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TNS5500D 12-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 a 12-port layer-2 wall-mounted industrial Ethernet switch. Models are as follows:

Model I. TNS5500D-8T4GT-P24 (8 100M M12 + 4 Gigabit M12 with 2 pairs of Bypass, 24VDC (18~36VDC) power input).

Model II. TNS5500D-8T4GT-P110 (8 100M M12 + 4 Gigabit M12 with 2 pairs of Bypass, 110VDC (66~156VDC) power input).

Model III. TNS5500D-8P4GT-P24 (8 100M PoE M12 + 4 Gigabit M12 with 2 pairs of Bypass, 24VDC (18~36VDC) power input).

Model IV. TNS5500D-8P4GT-P110 (8 100M PoE M12 + 4 Gigabit M12 with 2 pairs of Bypass, 110VDC (66~156VDC) power input).

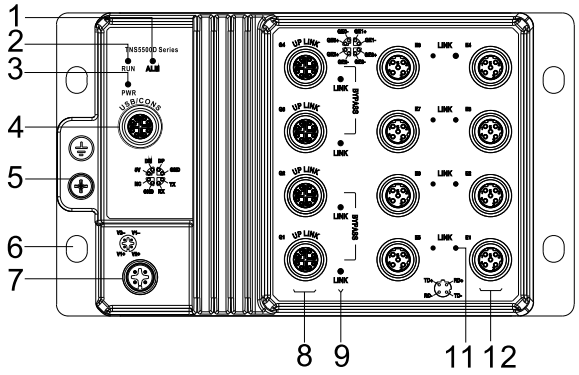
Model V. TNS5500D-8GP4GT-P24 (8 Gigabit PoE M12 + 4 Gigabit M12 with 2 pairs of Bypass, 24VDC (18~36VDC) power input).

Model VI. TNS5500D-8GP4GT-P110 (8 Gigabit PoE M12 + 4 Gigabit M12 with 2 pairs of Bypass, 110VDC (66~156VDC) power input).

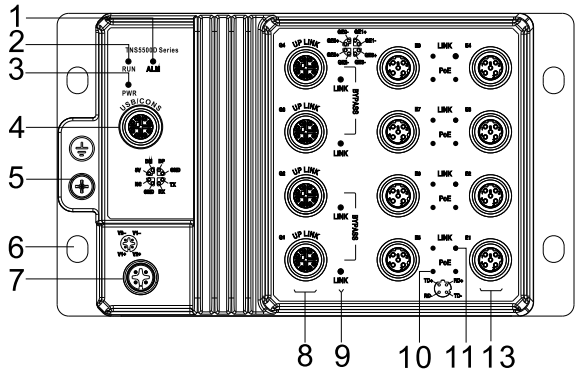
Model VII. TNS5500D-12GT-P110 (12 Gigabit M12 with 2 pairs of Bypass, 110VDC (66~156VDC) power input).

【Panel Design】

➢ **Front view**

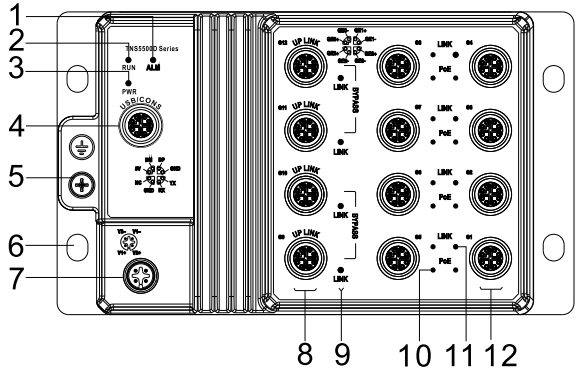


Model I, II

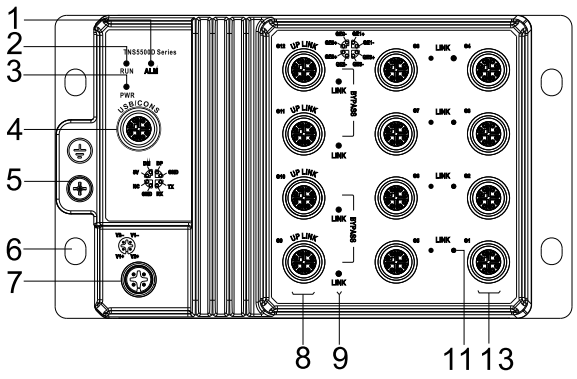


Model III, IV

1. Alarm indicator (ALM)
2. Running indicator (RUN)
3. Power supply indicator PWR
4. USB interface/CONSOLE port
5. Grounding screw (M5)
6. Lugs
7. Power supply input interface
8. Gigabit Bypass M12 interface (Two pairs of Bypass: G1-G2, G3-G4)
9. Gigabit M12 interface indicator (Link: G1-G4)
10. 100M PoE indicator (PoE: E1-E8)
11. 100M M12 interface indicator (Link: E1-E8)
12. 100M M12 interface (E1-E8)
13. 100M PoE M12 interface (E1-E8)



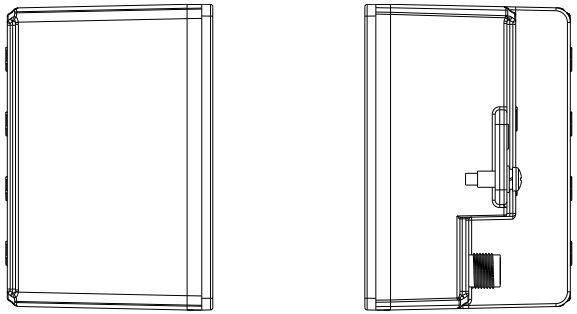
Model V, VI



Model VII

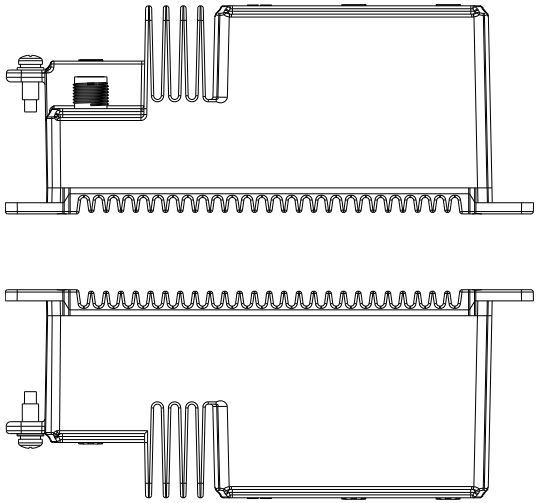
1. Alarm indicator (ALM)
2. Running indicator (RUN)
3. Power supply indicator PWR
4. USB interface/CONSOLE port
5. Grounding screw (M5)
6. Lugs
7. Power supply input interface
8. Gigabit Bypass M12 interface (Two pairs of Bypass: G9-G10, G11-G12)
9. Gigabit M12 interface indicator (Link: G9-G12)
10. Gigabit PoE indicator (PoE: G1-G8)
11. Gigabit M12 interface indicator (Link: G1-G8)
12. Gigabit PoE M12 interface (G1-G8)
13. Gigabit M12 interface (G1-G8)

➢ **Right view and left view**



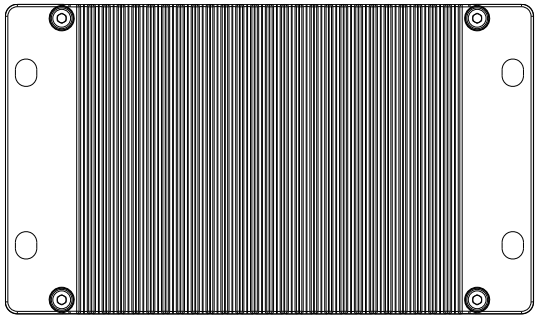
Model I-VII

➢ **Bottom view and top view**



Model I-VII

➢ **Rear view**



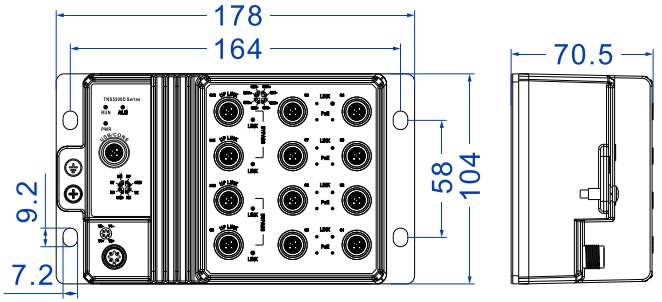
Model I-VI

【Mounting Dimension】

Unit: mm

Notes:

The external dimensions of this series of products are the same.



Notice Before Mounting:

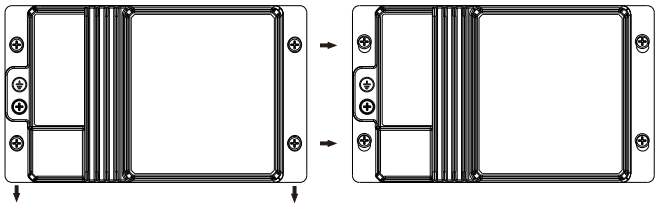
- Don't place or install the device in area near water or moisture, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before powering on the device, check the power specifications supported by the device to prevent device damage due to overvoltage.
- The device 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 Hang the device on the labeled wall, align the bolt to the labeled position, then fix them with a certain gap.

Step 3 Slide the device down to hang on the screw, then tighten the screw, and the installation is finished.



【Wall-mounted Device Disassembling】

Step 1 Power off the device.

Step 2 Hold the device steadily and screw out the bolt in the wall.

Step 3 Take out the device, disassembling ends.

Notice Before Powering on:

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

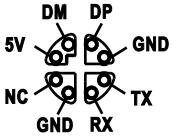


This series device supports single DC power with double input. The power supply interface adopts M12 A-Coded 4-Pin (male) connector. The pin definitions are shown as follows.

- Model I, III, V: 24VDC (18~36VDC) power supply input.
- Model II, IV, VI, VII: 110VDC (66~156VDC) power supply input.

Pin Definition	Pin Description
V2-	Negative input of power V2
V1-	Negative input of power V1
V2+	Positive input of power V2
V1+	Positive input of power V1

【USB/CONSOLE Port Connection】



This series of device provides a M12 X-Coded 8-Pin slot (Female), which supports 1 USB and CONSOLE port 2IN1, and the CONSOLE port can be connected with PC for CLI command management of the device. The pin definitions of USB and CONSOLE port are shown as follows:

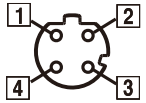
Pin Definition	Pin Description
5V	5V power input
DM	USB data positive signal (D+)
DP	USB data negative signal (D-)
GND	Grounding
Tx	RS-232 serial port transmitting
RX	RS-232 serial port receiving
GND	Grounding
NC (reserved)	Suspended

Connect the CONSOLE port through software. The default configuration is as follows:

Serial Port Connection	Default
Baud rate	115200 bps
Data bit	8 bits
Parity bit	None
Stop bit	1 bit

【Communication Interface Connection】

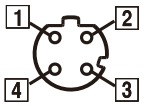
➢ **100M M12 Interface**



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

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

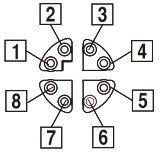
➢ **100M PoE M12 interface**



The Model III, IV device provides 10/100Base-T(X) interface, the interface type is M12 D-Coded 4-Pin slot (female). Single port supports up to 30W PoE power output, PoE power supply Pin 1 and 2 are positive, 3 and 4 are negative, and M12 pin is defined as follows:

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

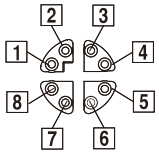
➢ **Gigabit PoE M12 interface**



Model V and VI provide 10/100/1000Base-T(X) interfaces, the interface type is M12 X-Coded 8-Pinslot (female). Single port supports up to 30W PoE power output, PoE power supply Pin 1 and 2 are positive, 3 and 4 are negative, and M12 pin is defined as follows:

Pin No.	Definition	Pin Description
1	GE0+	Positive bi-directional data of Gigabit Ethernet group 1
2	GE0-	Negative bi-directional data of Gigabit Ethernet group 1
3	GE1+	Positive bi-directional data of Gigabit Ethernet group 2
4	GE1-	Negative bi-directional data of Gigabit Ethernet group 2
5	GE3+	Positive bi-directional data of Gigabit Ethernet group 4
6	GE3-	Negative bi-directional data of Gigabit Ethernet group 4
7	GE2-	Negative bi-directional data of Gigabit Ethernet group 3
8	GE2+	Positive bi-directional data of Gigabit Ethernet group 3

➢ **Gigabit M12 interface**



This series of device provides 10/100/1000Base-T(X) interfaces, the interface type is M12 X-Coded 8-Pin slot (female). Support 2 Bypass pairs. The pin definitions of M12 are shown as follows:

Pin No.	Definition	Pin Description
1	GE0+	Positive bi-directional data of Gigabit Ethernet group 1
2	GE0-	Negative bi-directional data of Gigabit Ethernet group 1
3	GE1+	Positive bi-directional data of Gigabit Ethernet group 2
4	GE1-	Negative bi-directional data of Gigabit Ethernet group 2
5	GE3+	Positive bi-directional data of Gigabit Ethernet group 4
6	GE3-	Negative bi-directional data of Gigabit Ethernet group 4
7	GE2-	Negative bi-directional data of Gigabit Ethernet group 3
8	GE2+	Positive bi-directional data of Gigabit Ethernet group 3

【Checking LED Indicator】

The series of devices provide 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:

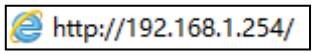
LED	Indicate	Description
PWR	ON	PWR is connected and running normally
	OFF	PWR is disconnected and running abnormally
ALM	ON	Port link has alarm
	OFF	Port link has no alarm
RUN	ON	The device is powering on or the device is abnormal
	OFF	The device is powered off or the device is abnormal.
	Blinking	Blinking 1 time per second, system is running normally
LINK(G1-G12, E1-E8)	ON	Ethernet port has established a valid network connection
	Blinking	Ethernet port is in an active network status
	OFF	Ethernet port has not established a valid network connection
PoE(E1-E8, G1-G8)	ON	POE port is powering other PD devices normally
	OFF	POE port is not powering other PD devices

【Logging in to WEB Interface】

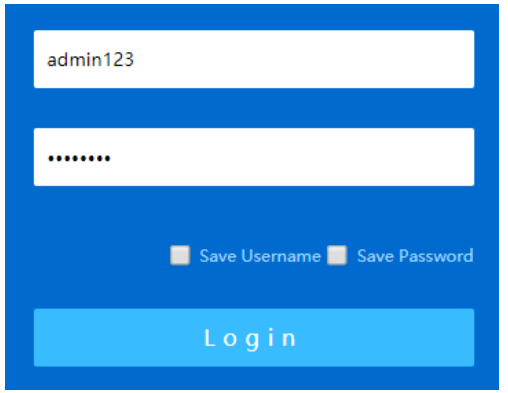
This series of devices supports WEB management and configuration, and computers can access devices through Ethernet interfaces. The way of logging in to device's configuration interface via IE browser is shown as below:

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 username and password of the device are "admin123".
- 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 M12	10/100/1000Base-T(X), M12(Female), 8-Pin X-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotuning; support two groups of Bypass
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
100M M12	10/100Base-T(X), M12(Female), 4-Pin D-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotunning
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 2 of PoE power supply are positive, while pin 3 and 4 are negative
USB/CONSOLE port	USB and CONSOLE port can be integrated. Console port can be connected with PC for CLI command management of device. Adopt M12(Female), 8-pin x-coded. USB occupies 4Pin, and Console port occupies 4Pin.
Indicator	Power indicator, running indicator, alarm indicator, interface indicator, PoE indicator
Switch Property	
Backplane bandwidth	128Gbps
Buffer size	12Mbit
MAC address table	16K
Power Supply	
Model I, III, V	M12(Male), 4-Pin A-Coded 24VDC (18~36VDC), support reverse connection protection
Model II, IV, VI, VII	M12(Male), 4-Pin A-Coded 110VDC (66~156VDC), support reverse connection protection

Power Consumption	
Model I	- No-load at normal temperature: 9.6W@24VDC - Full-load at normal temperature: 11.76W@24VDC - Full-load at high temperature: 11.96W@24VDC
Model II	- No-load at normal temperature: 11.01W@110VDC - Full-load at normal temperature: 13.21W@110VDC - Full-load at high temperature: 13.29W@110VDC
Model III	- No-load at normal temperature: 9.6W@24VDC - Full-load at normal temperature: 11.76W@24VDC - Full-load at high temperature: 11.96W@24VDC
Model IV	- No-load at normal temperature: 12.18W@110VDC - Full-load at normal temperature: 13.21W@110VDC - Full-load at high temperature: 13.29W@110VDC
Model V	- No-load at normal temperature: 9.44W@24VDC - Full-load at normal temperature: 12.19W@24VDC - Full-load at high temperature: 13.05W@24VDC
Model VI	- No-load at normal temperature: 9.87W@110VDC - Full-load at normal temperature: 14.23W@110VDC - Full-load at high temperature: 14.74W@110VDC
Model VII	- No-load at normal temperature: 9.87W@110VDC - Full-load at normal temperature: 14.23W@110VDC - Full-load at high temperature: 14.74W@110VDC
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.