[x]:0617%;	Restore input [x] to factory settings	0617%
USER/I/[x]:0686%	Set input [x] to HDMI	0686%
USER/I/[x]:0687%	Set input [x] to DVI	0687%
USER/I/[x]:<<*****>>%;	x represents the input port number, and ***** represents the text to be added	<<*****>>%
USER/I/[x]:0900%;	Turn off superimposed characters	0900%
USER/I/[x]:0901%;	Turn on superimposed characters	0901%
USER/I/[x]:0902%;	Display characters in the upper left corner	0902%

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Command	Function	Feedback
USER//[x]:0903%;	Display characters in the upper right corner	0903%
USER//[x]:0904%;	Display characters in the lower left corner	0904%
USER//[x]:0905%;	Display characters in the lower right corner	0905%
USER//[x]:0906%;	Set character color to white	0906%
USER//[x]:0907%;	Set character color to red	0907%
USER//[x]:0908%;	Set character color to green	0908%
USER//[x]:0909%;	Set character color to blue	0909%
USER//[x]:0910%;	Set character color to black	0910%
HDBaseT OUT		
USER/O/[x]:0110%;	Set the [x]th output audio to on	0110%
USER/O/[x]:0111%;	Set the [x]th output audio to off	0111%
USER/O/[x]:0802%;	Set the [x]th output signal source resolution to 720x480p@60Hz	Resolution Out01 720x480p
USER/O/[x]:0803%;	Set the [x]th output signal source resolution to 720x576p@50Hz	Resolution Out01 720x576p
USER/O/[x]:0804%;	Set the [x]th output signal source resolution to 1280x720p@60Hz	Resolution Out01 1280x720p
USER/O/[x]:0806%;	Set the [x]th output signal source resolution to 1280x720p@50Hz	Resolution Out01 1280x720p
USER/O/[x]:0807%;	Set the [x]th output signal source resolution to 1280x720p@30Hz	Resolution Out01 1280x720p
USER/O/[x]:0808%;	Set the [x]th output signal source resolution to 1280x720p@25Hz	Resolution Out01 1280x720p
USER/O/[x]:0813%;	Set the [x]th output signal source resolution to 1920 x 1080p 60Hz	Resolution Out01 1920x1080p
USER/O/[x]:0815%;	Set the [x]th output signal source resolution to 1920 x 1080p 50Hz	Resolution Out01 1920x1080p
USER/O/[x]:0816%;	Set the [x]th output signal source resolution to 1920 x 1080p 30Hz	Resolution Out01 1920x1080p
USER/O/[x]:0818%;	Set the [x]th output signal source resolution to 1920 x 1080p 25Hz	Resolution Out01 1920x1080p
USER/O/[x]:0820%;	Set the [x]th output signal source resolution to 640 x 480p 60Hz	Resolution Out01 640x480p
USER/O/[x]:0822%;	Set the [x]th output signal source resolution to 800 x 600p 60Hz	Resolution Out01 800x600p
USER/O/[x]:0824%;	Set the [x]th output signal source	Resolution

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Command	Function	Feedback
	resolution to 1024x768p 60Hz	Out01 1024x768p
USER/O/[x]:0826%;	Set the [x]th output signal source resolution to 1280x1024p 60Hz	Resolution Out01 1280x1024p
USER/O/[x]:0828%;	Set the xth output signal source resolution to 1360x768p 60Hz	Resolution Out01 1360x768p
USER/O/[x]:0829%;	Set the xth output signal source resolution to 1366x768p 60Hz	Resolution Out01 1360x768p
USER/O/[x]:0830%;	Set the xth output signal source resolution to 1400x1050p 60Hz	Resolution Out01 1400x1050p
USER/O/[x]:0831%;	Set the xth output signal source resolution to 1600x1200p 60Hz	Resolution Out01 1600x1200p
USER/O/[x]:0832%;	Set the xth output signal source resolution to 1440x900p 60Hz	Resolution Ou01 1440x900p
USER/O/[x]:0833%;	Set the xth output signal source resolution to 1440x900p 75Hz	Resolution Ou01 1440x900p
USER/O/[x]:0834%;	Set the xth output signal source resolution to 1680x1050p 60Hz	Resolution Ou01 1680x1050p
USER/O/[x]:0837%;	Set the xth output signal source resolution to 1920x1200p 60Hz	Resolution Ou01 1920x1200p
USER/O/[x]:0839%;	Set the xth output signal source resolution to 1600x900p 60Hz	Resolution Ou001 1600x900p
USER/O/[x]:0617%;	Restore the xth output signal to factory settings	0617%
USER/O/[x]:0400%;	Set brightness reduce	0400%
USER/O/[x]:0401%;	Set brightness increase	0401%
USER/O/[x]:0410%;	Set contrast reduce	0410%
USER/O/[x]:0411%;	Set contrast increase	0411%
USER/O/[x]:0116%;	Turn off the display, normal output	0116%
USER/O/[x]:0117%;	Turn off the display and the sound	0117%
USER/O/[x]:0118%;	Unfreeze the display and normal output	0118%
USER/O/[x]:0119%;	Freeze the display	0119%

6.4.2.8 1080p SDI Seamless Input & Output Signal Card Command

Command	Function	Feedback
SDI IN		
USER/I/[x]:02xx%;	Set the image brightness value of the [x]th input signal to xx (00-99)	02xx%
USER/I/[x]:03xx%;	Set the image contrast value of the	03xx%

Hybrid Card Matrix Switcher

Command	Function	Feedback
	[x]th input signal to xx (00-99)	
USER/I/[x]:04xx%;	Set the image chromaticity value of the [x]th input signal to xx (00-99)	04xx%
USER/I/[x]:05xx%;	Set the image sharpness value of the [x]th input signal to xx (00-99)	05 xx %
USER/I/[x]:0617%;	Restore the [x]th input signal to factory settings	0617%
USER/I/[x]:0698%;	Software upgrade (upgrade program name is MERGE)	0698%
USER/I/[x]:<<*****>>%;	x represents the port number, ***** represents the text to be added.	<<*****>>%
USER/I/[x]:0900%;	Turn off overlay characters (Default)	0900%
USER/I/[x]:0901%;	Turn on overlay characters	0901%
USER/I/[x]:0902%;	Show characters in the upper left corner	0902%
USER/I/[x]:0903%;	Show characters in the upper right corner	0903%
USER/I/[x]:0904%;	Show characters in the lower left corner	0904%
USER/I/[x]:0905%;	Show characters in the lower right corner	0905%
USER/I/[x]:0906%;	Set character color to white	0906%
USER/I/[x]:0907%;	Set character color to red	0907%
USER/I/[x]:0908%;	Set character color to green	0908%
USER/I/[x]:0909%;	Set character color to blue	0909%
USER/I/x:0915%;	Turn on no signal display jump mode	0915%;
USER/I/x:0916%;	Turn off no signal display jump mode	0916%;
SDI OUT		
USER/O/[x]:0804%;	Set the resolution of the output signal source of channel [x] to 1280x720p@60Hz	Resolution Out01 1280x720p
USER/O/[x]:0806%;	Set the resolution of the output signal source of channel [x] to 1280x720p@50Hz	Resolution Out01 1280x720p
USER/O/[x]:0810%;	Set the resolution of the output signal source of channel [x] to 1920x1080i@60Hz	Resolution Out01 1920x1080i
USER/O/[x]:0812%;	Set the resolution of the output signal source of channel [x] to	Resolution Out01 1920x1080i

Command	Function	Feedback
	1920x1080i@50Hz	
USER/O/[x]:0813%;	Set the resolution of the output signal source of channel [x] to 1920x1080p@60Hz	Resolution Out01 1920x1080p
USER/O/[x]:0815%;	Set the resolution of the output signal source of channel [x] to 1920x1080p@50Hz	Resolution Out01 1920x1080p
USER/O/[x]:0816%;	Set the resolution of the output signal source of channel [x] to 1920x1080p@30Hz	Resolution Out01 1920x1080p
USER/O/[x]:0818%;	Set the resolution of the output signal source of channel x to 1920x1080p@25Hz	Resolution Out01 1920x1080p
USER/O/[x]:0819%;	Set the resolution of the output signal source of channel x to 1920x1080p@24Hz	Resolution Out01 1920x1080p

6.4.2.9 1080p VGA Seamless Input & Output Signal Card Command

Command	Function	Feedback
VGA IN		
USER/I/[x]:0648%;	Turn on audio channel [x]	0648%
USER/I/[x]:0649%;	Turn off audio channel [x]	0649%
USER/I/x:0713%;	Set input card signal transmission to transmit analog audio when there is no signal input	0713%;
USER/I/x:0714%;	Set input card signal transmission to require input source for analog audio to be transmitted	0714%;
USER/I/x:02xx%;	Set image brightness value xx (0~99)	02xx%
USER/I/x:03xx%;	Set image contrast value xx (0~99)	03xx%
USER/I/x:04xx%;	Set image chromaticity value xx (0~90)	04xx%
USER/I/x:05xx%;	Set image sharpness value xx (0~99)	05xx%
USER/I/[x]:0617%;	Restore input signal channel [x] to factory settings	0617%
USER/I/[x]:<<*****>>%;	x indicates the port number, ***** indicates the text to be added	<<*****>>%
USER/I/[x]:0900%;	Turn off superimposed characters (default)	0900%
USER/I/[x]:0901%;	Turn on superimposed characters	0901%

Hybrid Card Matrix Switcher

Command	Function	Feedback
USER/I/[x]:0902%;	Show characters in the upper left corner	0902%
USER/I/[x]:0903%;	Show characters in the upper right corner	0903%
USER/I/[x]:0904%;	Show characters in the lower left corner	0904%
USER/I/[x]:0905%;	Show characters in the lower right corner	0905%
USER/I/[x]:0906%;	Set character color to white	0906%
USER/I/[x]:0907%;	Set character color to red	0907%
USER/I/[x]:0908%;	Set character color to green	0908%
USER/I/[x]:0909%;	Set character color to blue	0909%
USER/I/[x]:0910%;	Set character color to black	0910%
USER/I/x:0969%;	Set input board to output NO SIGNAL when no signal is input	0969%;
USER/I/x:0971%;	Set input board to output NO SIGNAL when no signal is input	0971%;
VGA OUT		
USER/O/[x]:0110%;	Enable analog audio output of channel [x]	0110%
USER/O/[x]:0111%;	Disable analog audio output of channel [x]	0111%
USER/O/[x]:0804%;	Set the resolution of output signal source of channel [x] to 1280x720p@60Hz	Resolution Ou01 1280x720 P
USER/O/[x]:0806%;	Set the resolution of output signal source of channel [x] to 1280x720p@50Hz	Resolution Ou01 1280x720 P
USER/O/[x]:0806%;	Set the resolution of output signal source of channel [x] to 1280x720p@50Hz	Resolution Ou004 1280x720 P
USER/O/[x]:0813%;	Set the resolution of output signal source of channel [x] to 1920x1080p@60Hz	Resolution Ou01 1920x1080P
USER/O/[x]:0815%;	Set the resolution of output signal source of channel [x] to 1920x1080p@50Hz	Resolution Ou01 1920x1080P
USER/O/[x]:0824%;	Set the resolution of output signal source of channel [x] to 1024x768p@60Hz	Resolution Ou01 1024x768
USER/O/[x]:0826%;	Set the resolution of output signal	Resolution

Command	Function	Feedback
	source of channel [x] to 1280x1024p@60Hz	Ou01 1280x1024
USER/O/[x]:0828%;	Set the resolution of output signal source of channel [x] to 1360x768p@60Hz z	Resolution Ou01 1360x768P
USER/O/[x]:0831%;	Set the resolution of the output signal source of channel [x] to 1600x1200p@60Hz	Resolution Ou01 1600x1200P
USER/O/[x]:0832%;	Set the resolution of the output signal source of channel [x] to 1440x900p@60Hz	Resolution Ou01 1440x900 P
USER/O/[x]:0837%;	Set the resolution of the output signal source of channel [x] to 1920x1200p@60Hz	Resolution Ou01 1920x1200
USER/O/[x]:0839%;	Set the resolution of the output signal source of channel [x] to 1600x900p@60Hz	Resolution Ou01 1600x900
USER/O/[x]:0617%;	Set the output signal of channel [x] to restore the factory settings	0617%
GetVGAPortMode[x].	Query the status of the VGA output port of channel [x]	
USER/O/[x]:0400%;	Adjust the brightness of the output image to decrease	
USER/O/[x]:0401%;	Adjust the brightness of the output image to increase	
USER/O/[x]:0410%;	Adjust the contrast of the output image to decrease	
USER/O/[x]:0411%;	Adjust the contrast of the output image to increase	
USER/O/[x]:0116%;	Turn off the screen black, normal output	0116%
USER/O/[x]:0117%;	The screen is black, turn off the sound	0117%
USER/O/[x]:0118%;	The screen is unfrozen, normal output	0118%
USER/O/[x]:0119%;	The screen is frozen	0119%

7. Maintenance

Fault Phenomenon	Cause Analysis	Troubleshooting
The POWER INDICATOR is off	The power input is not in good contact	Check whether the power input is loose
Color loss or no video output	Both ends of the line are not connected properly	Check and ensure both end of the cable at the good

		connection
	Display output low resolution	Adjust the input resolution or change a display output high resolution
The image of the peripheral display device has double images	The quality of the input and output cable is bad or is damaged	Replace the cable
	The connection between the input and output are in poor contact	Check the connection and interface
The output image is disturbed	The input or output are not well connected to GND	Connect the input and output to the GND correctly
With obvious static electricity when plugging /unplugging the audio and video interface	The device is not well connected to GND	Connect the GND terminal block correctly
Cannot switch input signal source channel manually	Front panel is locked state	Send the serial command "/%Unlock;" to unlock the lock state
Switch signal without corresponding image output	Input/ output cable is loose or damaged	Troubleshoot with relevant instruments (such as multimeter)
	Signal source with HDCP, but the system is set to incompatible with HDCP	Send the command HDCPON. Enable the HDCP protocol
The remote control cannot control the machine	Battery is exhausted	Replace new batteries
	Remote control is damaged	Send to a professional repair station for repair
	The transmitter of the remote control is not aligned with the IR receiver	Align the transmitter head with the IR receiver head
The control end cannot control the device	The communication port of the control end is damaged	Check whether the communication serial port is loose or damaged
	The communication protocol is not set properly.	Check the following: Baud rate: 9600 Data bits: 8 Stop bits: 1 Check bit: None
cannot control with panel buttons, communication port, and remote control	The device is damaged internally	Send to a professional repair station for repair

8. After-sales Service

1. If you encounter abnormal conditions when using this product, during the product warranty period, under normal use, if the product itself is faulty and has not been disassembled, our company will be responsible for free repair.

2. Our company provides one-year warranty service for this product, and the warranty period starts on.

- ✓ Product factory date.
- ✓ If the above dates cannot be verified, the product production date in our company's SN code shall prevail.

3. In any of the following cases, warranty service will not be implemented, and reasonable repair parts fees will be charged.

- ✓ Damage caused by improper use, storage, and maintenance by consumers.
- ✓ Man-made damage to the appearance and components.
- ✓ Damage caused by changing the configuration or modifying the product without the authorization of our company.
- ✓ Damage caused by force majeure.

4. In any of the following cases, our company has the right to refuse to provide repair services or provide paid repair services;

- ✓ No warranty certificate and valid invoice, the product has no SN code.
- ✓ The fragile label of the body is damaged (except for authorization by our company), the content of the product label has been altered or blurred and cannot be recognized.
- ✓ Damage caused by unauthorized installation and repair by our company.
- ✓ No sales receipt or the sales receipt does not match the model of the repaired product.
- ✓ The product is not produced and sold by our company.

5. You can contact our after-sales service department directly by letter or phone, please inform the following:

- ✓ The model and name of the product you are using.
- ✓ The fault phenomenon (as detailed as possible).
- ✓ The process before and after the fault occurs.