# NetPortServer Wireless Din-Rail RS485 to WiFi Device Server with Modbus and MQTT Support

## NPS6131A

RS485 Wireless Serial Device Server


The NPS6131A is a compact industrial wireless RS485 device server and IoT gateway, ideal for industrial use. It combines functions like a serial device server, Modbus gateway, MQTT gateway, RS485-to-JSON gateway, and virtual COM port tool. Equipped with RS485, 802.11b/g WiFi, and an RJ45 Ethernet port, it ensures reliable connectivity. The NPS6131AI model adds isolation protection to the RS485 interface. It converts RS485 to WiFi TCP/IP and integrates Modbus RTU to TCP, with WiFi functioning as a client or AP. Its DIN-rail mount design supports easy installation, while the wide power input range (10–30VDC) and Virtual COM tool make it a cost-effective, space-saving solution.

-25~70°C | Windows 10 | Windows 11 | Modbus | MQTT

## 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

### Wireless

- WiFi AP, WiFi Client, WiFi to Ethernet Router
- Security WEP/WPA-PSK/WPA2-PSK
- Data Encryption WEP64/WEP128/TKIP/AES

### 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

- One RS485 terminal with RS485-A, RS485-B, 2-Wires, up to 32 devices
- Baud Rate Support – 300bps ~115200bps, 5-9bits
- Parity Check – None, Odd, Even, Mark, Space

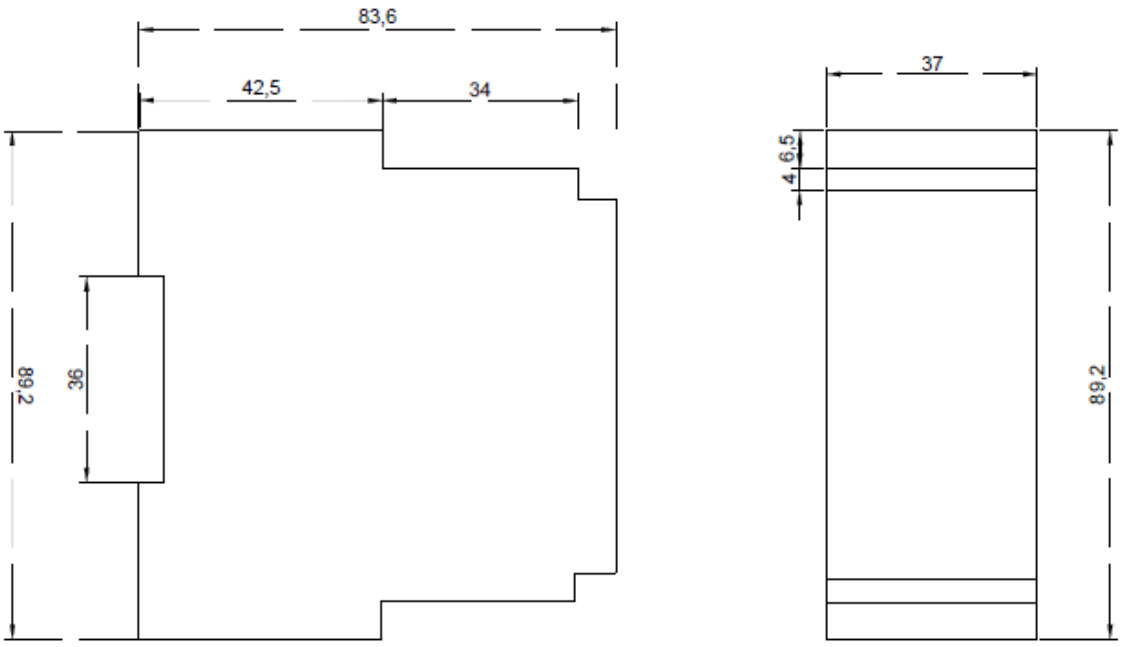
### Industrial Application

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

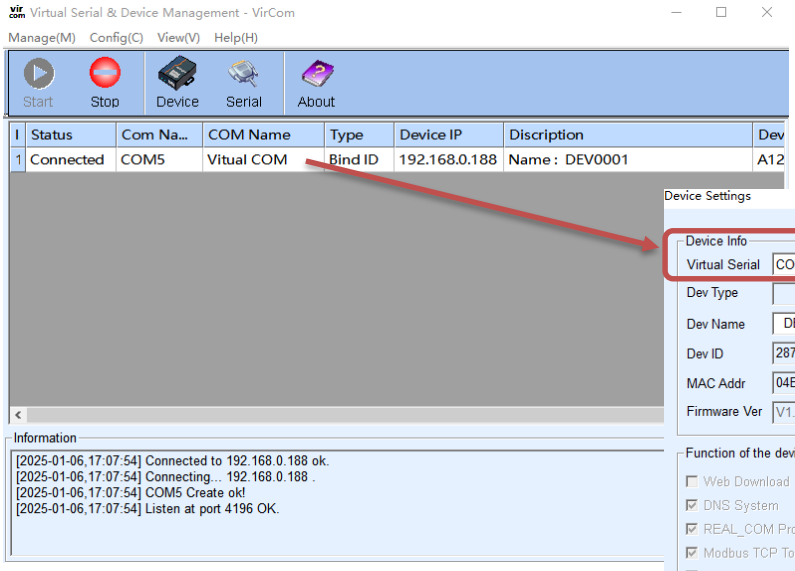
## Interfaces


## Dimensions

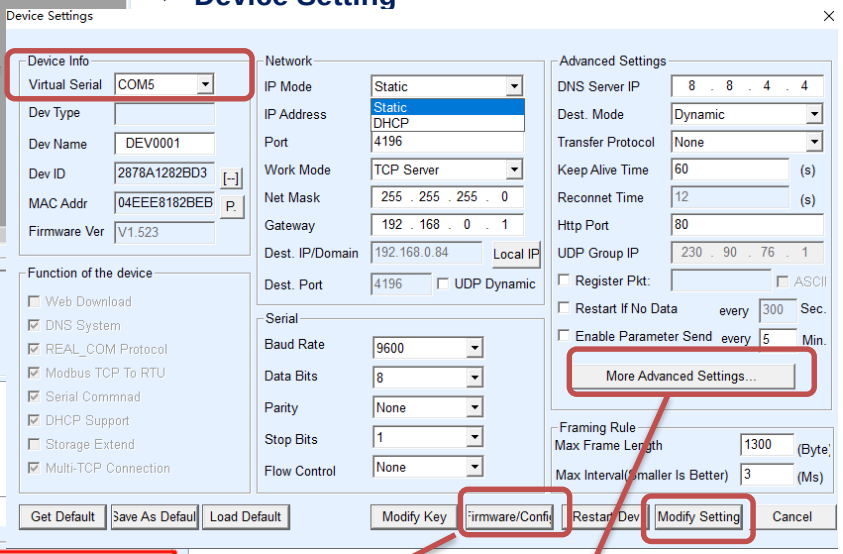
37 (w) x 89.2 (H) x 83.6 (D) (mm)



## ✓ Virtual COM Device Discovery and Management

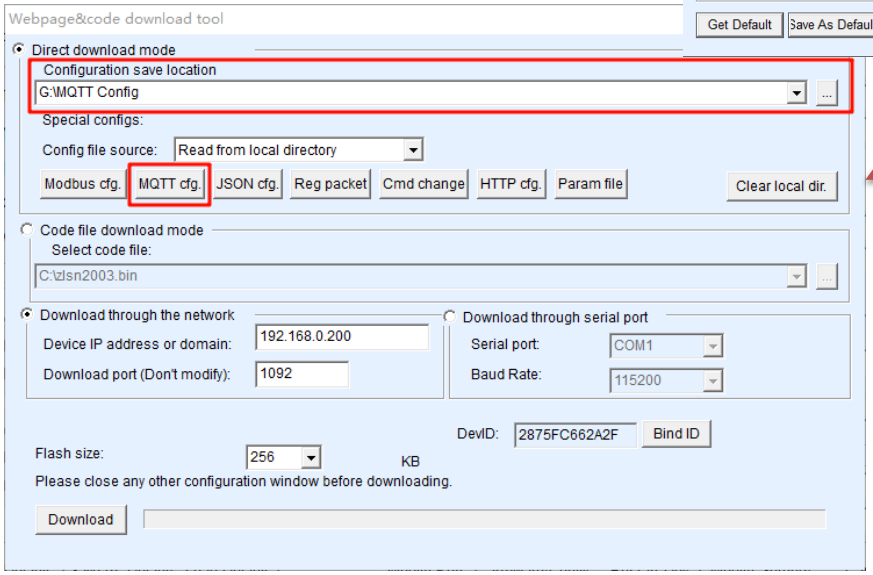


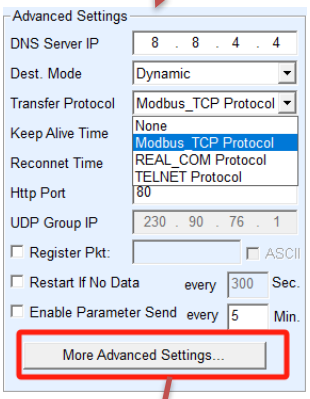

## ✓ Device Setting



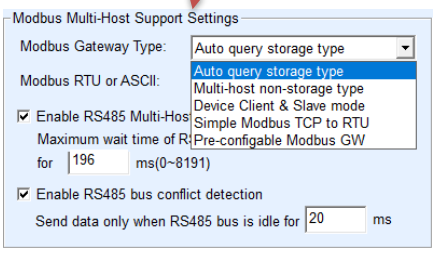

Save Setting

## ✓ Cloud MQTT Configuration

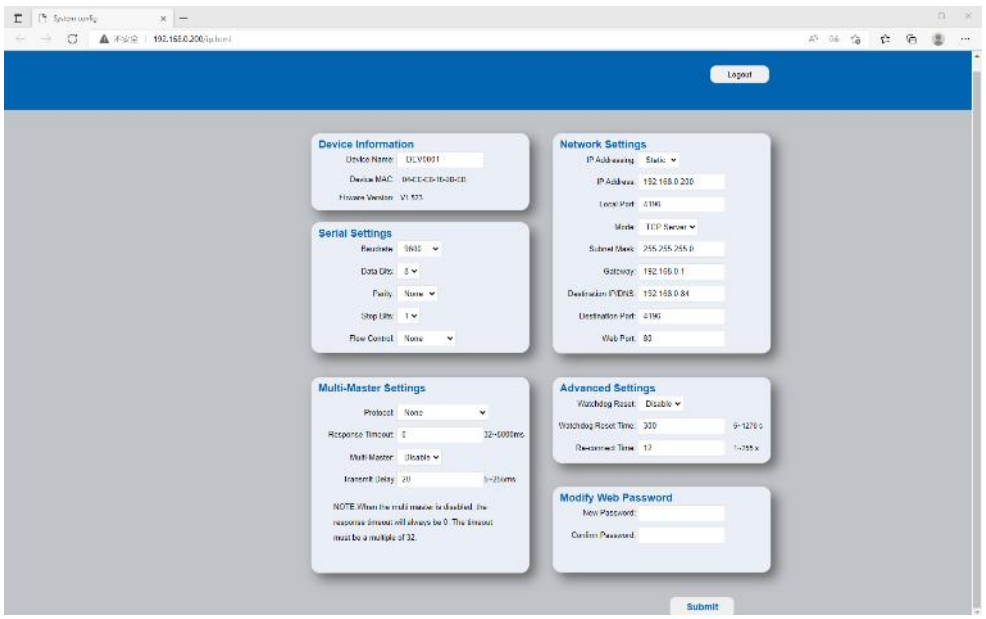



Multi Modbus Host




## ✓ Web Configuration



## Specifications

| | |
|---|---|
| **Network Interface** | |
| **Ethernet** | 10/100M RJ45 |
| **Wireless** | 802.11b/g WiFi |
| **Serial Interface** | |
| **Connector** | Screw Terminal Connector, 2-wire RS-485-A / -B<br>Max 32 x RS-485 Nodes, Max 1200 Meter Distance, 120 Ohm Terminal Resistor for > 300Meters |
| **Isolation (NPS6131AI)** | 1.5KV RS485 |
| **Serial Parameters** | Baud Rate: 1200~115200bps, Data Bit: 5~9<br>Parity Check: None, Odd, Even, Space, Mark<br>Flow Control: None Flow Control |
| **Service Mode** | |
| **Virtual COM Driver** | Windows XP / Windows 7 / Windows 10/ Windows 11 |
| **Wireless** | STA (Client) / AP |
| **Security** | WEP/WPA-PSK/WPA2-PSK |
| **Encryption** | WEP64/WEP128/TKIP/AES |
| **TCP** | TCP Server for up to 30 TCP clients, or TCP client to up to 7 destination IP |
| **UDP / UDP Multicasting** | UDP Polling & Response by UDP packet between stations<br>UDP Multicast to all station by UDP packet |
| **Modbus** | Modbus RTU to Modbus TCP<br>Modbus TCP to Modbus RTU |
| **Cloud** | MQTT, JSON to Modbus RTU, HTTP Post, HPPT Get |
| **Network Feature** | |
| **Protocol** | Ethernet, IP, TCP, UDP, HTTP, ARP, ICMP, DHCP, DNS, Modbus |
| **Security** | TCP with authentication key |
| **DHCP** | DHCP Client for IP and DNS information from DHCP server |
| **NTP** | Network Time Precision (NTP) |
| **Management** | |
| **System Management** | Windows Utility, Virtual COM, WEB Management |
| **Windows DLL Library** | Device management function library (Windows DLL dynamic link library) by VC, VB, Delphi, or C++ Builder with functions such as *read* and *write*. |
| **Power Input & Interface Connector** | |
| **Power Input** | 10~30VDC Input, Terminal Block |
| **Wireless** | |
| **Frequency** | 2.412GHz-2.484GHz |
| **Transmit Power** | 802.11b: +20dBm(Max.);<br>802.11g: +18dBm(Max.) |
| **Sensitivity** | 802.11b: -89dBm;<br>802.11g: -81dBm; |
| **Antenna** | SMA External |

| Mechanical & Installation | |
|---|---|
| **Installation** | Din-Rail |
| **Enclosure** | Durable, flame-retardant enclosure that withstands up to 100°C without deformation and self-extinguishes when removed from a fire source |
| **IP Protection** | IP40 |
| **Dimension** | 87x36x59mm (LxWxH), Packing Box160x123x79mm, 52pcs per Carton |
| **Environmental** | |
| **Operation Temperature** | -25°C~70°C, 0% ~ 90%, Non-Condensing |
| **Storage Temperature** | -40°C~80°C, 0% ~ 90%, Non-Condensing |
| **Reliability & Warranty** | |
| **MTBF** | > 200,000 Hours |
| **Warranty** | 3 Year |

## Ordering Information

| Model | Description |
|---|---|
| NPS6131A | Wireless One port RS485 Device Server, Modbus, MQTT Gateway, 10~30Vdc, antenna included |