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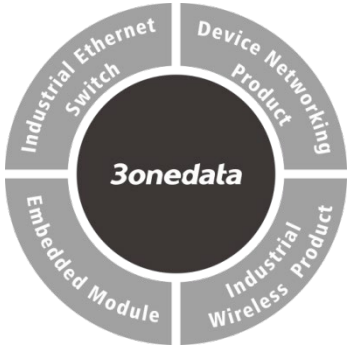
TNS5500D 20-Port Series Layer 2 Wall Mounting Industrial Ethernet Switch Quick Installation Guide



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【Package Checklist】

Please check the integrity of package and accessories while first using the switch.

1. Switch ×1
2. Warranty card
3. Certificate

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

【Product Overview】

This series of product is layer 2 managed wall-mounted EN50155 industrial Ethernet switch. For convenience, the products of this series adopt the following number on the left in this guide, please affirm the number of your product.

Model I. TNS5500D-20GT-P110 (20 Gigabit M12, 110VDC power input).

Model II. TNS5500D-16T4GT-P110 (16 100M M12 + 4 Gigabit M12, 110VDC power input).

Model III. TNS5500D-16T4GT-P24 (16 100M M12 + 4 Gigabit M12, 24VDC power input).

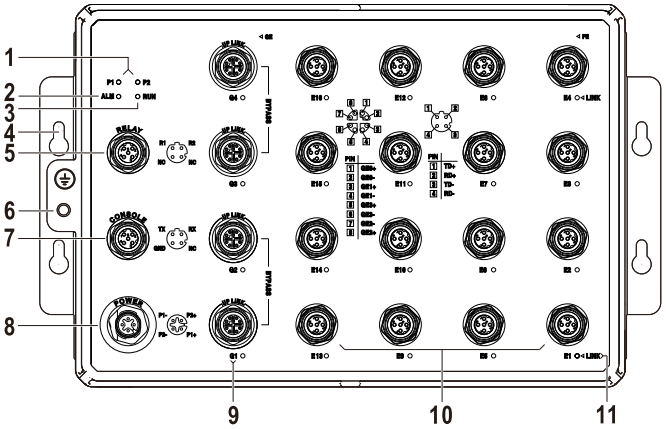
Model IV. TNS5500D-16GP4GT-P110 (16 Gigabit PoE M12 + 4 Gigabit M12, 110VDC power input).

Model V. TNS5500D-16P4GT-P110 (16 100M PoE M12 + 4 Gigabit M12, 110VDC power input).

Model VI. TNS5500D-16P4GT-P24 (16 100M PoE M12 + 4 Gigabit M12, 24VDC power input).

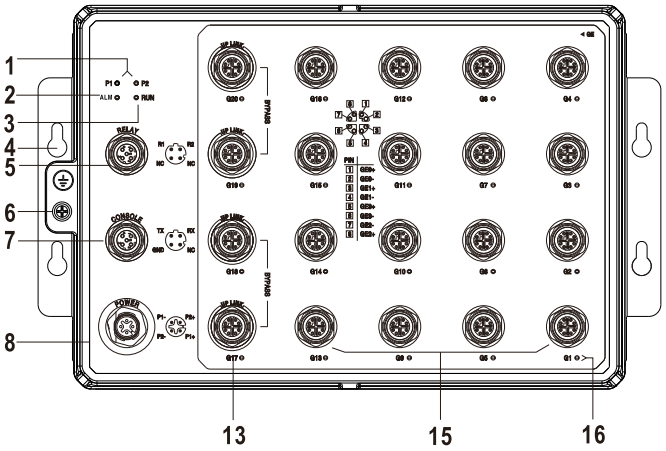
【Panel Design】

➢ **Model II, III Front View**

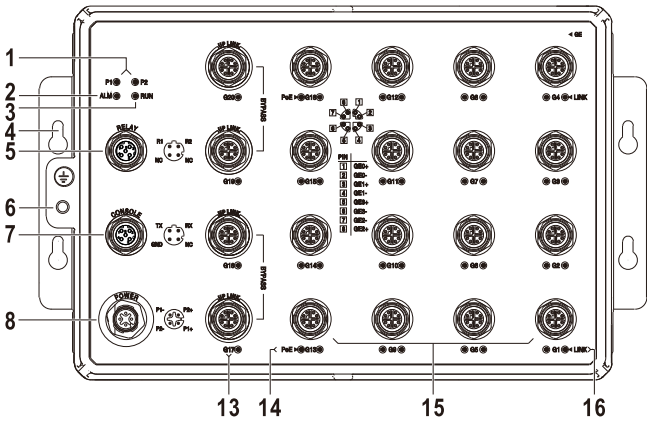


1. Power supply indicator (P1-P2)
2. Alarm indicator (ALM)
3. Running indicator (RUN)
4. Lugs
5. Relay alarm output interface
6. Grounding screw
7. CONSOLE port
8. Power input interface (P1-P2)
9. Gigabit Bypass M12 interface (Bypass: G1-G2, G3-G4)
10. 100M Ethernet port (E1-E16)
11. Ethernet port indicator (E1-E16, G1-G4)

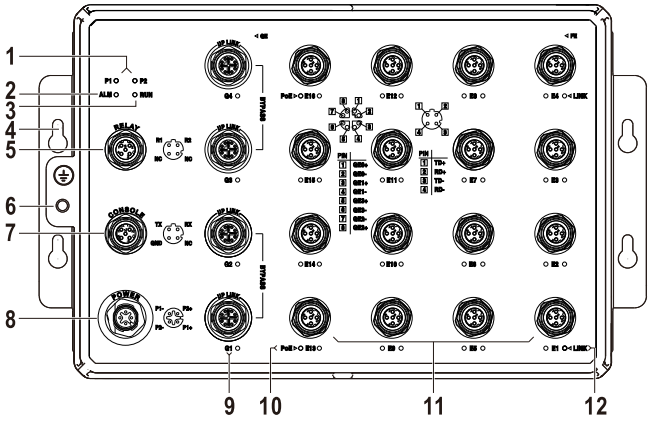
➢ **Model I, IV, V, VI Front View**



Model I



Model IV

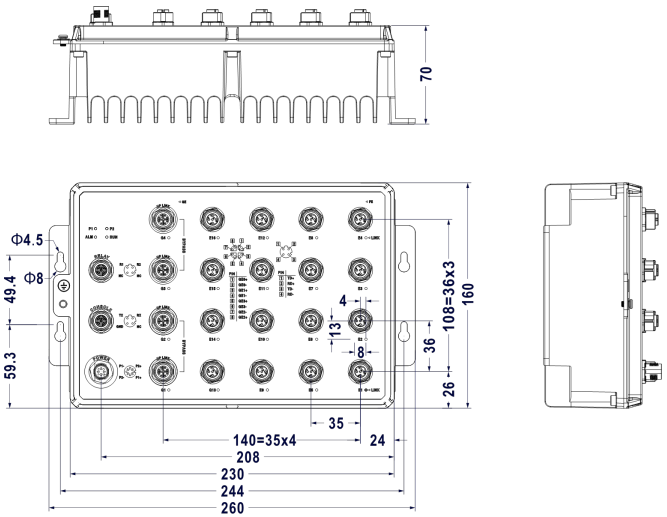


Model V, VI

1. Power supply indicator (P1-P2)
2. Alarm indicator (ALM)
3. Running indicator (RUN)
4. Lugs
5. Relay alarm output interface
6. Grounding screw
7. CONSOLE port
8. Power input interface (P1-P2)
9. Gigabit Bypass M12 interface (Bypass: G1-G2, G3-G4)
10. PoE indicator (E1-E16)
11. 100M PoE M12 interface (E1-E16)
12. Ethernet port indicator (E1-E16, G1-G4)
13. Gigabit Bypass M12 interface (Bypass: G17-G18, G19-G20)
14. PoE indicator (G1-G16)
15. Gigabit PoE M12 interface (G1-G16)
16. Ethernet port indicator (G1-G20)

【Mounting Dimension】

Unit: mm



Notice Before Mounting:

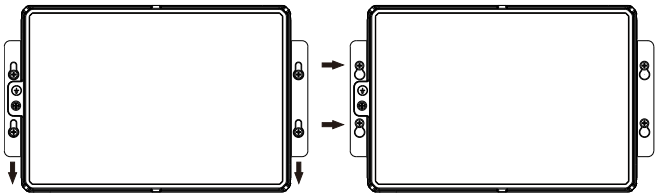
- Don't place or install the device in area near water or moist, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before power on, first confirm the supported power supply specification to avoid over-voltage damaging the device.
- The device surface temperature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

【Wall-mounted Device Mounting】

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 screws on the wall and keep 7mm interspace reserved.

Step 3. Hang the device on 4 screws and slide downward, then tighten the screw. Mounting ends.



【Wall-mounted Device Disassembling】

Step 1. Power off the device.

Step 2. Unscrew the screw on the wall about 7mm.

Step 3. Lift the device upward slightly; take out the device, disassembling ends.

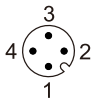
Notice before power on:

- Power ON operation: First insert the power supply terminal block into the device power supply interface, then plug the power supply plug contact and power on.
- Power OFF operation: First, remove the power plug, then remove the wiring section of terminal block. Please pay attention to the above operation sequence.

【Power Supply Connection】

➢ **110VDC power supply**

The Model I, III, IV and V of this series device support



reverse connection protection and redundant power input. The power supply interface adopts M12 A-Coded 4-Pin pin (male) connector. Power supply input range: 110VDC (66~156VDC). The pin definitions of M12 (male) are shown as follows:

Pin No.	1	2	3	4
Pin Definition	V1+	V2+	V1-	V2-

➢ **24VDC power supply**

The Model II, VI of this series device support reverse connection protection and redundant power input. The power supply interface adopts M12 A-Coded 4-Pin pin (male) connector. Model II Power supply input range: 24VDC (9~36VDC), Model VI Power supply input range: 24VDC (18~36VDC). The pin definitions of M12 (male) are shown as follows:

Pin No.	1	2	3	4
Pin Definition	V1+	V2+	V1-	V2-

【Relay Connection】

Provide 1 M12 D-Coded 4-Pin slot (female) that supports 1 relay alarm output. R1 and R2 are a set of normally open contacts of the device alarm relay. They are open circuit in the state of normal non alarm, closed when any alarm information occurs. For example: the relay supports the output of network abnormality alarm. It can be connected to alarm light or alarm buzzer or other switching value collecting devices, which can timely inform operators when the alarm occurs. The pin definitions of relay are shown as follows:

Pin No.	1	2	3	4
Pin Definition	R1	R2	NC	NC

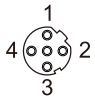
【Console Port Connection】

Provide 1 program debugging port based on RS232 serial port which can conduct device CLI command management after connecting to PC. The interface adopts M12 D-Coded 4-Pin slot (female). The pin definitions of M12 are shown as follows:

Pin No.	1	2	3	4
Pin Definition	TX	RX	NC	GND

【Communication Interface Connection】

➢ **100M M12 Interface**



Provide 10/100Base-T(X) interface, the interface type is M12 D-Coded 4-Pin slot (female). The definitions of M12 pin are as follows:

Pin No.	Pin Definition	Description
1	TX+	Positive send data of 100M Ethernet
2	RX+	Positive receive data of 100M Ethernet
3	TX-	Negative send data of 100M Ethernet
4	RX-	Negative receive data of 100M Ethernet

➢ **Gigabit M12 interface**

This device provides 10/100/1000Base-T(X) interfaces, the interface type is M12 X-Coded 8-Pin slot (female). The definitions of M12 pin are as follows:

Pin No.	Pin Definition	Description
1	D0+ (DA+)	Positive bi-directional data of Gigabit Ethernet group 1
2	D0- (DA-)	Negative bi-directional data of Gigabit Ethernet group 1
3	D1+ (DB+)	Positive bi-directional data of Gigabit Ethernet group 2
4	D1- (DB-)	Negative bi-directional data of Gigabit Ethernet group 2
5	D3+ (DD+)	Positive bi-directional data of Gigabit Ethernet group 4
6	D3- (DD-)	Negative bi-directional data of Gigabit Ethernet group 4
7	D2- (DC-)	Negative bi-directional data of Gigabit Ethernet group 3
8	D2+ (DC+)	Positive bi-directional data of Gigabit Ethernet group 3

【Checking LED Indicator】

The device provides LED indicators to monitor its operating status, which has simplified the overall troubleshooting process. The function of each LED is described in the table below:

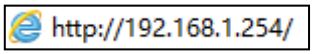
LED	Indicate	Description
P1/P2	ON	P1/2 is connected and running normally
	OFF	P1/2 is disconnected and running abnormally
ALM	ON	Port link has alarm
	OFF	Port link has no alarm
RUN	ON	The device is powering on or the device is abnormal.
	OFF	The device is powered off or the device is abnormal.
	Blinking	Blinking 1 time per second, system is running normally
LINK (E1-E16, G1-G20)	ON	Ethernet port has established a valid network connection
	Blinking	Ethernet port is in an active network status
	OFF	Ethernet port has not established valid network connection
POE (E1-E16, G1-G16)	ON	POE port is powering other PD devices normally
	OFF	POE port is not powering other PD devices

【Logging in to WEB Interface】

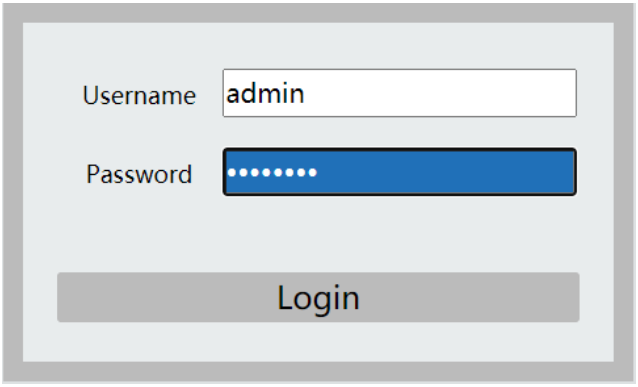
This device supports WEB management and configuration. Computer can access the device via Ethernet interface. The way of logging in to device's configuration interface via IE browser is shown as below:

Step 1. Configure the IP addresses of computer and the device to the same network segment, and the network between them can be mutually accessed.

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



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



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

Note:

- The default IP address of the device is "192.168.1.254".
- The default user name and password of the device are "admin".
- If the username or password is lost, user can restore it to factory settings via 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	
Gigabit PoE M12	10/100/1000Base-T(X), M12 (Female), 8-Pin X-Coded, automatic flow rate control, full/half duplex mode, MDI/MDI-X autotunning; The maximum capacity of a single port is 30W PoE power supply output. Pin 1 and 2 of PoE power supply are positive, while pin 3 and 4 are negative
Gigabit M12 LAN Port	10/100/1000Base-T(X), M12(Female), 8-Pin X-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotunning; support two groups of Bypass
100M PoE M12	10/100base-T(X), M12 (Female), 4-Pin D-Coded, automatic flow control, full/half duplex mode, MDI/MDI-X automatic detection; The single port supports up to 30W PoE power supply output. Pin 1 and 3 of PoE power supply are positive, while pin 2 and 4 are negative
100M M12	10/100Base-T(X), M12(Female), 4-Pin D-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotunning
Console port	CLI command line management port (RS-232), M12(Female), 4-Pin D-Coded
Alarm interface	M12 (Female), 4-Pin D-Coded, support 1 relay alarm output, current load capability is 1A@30VDC or 0.3A@125VAC
Indicator	Power indicator, alarm indicator, running indicator, interface indicator
Switch Property	
Backplane bandwidth	56G
Packet buffer size	12Mbit
MAC Address Table	16K
Power supply	
Model I, Model III, Model IV, Model V	110VDC（66~156VDC） Support reverse connection protection
Model II	24VDC（9~36VDC） Support reverse connection protection
Model VI	24VDC（18~36VDC） Support reverse connection protection
Connection Mode	M12(Male), 4-Pin A-Coded
Power consumption	
Full-load(without PoE)	＜20W
Full-load(with PoE)	＜120W
Working Environment	
Working temperature	-40~75℃
Storage temperature	-40~85℃
Working humidity	5%～95% (no condensation)
Protection grade	IP67(metal shell)

【Disposal of Waste Electrical and Electronic Equipment (WEEE 2012/19/EU)】

(Applicable in the EU-member states)

The crossed-out wheeled bin symbol on the equipment or its packaging indicates that the product, at the end of its service life, shall not be mixed with unsorted municipal waste but should be collected separately, in accordance with local laws and regulations.

A proper separate collection of end-of-life equipment for the subsequent recycling, treatment and environmentally compatible disposal, will help prevent potential damage to the environment and human health, facilitating the reuse, recycling and/or recovery of its component materials.

Private users should contact their vendor or municipal waste management service and ask for disposal information.

Professional users should contact their suppliers and check the terms of their selling agreement.

This product must not be disposed of with other commercial waste.

Users' cooperation in the correct disposal of this product will contribute to saving valuable resources and protecting the environment.