

AVCOMM Technologies Inc.

User Manual

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About This Manual

This user manual is intended to guide a professional installer to install and to configure the SEVR Series . It includes procedures to assist you in Avoiding unforeseen problems.



NOTE:

Only qualified and trained personnel should be involved with installation, inspection, and repairs of this switch.

Disclaimer

Avcomm reserves the right to make changes to this Manual or to the product hardware at any time without notice. Information provided here is intended to be accurate and reliable. However, it might not cover all details and variations in the equipment and does not claim to provide for every possible contingency met in the process of installation, operation, or maintenance. Should further information be required, or should particular problem arise which are not covered sufficiently for the user's purposes, the matter should be referred to Avcomm. Users must be aware that updates and amendments will be made from time to time to add new information and/or correct possible unintentional technical or typographical mistakes. It is the user's responsibility to determine whether there have been any such updates or amendments of the Manual. Avcomm assumes no responsibility for its use by the third parties.

Avcomm Online Technical Services

At Avcomm, you can use the online service forms to request the support. The submitted forms are stored in server for Avcomm team member to assign tasks and monitor the status of your service. Please feel free to write to www.avcomm.us if you encounter any problems.

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Chart 1: SEVR-Mx Series Serial Device Server Overview

a) Product introduction

SEVR-Mx series serial device server, also called terminal server or serial server, is a converter between asynchronous serial port RS232/422/485 and Ethernet. It is an independent intelligent device with CPU, embedded OS, and complete TCP/IP protocol stack. Complete the bi-directional transparent transmission of data between RS232/422/485 and Ethernet, allowing RS232/422/485 serial devices to connect to the network immediately.

Product features: supports dynamic IP (DHCP) and static IP, supports gateways and proxy servers, and can transmit data through the Internet. Provide bi-directional transparent transmission of data, realize the function of serial port to TCP/IP, users do not need to make any modification to the original system. ARP, IP, TCP, HTTP, ICMP, SOCKET, UDP, SNMP, MQTT, MODBUS and other protocols are integrated. And the equipment supports secondary development and provides an interface for customized protocol. All programs have a setup wizard, so you can use it as long as you can use a computer.



SEVR-M8



SEVR-M2
SEVR-M4

SEVR-M1



b) Main Features

Hardware Features

- ☆ Provide virtualized COM driver under Windows.
- ☆ With a serial port, it can be connected to various serial devices such as terminals, modems, bar code machines, cash registers, ISDN, terminal adapters, serial printers, and PCs, and can realize remote control functions.
- ☆ With Reset button, it can be forced to reset when the device halt.
- ☆ With 10/100M adaptive Ethernet port.
- ☆ Each serial port provides 5 signals, including RXD, TXD, RTS, CTS, GND.
- ☆ 32-bit embedded 400MHz CPU, 128M RAM.
- ☆ Both the network port and the power supply have independent indicator, which can easily indicate the working status.

☆The device provides a secondary development interface to meet the needs of user-defined protocol transplantation.

Software Features

★Support ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, SNMP, MQTT, MODBUS and other protocols.

★Support Windows extended serial port mode

A complete extended serial port (com) drivers based on the Windows, and a simple and easy-to-use management program on the Windows platform, which can drive up to 1024 serial ports on Windows. In this mode, each serial port of the serial server can be mapped to the local COM port of the Windows host. This means that using these serial ports is just like using the local COM port on the host, and it also means that all existing software or communication modules used on the existing serial device can be used directly without modification.

★Terminal server parameter configuration

You can configure the terminal server through the web, so that you can apply the serial device server very conveniently.

★Support software upgrade

Support software upgrades to facilitate product function extension, performance improvement and maintenance.

★Support status monitoring

On the device, not only indicators are provided to analyze the working status of the server, but also the input/output data of the network port and each port are counted for analysis by the system administrator.

Security Features

SEVR-Mx series serial server adopts the following security mechanisms to ensure that users can use this product safely.

☆The server management password can be set, and only the system administrator can manage the terminal server, so as to prevent unauthorized modification of the serial server to ensure the security of the serial server configuration;

☆The host name to be logged in to the port can be restricted, and host users who have not been backed up through the restricted port will not be able to access the server to ensure the secure access of the server;

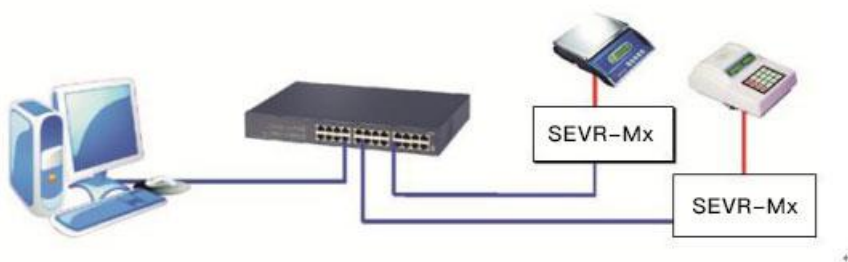
☆Since the serial device server is connected to the network during it works, in order to ensure its security during network access;

You can restrict the hosts or network segments that are allowed to access the server. Unauthorized users who are not backed up in the host list and network segment list will not be able to access the server through the network;

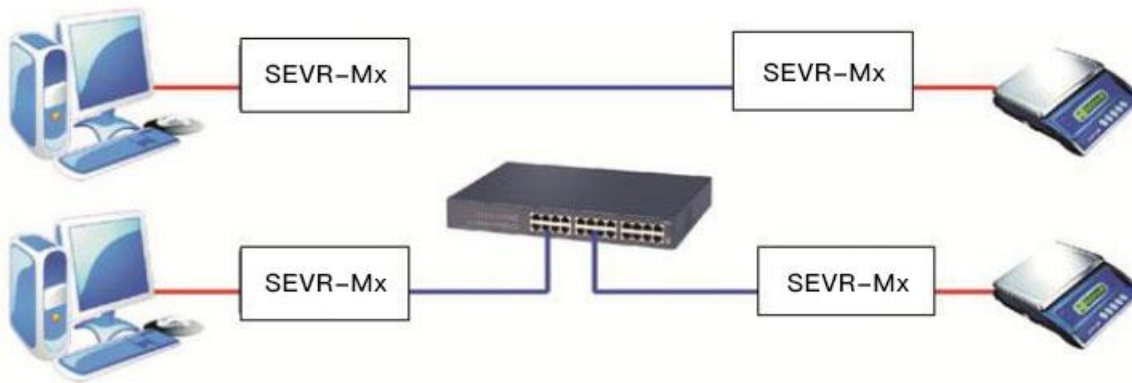
Serial device server factory IP address 192.168.1.125 sub-page code 255.255.255.0

c) Scenarios

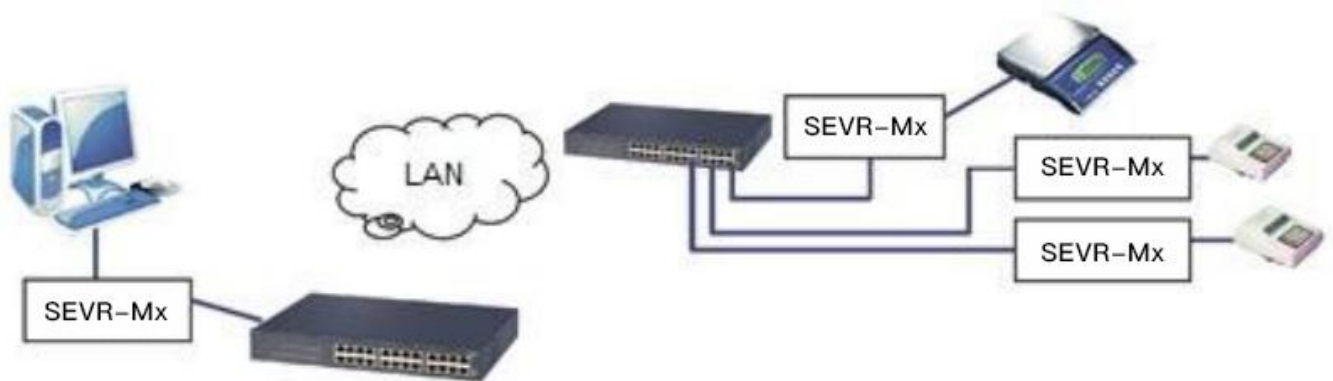
1. Virtual serial port mode



2. P2P Mode



3. P2MP Mode



4. Multi-host mode (up to six hosts)

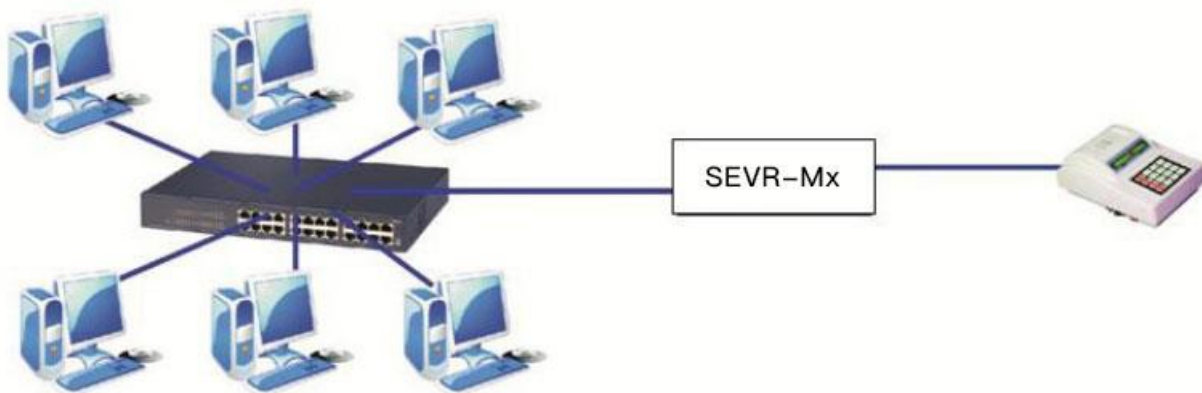


Chart 2: SEVR-Mx Series Serial Device Server Installation Introduction

a) Software installation introduction

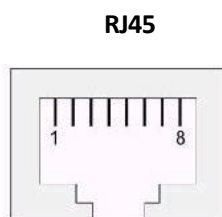
1. IP address lookup and changing software
Refer to the attachment.
2. Virtualized serial port software
Refer to the attachment

b) LED indicator introduction

Model	PWR (Red)	RUN (Green)	Tx (Green)	Rx (Green)	LAN (Green, Yellow)
SEVR-M1	√	√	√	√	√
SEVR-M2	√	√	√	√	√
SEVR-M4	√	√	×	×	√
SEVR-M8	√	√	×	×	√

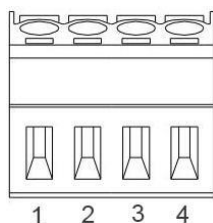
c) Pin definition

1. SEVR-Mx series serial port pin definition:



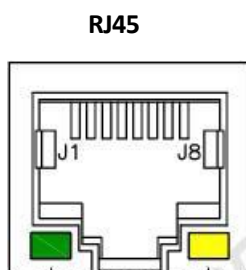
RJ45	RS-232	RS-485 HALF	RS-485 FULL	RS-422
1	TxD	DATA+	TxD+	TxD+
2	RxD	DATA-	TxD-	TxD-
3	RTS		RxD+	RxD+
4	CTS		RxD-	RxD-
5				
6	GND	GND	GND	GND
7				
8				

2. SEVR-MxMT series serial port terminal block pin definition:



3.81 Terminal Block	RS-485	RS-422	Remark
1	T/R+	TX+	
2	T/R-	TX-	
3		RX+	
4		RX-	

3. SEVR-Mx Series RJ45 network port pin definition:



RJ45	EIA/TIA 568B	Definition	EIA/TIA 568B
1	Orange & White	TX+	TX+
2	Orange	TX-	TX-
3	Green & White	RX+	RX+
4	Blue	Data+	Data+
5	Blue & White	Data-	Data-
6	Green	RX-	RX-
7	Brown & White	Data+	Data+
8	Brown	Data-	Data-

Chart 3: SEVR-Mx Series serial device server technical parameter

a) Product technical parameters

Product model		SEVR-M1	SEVR-M2	SEVR-M4	SEVR-M8
Serial port number		1	2	4	8
Processor		32bit 400MHZ	32bit 400MHZ	32bit 400MHZ	32bit 400MHZ
Memory		128M	128M	128M	128M
Serial Port	Baud Rate	300-921600bps	300-921600bps	300-921600bps	300-921600bps
	Check Bit	None, Odd, even	None, Odd, even	None, Odd, even	None, Odd, even
	Data Bit	5,6,7,8	5,6,7,8	5,6,7,8	5,6,7,8
	Stop Bit	1,2	1,2	1,2	1,2
	Flow Control	RTS/CTS,XON/XOFF	RTS/CTS, XON/XOFF	RTS/CTS, XON/XOFF	RTS/CTS, XON/XOFF
	Serial Port Type	DB9 Male,4pin Terminal block	RJ45	RJ45	RJ45
	Serial Port Protection	±4KV ESD Protection	±4KV ESD Protection	±4KV ESD Protection	±4KV ESD Protection
	Signal	RS232: RxD/TxD/GND/RTS/CTS, R S422: TXD+/RXD+/TXD-/RXD-/GND, RS485: Data+/Data-	RS232: RxD/TxD/GND/RTS/CTS, RS4 22: TXD+/RXD+/TXD-/RXD-/GND, RS485: Data+/Data-	RS232: RxD/TxD/GND/RTS/CTS, R S422: TXD+/RXD+/TXD-/RXD-/GND, RS485: Data+/Data-	RS232: RxD/TxD/GND/RTS/CTS, R S422: TXD+/RXD+/TXD-/RXD-/GND, RS485: Data+/Data-
Network Port	Speed	10/100M Adaptive	10/100M Adaptive	10/100M Adaptive	10/100M Adaptive
	Type	RJ45	RJ45	RJ45	RJ45
	Protection	Built-in1.5KV Electromagnetic isolation	Built-in1.5KV Electromagnetic isolation	Built-in1.5KV Electromagnetic isolation	Built-in1.5KV Electromagnetic isolation
Software	Protocol	ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, SNMP	ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, SNMP	ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, SNMP	ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, SNMP
	Virtual COM	Windows	Windows	Windows	Windows
Environment	Operating Temp	-40℃-----85℃	-40℃-----85℃	-40℃-----85℃	-40℃-----85℃
	Operating Humidity	5%-----95%	5%-----95%	5%-----95%	5%-----95%
	Storage Temp	-40℃-----85℃	-40℃-----85℃	-40℃-----85℃	-40℃-----85℃
	Storage Humidity	5%-----95%	5%-----95%	5%-----95%	5%-----95%
Power Supply		DC12~48V,350mA@12Vmax	DC12~48V,350mA@12Vmax	DC12~48V,350mA@12Vmax	DC12~48V,350mA@12Vmax
Appearance	Housing	Metal	Metal	Metal	Metal
	Size	100mm×80.8mm×30mm	100mm×80.8mm×30mm	161mm×91mm×37mm	161mm×91mm×37mm

b) Product Accessory (1 Set)

Product model	Serial Device Server	Power Adapter	Software	Product Manual and warranty bill	RJ45to Male DB9 Cable
SEVR-M1	1Set	1*DC12V/1A	1Set	1Set	X
SEVR-M2	1 Set	1*DC12V/1A	1Set	1Set	X
SEVR-M4	1 Set	1*DC12V/1A	1Set	1Set	X
SEVR-M8	1 Set	1*DC12V/1A	1Set	1Set	X

Chart 4 : SEVR-Mx series serial device server WEB operating Instruction

System Content

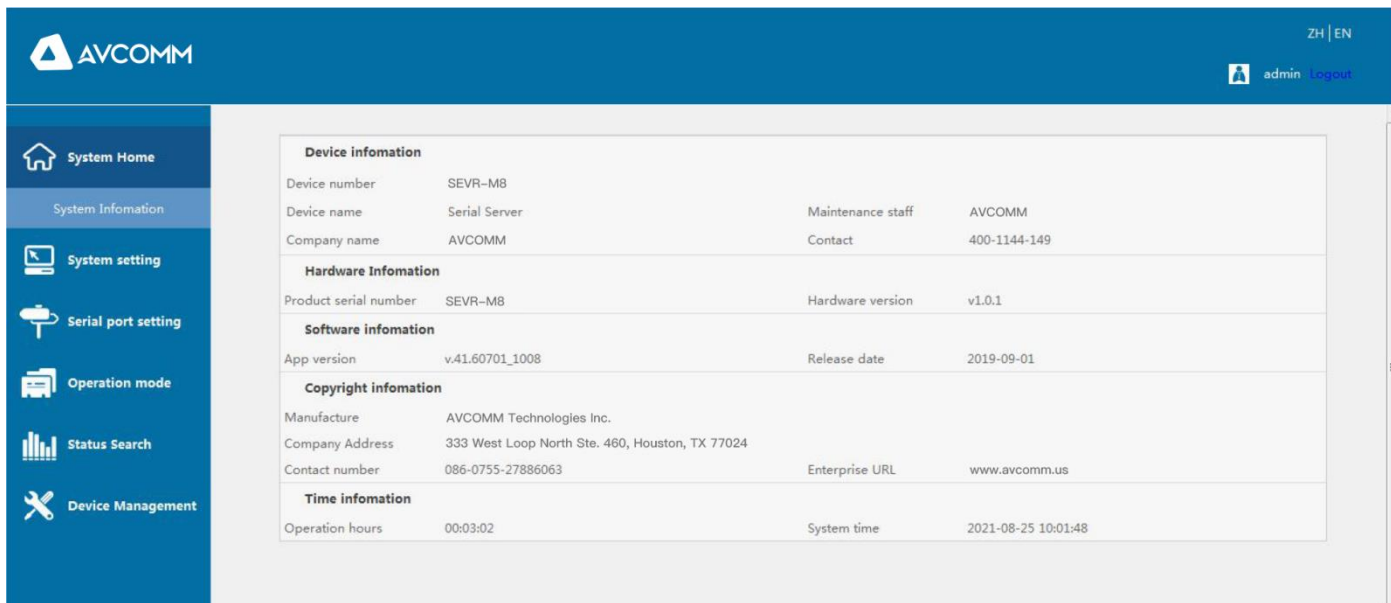


Content	Function
System Home	Setting device related information
System Setting	Set device network configuration, user management, SNMP setting, mqtt setting
Serial port setting	Set serial port related parameters
Operating mode	Set the operating mode of the device
Status Search	Query various configurations and status of the device
Device Management	Manage device operations

a) System Content

System Content---System Home (Show serial device server information)

Device number	Serial device server number
Device name	Serial device server name
Company Name	User company name
Maintenance staff, contact	Fill in the name of the device maintenance personnel and their contact information to facilitate the internal management of the user company



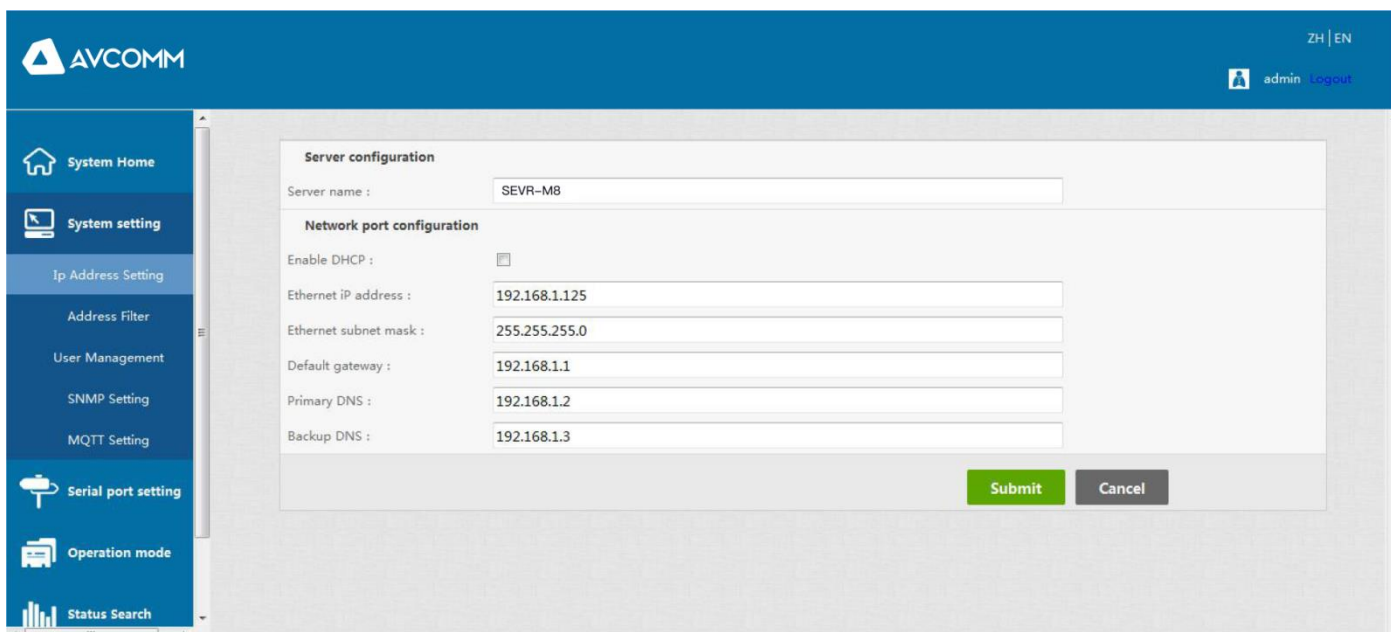
The screenshot shows the AVCOMM web interface. The top navigation bar includes the AVCOMM logo, user 'admin', and 'Logout'. The left sidebar contains menu items: System Home, System Information (selected), System setting, Serial port setting, Operation mode, Status Search, and Device Management. The main content area displays system information categorized into:

- Device information:** Device number (SEVR-M8), Device name (Serial Server), Maintenance staff (AVCOMM), Company name (AVCOMM), Contact (400-1144-149).
- Hardware Information:** Product serial number (SEVR-M8), Hardware version (v1.0.1).
- Software information:** App version (v.41.60701_1008), Release date (2019-09-01).
- Copyright information:** Manufacture (AVCOMM Technologies Inc.), Company Address (333 West Loop North Ste. 460, Houston, TX 77024), Contact number (086-0755-27886063), Enterprise URL (www.avcomm.us).
- Time information:** Operation hours (00:03:02), System time (2021-08-25 10:01:48).

b) System Setting

1, System Setting ---IP address setting (Set serial device service networking IP parameters)

Server Name	Set the serial device server name
Enable DHCP	Check the box to get the IP address of the serial device server automatically
Ethernet IP address	Set the Ethernet IP address of the serial device server
Ethernet Subnet Mask	Set the Ethernet subnet mask of the serial device server
Default Gateway	Set the default gateway of the serial device server
Primary DNS	Set up primary DNS
Backup DNS	Set up Backup DNS
Submit, Cancel	Submit (after setting the above options must be submitted to complete the settings, and the new IP address will take effect immediately after submission, you can use the newly set IP address to access the device),Cancel (no changes)



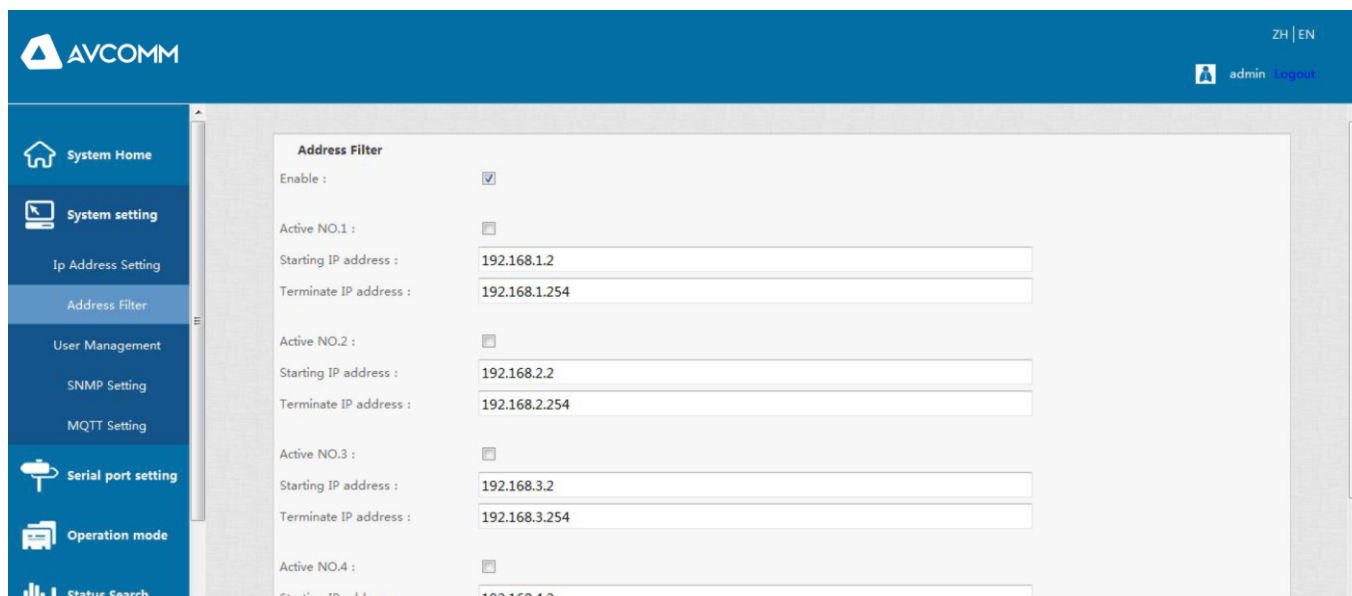
The screenshot shows the AVCOMM web interface for 'Server configuration'. The top navigation bar includes the AVCOMM logo, user 'admin', and 'Logout'. The left sidebar contains menu items: System Home, System setting (selected), Ip Address Setting, Address Filter, User Management, SNMP Setting, MQTT Setting, Serial port setting, Operation mode, and Status Search. The main content area displays the 'Server configuration' form with the following fields:

- Server name : SEVR-M8
- Network port configuration**
- Enable DHCP :
- Ethernet IP address : 192.168.1.125
- Ethernet subnet mask : 255.255.255.0
- Default gateway : 192.168.1.1
- Primary DNS : 192.168.1.2
- Backup DNS : 192.168.1.3

At the bottom right of the form are 'Submit' and 'Cancel' buttons.

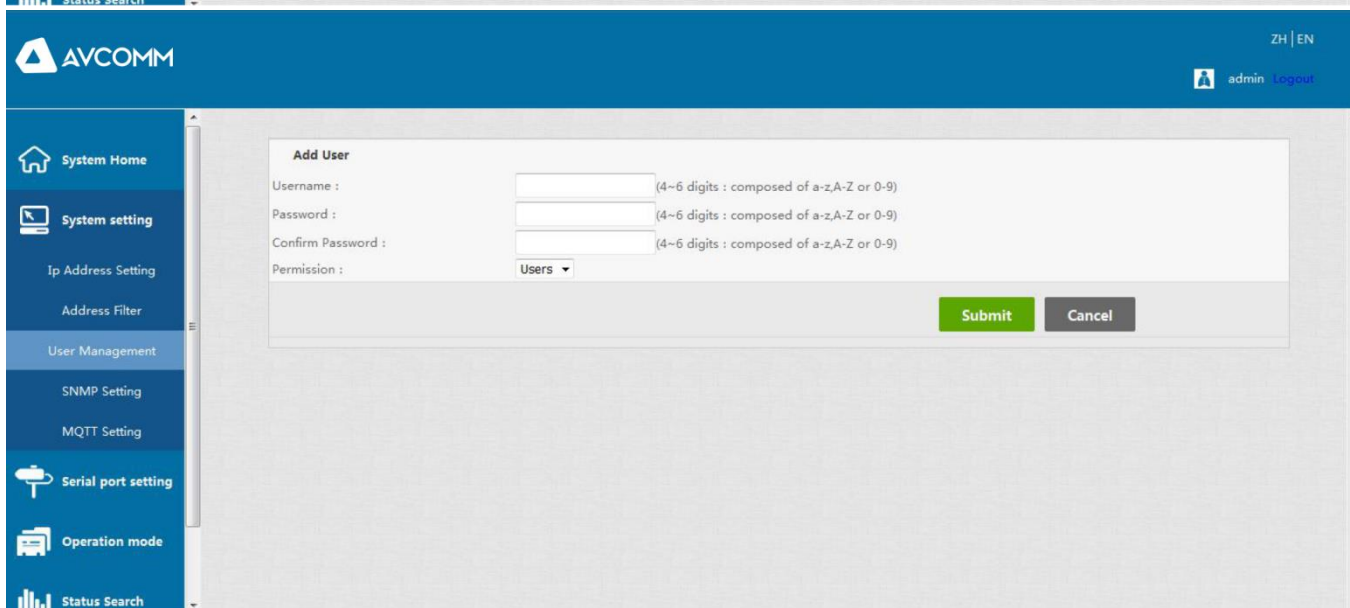
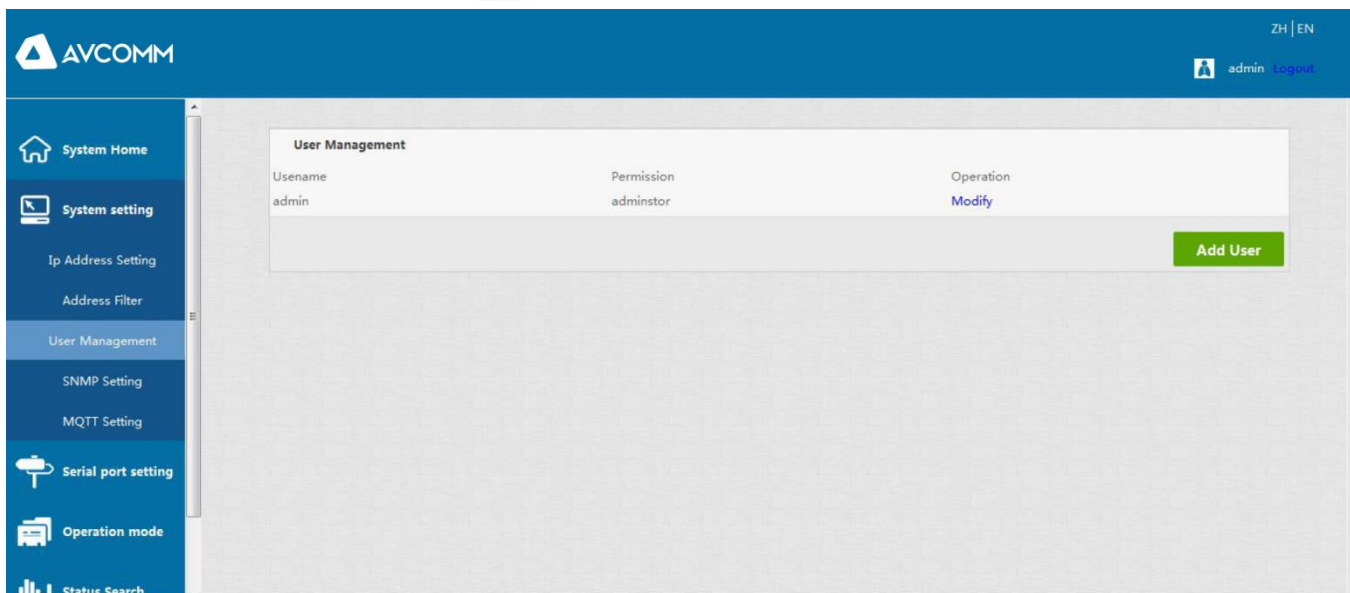
2, System Setting ---Address Filter (Set the serial device service to filter the networking address)

Enable address filtering	This item is checked to enable the address filtering function, a total of 4 groups of Ethernet IP segments can be filtered
Activate NO.	This item is checked even if the current group IP network segment can be filtered
Starting IP address	Set the starting IP address of the filter segment
Terminate IP address	Set the terminating IP address of the filtered network segment
Submit, Cancel	Submit (must be submitted after setting the above options to complete the settings),Cancel (no changes)



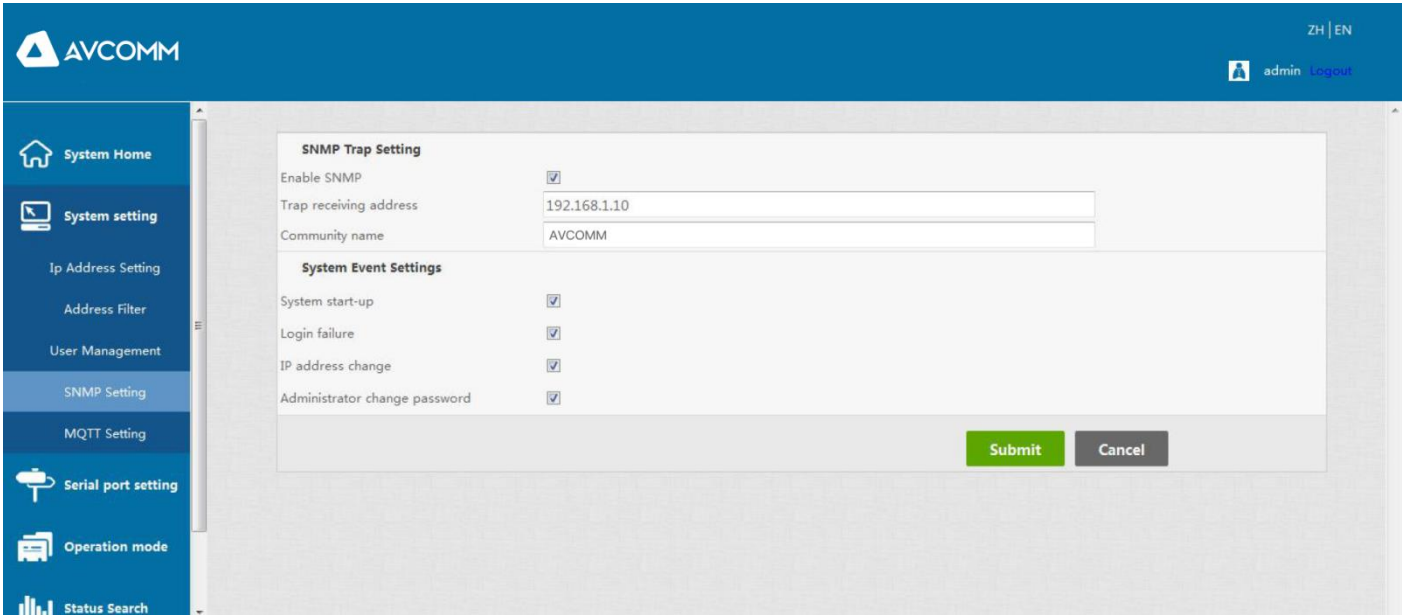
3, System Setting---User management (set the user management account information for the serial service)

Modification	Change current user password
Delete	Delete current user information
Add User	Add a new user account name
Username	Set the new username to be added
Password, Confirm Password	Set the password of the new user added
Permission	Select the newly added user permissions, Users is the user permissions account, by default only one administrator user is allowed for a device.
Submit, Cancel	Submit (must be submitted after setting the above options to complete the settings),Cancel (no changes)



4, System Setting --- SNMP Setting (Set SNMP Trap parameters and options for serial device services)

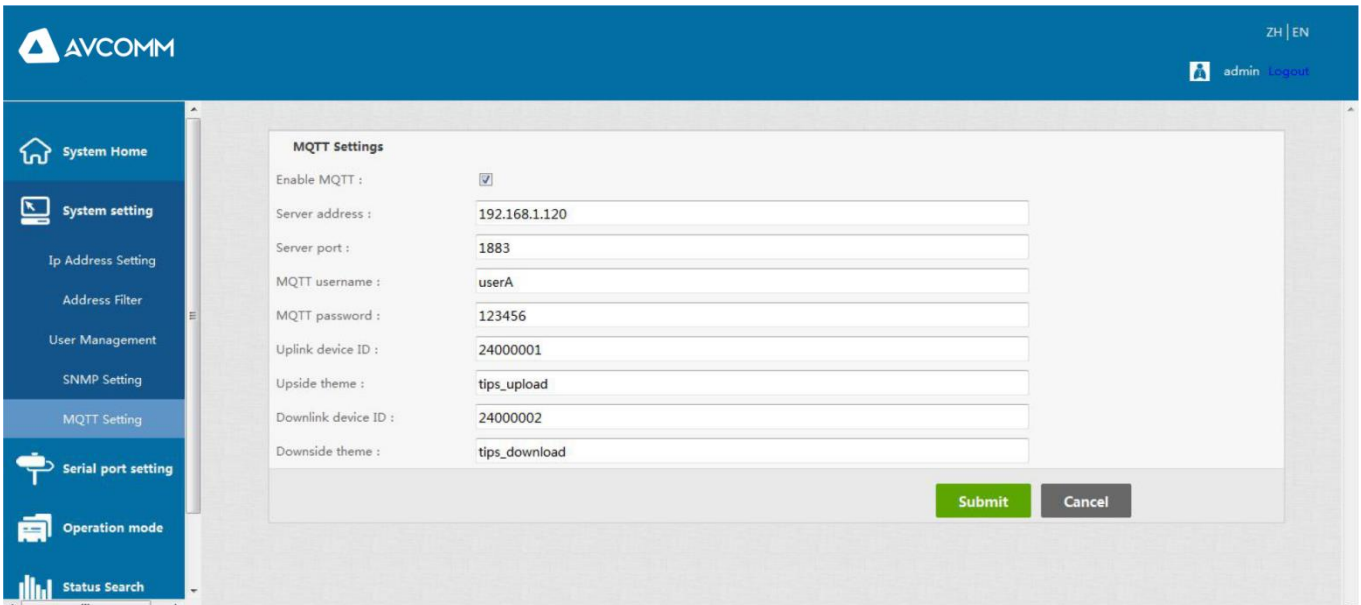
Enable SNMP	Check the box to enable Simple Network Management Protocol
Trap receiving address	Set the Trap server address
Community Name	Set the community name of the network management protocol
System start-up	Check to enable sending system startup time signal
Login failure	Check to enable sending login failure event signal
IP address change	Check to enable sending IP address change event signal
Administrators change password	Check to enable sending administrator password change event signal
Submit, Cancel	Submit (must be submitted after setting the above options to complete the settings), Cancel (no changes)



5, System Setting---MQTT Settings (Set the MQTT parameters and options for the serial device server)

Enable MQTT	Check to enable MQTT and the device will create MQTT client tasks
Server Address	Setting the MQTT server address

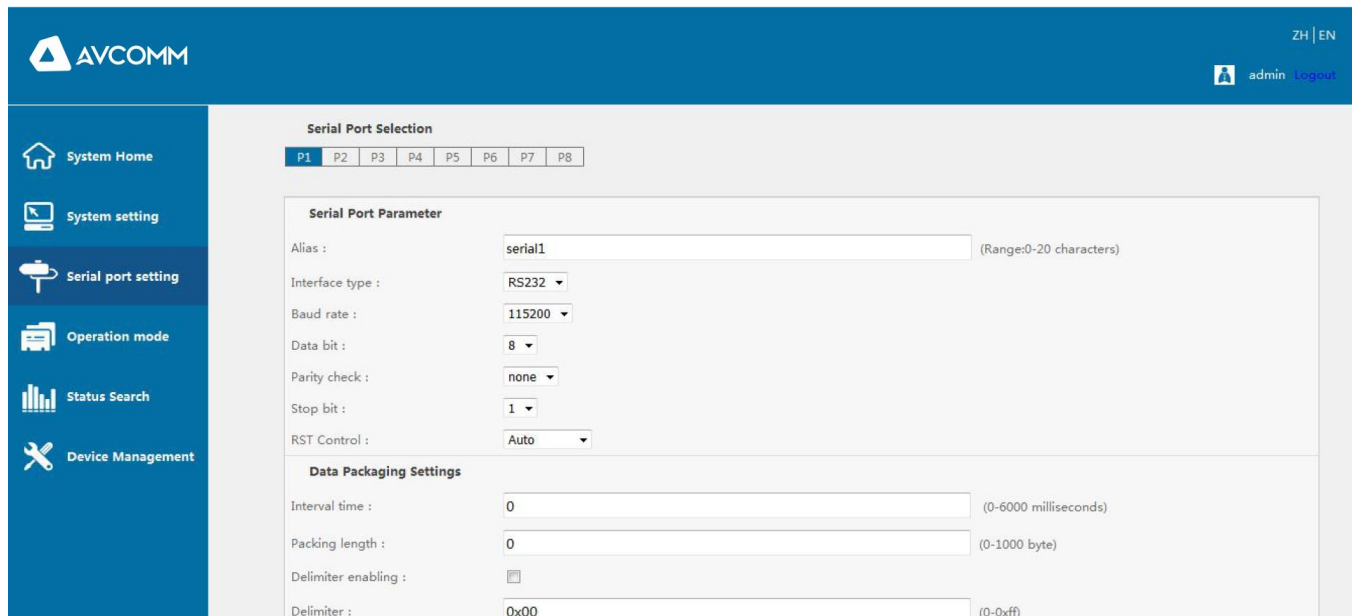
Server port	Set the MQTT server port number
MQTT Username	Set the username information for MQTT login
MQTT Password	Set the user password information for MQTT login
Uplink Device ID	Set the client ID of the published topic
Upside Theme	Set the posting theme
Downlink Device ID	Set the client ID of the subscription topic
Downside Theme	Set subscription topic
Submit, Cancel	Submit (must be submitted after setting the above options to complete the settings),Cancel (no changes)



c) Serial port setting

Serial port setting (serial communication setting)

Alias	Set the serial port alias of the serial port server
Interface Type	Interface type (including RS232/485/422)
Baud rate	Serial port baud rate (the value should be the same as the baud rate of the device connected to the serial port)
Data bit	Data bits (default is 8, specific should be consistent with the device connected to the serial port)
Parity Check	Check bits (including None, Even, Odd default to None, the specific should be consistent with the serial port connected to the device)
Stop bit	Stop bit (default is 8, specific should be consistent with the device connected to the serial port)
RTS control	Auto, XON/XOFF, CTS/RTS can be selected
Interval time	Data packing interval
Packing length	Length of data packing
Delimiter Enabling	Check the Enable Delimiter
Delimiter	Set the encoding of the delimiter for the transmitted data (0-0xff)
Delimiter handling	Choose to keep or discard
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the rules to save to the device), cancel (no changes)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)



Serial Port Selection

P1 P2 P3 P4 P5 P6 P7 P8

Serial Port Parameter

Alias : serial1 (Range:0-20 characters)

Interface type : RS232

Baud rate : 115200

Data bit : 8

Parity check : none

Stop bit : 1

RST Control : Auto

Data Packaging Settings

Interval time : 0 (0-6000 milliseconds)

Packing length : 0 (0-1000 byte)

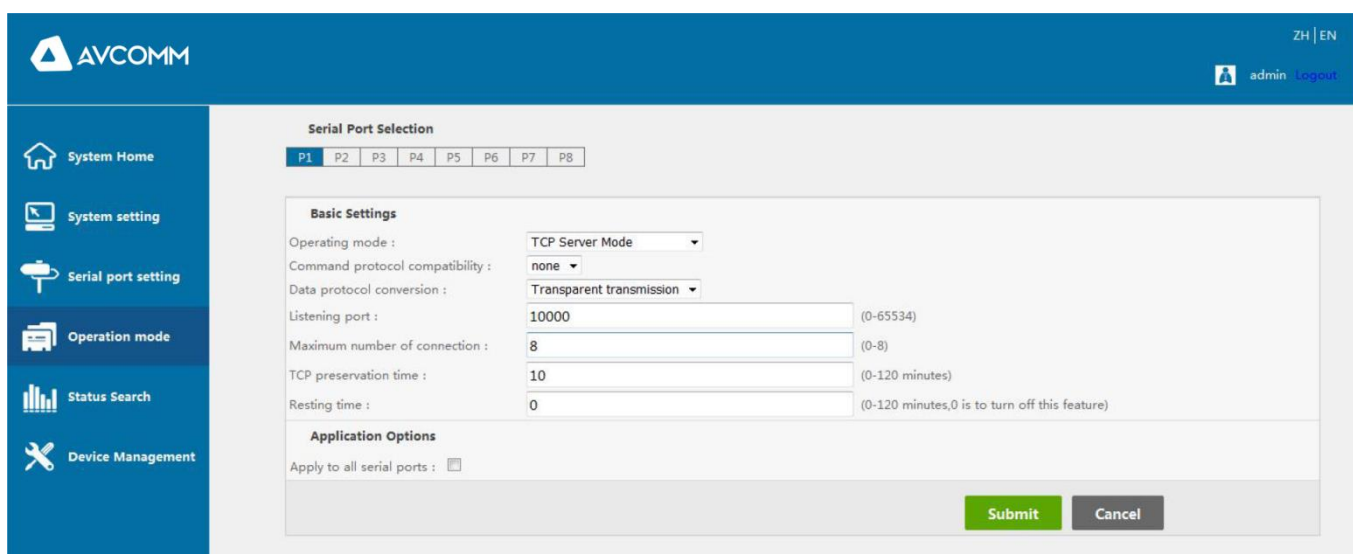
Delimiter enabling :

Delimiter : 0x00 (0-0xff)

d) Operating mode (server operating mode)

1, TCP Server Mode (TCP Server Mode)

Operating mode	Operating mode option
Command protocol compatibility	No other compatible protocol
Data protocol conversion	Only transparent transmission is supported for now
Listening port	Set the command side of the serial port (range 0-65534)
Maximum number of connections	Number of hosts connected to the device (up to eight)
TCP preservation time	Set the retention time for TCP connection
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the device in accordance with the rules), cancel (no changes)
Apply to all serial ports	Apply all serial ports (you can check this if the settings for each serial port are the same)



Serial Port Selection

P1 P2 P3 P4 P5 P6 P7 P8

Basic Settings

Operating mode : TCP Server Mode

Command protocol compatibility : none

Data protocol conversion : Transparent transmission

Listening port : 10000 (0-65534)

Maximum number of connection : 8 (0-8)

TCP preservation time : 10 (0-120 minutes)

Resting time : 0 (0-120 minutes, 0 is to turn off this feature)

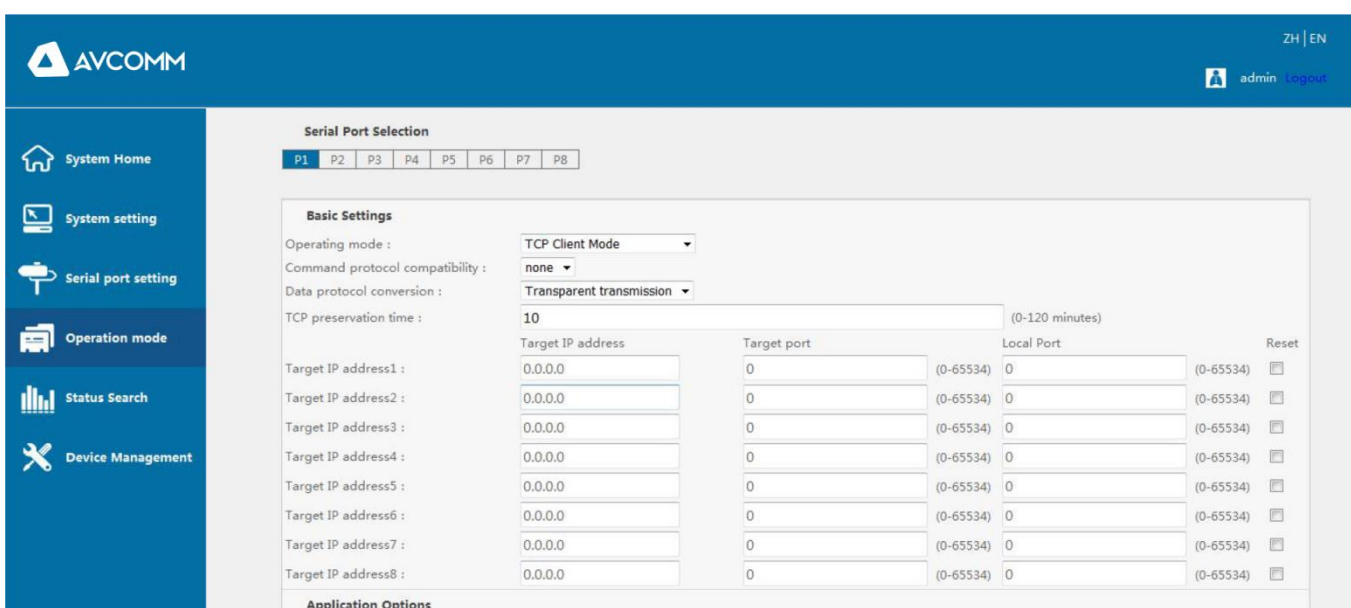
Application Options

Apply to all serial ports :

Submit Cancel

2, TCP Client Mode (TCP Client Mode)

Operating mode	Operating mode option
Command protocol compatibility	No other compatible protocol
compatibility	
Data protocol conversion	Only transparent transmission is supported for now
TCP preservation time	Set the retention time for TCP connection
Target IP address	Set destination IP address of the host
Target port	Set the IP address of the connected target host
Local Port	Set the local port number of the serial port service
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the device in accordance with the rules), cancel (no modification)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)



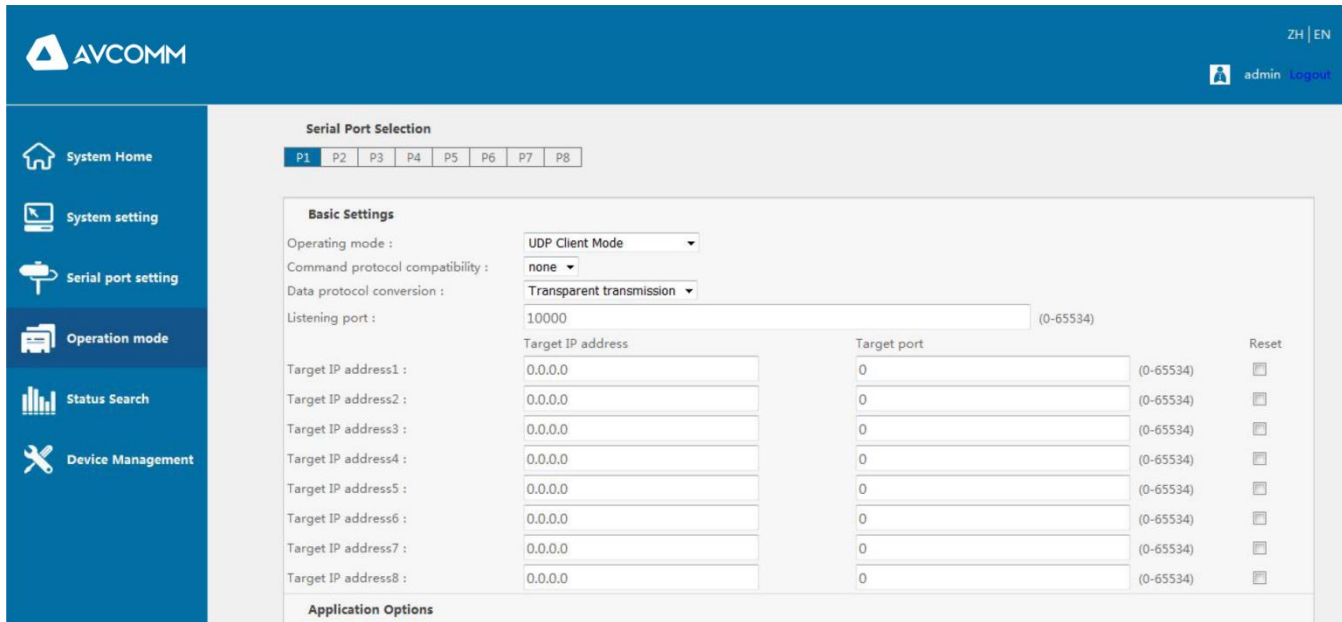
The screenshot shows the AVCOMM web interface. The top navigation bar includes the AVCOMM logo, language options (ZH | EN), and user information (admin | Logout). The left sidebar contains navigation links: System Home, System setting, Serial port setting, Operation mode, Status Search, and Device Management. The main content area is titled "Serial Port Selection" and shows a configuration page for "P1". The "Basic Settings" section includes:

- Operating mode: TCP Client Mode (dropdown)
- Command protocol compatibility: none (dropdown)
- Data protocol conversion: Transparent transmission (dropdown)
- TCP preservation time: 10 (0-120 minutes)

 Below this is a table for configuring 8 serial ports (P1-P8). Each row contains fields for Target IP address, Target port, and Local Port, along with a Reset button. The values for all ports are currently 0.0.0.0, 0, and 0 respectively.

3, UDP Client Mode (UDP Client mode)

Operating mode	Operating mode option
Command protocol compatibility	No other compatible protocols
Data protocol conversion	Only transparent transmission is supported for now
TCP preservation time	Set the retention time for TCP connections
Target IP address	Set the IP address of the connected target host
Target port	Set the target port for the connection
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the device in accordance with the rules), cancel (no modification)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)



Serial Port Selection

P1 P2 P3 P4 P5 P6 P7 P8

Basic Settings

Operating mode : UDP Client Mode
 Command protocol compatibility : none
 Data protocol conversion : Transparent transmission
 Listening port : 10000 (0-65534)

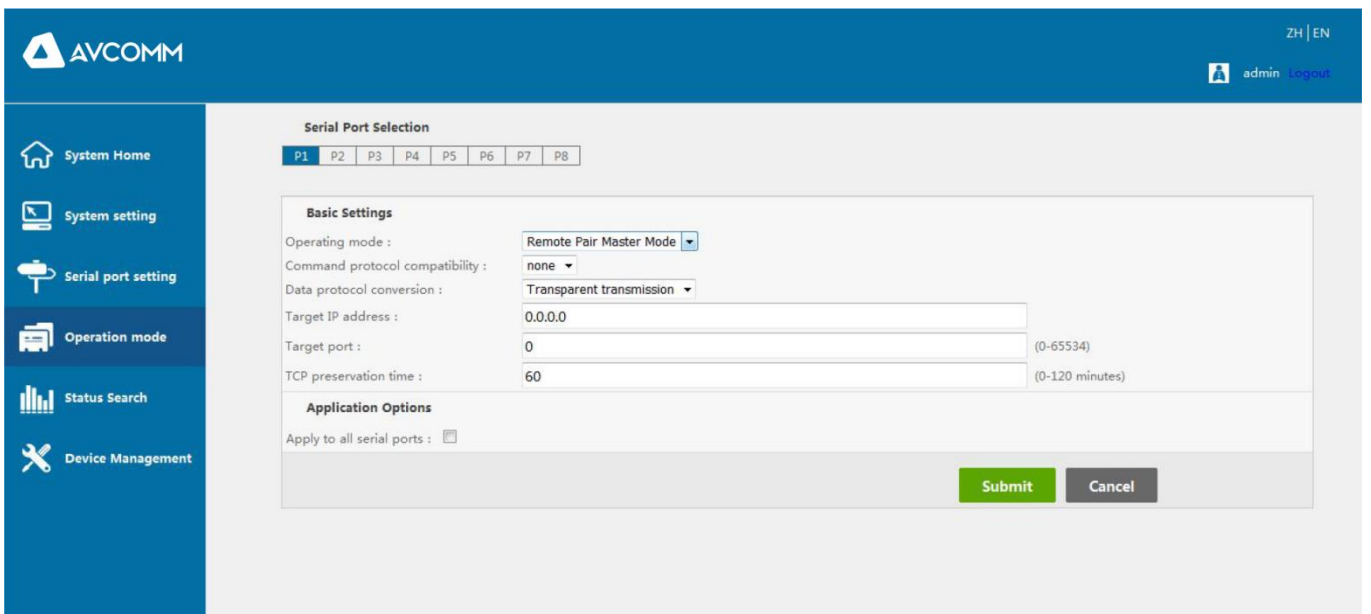
Target IP address	Target port	Reset
0.0.0.0	0 (0-65534)	<input type="checkbox"/>
0.0.0.0	0 (0-65534)	<input type="checkbox"/>
0.0.0.0	0 (0-65534)	<input type="checkbox"/>
0.0.0.0	0 (0-65534)	<input type="checkbox"/>
0.0.0.0	0 (0-65534)	<input type="checkbox"/>
0.0.0.0	0 (0-65534)	<input type="checkbox"/>
0.0.0.0	0 (0-65534)	<input type="checkbox"/>
0.0.0.0	0 (0-65534)	<input type="checkbox"/>
0.0.0.0	0 (0-65534)	<input type="checkbox"/>

Application Options

4, Remote Pair Master Mode

In this mode, the device creates a TCP client service and only supports connecting a TCP server service for communication

Operating mode	Operating mode option
Command protocol compatibility	No other compatible protocols
Data protocol conversion	Only transparent transmission is supported for now
TCP preservation time	Set the retention time for TCP connections
Target IP address	Set the IP address of the connected target host
Target port	Set the target port for the connection
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the device in accordance with the rules), cancel (no modification)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)



Serial Port Selection

P1 P2 P3 P4 P5 P6 P7 P8

Basic Settings

Operating mode : Remote Pair Master Mode
 Command protocol compatibility : none
 Data protocol conversion : Transparent transmission
 Target IP address : 0.0.0.0
 Target port : 0 (0-65534)
 TCP preservation time : 60 (0-120 minutes)

Application Options

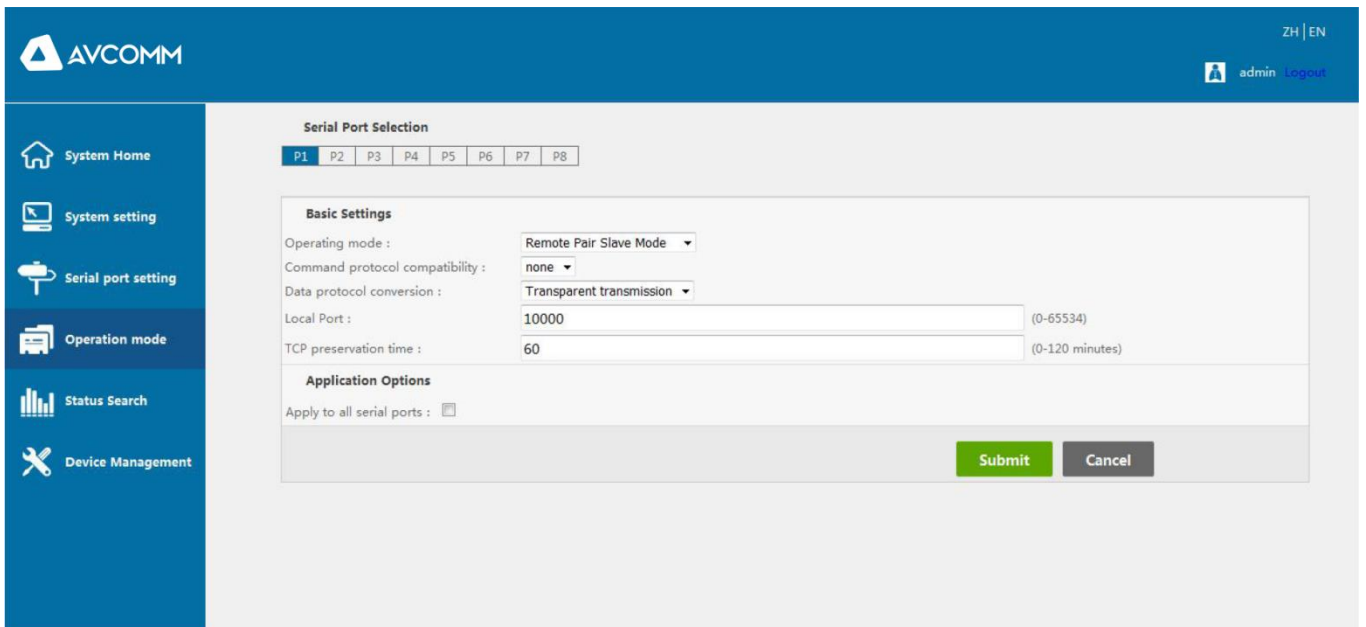
Apply to all serial ports :

Submit **Cancel**

5, Remote Pair Slave Mode

The device in this mode creates a TCP server service and supports only one TCP client service for connection communication.

Operating mode	Operating mode option
Command protocol compatibility	No other compatible protocols
Data protocol conversion	Only transparent transmission is supported for now
TCP preservation time	Set the retention time for TCP connections
Local Port	Set the port number for the device to create a TCP server
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the device in accordance with the rules), cancel (no modification)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)

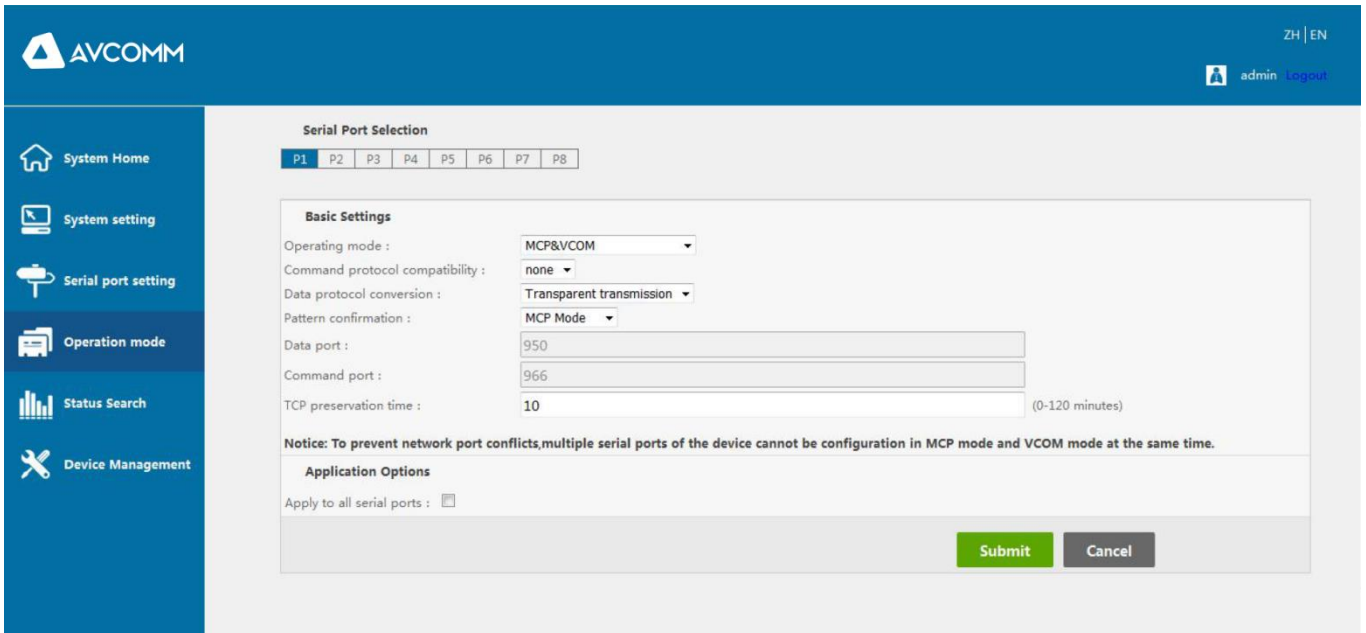


6、MCP&VCOM Mode (TCP/IP virtual serial port mode)

TCP/IP virtual serial port mode works in the windows system environment, through the driver to map the port on the serial server into a virtual COM port of the local host, so that the original COM port-based operation of the upper software without any modification as if the application of the local real COM port, the driver can support up to extend to COM1024, making the monitoring of serial devices More flexible and convenient, multiple connection resources can also do connection backup.

Operating mode	Operating mode option
Command protocol compatibility	No other compatible protocols
Data protocol conversion	Only transparent transmission is supported for now
TCP retention time	Set the retention time for TCP connections
Pattern Confirmation	Since the MCP and VCOM modes correspond to different virtual serial software, you need to confirm one of them when selecting this mode
Data Port	This is the port corresponding to the virtual serial port software driver for data communication (not configurable)

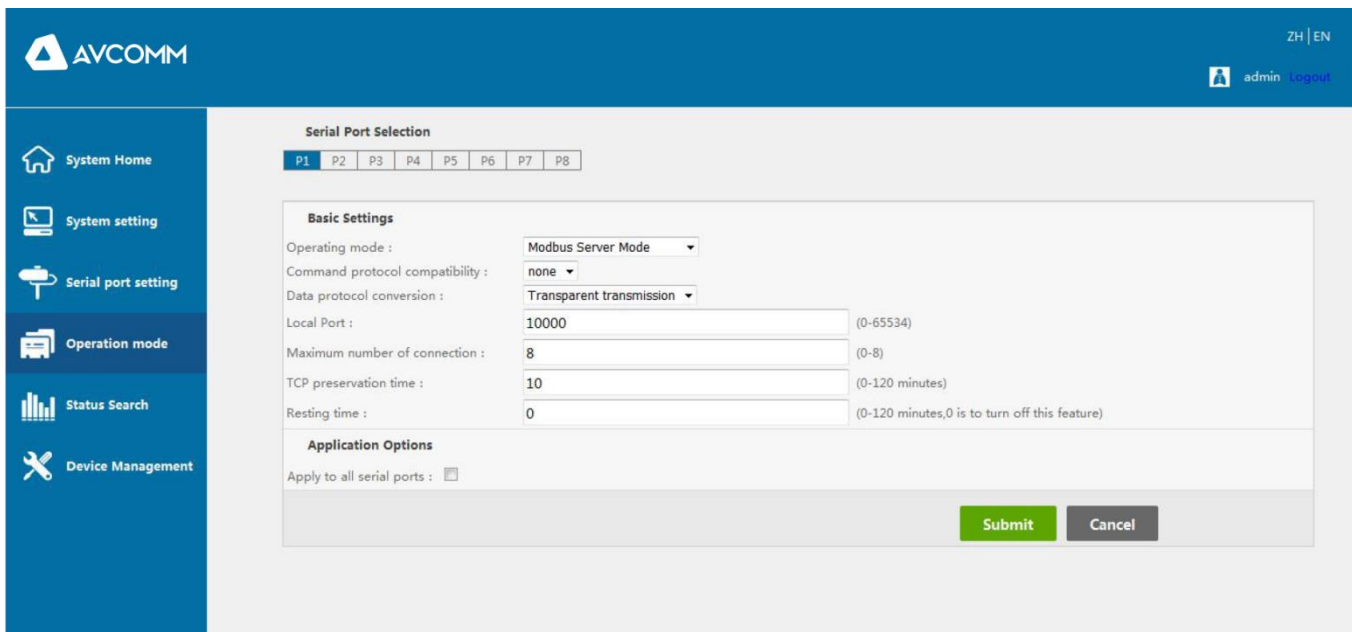
Command Port	This is the port that corresponds to the virtual serial port software driver for monitoring the connection status (not configurable)
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the device in accordance with the rules), cancel (no modification)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)



7、Modbus Server Mode

In this mode, the device creates a TCP server mode, the data protocol is the standard Modbus-RTU frame format for communication, the Ethernet network serves as the Modbus master station, and the serial port serves as the Modbus slave station.

Operating mode	Operating mode option
Command protocol compatible	No other compatible agreement
Data protocol conversion	Only transparent transmission is supported temporarily
TCP keep-alive time	Set the keep-alive time of the TCP connection
Local port	Set the local port number when creating a TCP server service
Maximum number of connections	Set the maximum number of connections
Resting time	Set the static time. When there is no data communication within the set time, the server will actively disconnect the client.
Submit, cancel	Submit (After setting the above options, you need to click "Submit" to check whether the parameters comply and save the page. If the parameters are set to the device in compliance with the rules), cancel (without modification)
Apply to all serial ports	Apply all serial ports (if the settings of each serial port are the same, you can check the next item)



8、Modbus Client Mode

In this mode, the device creates a TCP client mode, the data protocol is the standard Modbus-RTU frame format for communication, the Ethernet network is used as the Modbus slave, and the serial port is used as the Modbus master.

Operating mode	Operating mode option
Command protocol compatibility	No other compatible protocols
Data protocol conversion	Only transparent transmission is supported for now
TCP preservation time	Set the retention time for TCP connections
Target IP address	Set the IP address of the server
Target port	Set the server port number
Local Port	Set the port number to which the device is bound when creating a client locally
Reset	Cancel the current line of configuration information to re-enter
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the device in accordance with the rules), cancel (no modification)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)

-  System Home
-  System setting
-  Serial port setting
-  **Operation mode**
-  Status Search
-  Device Management

P1 P2 P3 P4 P5 P6 P7 P8

Basic Settings

Operating mode : Modbus Client Mode

Command protocol compatibility : none

Data protocol conversion : Transparent transmission

TCP preservation time : 10 (0-120 minutes)

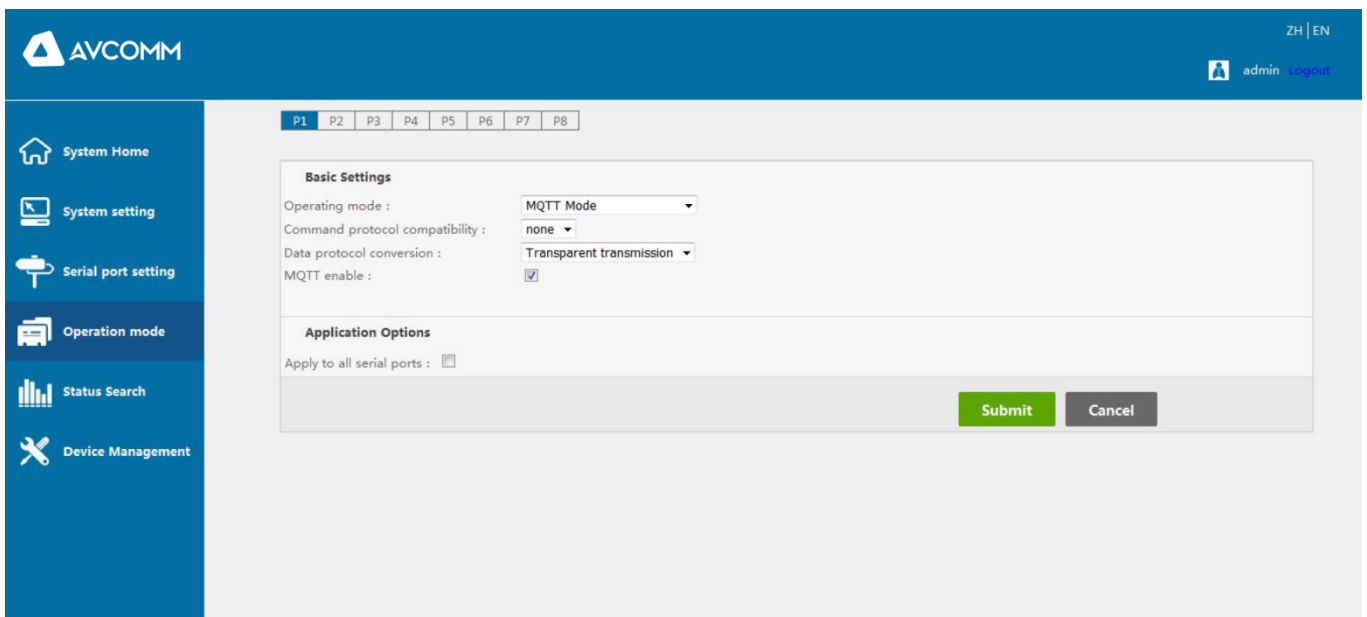
	Target IP address	Target port	Local Port	Reset
Target IP address1 :	<input type="text" value="0.0.0.0"/>	<input type="text" value="0"/> (0-65534)	<input type="text" value="0"/> (0-65534)	<input type="checkbox"/>
Target IP address2 :	<input type="text" value="0.0.0.0"/>	<input type="text" value="0"/> (0-65534)	<input type="text" value="0"/> (0-65534)	<input type="checkbox"/>
Target IP address3 :	<input type="text" value="0.0.0.0"/>	<input type="text" value="0"/> (0-65534)	<input type="text" value="0"/> (0-65534)	<input type="checkbox"/>
Target IP address4 :	<input type="text" value="0.0.0.0"/>	<input type="text" value="0"/> (0-65534)	<input type="text" value="0"/> (0-65534)	<input type="checkbox"/>
Target IP address5 :	<input type="text" value="0.0.0.0"/>	<input type="text" value="0"/> (0-65534)	<input type="text" value="0"/> (0-65534)	<input type="checkbox"/>
Target IP address6 :	<input type="text" value="0.0.0.0"/>	<input type="text" value="0"/> (0-65534)	<input type="text" value="0"/> (0-65534)	<input type="checkbox"/>
Target IP address7 :	<input type="text" value="0.0.0.0"/>	<input type="text" value="0"/> (0-65534)	<input type="text" value="0"/> (0-65534)	<input type="checkbox"/>
Target IP address8 :	<input type="text" value="0.0.0.0"/>	<input type="text" value="0"/> (0-65534)	<input type="text" value="0"/> (0-65534)	<input type="checkbox"/>

Application Options

Apply to all serial ports :

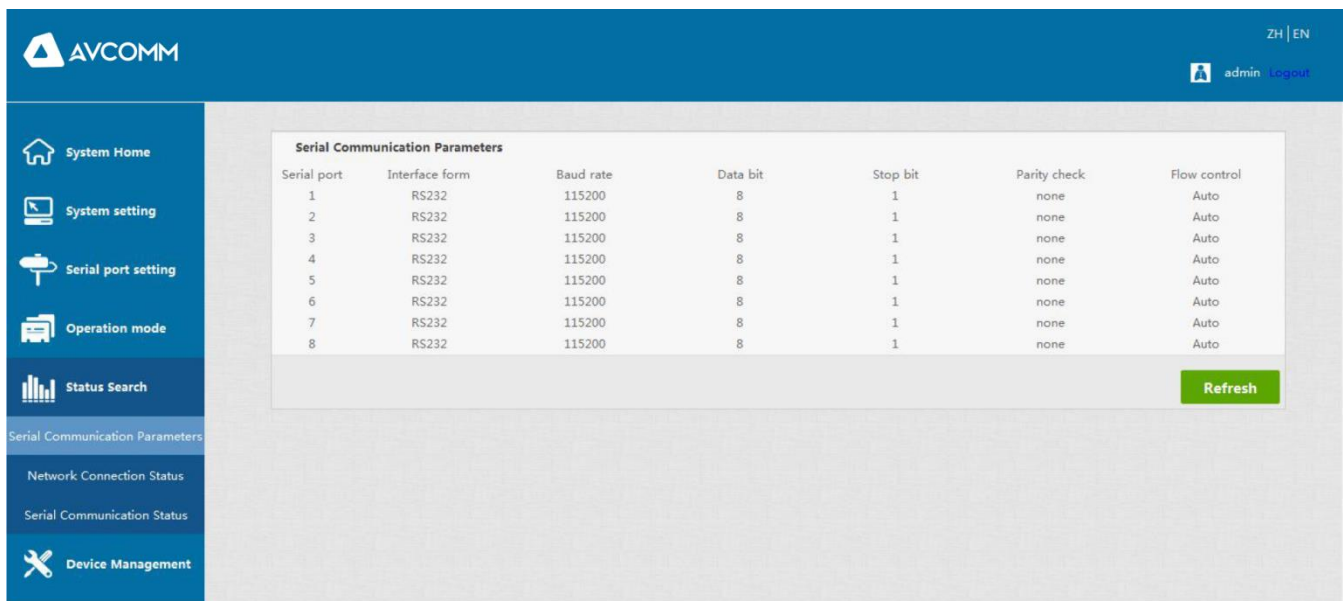
9、MQTT Mode

Operating mode	Operating mode option
Command protocol compatibility	No other compatible protocols
Data protocol conversion	Only transparent transmission is supported for now
MQTT Enable	Set the current serial port to work on MQTT service enable
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the device in accordance with the rules), cancel (no modification)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)



e) Status Search

Serial communication parameters	View the serial interface form, baud rate, data bits, stop bits, parity, flow control related parameters, click "Refresh" to update to the latest state
Network connection status	Check the network connection status of the serial port, click "Refresh" to update to the latest status
Serial communication status	Check the communication status of the serial port, click "Refresh" to update to the latest status



AVCOMM ZH | EN admin Logout

System Home
System setting
Serial port setting
Operation mode
Status Search

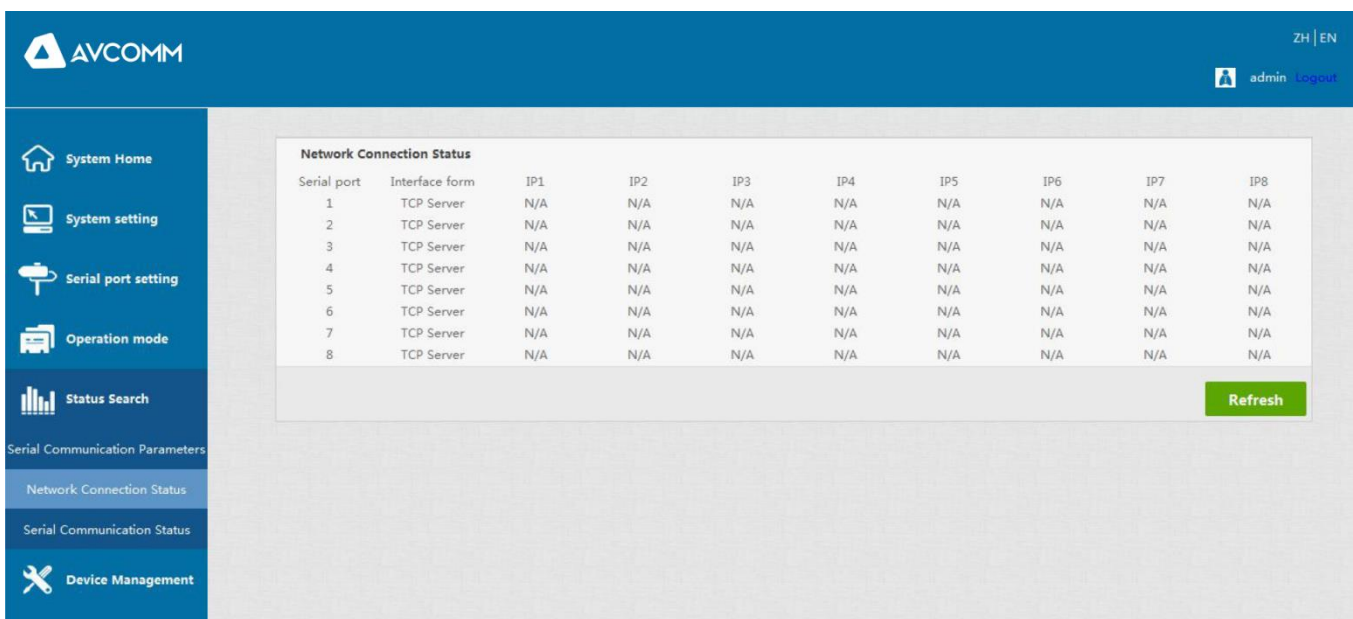
Serial Communication Parameters

Serial port	Interface form	Baud rate	Data bit	Stop bit	Parity check	Flow control
1	RS232	115200	8	1	none	Auto
2	RS232	115200	8	1	none	Auto
3	RS232	115200	8	1	none	Auto
4	RS232	115200	8	1	none	Auto
5	RS232	115200	8	1	none	Auto
6	RS232	115200	8	1	none	Auto
7	RS232	115200	8	1	none	Auto
8	RS232	115200	8	1	none	Auto

Refresh

Serial Communication Parameters
Network Connection Status
Serial Communication Status
Device Management

Serial communication parameters



AVCOMM ZH | EN admin Logout

System Home
System setting
Serial port setting
Operation mode
Status Search

Serial Communication Parameters

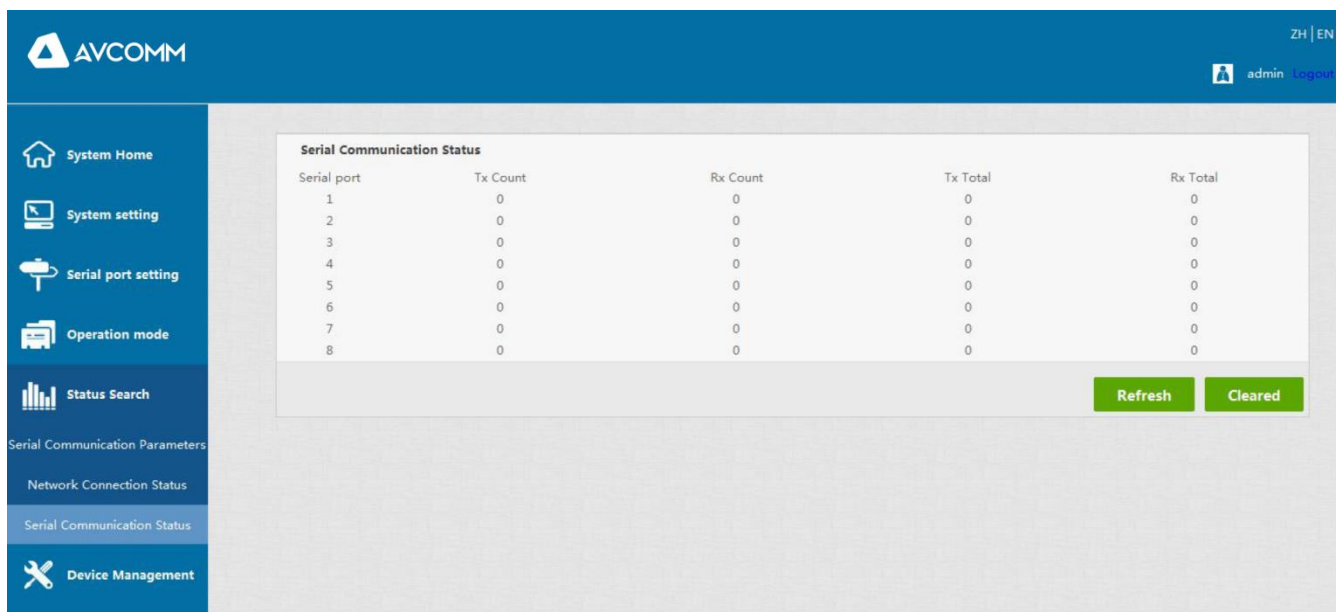
Network Connection Status

Serial port	Interface form	IP1	IP2	IP3	IP4	IP5	IP6	IP7	IP8
1	TCP Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	TCP Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	TCP Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	TCP Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	TCP Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	TCP Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	TCP Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	TCP Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Refresh

Serial Communication Parameters
Network Connection Status
Serial Communication Status
Device Management

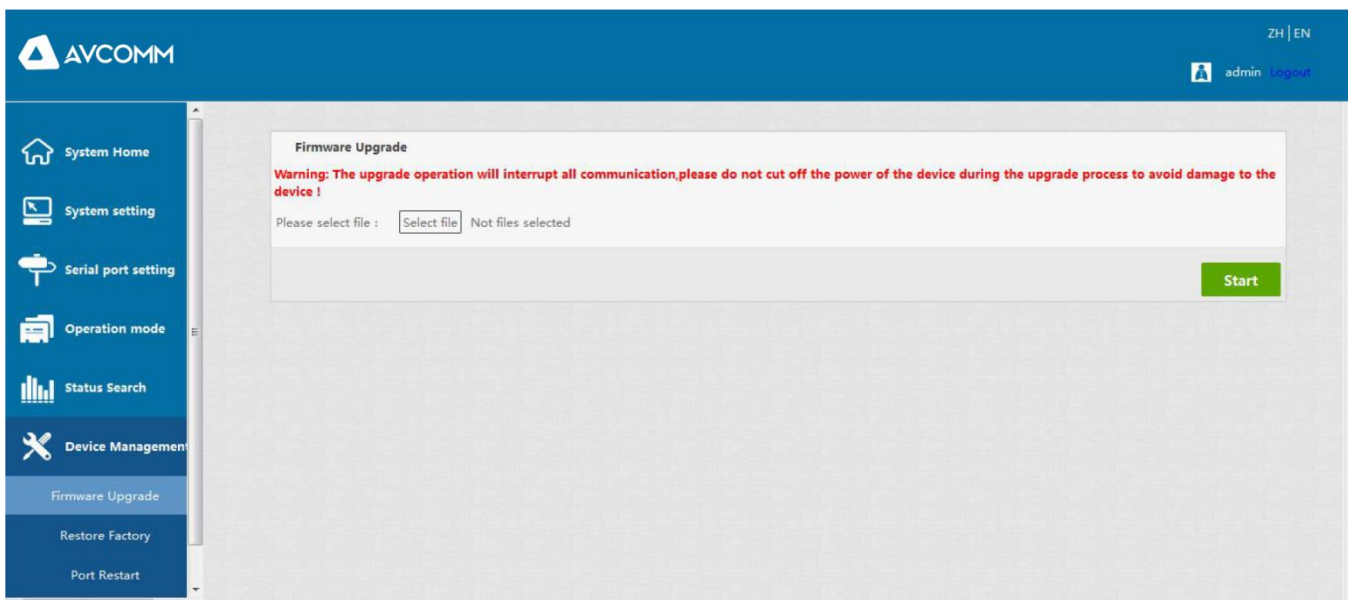
Network connection status



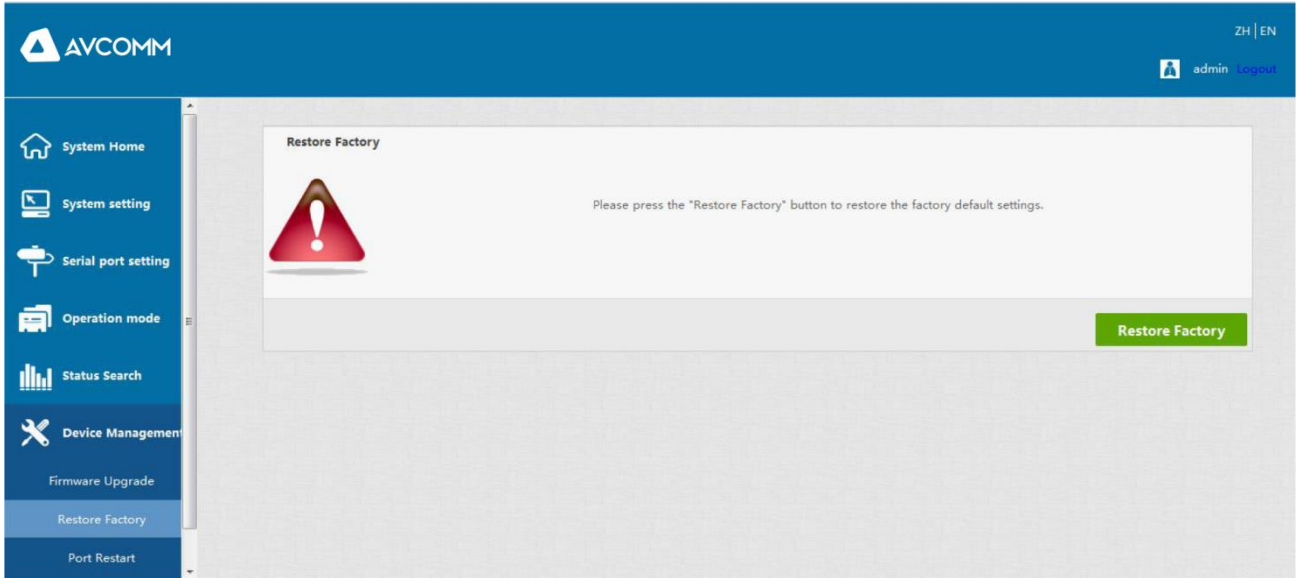
Serial communication status

f) Equipment management

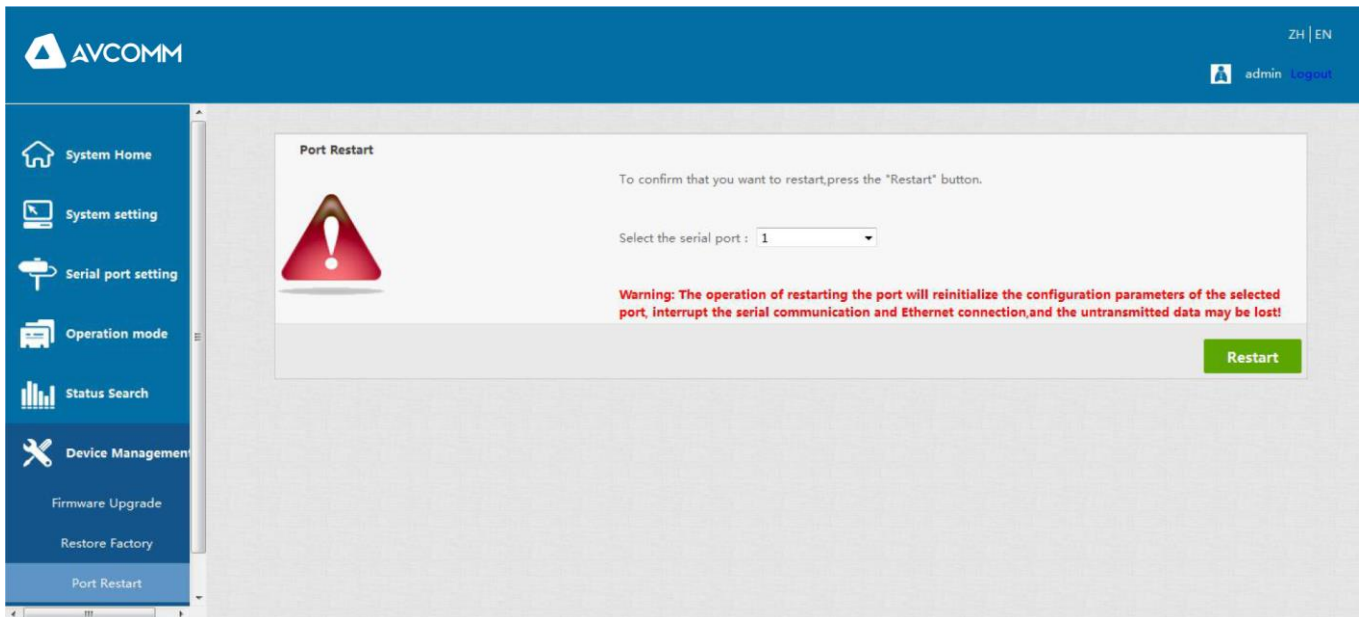
Firmware upgrade	Select the latest version of the local software package, click Start to upload file information and upgrade the device
Restore Factory	Click "Restore Factory Settings", and the serial server will be restored to the factory default settings
Port restart	Check the port that needs to be restarted, and restart the port after submission
System restart	Click "Restart" to restart the serial server.



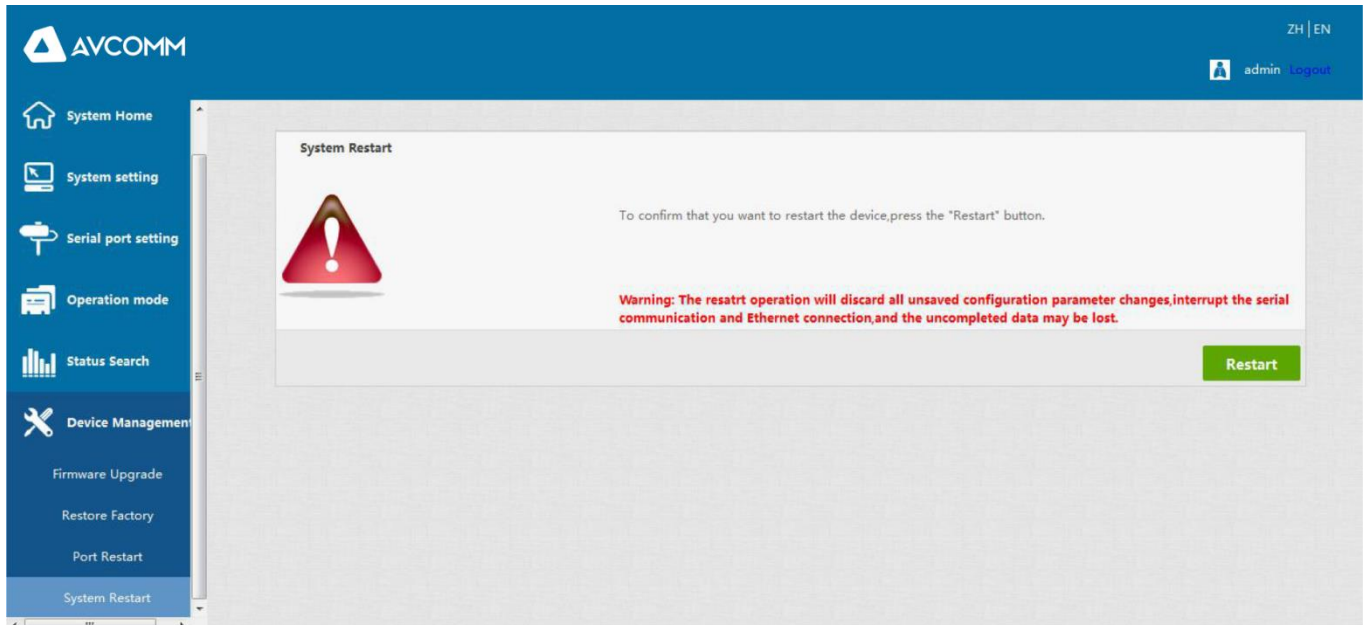
Firmware upgrade



Restore Factory



Port Restart



System Restart

Chapter 5: Troubleshooting Instructions for SEVR-Mx Series Serial Server

a) Running serial_ethernet_connector_CH.exe cannot find the IP address of the serial port server

1. First check whether the physical connection is normal, whether the network cable (to distinguish between crossover cable and direct connection) and power supply are connected, observe the power indicator, LAN light, ACT (when connected to a 10M network, this light does not light up, only when it is 100M bright)
2. The host network card is available, can it communicate with other local hosts.
3. Turn off all tools and software that can shield broadcast packets (do not turn on the firewall that comes with the system)
4. When entering the configuration through the browser, the IP is suddenly disconnected when setting the IP, such as: power failure, and then the device cannot be searched, enter the configuration through the console port to reset the IP.

b) Cannot open the serial port.

1. Ensure that the network is working properly and can ping the server.
2. Check whether the virtual serial port is successfully established.
3. Check the working status to see if the port is occupied.
4. Delete the corresponding COM port in the registry to remap.

c) Cannot send and receive data.

1. Make sure to open the serial port normally.
2. Observe whether the IP and port numbers under [Serial to Ethernet Tool]◇[connected to 0 from 1] indicate "Connected", if

there is no increase, check the connection between the serial port and the upper network

3. Observe whether the "Sent" and "Received" values under [Serial to Ethernet Tool] connected to 0 from 1] have increased. If there is no increase, check the connection between the serial port and the upper network, if "Sent" There is an increase, "received" does not increase the test to detect the connection between serial ports

d) Forgot the password set before

1. By pressing and holding the "reset" button for 5 seconds and then releasing it, the device enters to restore factory settings. When the RUN light resumes and flashes slowly at 1 second intervals, the device restores to factory settings. At this time, the factory initial account password admin: admin can be used to log in to the system, The factory IP address is static: 192.168.1.125.

e) Sending and receiving data is garbled.

1. Check whether the wiring is correct, our 485 equipment should pay attention to the problem of parallel wiring.
2. Check whether the line distance exceeds the standard distance and line quality (also by extending the line transceiver or optical separation)
3. Check the set serial parameters (baud rate, data bit, stop bit, parity bit, etc.)
 1. Confirm that no other PC is connected to the corresponding port of the serial communication server: enter the [Statistics] of the serial communication server to view [active TCP information]
 2. Whether [Authentication] in [Detailed Parameters] is [none]If none of the above methods solve your problem, please contact the manufacturer
Whether it matches the bottom device
4. Separate from the client's upper-end software, can you receive normal data with the network or serial port debugging assistant? If you can receive normal data, the problem may be related to the packaging mechanism. You can set the length of the package and the package in the "Serial Settings" waiting time.

f) Cannot be connected as a TCP server.

1. Confirm that no other PC is connected to the corresponding port of the serial communication server: enter the [Statistics] of the serial communication server to query [active TCP information]
 2. Whether [Authentication] in [Detailed Parameters] is [none]
- If none of the above methods solve your problem, please contact the manufacturer

Chapter 6: Accessories

a) remote devices Management

1, Equipment query

The serial port of the device works in MCP&VCOM->VCOM Mode and connects to the device. Start the attached software "VCOM" (as shown in Figure 1 below), select remote devices Management->Add Device, and a search interface for searching all SEVR-Mx series IPs in the network will pop up; As shown in Figure 2, select the "Search" button, you can search for all the SEVR-Mx series IP addresses and basic information in the network, as shown in Figure 3; then select "cancel" in Figure 3 to get the device information list in Figure 4 , Click OK to display search device information on the VCOM interface, as shown in Figure 5, the device has been added;

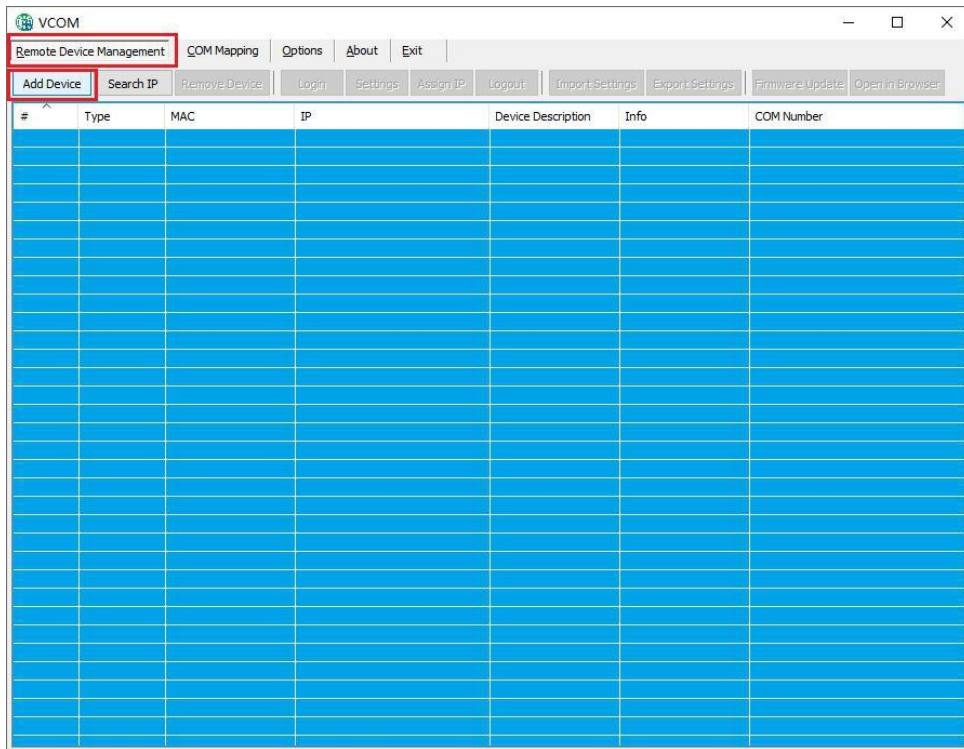


Figure1

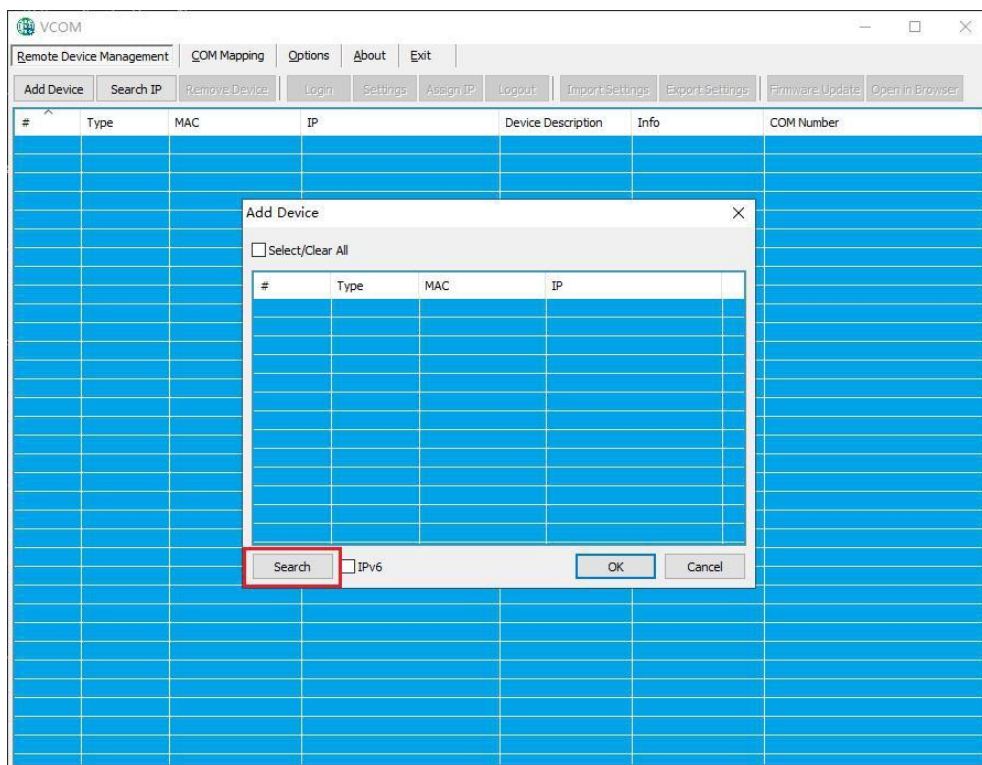


Figure2

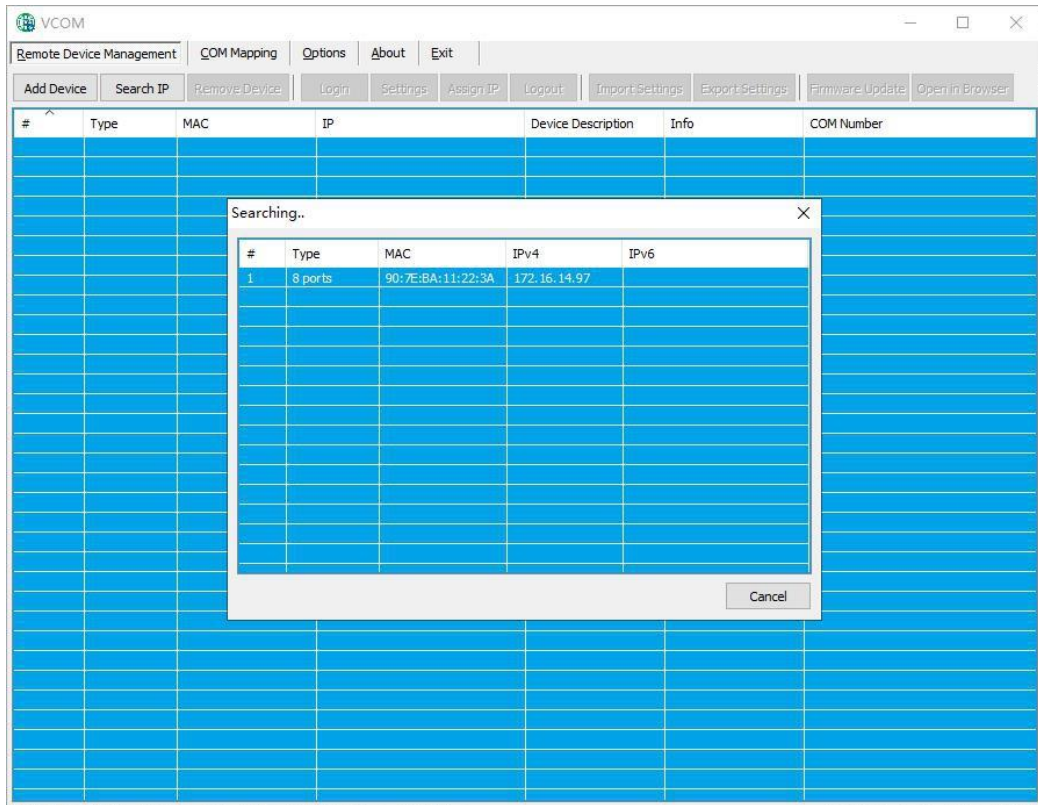


Figure3

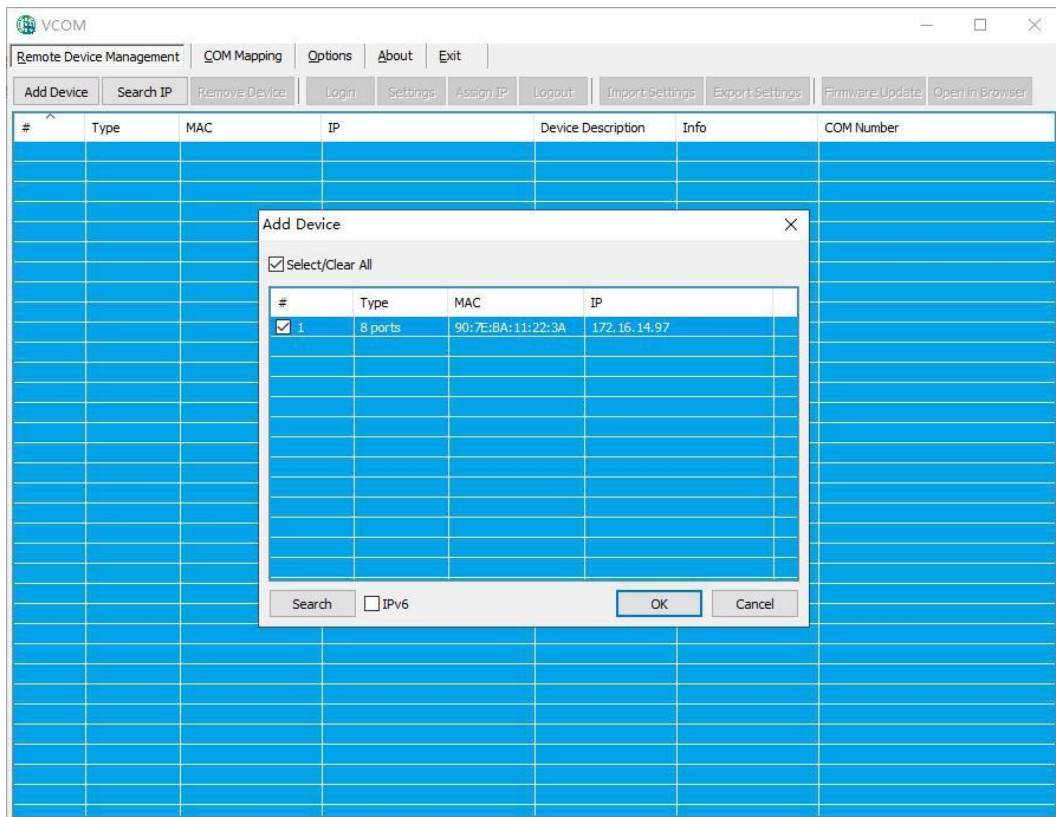


Figure4

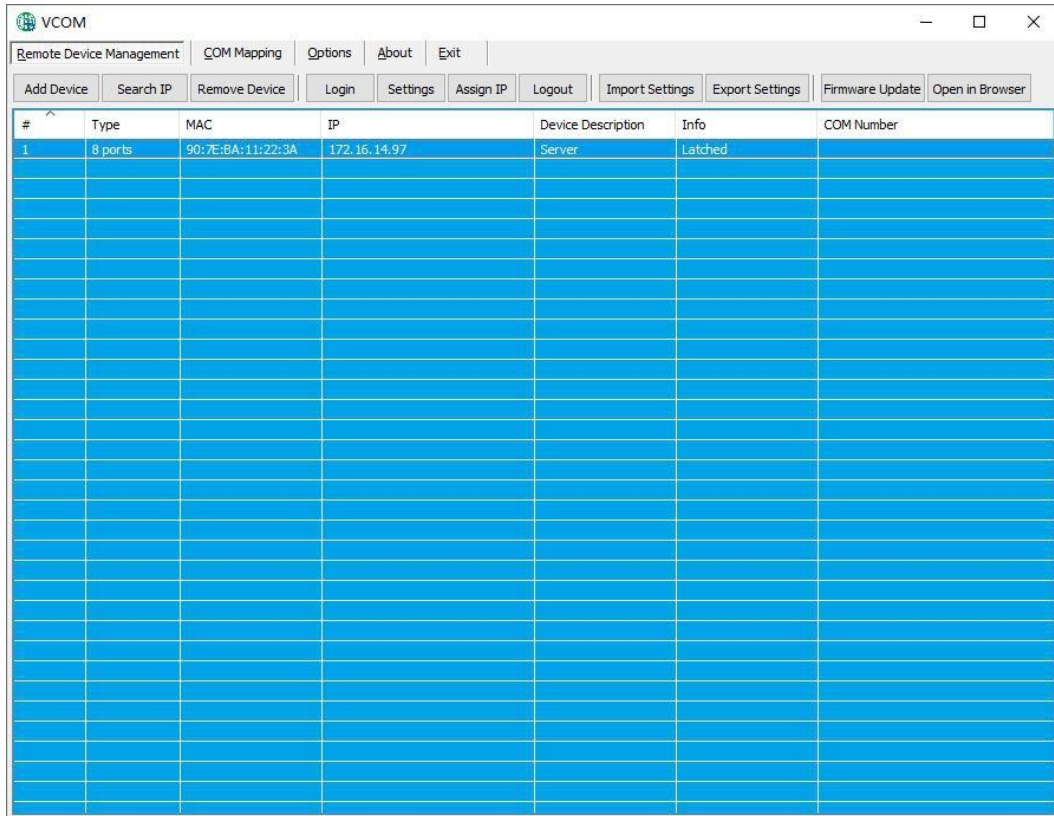


Figure5

2, Jump to web page login

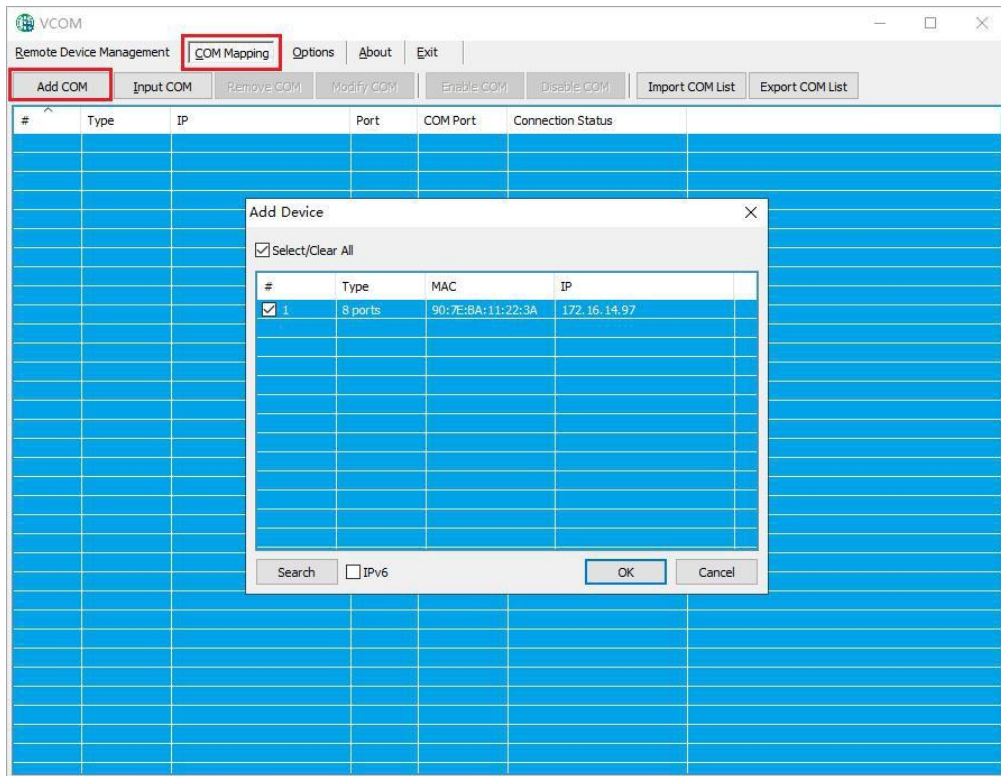
In the "VCOM", first select the added device, then select the remote devices Management interface, and click "Open in Browser" to enter the web login interface through the IE browser.



b) COM Mapping

1) Create a virtual serial port.

1, In the "VCOM", select COM Mapping—Add COM, the "Add Device" window will pop up, as shown in the figure below, and then click OK.



2, Then the following interface will pop up, that is, the corresponding virtual serial port will be created

The screenshot shows the VCOM application window with the 'COM Mapping' tab selected. The window title is 'VCOM'. Below the menu bar, there are buttons for 'Add COM', 'Input COM', 'Remove COM', 'Modify COM', 'Enable COM', 'Disable COM', 'Import COM List', and 'Export COM List'. The main area contains a table with the following columns: '#', 'Type', 'IP', 'Port', 'COM Port', and 'Connection Status'. The table lists 8 virtual serial ports, each with a type of '8 ports', IP of '172.16.14.97', and connection status of 'N/A'. The COM ports are labeled COM2 through COM10.

#	Type	IP	Port	COM Port	Connection Status
1	8 ports	172.16.14.97	1	COM2	N/A
2	8 ports	172.16.14.97	2	COM3	N/A
3	8 ports	172.16.14.97	3	COM5	N/A
4	8 ports	172.16.14.97	4	COM6	N/A
5	8 ports	172.16.14.97	5	COM7	N/A
6	8 ports	172.16.14.97	6	COM8	N/A
7	8 ports	172.16.14.97	7	COM9	N/A
8	8 ports	172.16.14.97	8	COM10	N/A

2) Delete virtual serial port.

In the "VCOM", first select the virtual serial port to be deleted, then select the COM Mapping interface, and click "Remove COM" to delete the virtual serial port, as shown in the figure below.

This screenshot is identical to the previous one, but the 'Remove COM' button in the toolbar is highlighted with a red rectangle. The table below it is the same as in the first screenshot.

#	Type	IP	Port	COM Port	Connection Status
1	8 ports	172.16.14.97	1	COM2	N/A
2	8 ports	172.16.14.97	2	COM3	N/A
3	8 ports	172.16.14.97	3	COM5	N/A
4	8 ports	172.16.14.97	4	COM6	N/A
5	8 ports	172.16.14.97	5	COM7	N/A
6	8 ports	172.16.14.97	6	COM8	N/A
7	8 ports	172.16.14.97	7	COM9	N/A
8	8 ports	172.16.14.97	8	COM10	N/A

3) Modify the virtual serial port.

In the "VCOM", first select the virtual serial port to be deleted, and then select the COM Mapping interface, click. "Modify COM" to pop up the interface as shown in Figure 1, and then select "COM6" to change Port4 to "COM6" to "COM11", as shown in Figure 2:

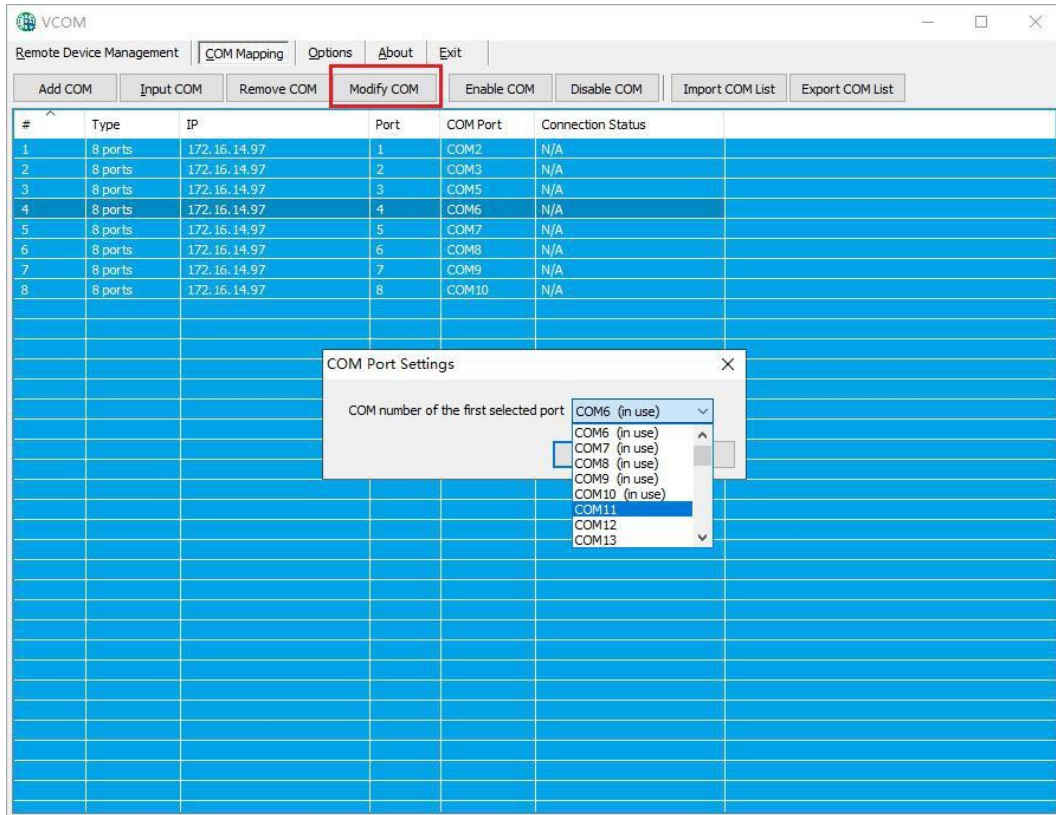


Figure 1

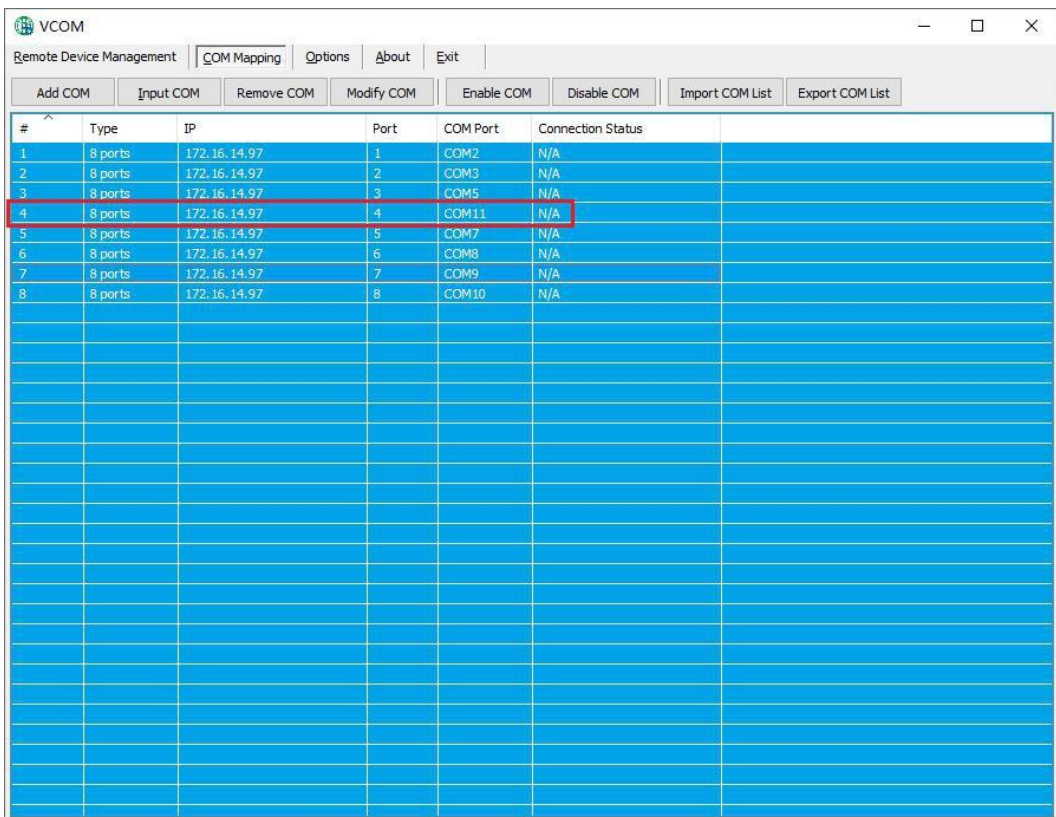
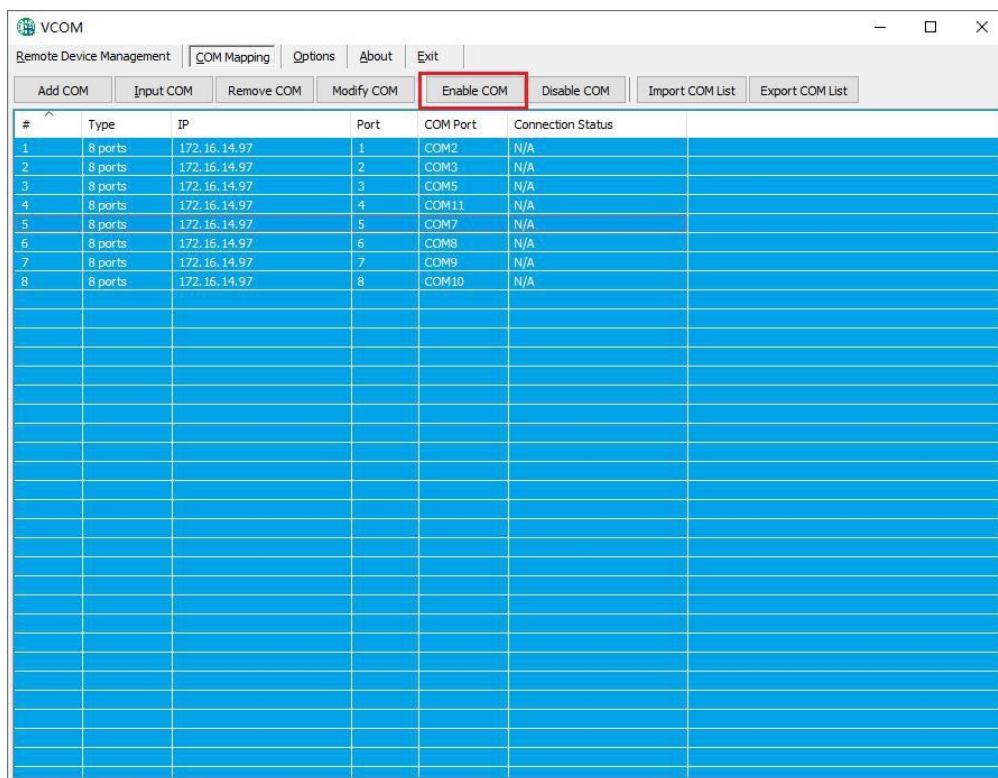


Figure 2

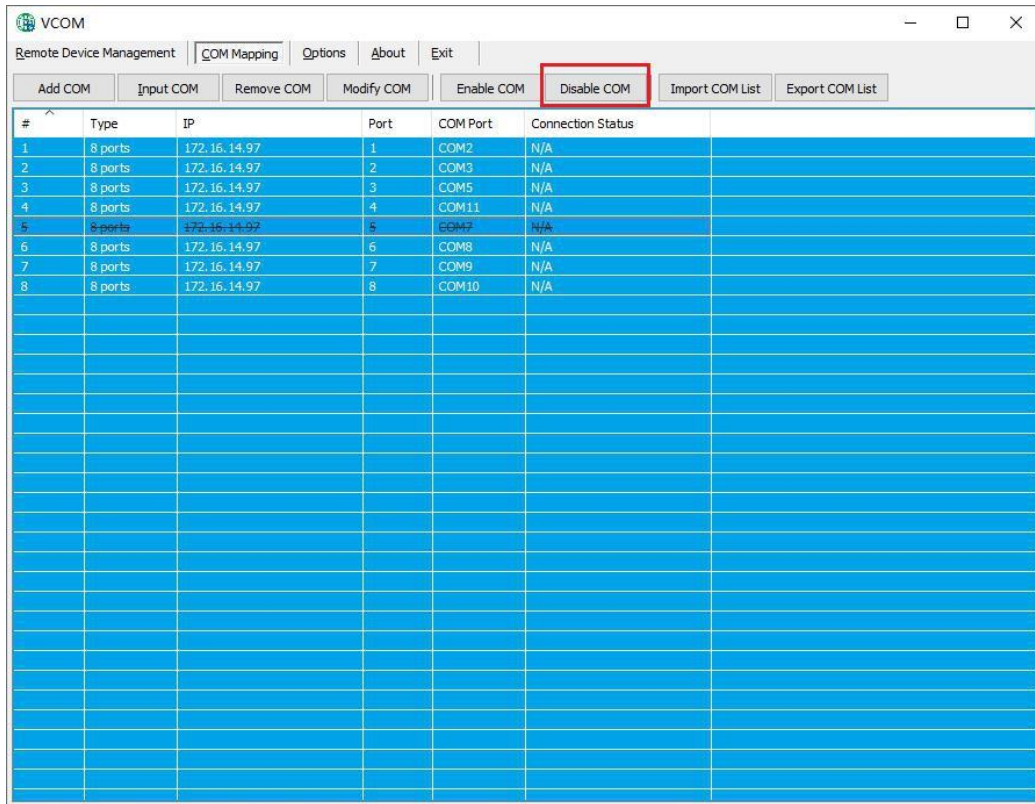
4) Enable virtual serial port.

In the "VCOM", first select the virtual serial port that needs to be disabled, then select the COM Mapping interface, and click "Enable COM" to enable the corresponding virtual serial port, as shown in the figure below.



5) Disable virtual serial port.

In the "VCOM", first select the virtual serial port that needs to be disabled, then select the COM Mapping interface, and click "Disable COM" to disable the corresponding virtual serial port, as shown in the figure below



6) Import virtual serial port list.

In the "VCOM", select the COM Mapping interface and click "Import COM List" to pop up the interface as shown in Figure 1. After clicking "Browse", select the saved virtual serial port configuration information as shown in Figure 2, and click "OK" You can import successfully as shown in Figure 3

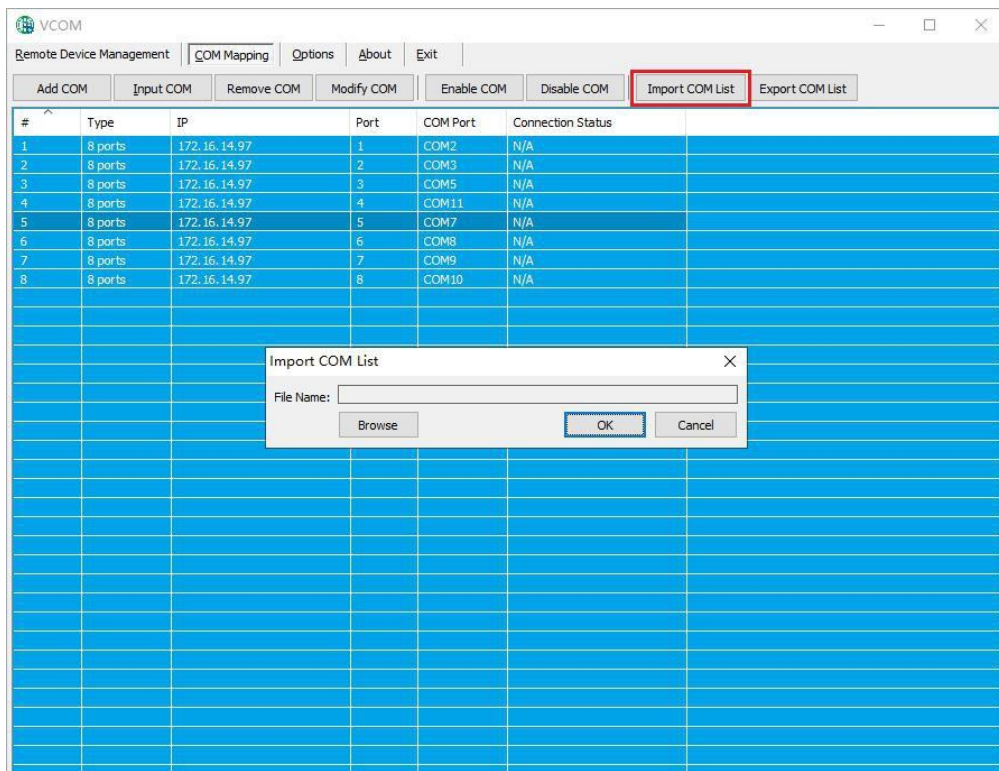


Figure 1

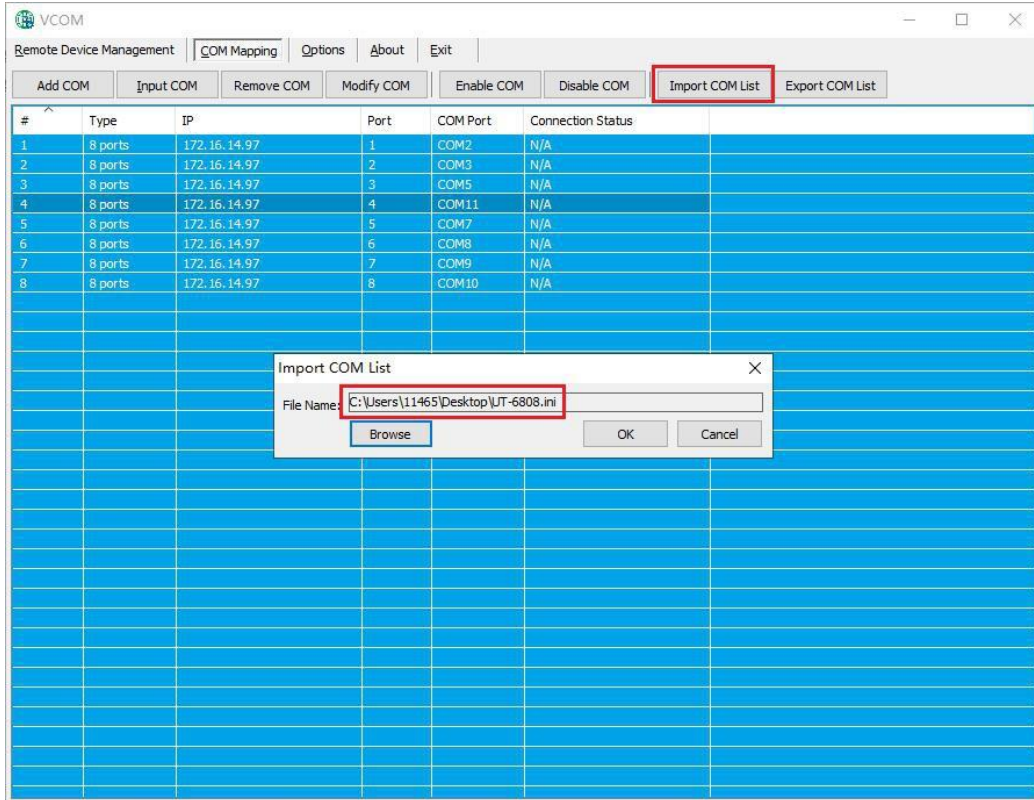


Figure 2

7) Export virtual serial port list

In the "VCOM", select the COM Mapping interface, and click "Export COM List" to pop up the interface as shown in Figure 1. After clicking "Browse", select the path of the virtual serial port configuration information to be saved, and click "OK" to export. Success is shown in Figure 2.

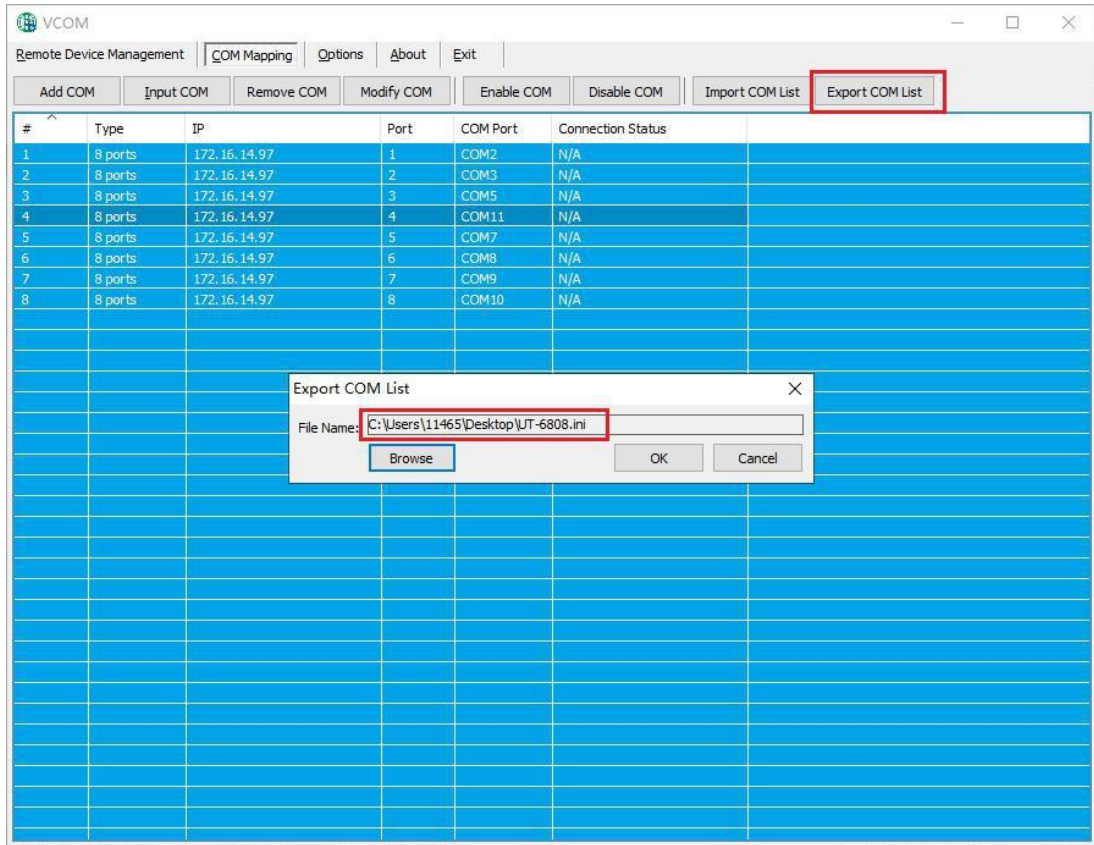


Figure1

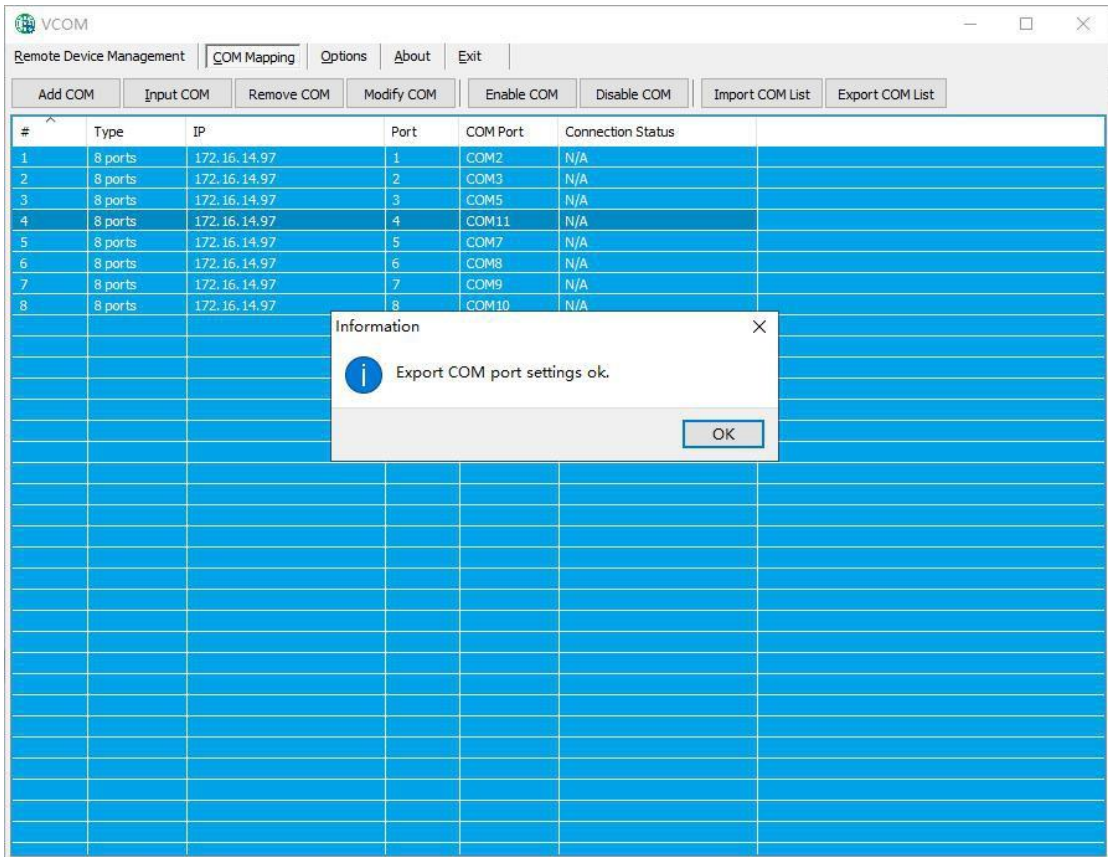
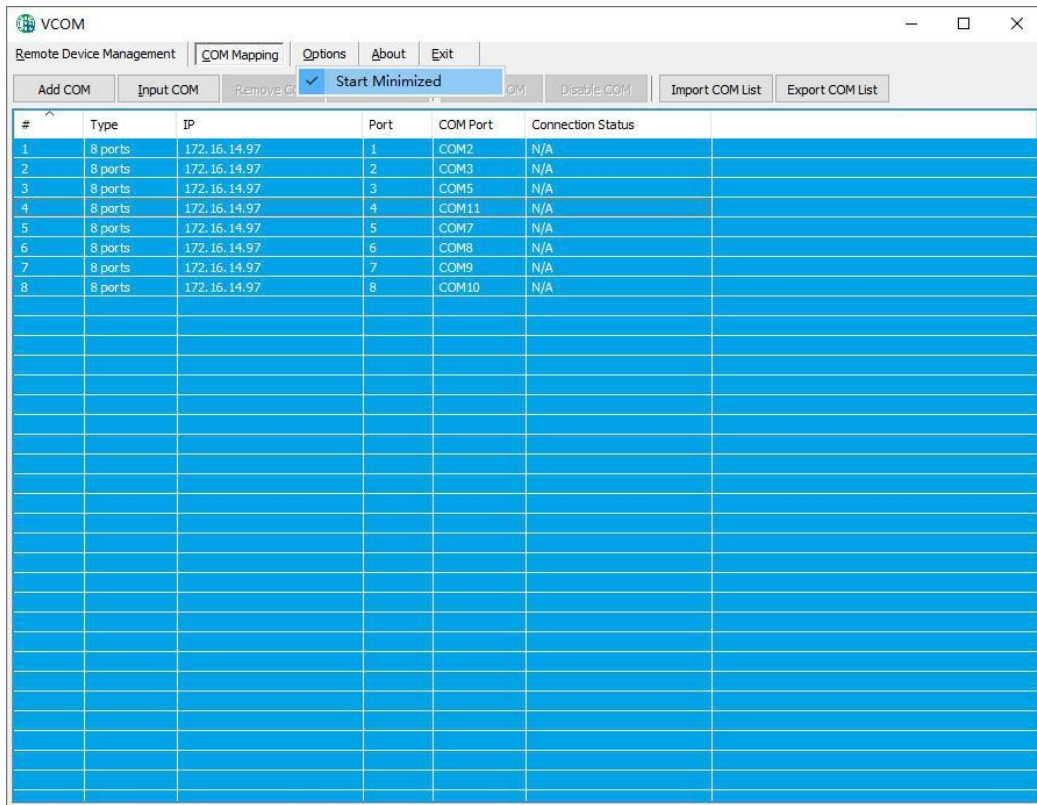


Figure2

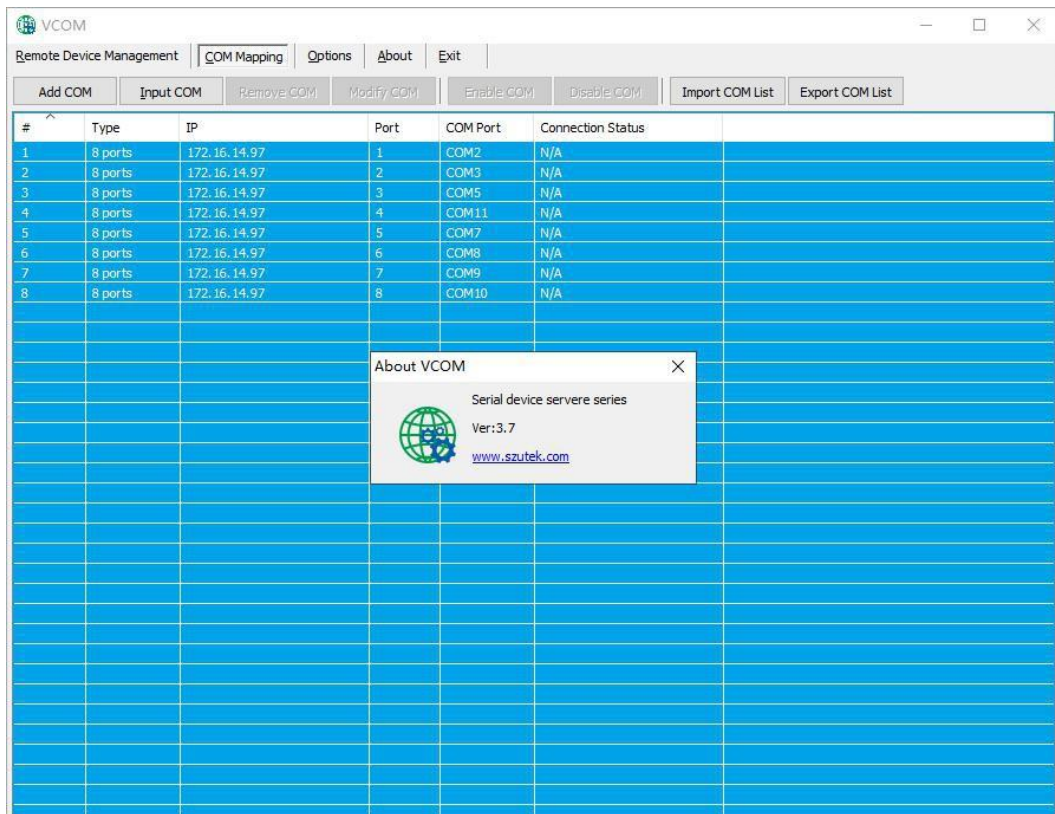
c) Options

When you choose to open the VCOM, whether the software is opened directly or minimized in the taskbar; the software is opened in the taskbar minimized by default, the configuration is as shown in the figure below.



d) About

Click the "About" button to view the software version information as shown in the figure below.



e) Exit



Click the "Exit" button to exit the software.