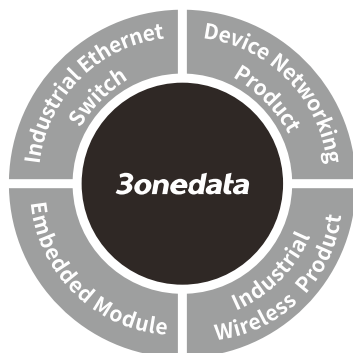# 3onedata
Make network communication more reliable

NP5000 Series
Serial Server
Quick Installation Guide

3onedata Co., Ltd.

Address: 3/B, Zone 1, Baiwangxin High Technology Industrial Park, Xili, Nanshan District, Shenzhen

Website: www.3onedata.com

Tel: +86 0755-26702688

Fax: +86 0755-26703485

【Package Checklist】

Please check whether the package and accessories are intact while using the device for the first time.

1. Serial Server
2. Lugs
3. Power adapter
4. Straight-through cable
5. Certification
6. Warranty card

If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

【Product Overview】

The products are desktop safe serial servers, including the following models:

Model I.　NP5000-1T-1DI(3IN1)-DB-P(12-48VDC) (1 100M copper port + 1 3IN1 DB9 serial port with isolation + 1 12~48VDC power supply)

Model II.　NP5000-1T-2DI(3IN1)-DB-P(12-48VDC) (1 100M copper port + 2 3IN1 serial ports with isolation + 1 12~48VDC power supply)

Model III.　NP5000-2T-4DI(3IN1)-RJ-P(12-48VDC) (2 100M copper ports + 4 3IN1 RJ45 serial ports with isolation + 1 12~48VDC power supply)

Model IV.　NP5000-2T-8DI(3IN1)-RJ-P(12-48VDC) (2 100M copper ports + 8 3IN1 RJ45 serial ports with isolation + 1 12~48VDC power supply)

Model V.　NP5000-2T-4DI(RS-485)-TB-P(12-48VDC) (2 100M copper ports + 4 RS-485 serial ports with isolation + 1 12~48VDC power supply)
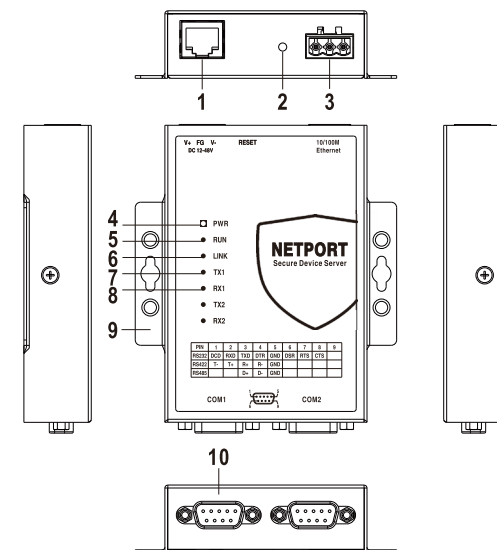
Model VI.　NP5000-2T-8DI(RS-485)-TB-P(12-48VDC) (2 100M copper ports + 8 RS-485 serial ports with isolation + 1 12~48VDC power supply)
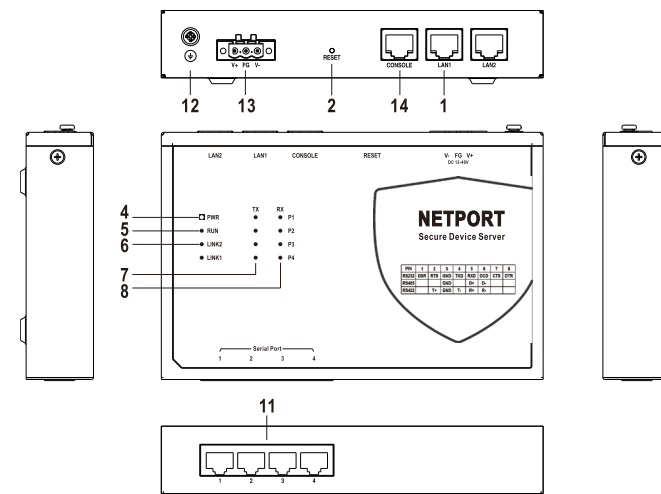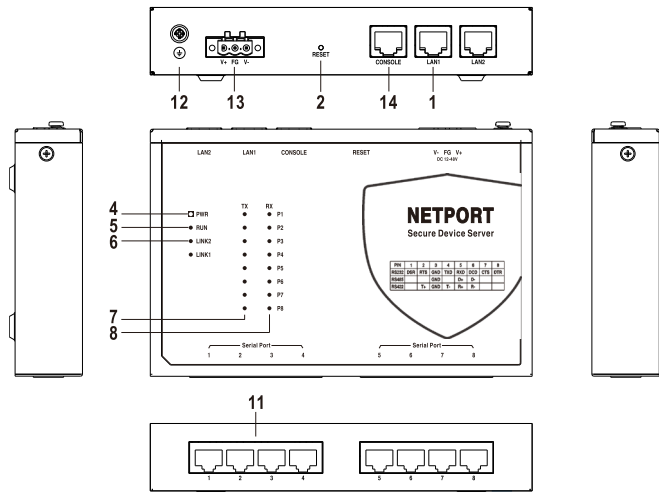
【Panel Design】

➢ **Model I**
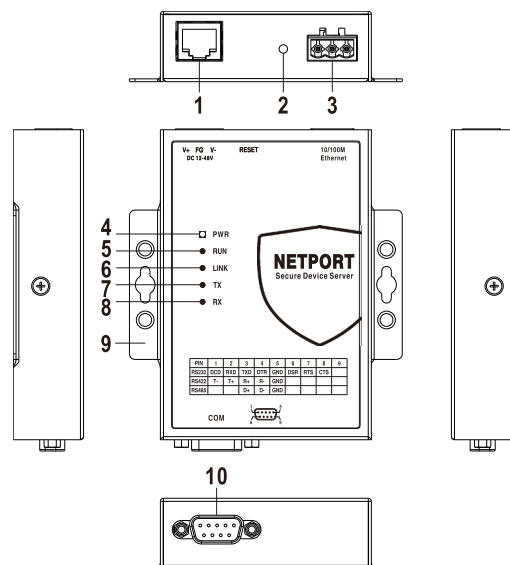
➢ **Model II**
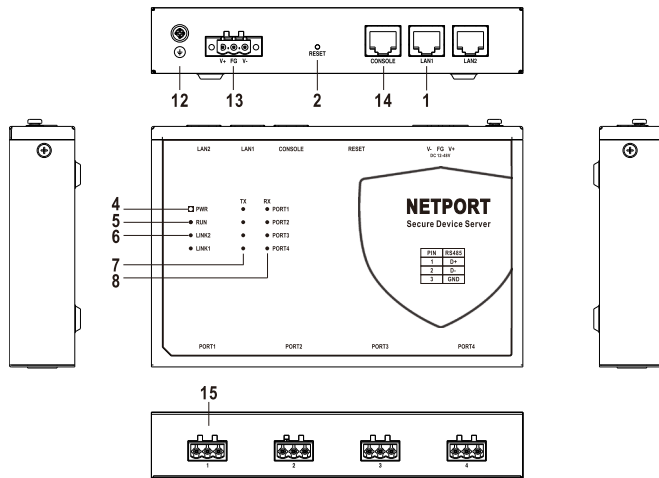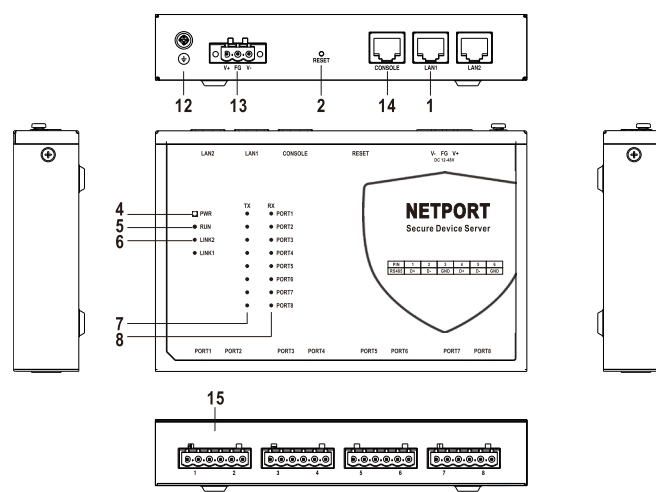
➢ **Model III**

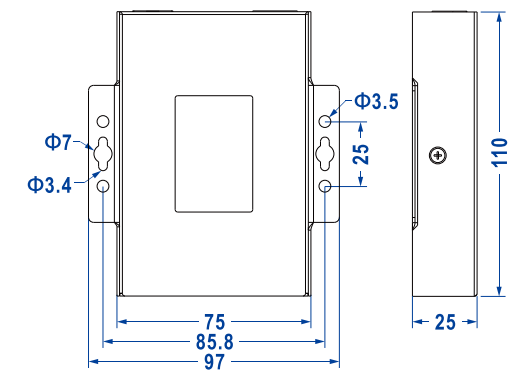➢ **Model IV**

➢ **Model V**

➢ **Model VI**

1. 100M copper port
2. Reset button
3. Terminal block 1 for power input
4. Power indicator
5. Running indicator
6. Copper port connection indicator
7. Serial port transmission data indicators
8. Serial port receiving data indicators
9. Lugs
10. RS-485/422/232 DB9 serial port
11. RS-485/422/232 RJ45 serial port
12. Grounding screw
13. Terminal block 2 for power input
14. Console port
15. RS-485 serial port

【Mounting Dimension】

Unit: mm

➢ **Model I, Model II**

➢ **Model III, Model IV, Model V, Model VI**
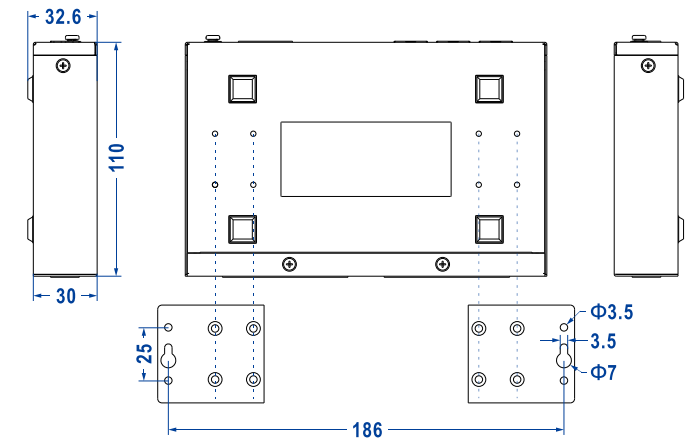
⚠ **Notice Before Mounting:**

- Don't place or install the device in area near water or moist, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before power on, first confirm the supported power supply specification to avoid over-voltage damaging the device.
- The device surface temperature is high after running; please don't directly contact to avoid scalding.

【Wall-mounted Device Mounting】

➢ **Model I, Model II**

Step 1   On the wall of device mounting, place the device on the wall for reference or refer to the mounting

dimension to mark two screw positions.

Step 2 Nail M4 screws on the wall and keep 2mm interspace reserved.

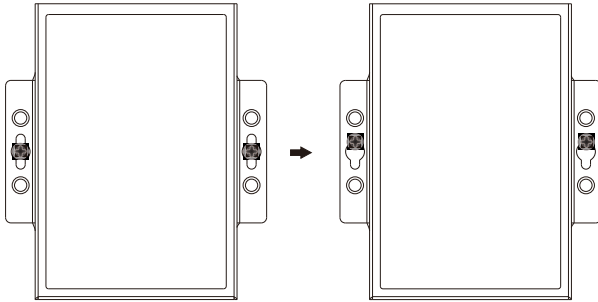Step 3 Hang the device on two screws and slide downward, then tighten the screw to enhance stability, mounting ends.

➢ **Model III, Model IV, Model V, Model VI**

Step 1 Adopt M3 screw to install the left/right mounting board on the device backboard.

Step 2 On the wall of device mounting, place the device on the wall for reference or refer to the mounting dimension to mark two screw positions.
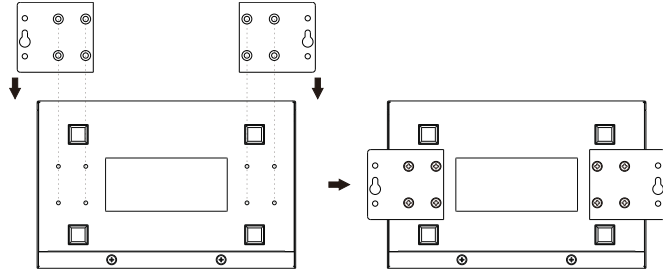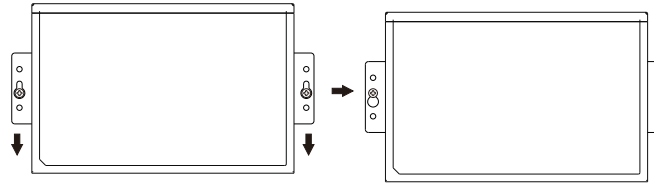
Step 3 Nail M4 screws on the wall and keep 2mm interspace reserved.

Step 4 Hang the device on two screws and slide downward, then tighten the screw to enhance stability, mounting ends.

【Wall-mounted Device Disassembling】

Step 1 Device power off.

Step 2 Unscrew the screw on the wall about 2mm.

Step 3 Lift the device upward slightly; take out the device, disassembling ends.
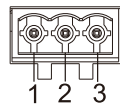
 Notice before power on:

- Power ON operation: First insert the power supply terminal block into the device power supply interface, and then plug the power supply plug contact and power on.

- Power OFF operation: first unpin the power plug, then remove the power line, please note the operation order above.
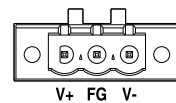
【Power Supply Connection】

➢ **Model I, Model II**

 This device provides 1 DC power supply input which is 3-pin 5.08mm pitch terminal block, the power supply supports non-polarity and anti-reverse connection. Power supply range: 12-48VDC. The pin definitions of the terminals are shown as follows:

| PIN	1	2	3
Definition	V+	FG	V-

➢ **Model III, Model IV, Model V, Model VI**

 The model III, model IV, model V and model VI of this series provide 1 DC power supply input terminal blocks that adopts , in which V+ and V- are DC input, FG is the power grounding input; The power supply supports non-polarity, power supply range: 12～48VDC.

【Reset Button Setting】

This series device provides 1 reset button, press the button for 4-5S then release it to restore factory defaults.

【Serial Port Connection】

➢ **RS-485/422/232 DB9 serial port**
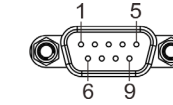
 The model I and model II of this series provide 1/2 3IN1 DB9 serial port, which supports RS-232, RS-485 and RS-422 at the same time. The interface type is DB9 male and its pin definitions are as follows:

PIN	RS-232	RS-422	RS-485
1	DCD	T-	-
2	RXD	T+	-
3	TXD	R+	D+
4	DTR	R-	D-
5	GND	GND	GND
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-
9	-	-	-

➢ **RS-485/422/232 RJ45 serial port**
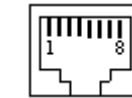
 The model III and model IV of this series provide 4/8 3IN1 RJ45 serial port, which supports RS-232, RS-485 and RS-422 at the same time. The interface type is RJ45 and its pin definitions are as follows:

PIN	1	2	3	4	5	6	7	8
RS-232	DSR	RTS	GND	TXD	RXD	DCD	CTS	DTR
RS-485	—	—	GND	—	D+	D-	—	—
RS-422	—	T+	GND	T-	R+	R-	—	—

➢ **RS-485 serial port (Model V)**

 Model V provides 4 RS-485 serial ports and adopts 3-pin 5.08mm pitch terminal blocks. The pin definitions of serial port are shown in the following table:

PIN	1	2	3
Definition	D+	D-	GND

➢ RS-485 serial port (Model VI)

PIN   1 2 3 4 5 6

Port   1   2

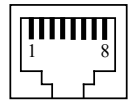Model VI provides 8 RS-485 serial ports and adopts 4 6-pin 5.08mm pitch terminal blocks. Each terminal supports 2 serial ports. The pin definitions of serial port are shown in the following table:

PIN	1	2	3	4	5	6
Definition	D+	D-	GND	D+	D-	GND
RS-485	Port1/3/5/7			Port2/4/6/8		

【Console Port Connection】

The Model III, Model IV, Model V and Model VI provide 1 program debugging port based on RS232 serial port which can conduct device CLI command line management after connected to PC. The interface adopts RJ45 port, the RJ45 pin definition as follows:

Pin No.	2	3	5
Pin Definition	TXD	RXD	GND

【Checking LED Indicator】

The device provides LED indicators to monitor the device working status with a comprehensive simplified troubleshooting; the detailed status of each LED is described in the table as below:

LED	Indicate	Description
PWR	ON	PWR is connected and running normally
	OFF	PWR is disconnected and running abnormally
RUN	Blinking	The system is running normally
	OFF	The system is not running or running abnormally
	ON	System is running abnormally
LINK(1-2)	ON	Copper port has established an active network connection.
	Blinking	Copper port is in a network activity state.
	OFF	Copper port has not established an active network connection
TX(1-2/4/8)	OFF	Serial port is not transmitting data or transmitting data abnormally
	Blinking	Serial port is transmitting data.
RX(1-2/4/8)	OFF	Serial port is not receiving data or receiving data abnormally
	Blinking	Serial port is receiving data.

【Logging in to WEB Interface】

This device supports WEB management and configuration. Computer can access the device via Ethernet interface. The way of logging in to device's configuration interface via IE browser is shown as below:

Step 1   Configure the IP addresses of computer and the device to the same network segment(The network segment of Model I, Model II is 1; and the network segment of network port 1 of Model III, Model IV, Model V and Model VI is 1, the network segment of network port 2 is 8), and the network between them can be mutually accessed.

Step 2   Enter device's IP address in the address bar of the computer browser.

Network Port 1: http://192.168.1.254/

Network Port 2: http://192.168.8.254/

Step 3   Enter device's username and password in the login window as shown below.

Username	admin
Password	••••••

Login

☐ Save username   ☐ Save password

Step 4   Click "Login" button to login to the WEB interface of the device.

Note:
- The default IP address of the network ports of model I and model II is "192.168.1.254"; The default IP address of network port 1 of model III, model IV, model V and model VI is "192.168.1.254", and the default IP address of network port 2 is "192.168.8.254".
- The default user name and password of the device are "admin".
- If the user name or password is lost, user can restore it to factory settings via restore button or management software; all modified configurations will be cleared after restoring to factory settings, so please backup configuration file in advance.
- Please refer to user manual for specific configuration method of logging in to WEB interface and other configurations about network management function.

【Specification】

Panel	
100M Copper Port	10/100Base-T(X) self-adapting RJ45 port
Serial Port	3IN1 RJ45 interface or 3IN1 DB9 interface with isolation

Indicator	Power indicator, Running indicator, Copper port connection indicator, Serial port transmission and receiving data indicator
Power supply	
Input power supply	12~48VDC
Access terminal block	3-pin 5.08mm pitch terminal blocks
Power consumption	
Model I, Model II	No-load: 0.9W@12VDC Full-load: 1.1W@12VDC
Model III, Model IV	No-load: 3.4W@12VDC Full-load: 4.1W@12VDC
Model V	No-load: 1.7W@12VDC Full-load: 1.9W@12VDC
Model VI	No-load: 1.7W@12VDC Full-load: 2.0W@12VDC
Working Environment	
Working temperature	-40～75℃
Storage temperature	-40～85℃
Working humidity	5%～95% (no condensation)
Protection grade	IP40(metal shell)