

# **Intelligent Device Management**






**MOXA NPort Serial Port Device Server**

**User Manual**

**IM26H11-E**

Notices
<ul style="list-style-type: none"> <li>● The reproduction, transmission or use of this document or its contents is not permitted without express written authority.</li> <li>● Information and specifications in this document are subject to change without notice.</li> <li>● While information in this document is well edited and checked, mistake or omission may exist. Please don't hesitate to contact SUPCON if you have any question about this document.</li> <li>● Please contact SUPCON via email "SMS@supcon.com" if you have any question.</li> </ul>

Trademarks
<p>Trademarks or marks SUPCON, SPlant, Webfield, ESP-iSYS, MultiF, InScan, SupField are all registered, registering or using by Zhejiang SUPCON Technology Co., Ltd., which owns the properties of all trademarks or marks above. Without the written authority from Zhejiang SUPCON Technology Co., Ltd, no individual or company shall use any trademarks or marks above. We reserve the right to take legal action for any individual or company using trademarks or marks above illegally.</p>

Symbol Definition	
	<b>WARNING:</b> Indicates information that a potentially hazardous situation which, if not avoided, could result in serious injury or death.
	<b>RISK OF ELECTRICAL SHOCK:</b> Indicates information that Potential shock hazard where HAZARDOUS LIVE voltages greater than 30V RMS, 42.4V peak, or 60V DC may be accessible.
	<b>ESD HAZARD:</b> Indicates information that Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices
	<b>ATTENTION:</b> Identifies information that requires special consideration.
	<b>TIP:</b> Identifies advice or hints for the user.

# Table of Contents

<b>MOXA NPort 5232 Serial Port Device Server .....</b>	<b>1</b>
<b>Section 1 Hardware Settings .....</b>	<b>1</b>
1.1 NPort Module Structure .....	1
1.2 Notes for Installation.....	1
1.3 Power Connection .....	1
1.4 RS-485 Port Connection.....	2
1.5 LED Indicator.....	3
1.6 Network Connection .....	3
<b>Section 2 Software Configuration .....</b>	<b>4</b>
2.1 Installation .....	4
2.2 Basic Settings for Serial Port Device Server .....	4
2.3 COM Port Mapping.....	6
<b>Section 2 Appendix: Legacy Software Configuration.....</b>	<b>11</b>
2.1 NPort6600 .....	11
2.1.1 Installation .....	11
2.1.2 Basic Settings for Serial Port Device Server .....	11
2.1.3 COM Port Mapping.....	11
2.2 NPort 5232 .....	11
2.2.1 Installation .....	11
2.2.2 Basic Settings for Serial Port Device Server .....	11
2.2.3 COM Port Mapping.....	16
<b>Section 3 Revision.....</b>	<b>18</b>

# MOXA NPort 5232 Serial Port Device Server

## Section 1 Hardware Settings

MOXA NPort serial port device server can be RS-485/ Ethernet transducer in device management software to convert communication protocol and transmit data between device management software server and field devices.

### 1.1 NPort Module Structure

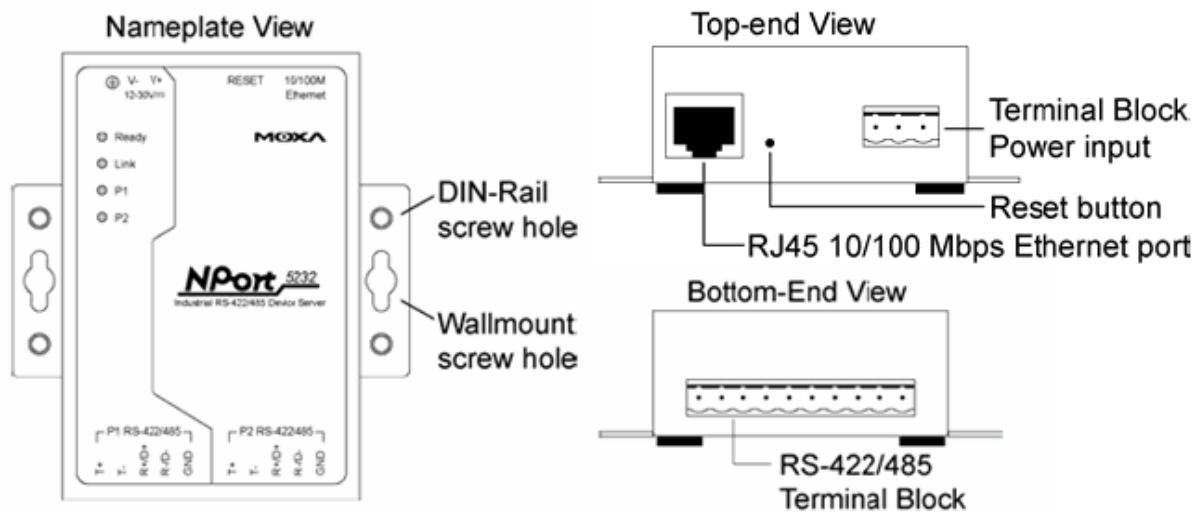


Figure 1-1 Hardware structure (taking NPort 5232 as an example)

### 1.2 Notes for Installation

1. Make sure the NPort module is power-off when installing or wiring.
2. Because the NPort module will generate heat when working, please make sure the good radiation during installation.
3. Power line should be wired separated from signal line to avoid disturbance.

### 1.3 Power Connection

Allowed power supply range of NPort module is DC 12V-30V. DC 24V power is recommended. The system 24V power in cabinet is generally used.

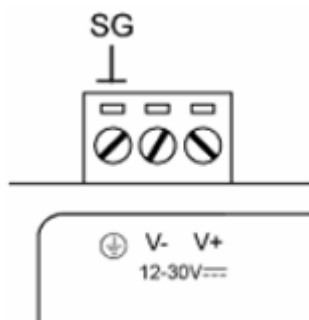


Figure 1-2 Power terminal



**Attention:**

V+ connects positive pole, V- connects negative pole, the shield ground SG should connect protection ground.

## 1.4 RS-485 Port Connection

Terminal definition of NPort module Port:

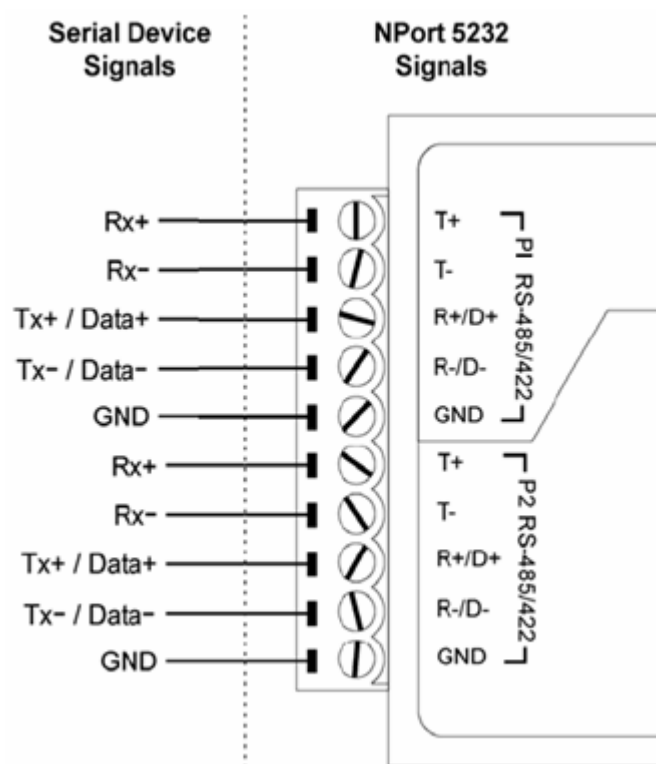


Figure 1-3 NPort module terminal definition (taking NPort 5232 as an example)

NPort module has 2 RS-422/RS-485 interfaces, RS-485 positive pole connects Data+, and RS-485 negative pole connects Data-.

## 1.5 LED Indicator

*Table 1-1 Definition of NPort module LED indicator*

LED Indicator	Color	Instruction
Ready	Red	ON: module is starting. Blink: find out IP address conflict, or DHCP and BOOTP servers don't respond
	Green	ON: module is powered on and its functions are normal. Blink: module is located.
	OFF	No power supply or it is abnormal.
Ethernet	Orange	10M Ethernet connection
	Green	100M Ethernet connection
	Off	Network doesn't be connected.
P1, P2	Orange	Serial port is receiving data.
	Green	Serial port is sending data.
	OFF	Serial port doesn't receive or send data.

## 1.6 Network Connection

Ethernet network interface of NPort module connects the network of device management software server.

## Section 2 Software Configuration

---

Serial port parameters should be configured via NPort software before configuring communication server in device management software.

- It's recommended to use the software of version 3.5. This chapter describes the installation and configuration requirements for the software.
- If you are using version NPort 6600 or NPort 5232, refer to the operation in the section "Appendix: ".

### 2.1 Installation

1. Open the directory of software installation package, enter the key word "NPORT" in the search box and get the search result.
2. Right-click the search result, select "Open file location" in the command menu, and you can find the Tools .zip package in the Packs directory. Extract it.
3. After extraction, you will see the package labeled moxa, which is the installation package for the NPort configuration software. Extract it.
4. After extraction, double-click drvmgr\_setup\_Ver3.5\_Build\_22120118\_whql.exe and install the software according to the prompts.

---

**Tip:**



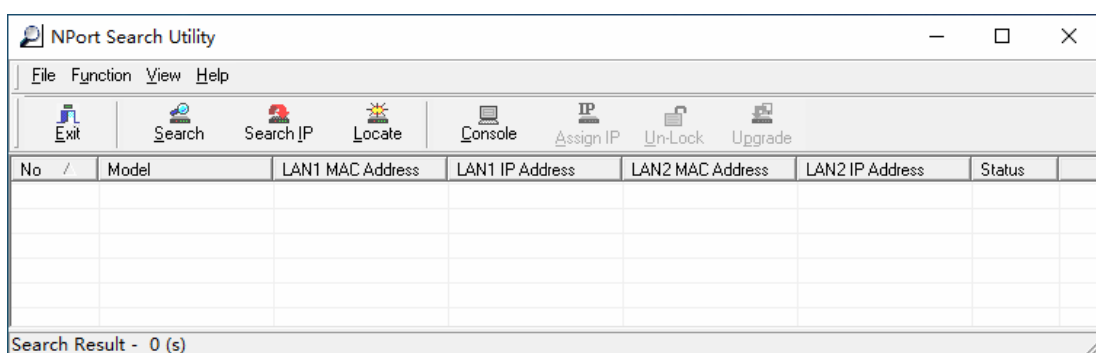
Before you use the NPort configuration software, you also need to install nploc software, whose version should be nploc\_setup\_Ver1[1].8.0\_Build\_09050411. If you do not have an installation package, please contact a SUPCON engineer for it.

---


After installing the software, you can find the NPort Windows Driver Manager software and the NPort Search Utility software on your computer.

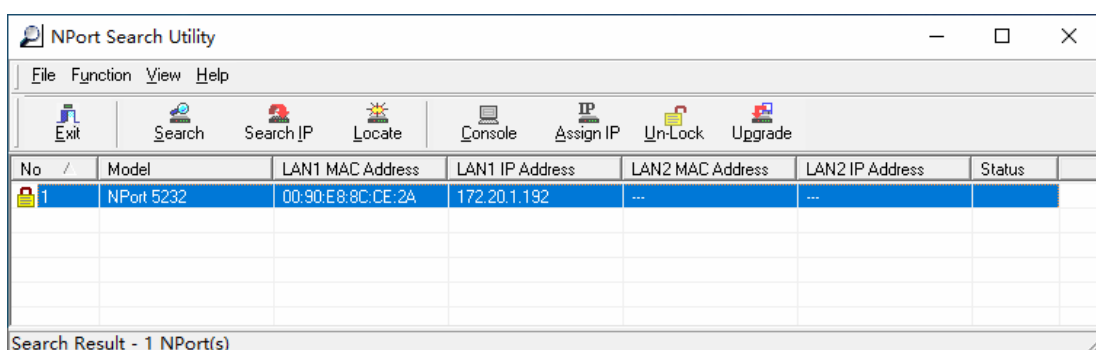
### 2.2 Basic Settings for Serial Port Device Server

1. Run the NPort Search Utility software from the Start menu. The main interface is shown as Figure 2-1. The menu bar and shortcut buttons are at the top and the list of device information is shown below.





**Figure 2-1 NPort Search Utility Main Interface**

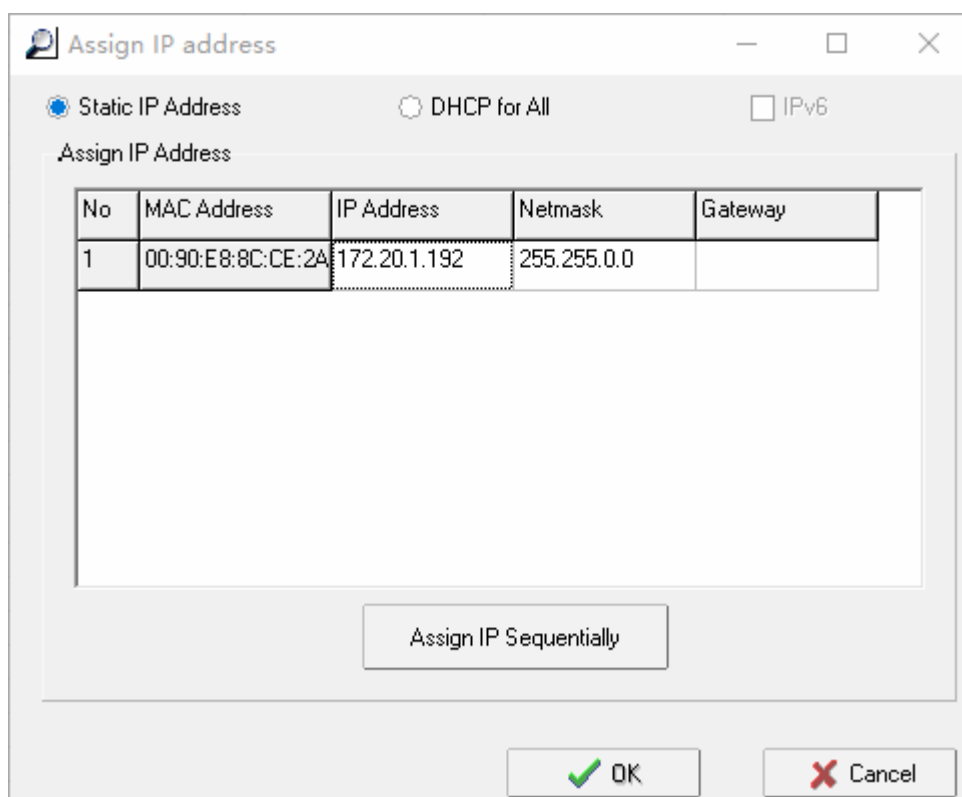
2. Click the Search button  to find the online module via broadcast. You can see the progress by the pop-up prompt and please wait for the search result.
3. The search result is displayed in the Device Information List area below, as shown in the following figure.



**Figure 2-2 Lookup Results**

4. Check if the module found is locked. If there is a marker  beside the serial number, the module is locked. Select the locked module and click the Un-Lock button  to unlock it. The unlock password is moxa by default.
5. Right-click the module that you want to configure and select the Assign IP command in the right-click menu, you will enter the configuration dialog box, as shown in Figure 2-3. Select the configuration mode as "Static IP Address" and set the IP address and net mask of the module.



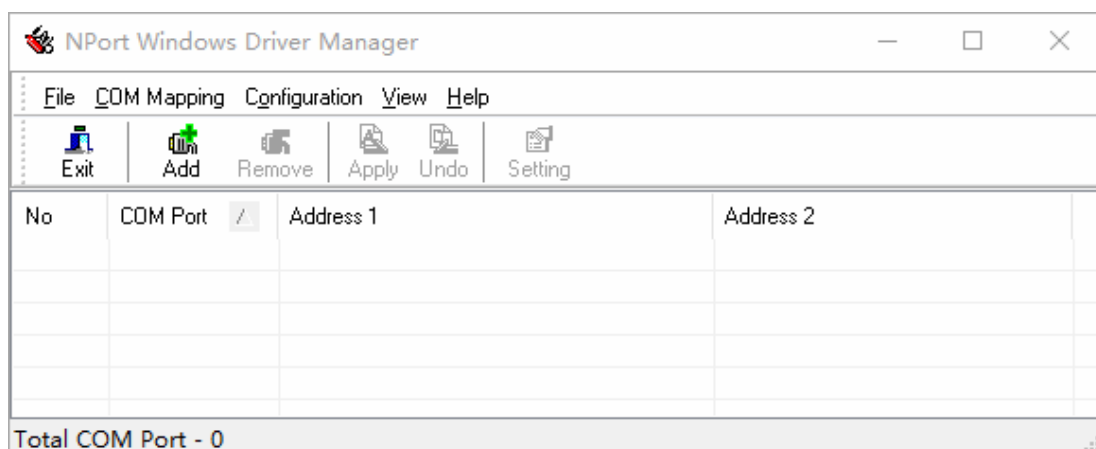


**Figure 2-3 Network Configuration dialog box**


6. After you finish the configuration, click OK to return to the Device Information List. The module configuration is complete by now.

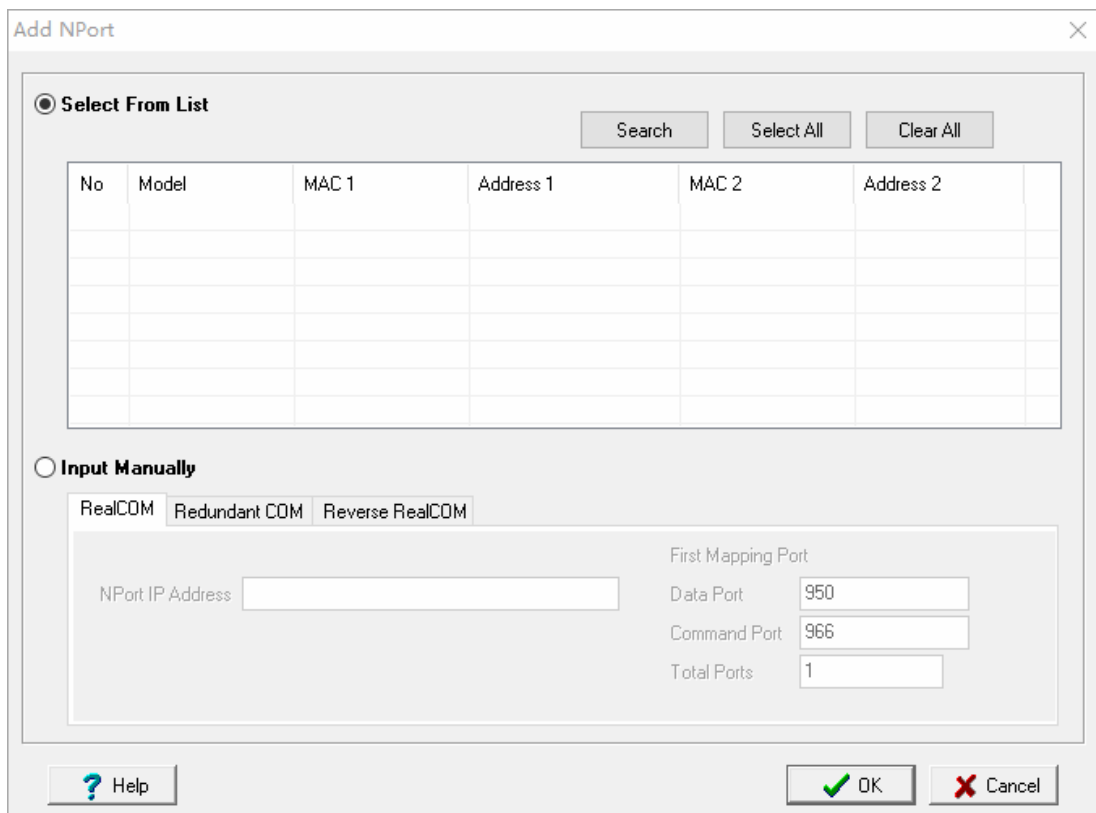
## 2.3 COM Port Mapping

1. Run the NPort Windows Driver Manager software from the Start menu. The interface is shown in the Figure 2-4. The menu bar and shortcut buttons are at the top and the list of device information is shown below.



**Figure 2-4 NPort Windows Driver Manager interface**

2. Select the menu command "COM Mapping/Add" or click the Add button  Add, the Add NPort dialog box will pop up, as shown in the Figure 2-5. Click the Search button to search for online serial device servers. You can see the progress by the pop-up prompt and please wait for the search result.



The "Add NPort" dialog box is shown with the "Select From List" tab selected. It features a table with columns: No, Model, MAC 1, Address 1, MAC 2, and Address 2. Below the table are buttons for "Search", "Select All", and "Clear All". The "Input Manually" tab is also visible, showing options for "RealCOM", "Redundant COM", and "Reverse RealCOM". It includes input fields for "NPort IP Address", "First Mapping Port", "Data Port" (set to 950), "Command Port" (set to 966), and "Total Ports" (set to 1). At the bottom are "Help", "OK", and "Cancel" buttons.

No	Model	MAC 1	Address 1	MAC 2	Address 2

**Figure 2-5 Add NPort dialog box**

3. The search results are shown in the list, as shown in the Figure 2-6. Select the modules in the list that you want to add a COM port mapping. Click the Select All button to select all modules, or click Clear All to deselect all modules. Then, click OK and the software will map the COM ports automatically.

**Add NPort**

☒ **Select From List**

Search Select All Clear All

No	Model	MAC 1	Address 1	MAC 2	Address 2
<input checked="" type="checkbox"/> 1	NPort 5232	00:90:E8:8C:CE:2A	172.20.1.192	-	-

☐ **Input Manually**

RealCOM Redundant COM Reverse RealCOM

NPort IP Address

First Mapping Port

Data Port

Command Port


Total Ports

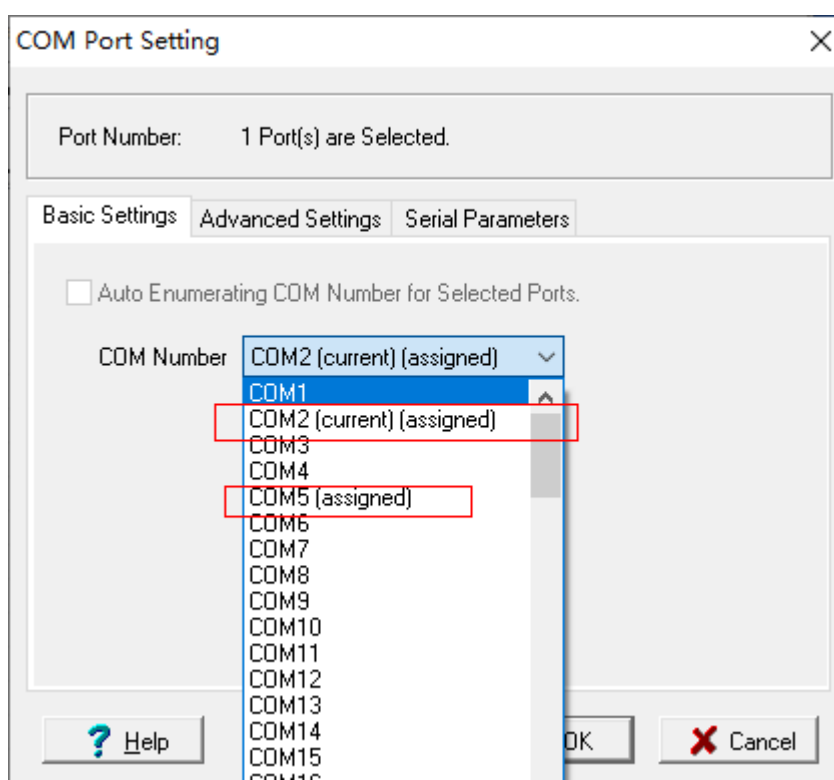
? Help OK Cancel

**Figure 2-6 Adding a Serial Server**

4. If the prompt "Do you want to activate the COM Port now?" pops up, select **NO** to return to the main interface and check the parameters of COM port.

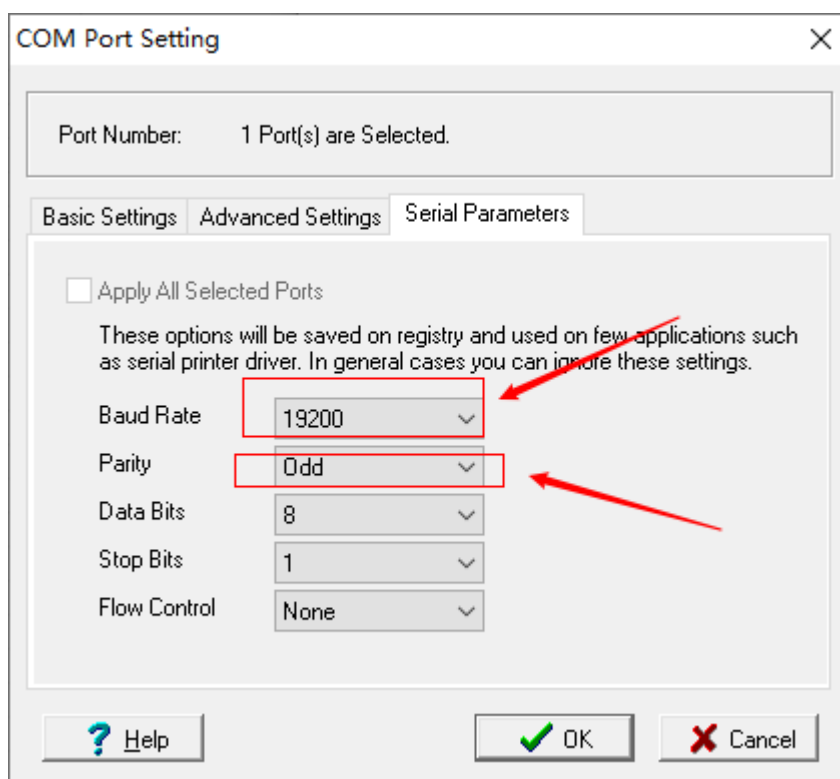
If the mapping COM port for the module is incorrect, modify the it by these steps:

- 1) Select the COM port and click the button  Setting, the COM Port Setting dialog box pops up. In the Basic Settings page, select a COM port without the flag "assigned" or "in used" in the COM Number option. As shown in Figure 2-7, COM2 is the current COM port, and you cannot select COM2 or COM5 as they have been marked with the flag "assigned". (Description of flags: "Current" means it's the currently selected COM port. "Assigned" means the COM port has been assigned. "In used" means the COM port has been both assigned and in use.)



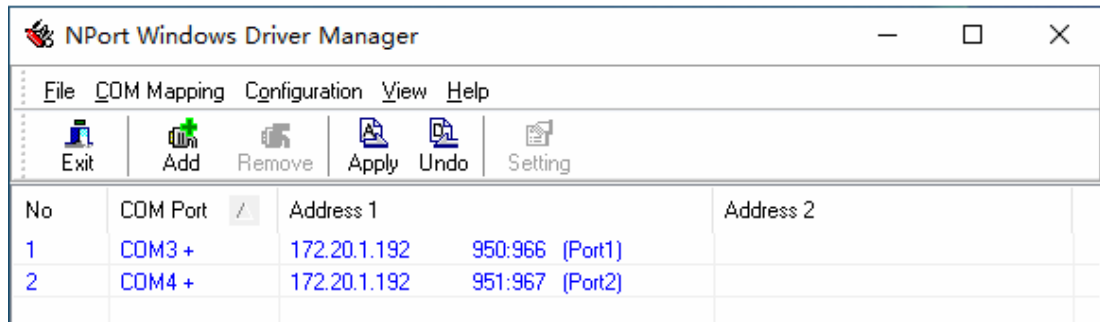
**Figure 2-7 Adjust the COM port**

- 2) Switch to the Serial Parameters page, and set the Baud Rate to 19200 and Parity to Odd, as shown in the following figure.



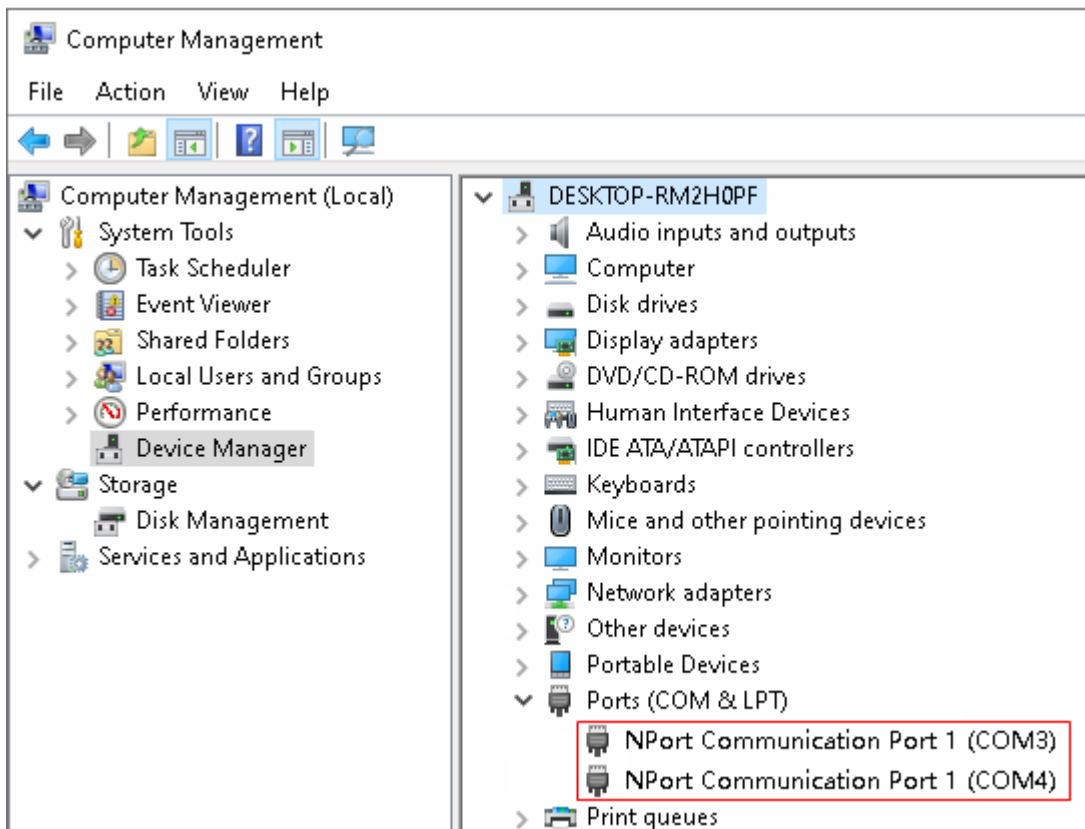
**Figure 2-8 Serial Parameters Settings**

- 3) Click OK to finish the mapping of COM port.
5. You can see the COM port information that has been mapped in the COM list of the main interface. As shown in the following figure, the first port of the IP is mapped to COM3, and the other port is mapped to COM4. Finally, select Apply button to complete the mapping of the COM port.



**Figure 2-9 COM port mapping information**

Select "Start / Windows Administrative Tools / Computer Management / System Tools / Device Manager" and you can view the mapping COM ports under the Ports (COM and LPT) node, as shown in the following figure.



**Figure 2-10 View mapping port in Local Computer Management interface**

## **Section 3 Appendix: Legacy Software Configuration**

---

When you use the NPort6600 or NPort5232, please follow the instructions in this section to finish the configuration.

### **3.1 NPort6600**

#### **3.1.1 Installation**

1. Install drvmgr\_setup\_Ver1.11\_Build\_09100717\_WHQL.
2. Install nploc\_setup\_Ver1[1].8.0\_Build\_09050411.
3. If the software cannot be used normally, uninstall the software and install the newer version of the software. There is the version 3.5 of the software in the installation package of intelligent device management software. For details of installation steps, please refer to "2.1 Installation".

#### **3.1.2 Basic Settings for Serial Port Device Server**

It's basically consistent with V3.5. Please refer to "2.2 Basic Settings for Serial Port Device Server".

#### **3.1.3 COM Port Mapping**

It's basically consistent with V3.5. Please refer to "2.3 Hardware Settings"

### **3.2 NPort 5232**

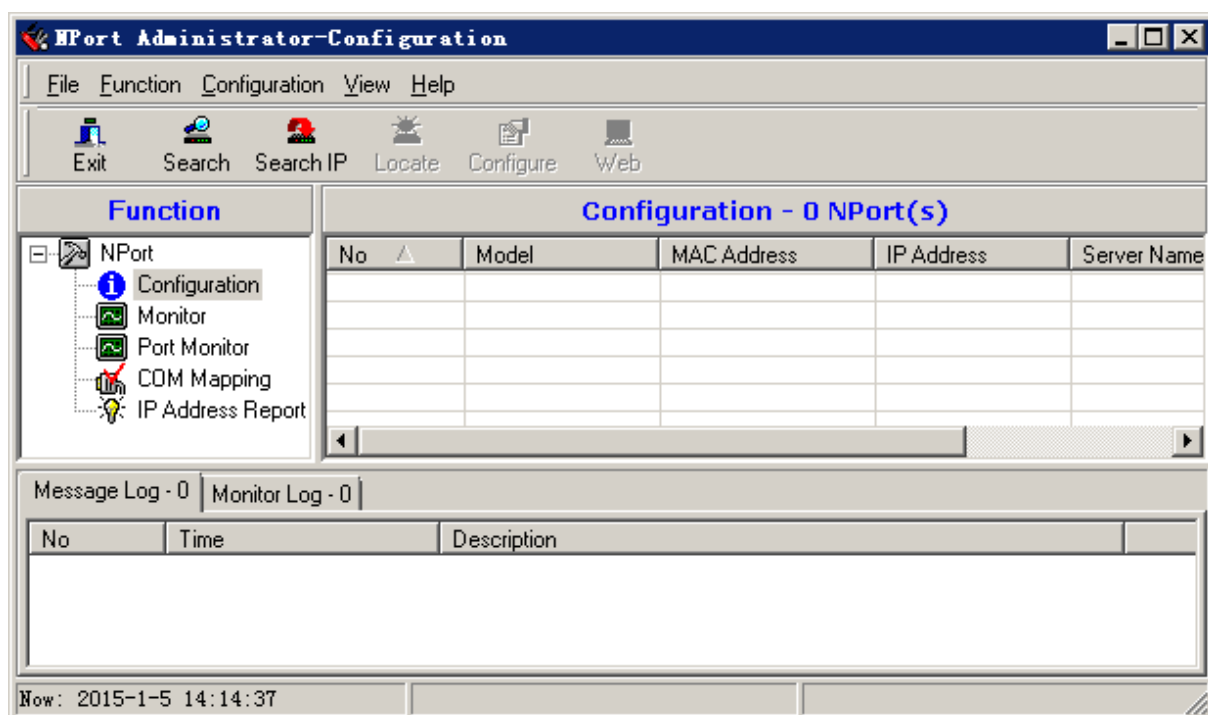
#### **3.2.1 Installation**

Install NPort Administrator Suite software (NPort Windows Driver Manager V1.17).

If the software cannot be used normally, uninstall the software and install the newer version of the software. There is the version 3.5 of the software in the installation package of intelligent device management software. For details of installation steps, please refer to "2.1 Installation".

#### **3.2.2 Basic Settings for Serial Port Device Server**

Click [Start/ NPort Administrator Suite/ NPort Administrator] to pop up the interface shown in Figure 3-1.

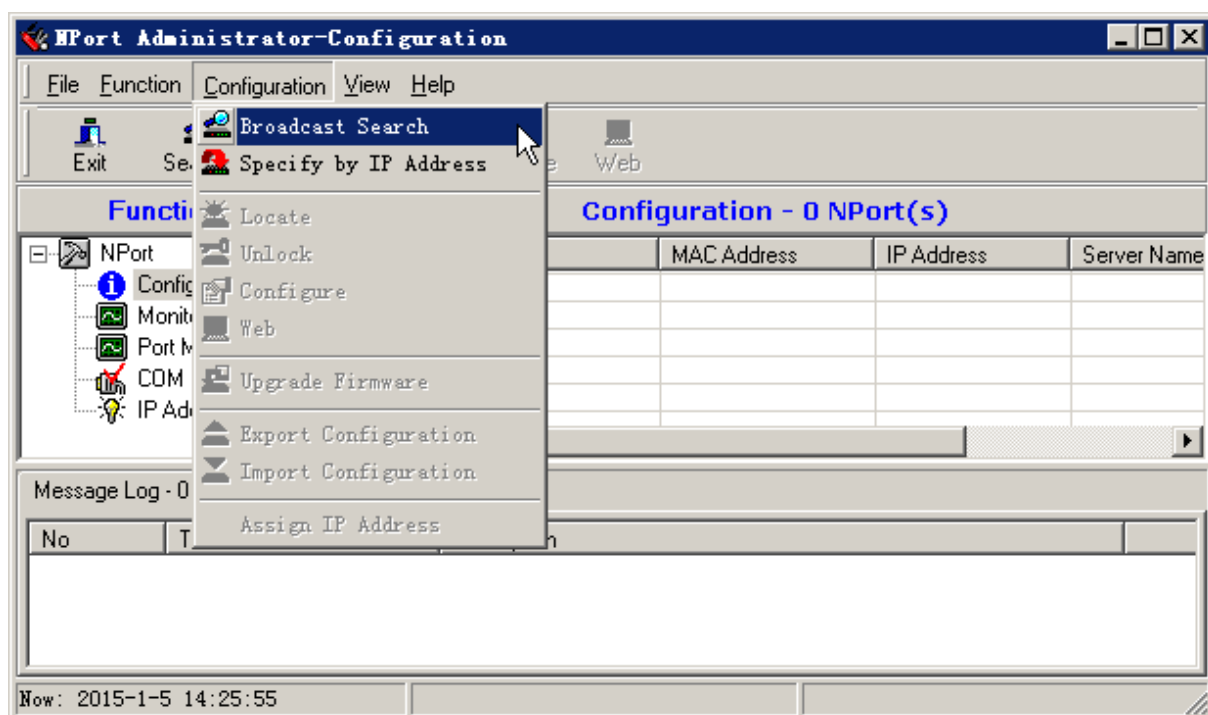


**Figure 3-1 NPort Administrator**

Panes in the interface are shown below:

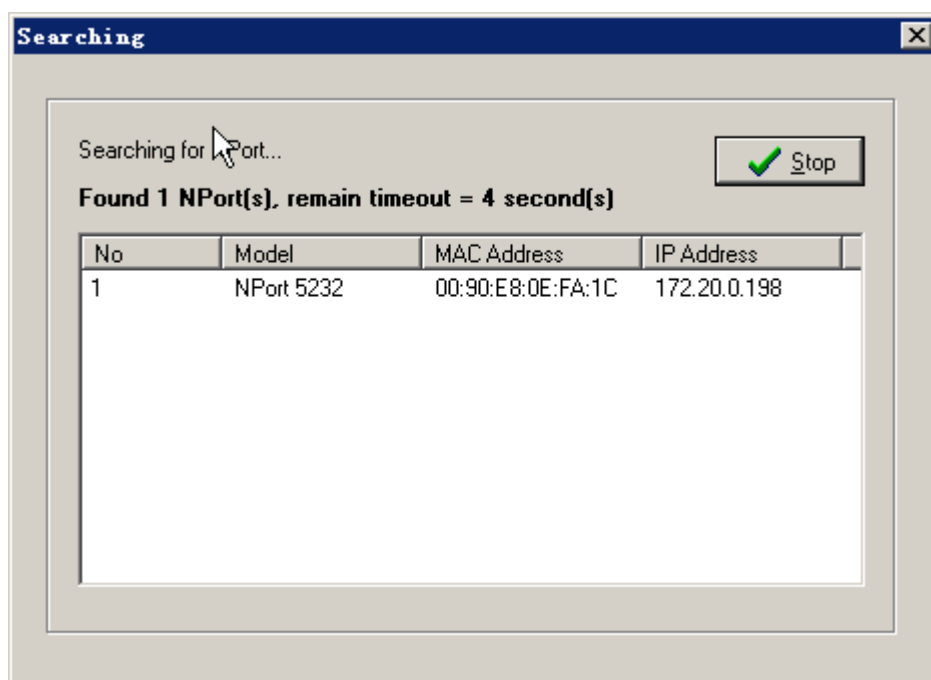
- In the top is the function list and on-line help.
- On the left is the list of 5 major functions.
- On the right is the device information list.
- At the bottom is the operation log.

Click menu commands [Configuration/ BroadcastSearch] to broadcast search the online module, as shown in Figure 3-2.



**Figure 3-2 Search the online serial port device server module**

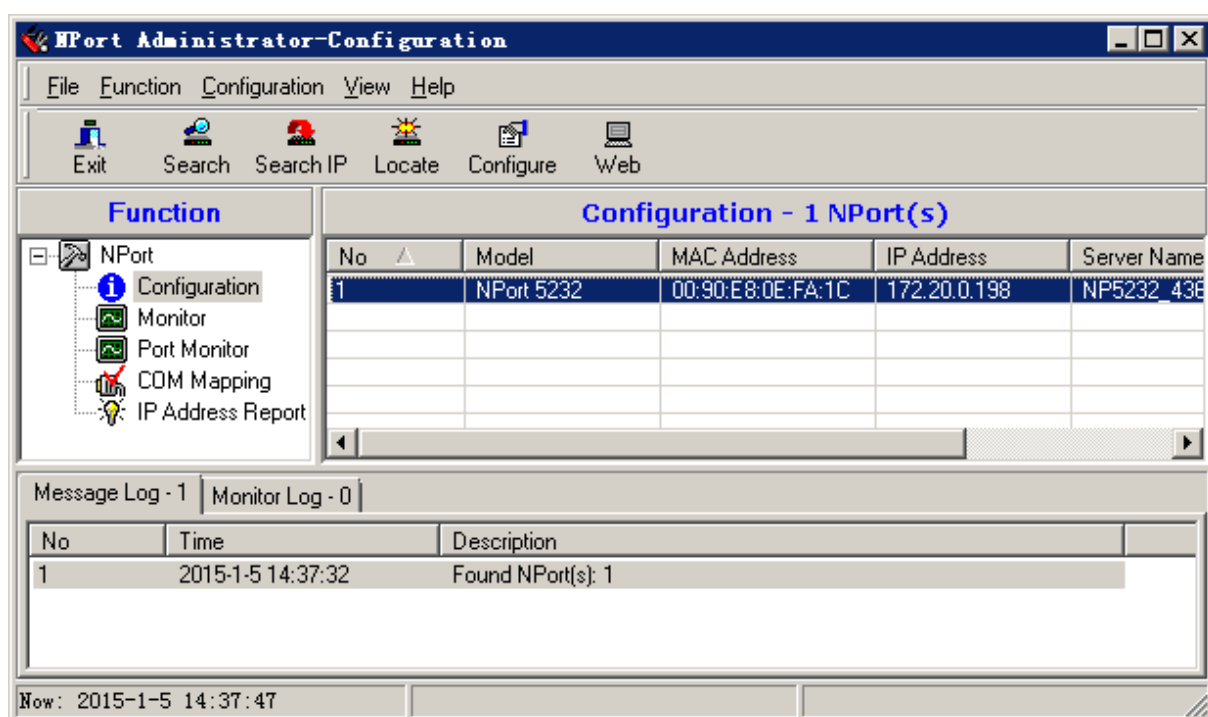
Search process of online serial port device server is shown in Figure 3-3.



**Figure 3-3 Search process of online serial port device server**

After searching completed, the results are shown in the device information region of software interface.





**Figure 3-4 Display server search results of serial port device**

Double-click the module in right pane to open the configuration interface: the major items to be configured are "Network" and "Operating Mode".

Network configuration interface is shown in Figure 3-5. Network settings mainly set the IP address, make sure to select "Static" for IP configuration.

The screenshot shows the 'Configuration' window for the MOXA NPort 5232. The 'Network' tab is selected, and several elements are circled in red to indicate configuration points: the 'Network' tab itself, the 'Modify' checkboxes for IP Address and Netmask, the IP Address field (172.20.0.198), the Netmask field (255.255.0.0), the IP Configuration dropdown (set to 'Static'), and the 'Modify' checkbox for the SNMP section. The left sidebar shows device information: Model Name (NPort 5232), MAC Address (00:90:E8:0E:FA:1C), Serial Number (436), Firmware Version (Ver 2.2), and System Uptime (17 days, 01h:46m:23s). The bottom of the window includes a hint to click the 'Modify' checkbox and 'OK'/'Cancel' buttons.

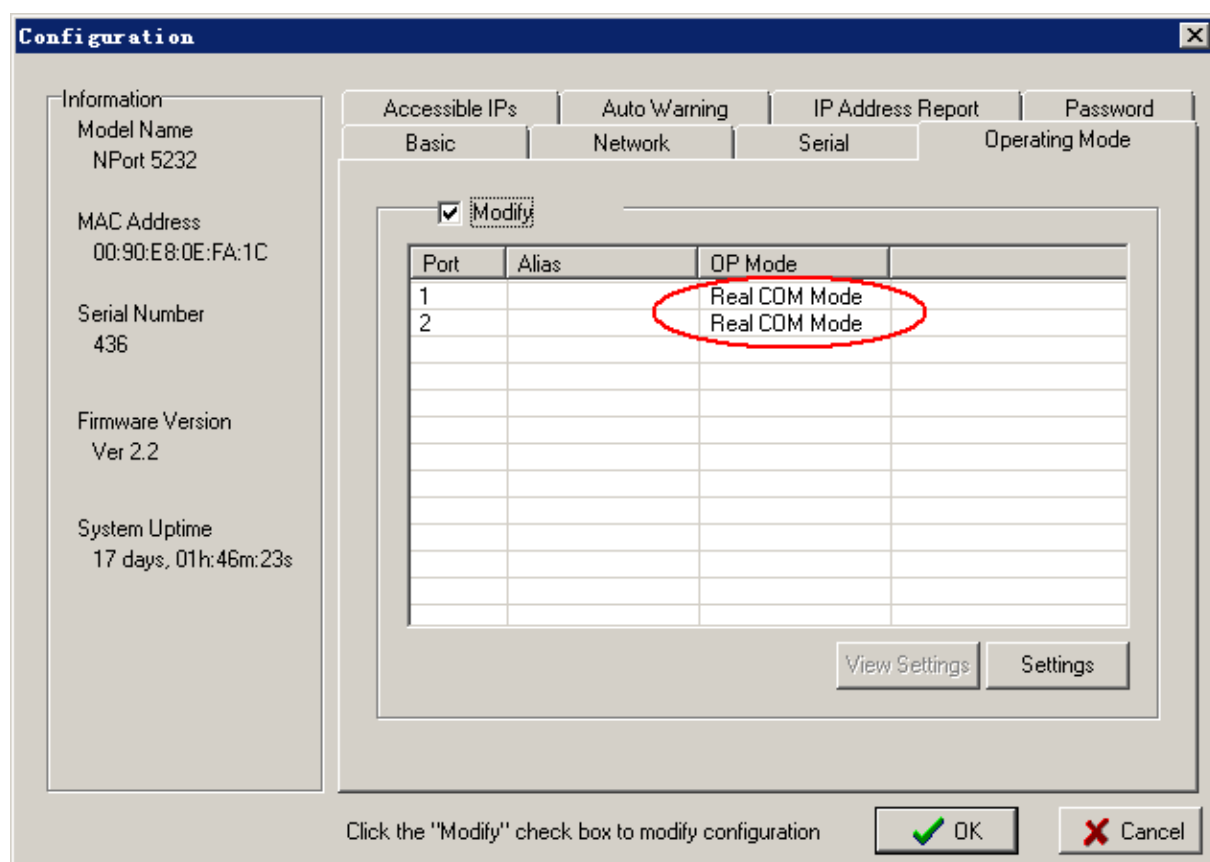
Information	Accessible IPs	Auto Warning	IP Address Report	Password
Model Name NPort 5232	Basic	Network	Serial	Operating Mode
MAC Address 00:90:E8:0E:FA:1C	<input checked="" type="checkbox"/> Modify	IP Address 172.20.0.198		
Serial Number 436	<input checked="" type="checkbox"/> Modify	Netmask 255.255.0.0		
Firmware Version Ver 2.2		Gateway		
System Uptime 17 days, 01h:46m:23s		IP Configuration Static		
		DNS Server 1		
		DNS Server 2		
	<input type="checkbox"/> Modify	<input checked="" type="checkbox"/> Enable SNMP		
		Community Name public		
		Location		
		Contact		

Click the "Modify" check box to modify configuration

OK Cancel

**Figure 3-5 Network configuration**

Make sure all Ports work in "Real COM Mode" when setting "Operating Mode". Besides, user can set access password for serial port server in "Password" tab.

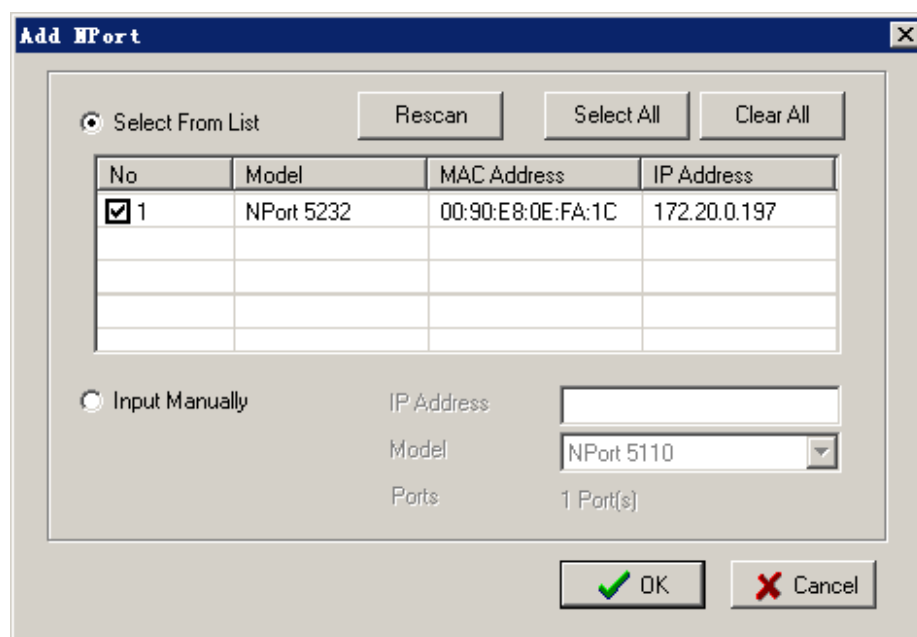


**Figure 3-6 Set running mode**

Click "OK" to back to administrator interface. Basic settings for module are completed here. Following part will introduce the serial port mapping.

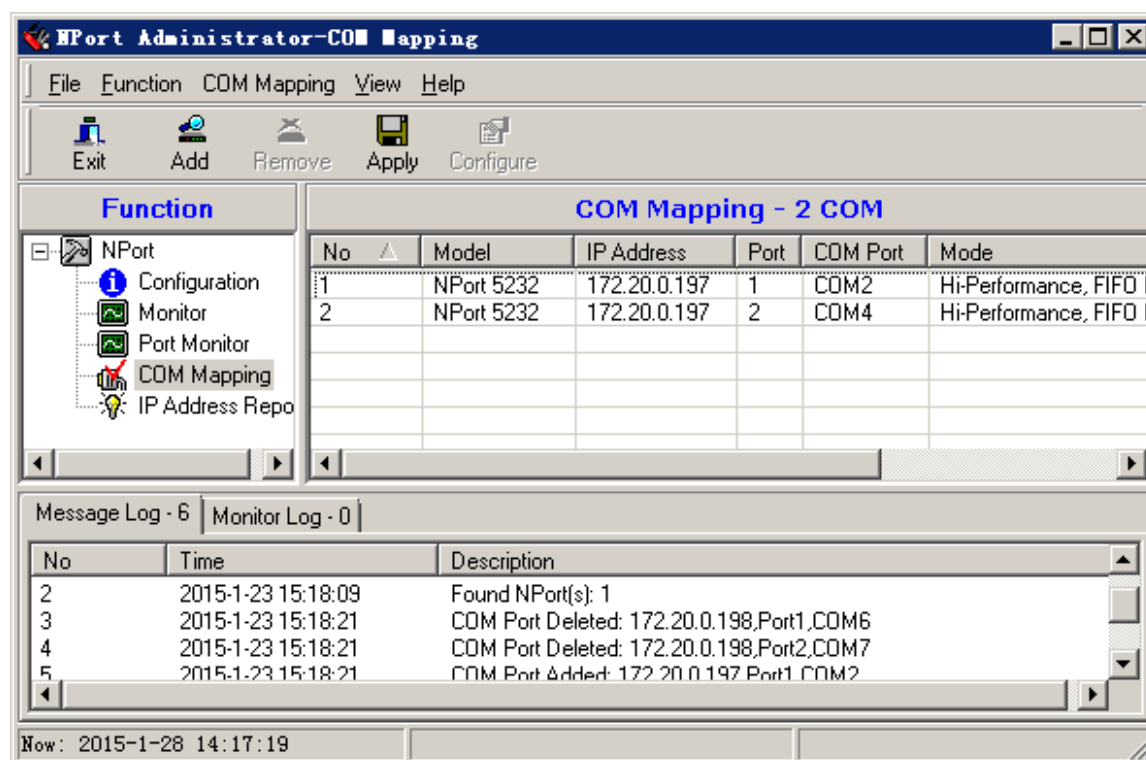
### 3.2.3 COM Port Mapping

After selected "COM Mapping" in function group list in the left pane, the COM ports will be listed in the right pane, right-click and select "Add Target", and select the serial port server for mapping COM port in the dialog pops up, as shown in Figure 3-7.



**Figure 3-7 Add serial port server**

Click "OK" to complete COM port mapping automatically. And the information of mapped COM port will be shown in COM list of main window. The figure below shows that the first Port of NPort 5232 with IP 128.128.5.100 is mapped as COM3, and another port is mapped as COM4, as shown in Figure 3-8.



**Figure 3-8 COM port mapping information**

Select [COM Mapping/ Apply Change] to save settings, and complete the mapping of COM port.

## Section 4 Revision

---

*Table 4-1 Retrofit list of the version*

Document Version	Applicable Product Version	Remarks
V1.0 (20150209)	SAMS V2.80.00.00	The first edition
V1.1 (20161011)	SAMS V2.80.01.00	Add trademarks instruction.
V1.2 (20170821)	SAMS V2.80.03.00 and above	Add code
V1.3 (20221116)	NPort Windows Driver Manager V1.17	Applicable software is changed to device management software
V1.4 (20230828)	NPort V3.5	Update the configuration description of software