

# NetPortServer Compact 2 Port RS232/422/485 Device Server with Modbus and MQTT Support

## NPS5251

Compact 2 Port RS232/422/485 Serial Device Server

The NPS5251 is a compact 2-port RS232/422/485 device server and IoT gateway for industrial use. It combines functions like serial device server, Modbus gateway, MQTT gateway, RS485-to-JSON gateway, and virtual COM port device tool. With two RS232 RJ45 ports, two RS485 terminal ports, and two Ethernet LAN. The additional Ethernet port can be used as a switch or for cascading to another NPS5251 allowing expansion to 4 serial ports, 6 serial ports, or 8 serial ports. Its compact design supports desktop and DIN-rail installation, while the wide 10–30VDC power input or AC adapter enhances flexibility. The NPS5251 offers a cost-effective, space-saving solution.



### Features & Benefits

#### Modbus RTU /Ethernet Gateway

- Integrated Serial Port Server (Serial Device Server)
- Modbus RTU Server/ Client
- Modbus RTU to MQTT Gateway
- Cloud JSON data to Modbus RTU
- TCP Server/ Client, UDP, UDP Multicast
- TCP Server
- Auto-Polling Storage Multi Modbus/TCP Client to Single Modbus RTU Server
- Cloud Modbus/TCP to Modbus RTU Client Access

#### Modbus Gateway

- Modbus RTU protocol to Modbus/TCP
- RTU/Register Auto Polling and Storage
- Allows Multiple points access same serial device
- Scheduling Polling Modbus RTU register

#### JSON to Modbus RTU

- CSV JSON Table
- Scheduling Polling Modbus RTU register
- Scheduling Publish in JSON format
- Subscribe support request and Setting Modbus Register

#### Modbus RTU to MQTT

- Publish RTU data in JSON format
- Subscribe JSON to Modbus RTU by HTTP Post, HTTP Get
- NTP support for Network Time Synchronize

#### Serial Device Server

- TCP/UDP Transmission to virtual serial port
- Support Virtual COM Software tool

#### Serial Interface

- Two RS232 DB9 RJ45 ports and Two RS422/485 Terminal ports
- Baud Rate – 1200bps ~460800bps, 5~9 data bit
- Parity Check – None, Odd, Even, Mark, Space

#### Industrial Application

- DC 10~30V Power Input, Terminal Connector
- -25~70°C / 5~95% RH Environment Operating Temperature



## Interfaces

Power Link 1/2:  
 (Green- LAN OK)  
 (Blue- TCP or UDP)  
 Active 1/2:  
 (Green- LAN to Serial)  
 (Blue- Serial to LAN)  
 Net: LAN1

Reset Switch



Power Adapter DC Jack

Power Input 10~30VDC

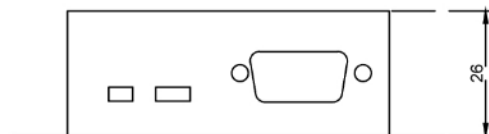
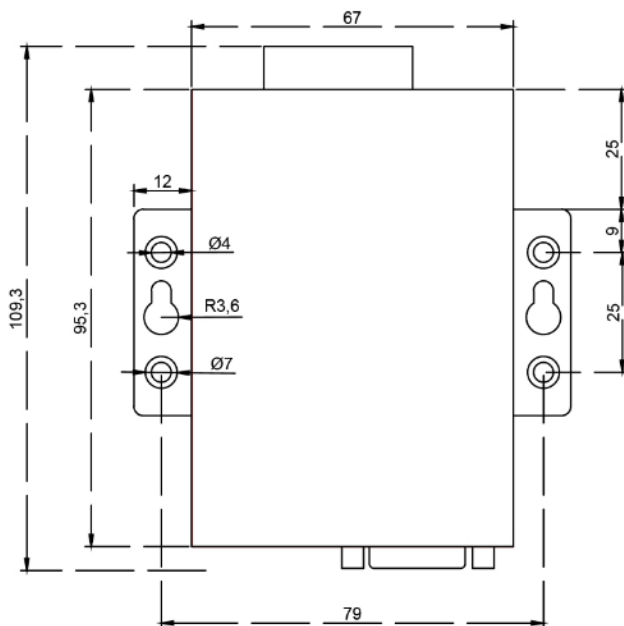
RS485



RS232 RJ45 100M LAN



## Dimensions



## ✓ Virtual COM Device Discovery and Management

vir.com Virtual Serial & Device Management - VirCom

Manage(M) Config(C) View(V) Help(H)

Start Stop Device Serial About

ID	Status	Com Na...	COM Name	Type	Device IP	Discription	Dev
1	Connected	COM5	Virtual COM	Bind ID	192.168.0.188	Name : DEV0001	A12

Device Settings

Device Info: Virtual Serial: COM5, Dev Type: , Dev Name: DEV0001, Dev ID: 2878A1282BD3, MAC Addr: 04EEE8182BEB, Firmware Ver: V1.523

Function of the device:  Web Download,  DNS System,  REAL\_COM Protocol,  Modbus TCP To RTU,  Serial Commnad,  DHCP Support,  Storage Extend,  Multi-TCP Connection

Network: IP Mode: Static, IP Address: 192.168.0.188, Port: 4196, Work Mode: TCP Server, Net Mask: 255.255.255.0, Gateway: 192.168.0.1, Dest. IP/Domain: 192.168.0.84, Local IP, Dest. Port: 4196,  UDP Dynamic

Serial: Baud Rate: 9600, Data Bits: 8, Parity: None, Stop Bits: 1, Flow Control: None

Advanced Settings: DNS Server IP: 8.8.4.4, Dest. Mode: Dynamic, Transfer Protocol: None, Keep Alive Time: 60 (s), Reconnet Time: 12 (s), Http Port: 80, UDP Group IP: 230.90.76.1,  Register Pkt.,  ASCII,  Restart If No Data every 300 Sec.,  Enable Parameter Send every 5 Min.

Information: [2025-01-06, 17:07:54] Connected to 192.168.0.188 ok. [2025-01-06, 17:07:54] Connecting... 192.168.0.188. [2025-01-06, 17:07:54] COM5 Create ok! [2025-01-06, 17:07:54] Listen at port 4196 OK.

## ✓ Device Setting

More Advanced Settings...

Save Setting

Advanced Settings: DNS Server IP: 8.8.4.4, Dest. Mode: Dynamic, Transfer Protocol: Modbus\_TCP Protocol, Keep Alive Time: None, Reconnet Time: REAL\_COM Protocol, Http Port: 80, UDP Group IP: 230.90.76.1,  Register Pkt.,  ASCII,  Restart If No Data every 300 Sec.,  Enable Parameter Send every 5 Min.

More Advanced Settings...

## ✓ Cloud MQTT Configuration

Webpage&code download tool

Direct download mode

Configuration save location: G:\MQTT Config

Special configs: Config file source: Read from local directory

Modbus cfg. **MQTT cfg.** JSON cfg. Reg packet. Cmd change. HTTP cfg. Param file. Clear local dir.

Code file download mode

Select code file: C:\lsn2003.bin

Download through the network: Device IP address or domain: 192.168.0.200, Download port (Don't modify): 1092

Download through serial port: Serial port: COM1, Baud Rate: 115200

Flash size: 256 KB, DevID: 2875FC662A2F, Bind ID

Please close any other configuration window before downloading.

Download

## Multi Modbus Host

Modbus Multi-Host Support Settings

Modbus Gateway Type: Auto query storage type

Modbus RTU or ASCII: Auto query storage type

Enable RS485 Multi-Host

Maximum wait time of RS485 bus is idle for: 196 ms(0-8191)

Enable RS485 bus conflict detection

Send data only when RS485 bus is idle for: 20 ms

## ✓ Web Configuration

Spisomconfig

192.168.0.200/external

Logout

Device Information: Device Name: DEV0001, Device MAC: 04EEE8182BEB, Firmware Version: V1.523

Serial Settings: Baudrate: 9600, Data Bits: 8, Parity: None, Stop Bits: 1, Flow Control: None

Multi-Master Settings: Protocol: None, Response Timeout: 0 (0-60000ms), Multi-Master: Disabled, Transfer Delay: 20 (0-255ms)

Network Settings: IP Addressing: Static, IP Address: 192.168.0.200, Local Port: 4196, Mode: TCP Server, Subnet Mask: 255.255.255.0, Gateway: 192.168.0.1, Destination IP/DNS: 192.168.0.84, Destination Port: 4196, Web Port: 80

Advanced Settings: Watchdog Reset: Disable, Watchdog Reset Time: 300 (0-1270), Reconnet Time: 12 (1-255)

Modify Web Password: New Password: , Confirm Password:

Submit

Network Interface	
<b>Ethernet</b>	Two 10/100M Ethernet RJ45 2KV Surge Protection
Serial Interface	
<b>Connector</b>	Two RS232 RJ45, Two RS422/485 Terminal
<b>Serial Parameters</b>	Baud Rate: 1200~460800bps, Data Bit: 5~9 Parity Check: None, Odd, Even, Space, Mark Flow Control: None Flow Control
Service Mode	
<b>Virtual COM Driver</b>	Windows XP / Windows 7 / Windows 10/ Windows 11
<b>TCP</b>	TCP Server for up to 100 TCP clients, or TCP client to up to 7 destination IP
<b>UDP / UDP Multicasting</b>	UDP Polling & Response by UDP packet between stations UDP Multicast to all station by UDP packet
<b>Modbus</b>	Modbus RTU to Modbus TCP Modbus TCP to Modbus RTU
<b>Cloud</b>	MQTT, JSON to Modbus RTU, HTTP Post, HPPT Get
Network Feature	
<b>Protocol</b>	Ethernet, IP, TCP, UDP, HTTP, ARP, ICMP, DHCP, DNS, Modbus
<b>Security</b>	TCP with authentication key
<b>DHCP</b>	DHCP Client for IP and DNS information from DHCP server
<b>NTP</b>	Network Time Precision (NTP)
Management	
<b>System Management</b>	Windows Utility, Virtual COM, WEB Management
<b>Windows DLL Library</b>	Device management function library (Windows DLL dynamic link library) by VC, VB, Delphi, or C++ Builder with functions such as <i>read</i> and <i>write</i> .
Power Input & Interface Connector	
<b>Power Input</b>	10~30VDC Input, Terminal Block, DC Jack
Mechanical & Installation	
<b>Installation</b>	Din-Rail, Desktop
<b>Enclosure</b>	Metal
<b>IP Protection</b>	IP20
<b>Dimension</b>	94x65x25mm (LxWxH), Packing Box160x123x79mm, 52pcs per Carton
Environmental	
<b>Operation Temperature</b>	-25°C~70°C, 0% ~ 90%, Non-Condensing
<b>Storage Temperature</b>	-40°C~80°C, 0% ~ 90%, Non-Condensing
Reliability & Warranty	
<b>MTBF</b>	> 200,000 Hours
<b>Warranty</b>	3 Year


**Ordering Information**

Model	Description
NPS5251E/U/UK	Compact Two-port RS232/422/485 Device Server, Modbus, MQTT Gateway, 10~30Vdc <ul style="list-style-type: none"> <li>- Quick Installation Guide</li> <li>- 2 x RJ45 to DB9 male cable</li> <li>- 1 x 1m RJ45 cable</li> <li>- Power Adapter (EU/US/UK)</li> <li>- Din-rail Kit</li> </ul>