3onedata
Reliable Connections




# NP314T&NP318T RS-485 Series

## Desktop/Wall Mounting

## 4/8 RS-485/422 Serial Server

- Support 4/8 RS-485/422 serial ports to 2 10/100Base-T(X) self-adaptive Ethernet interfaces
- Support network modes such as redundant mode, switching mode and dual IP mode to meet the needs of various network environments
- Support multiple operating modes like RealCom, TCP Server, TCP Client, UDP Server, UDP Client, UDP Rang and UDP Multicast
- Support 12~48VDC wide voltage input
- Support -40~75℃ wide operating temperature range

Industrial Grade

IP40

CONNECTING FOR A BETTER FUTURE

3onedata Co.,Ltd.

# Introduction

NP314T&NP318T RS-485 series are the serial device servers that can make serial device be equipped with networking capability instantly and centrally manage the scattered serial devices and hosts via network. This series provides 2 products and supports a variety of interfaces including 100M copper ports, and RS-485/422 serial ports. They adopt desktop/wall mounting to meet the requirements of different application scenes.

Serial server supports multiple network protocols, such as TCP, UDP, TELNET, ARP, ICMP, HTTP, HTTPS, SNMP, SSH, SMTP, SNTP, DNS, BOOTP and DHCP protocol. It also possesses complete management functions, including Access Control, Rapid Configuration, Online Upgrading and so on. Each serial port supports 4 TCP or UDP session connections, and it also supports RealCom, TCP Server, TCP Client, UDP Server, UDP Client, UDP Rang, UDP Multicast operating modes and TELNET, WEB, SSHD access modes. Furthermore, supplied management configuration tool based on Windows platform can guide the user to manage and configure the device, achieving immediate networking of serial device via simple settings. Network management system could bring you great user experience through its friendly interface design and easy and convenient operation.

RESET button can achieve the restore factory defaults function. Hardware adopts fanless, low power consumption, wide temperature and voltage design and has passed rigorous industrial standard tests, which can adapt to the industrial scene environment with harsh requirements for EMC. It can be widely used in custom checkpoint system, smart gas station, data center and industrial automation, etc.

# Features and Benefits

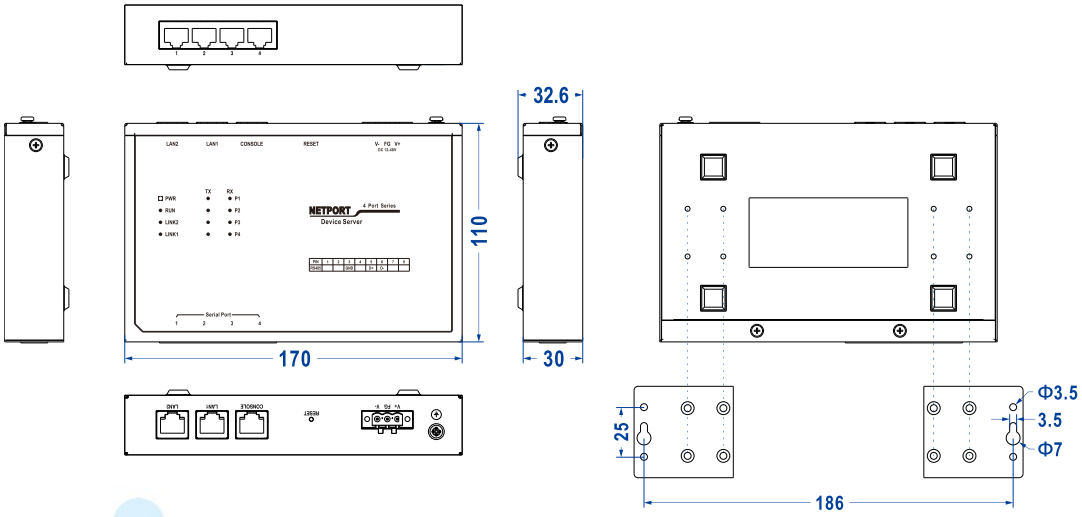
- Support 2 10/100Base-T(X) self-adaptive Ethernet interfaces and provide dual IP and MAC addresses to meet the requirements of multi-network management or network backups
- Support 110bps-115200bps (customizable 921600bps) line speed and non-blocking communication
- Support multiple operating modes like RealCom, TCP Server, TCP Client, UDP Server, UDP Client, UDP Rang and UDP Multicast
- Support cross-gateway and cross-router communication
- Support multiple hosts polling mode, which allows multiple hosts to access the same serial port
- Support delimiter matching communication, achieving various demands for serial port packaging
- Support FIFO, compatible with various old type terminal devices
- Support IP address and MAC address filtering, which can achieve accurate access control easily
- Support graded user management to implement humanized authority management

- Support serial port status, parameters and communication statistical monitoring, making the communication status easy to read
- Support virtual serial port drive access mode and automatic connection recovery after network interruption
- Flexible serial port data framing setting, which can satisfy user's various demands for data packets segmentation
- Support standard TCP/IP SOCKET application access
- TCP supports multi-connection, which allows maximum 4 users to monitor or manage the serial device simultaneously
- UDP supports single machine or multi-machine communication, which allows multiple users to monitor or manage the serial device simultaneously
- Support multiple configuration forms like Windows configuration tool, TELNET, SSHD and WEB
- SSHD and HTTPS can guarantee the access security of data
- Support multiple alarm methods, including e-mail alarm, log alarm and system alarm
- Support multiple alarm events including warm start and cold start
- Network diagnosis and troubleshooting could be conducted via Ping, Traceroute and packet capture diagnosis
- ARP function is supported, which can prevent the MAC address of the device from being aged by the switch or router and unable to communicate
- Support static routing, routing table could be added manually

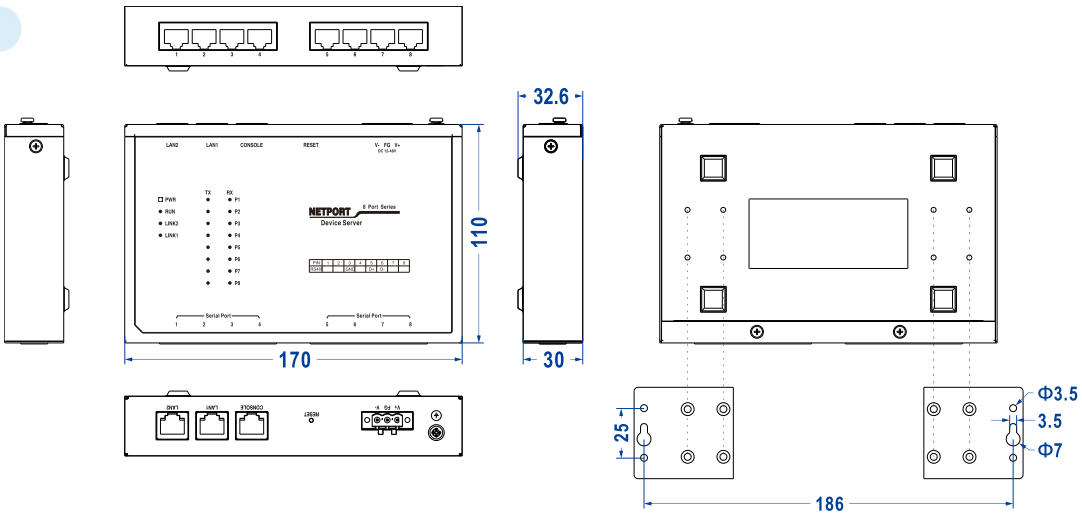
# Dimension

Unit: mm

- NP314T-4D(RS-485)-RJ-P(12-48VDC)




- NP318T-8D(RS-485)-RJ-P(12-48VDC)




# Specification

| | |
|---|---|
| Ethernet | Standard: 10Base-T, 100Base-TX<br>Protocol: TCP, UDP, ARP, HTTP, HTTPS, TELNET, ICMP, SMTP, SNTP, DHCP, DNS<br>Rate: 10/100M Automatic Flow Control, MDI/MDI-X Autotuning<br>Interface form: RJ45<br>Interface quantity: 2<br>Duplex mode: full/half duplex mode self-adaption<br>Working mode: Each serial port can simultaneously establish up to 4 TCP/UDP session connections. Support multiple operating modes like RealCom, TCP Server, TCP Client, UDP Server, UDP Client, UDP Rang and UDP Multicast |
| Serial Port | Standard: RS-485, RS-422<br>Quantity of serial port: 4/8 RS-485/422<br>RS-485 signal: D+, D-, GND<br>RS-422 signal: T+, T-, GND, R+, R-<br>Baud rate: 110bps-115200bps (110bps-921600bps can be customized)<br>Data bit: 5bit, 6bit, 7bit, 8bit<br>Parity bit: None, Even, Odd, Space, Mark<br>Stop bit: 1bit, 1.5bit, 2bit<br>Interface form: adopt RJ45 Interface<br>Flow control: RTS/CTS, DTR/DSR, XON/XOFF<br>Direction control: RS-485 direction adopts Automatic Data Direction Control (ADDC)<br>Load capacity: RS-485 supports 32 points polling (customizable 256 points) |

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| | Transmission distance: 1200m<br>Pull up/down resistance for RS-485: 4.7kΩ<br>Electromagnetic isolation strength: 2kVDC |
| Console Port | CLI command line management port (RS-232), RJ45 |
| Configuration Method | WEB configuration management, TELNET configuration, Windows configuration tool, SSHD configuration |
| Management | Free ARP, system log, SNMP, serial port status statistics, system network status |
| Routing/Switching | Static routing, routing table, single IP mode (dual port redundancy, switching mode), dual IP mode |
| Security | User rights classification, IP address filtering, MAC address filtering, SNMP/mail/System Log alarm, HTTP/HTTPS/SSHD/TELNET access control |
| Troubleshooting | Ping, Traceroute, packet capture diagnosis |
| Time Management | Time Zone, NTP Client |
| Indicator | Power indicator, running indicator, Ethernet port indicator, serial port transmission and receiving data indicator |
| Power Supply | 12~48VDC power input, adopt 3-pin 5.08mm pitch terminal blocks, and support non-polarity |
| Power Consumption | **Model** / **No-load@12V** / **Full-load @12V**<br>NP314T-4D(RS-485)-RJ-P(12-48VDC) / 1.9W / 2.3W<br>NP318T-8D(RS-485)-RJ-P(12-48VDC) / 2.3W / 3.2W |
| Working Environment | Operating temperature: -40~75℃<br>Storage temperature:-40~85℃<br>Relative humidity: 5%~95% (no condensation) |
| Mechanical Structure | Housing: IP40 protection, metal<br>Installation: desktop or wall mounting<br>Dimension (W x H x D): 170mm×30mm×110mm (lugs are not included)<br>Weight: 0.54kg (4 RS-485), 0.6kg (8 RS-485) |
| Industrial Standard | IEC 61000-4-2 (ESD, electrostatic discharge), Level 3<br>● Air discharge: ±8kV |

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|---|---|
| | • Contact discharge: ±6kV<br><br>IEC 61000-4-4 (EFT, electrical fast transient), Level 3<br>• Power supply: ±2kV<br>• Signal: ±1kV<br><br>IEC 61000-4-5 (Surge), Level 3<br>• Power supply: common mode ±2kV, differential mode ±1kV<br>• Signal: common mode±2kV, differential mode±1kV<br><br>Shock: IEC 60068-2-27<br>Free fall: IEC 60068-2-32<br>Vibration: IEC 60068-2-6 |
| Authentication | CE, FCC, RoHS |
| Warranty | 3 years |

# Ordering Information

| Model | 100M Copper Port | RS-485/422 | Power Supply |
|---|---|---|---|
| NP314T-4D(RS-485)-RJ-P(12-48VDC) | 2 | 4 | 12~48VDC |
| NP318T-8D(RS-485)-RJ-P(12-48VDC) | 2 | 8 | |

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