3onedata
Reliable Connections



NP5000 Series

Desktop/Wall Mounting

1/2/4/8 RS-232/485/422 3IN1 or RS-485 Safe Serial Server

- Support 1/2 3IN1 DB9 serial port to 1 10/100Base-T(X) self-adaptive Ethernet interface or 4/8 3IN1 RJ45 / RS-485 serial port to 2 10/100Base-T(X) self-adaptive Ethernet interfaces
- (Optional) Support network modes such as redundant mode, switching mode and dual IP mode to meet the needs of various network environments
- Support RealCom, Reverse RealCom, TCP Server, TCP Client, UDP Server, UDP Client, Pair Master, Pair Slave, UDP Rang, UDP Multicast, Telnet, Reverse Telnet, RFC2217, Redundant COM, DRDAS RealCom, DRDAS TCP Server and other operating modes
- Support dual power supply 12~48VDC wide voltage input
- Support -40~75℃ wide temperature operation

Industrial Grade

Introduction

NP5000 series are the safe serial networking server that can make serial device be equipped with networking capability instantly and centrally manage the scattered serial devices and hosts via network. This series has 6 products to choose. The products support 1/2 3IN1 DB9 serial port to 1 10/100Base-T(X) self-adaptive Ethernet interface or 4/8 3IN1 RJ45 / RS-485 serial port to 2 10/100Base-T(X) self-adaptive Ethernet interfaces. They adopt desktop/wall mounting to meet the requirements of different application scenes.

Serial device server supports multiple network protocols, such as TCP, UDP, RFC2217, 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, Reverse RealCom, TCP Server, TCP Client, UDP Server, UDP Client, Pair Master, Pair Slave, UDP Rang, UDP Multicast, Telnet, Reverse Telnet, RFC2217, Redundant COM, DRDAS RealCom and DRDAS TCP Server work modes and TELNET, WEB and 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. It can provide users with good experience with friendly design of network management system interface, simple and convenient operation.

This product supports RESET button, which can achieve restore factory defaults function of the device. 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

- (Optional) 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 RealCom, Reverse RealCom, TCP Server, TCP Client, UDP Server, UDP Client, Pair Master, Pair Slave, UDP Rang, UDP Multicast, Telnet, Reverse Telnet, RFC2217, Redundant COM, DRDAS RealCom, DRDAS TCP Server and other operating modes
- 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

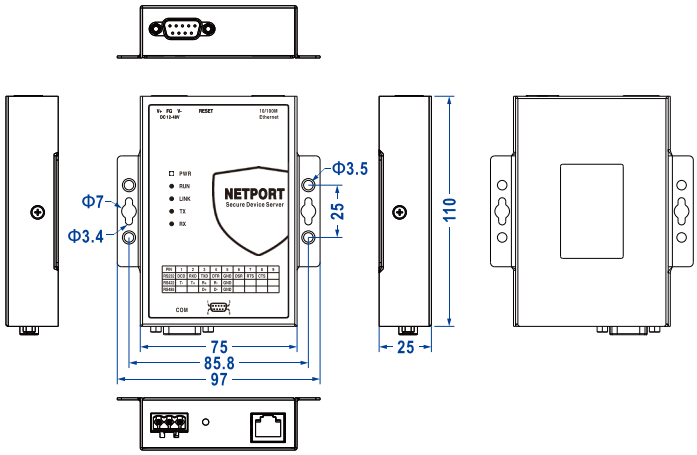
packaging

- 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 RTS/CTS, DTR/DSR and XON/XOFF flow control
- 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 TELNET and Reverse TELNET modes, build TELNET protocol session to realize the conversion of serial port data and Ethernet data between terminal device and server
- Support RFC2217 protocol, which can make serial port present in the host as local COM port
- 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 power supply connection, warm start and cold start
- Conduct network diagnosis and troubleshooting via Ping and Traceroute
- Support ARP function, which can avoid the failure of communication due to the MAC address of serial server being aged by switch or router.
- Support static routing, routing table could be added manually

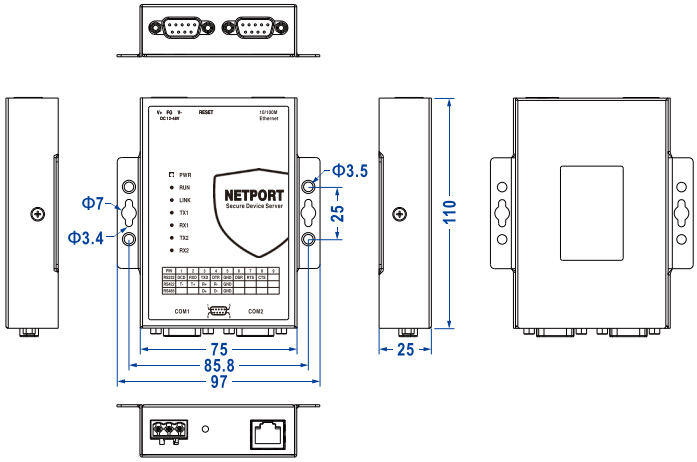
Dimension

Unit: mm

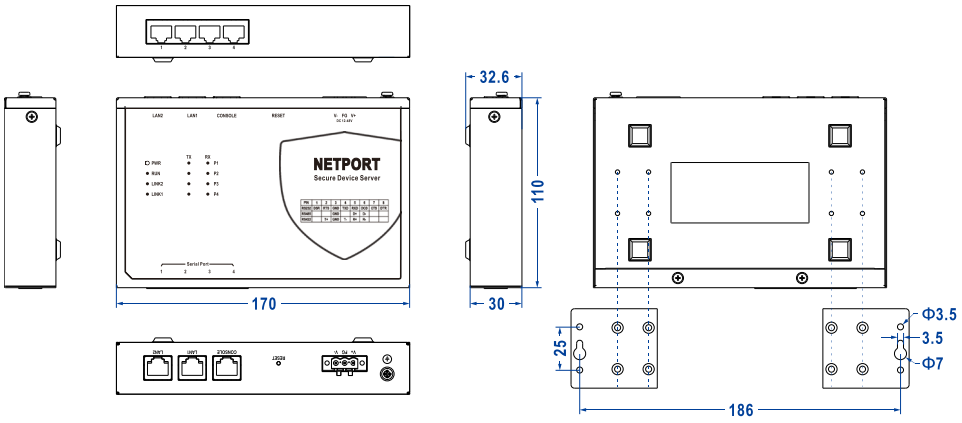
- NP5000-1T-1DI(3IN1)-DB-P(12-48VDC)



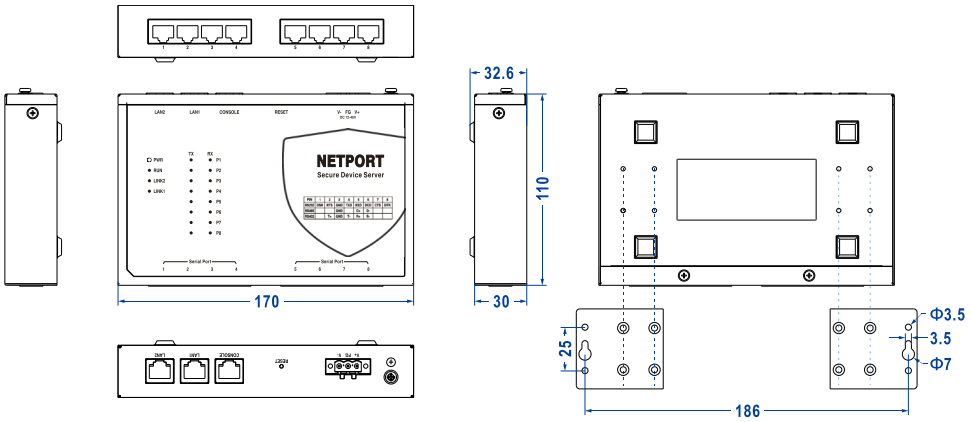
- NP5000-1T-2DI(3IN1)-DB-P(12-48VDC)



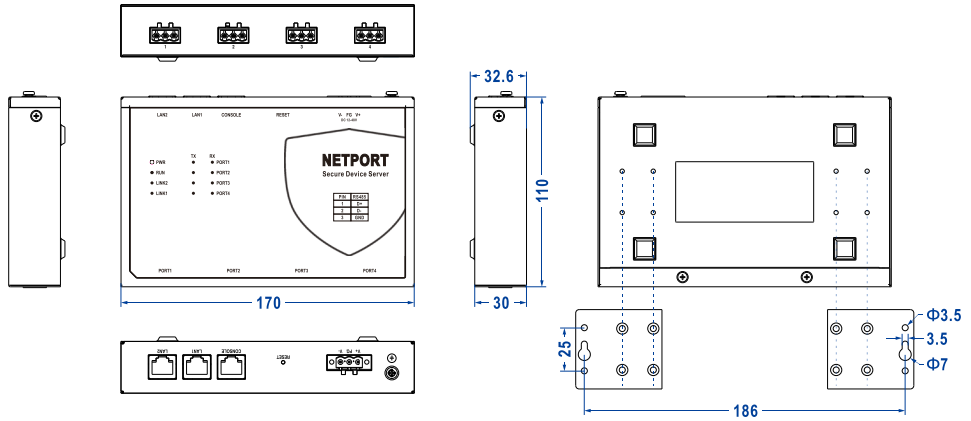
- NP5000-2T-4DI(3IN1)-RJ-P(12-48VDC)



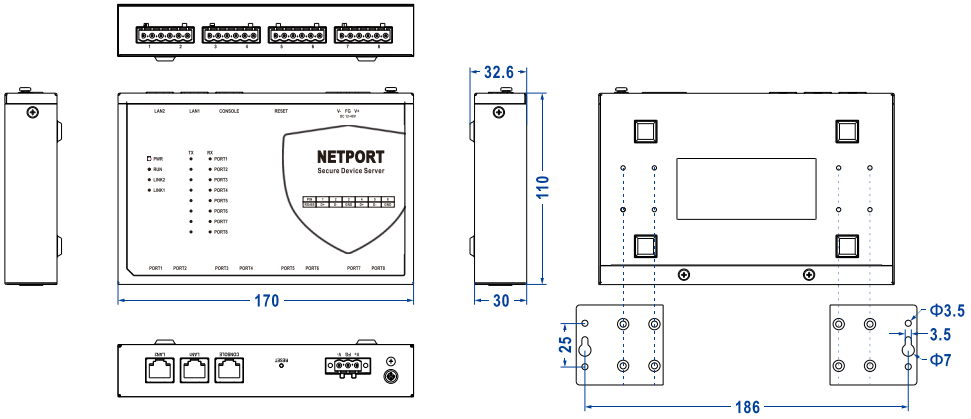
- NP5000-2T-8DI(3IN1)-RJ-P(12-48VDC)



- NP5000-2T-4DI(RS-485)-TB-P(12-48VDC)



- NP5000-2T-8DI(RS-485)-TB-P(12-48VDC)



Specification

Ethernet	Standard: 10Base-T, 100Base-TX Protocol: TCP, UDP, ARP, HTTP, HTTPS, TELNET, ICMP, SMTP, SNTP, DHCP, DNS Rate: 10/100M Automatic Flow Control, MDI/MDI-X Autotunning Interface form: RJ45 Interface quantity: 1/2 Duplex mode: Full/Half Duplex Mode Self-adaptive Work mode: each serial port can simultaneously establish up to 4

	TCP/UDP session connections, support work modes such as RealCom, Reverse RealCom, TCP Server, TCP Client, UDP Server, UDP Client, Pair Master, Pair Slave, UDP Rang, UDP Multicast, Telnet, Reverse Telnet, RFC2217, Redundant COM, DRDAS RealCom and DRDAS TCP Server
Serial Port	Standard: EIA RS-232C, RS-485, RS-422 Quantity of serial port: 1/2/4/8 3IN1 or 4/8 RS-485 serial ports RS-232 signal: RXD, TXD, DTR, GND, DSR, RTS, CTS, DCD RS-485 signal: D+, D-, GND RS-422 signal: T+, T-, GND, R+, R- Baud rate: 110bps-115200bps Data bit: 5bit, 6bit, 7bit, 8bit Parity bit: None, Even, Odd, Space, Mark Stop bit: 1bit, 1.5bit, 2bit Interface form: DB9 or RJ45 Flow control: RTS/CTS, DTR/DSR, XON/XOFF Direction control: RS-485 direction adopts Automatic Data Direction Control (ADDC) Load capacity: RS-485/422 end supports 32-node polling (customizable 256 nodes) Transmission distance: RS-232, 15m; RS-485/422, 1200m Pull high/low resistor for RS-485: 4.7kΩ Electromagnetic isolation strength: 2kVDC
Console port (Optional)	CLI command line management port (RS-232), RJ45
Configuration Method	WEB configuration management, TELNET configuration, Windows configuration tool, SSHD configuration
Security	User right classification, IP address filtering, MAC address filtering, SNMP/ Mail /System Log alarm, HTTP/HTTPS/SSHD/TELNET access control
Indicator	Power supply indicator, Ethernet port indicator, serial port indicator, running indicator
Power supply	The power supply interface is 3-pin 5.08mm pitch terminal blocks; input power supply: 12~48VDC; support non-polarity
Power consumption	

Available Models	No-load (@12VDC)	Full-load (@12VDC)

	NP5000-1T-1DI(3IN1)-DB-P(12-48VDC), NP5000-1T-2DI(3IN1)-DB-P(12-48VDC)	0.9W	1.1W
	NP5000-2T-4DI(3IN1)-RJ-P(12-48VDC), NP5000-2T-8DI(3IN1)-RJ-P(12-48VDC)	3.4W	4.1W
	NP5000-2T-4DI(RS-485)-TB-P(12-48VDC)	1.7W	1.9W
	NP5000-2T-8DI(RS-485)-TB-P(12-48VDC)	1.7W	2.0W

Working Environment	Operating temperature: -40~75℃ Storage temperature:-40~85℃ Relative humidity: 5%～95% (no condensation)
Physical Characteristic	Housing: IP40 protection, metal Installation: Desktop and Wall Mounting NP5000-1T-1DI(3IN1)-DB-P(12-48VDC), NP5000-1T-2DI(3IN1)-DB-P(12-48VDC): ● Dimension (W x H x D): 97mm×25mm×110mm (lugs are included) ● Weight: 297g NP5000-2T-4DI(3IN1)-RJ-P(12-48VDC), NP5000-2T-8DI(3IN1)-RJ-P(12-48VDC): ● Dimension (W x H x D): 170mm×30mm×110mm (lugs are not included) ● Weight: 590g NP5000-2T-4DI(RS-485)-TB-P(12-48VDC), NP5000-2T-8DI(RS-485)-TB-P(12-48VDC): ● Dimension (W x H x D): 170mm×30mm×110mm (lugs are not included) ● Weight: 530g
Industrial Standard	IEC 6100042 (ESD, electrostatic discharge), Level 3 ● Air discharge: ±8kV ● Contact discharge: ±6kV IEC 6100044 (EFT, electrical fast transient pulses), Level 3 ● Power supply: ±2kV ● Signal: ±1kV IEC 6100045 (Surge), Level 3 ● Power supply: common mode±2kV, differential mode±1kV ● Signal: common mode±2kV, differential mode±1kV

	Shock: IEC 60068- 2- 27 Free fall: IEC 60068- 2- 32 Vibration: IEC 60068- 2- 6
Certification	CE, FCC, RoHS
Warranty	3 years

Ordering Information

Available Models	100M RJ45	3IN1 (RS-232/485/422)		RS-485	Power Supply
		DB9	RJ45		
NP5000-1T-1DI(3IN1)-DB-P(12-48VDC)	1	1	—	—	12~48VDC
NP5000-1T-2DI(3IN1)-DB-P(12-48VDC)	1	2	—	—	
NP5000-2T-4DI(3IN1)-RJ-P(12-48VDC)	2	—	4	—	
NP5000-2T-8DI(3IN1)-RJ-P(12-48VDC)	2	—	8	—	
NP5000-2T-4DI(RS-485)-TB-P(12-48VDC)	2	—	—	4	
NP5000-2T-8DI(RS-485)-TB-P(12-48VDC)	2	—	—	8	

Address: 3/B, Zone 1, Baiwangxin High Technology Industrial Park, Song Bai Road, Nanshan District, Shenzhen, 518108, China
TEL.: +86-755-26702668 ext 835 FAX: +86-755-26703485
E-mail: ics@3onedata.com
Website: www.3onedata.com

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