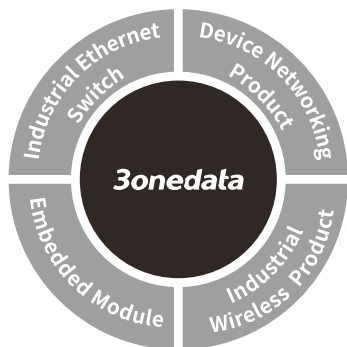


# TNS5800 Series Managed Rack-mounted Industrial Ethernet Switch Quick Installation Guide



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## 【Package Checklist】

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

- |                               |                  |
|-------------------------------|------------------|
| 1. Industrial Ethernet switch | 2. CD            |
| 3. Quick installation guide   | 4. Certification |
| 5. Warranty card              |                  |

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

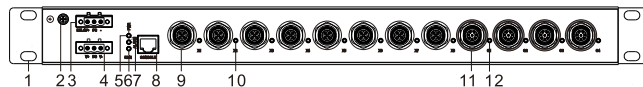
## 【Product Overview】

The series of product is layer 3 managed rack-mounted industrial Ethernet switch designed for rail transit industry. The models are:

- Model I. TNS5800-4GT-8T-P110 (4 Gigabit copper ports + 8 100M copper ports+110VAC/DC (100~240VAC/DC) power supplies)
- Model II. TNS5800-20GT-2P110 (20 Gigabit copper ports +2 110VAC/DC power supplies)
- Model III. TNS5800-20GT-2P24 (20 Gigabit copper ports +2 24VDC power supplies)

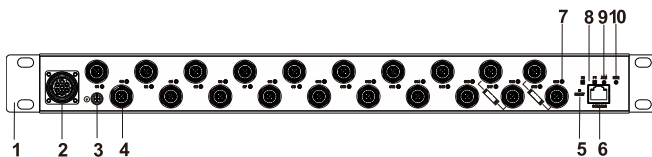
## 【Panel Design】

### ➤ Front view



Model I

1. Hanger
2. Grounding screw
3. Relay alarm output terminal block
4. Power input terminal block
5. Power supply indicator (PWR)
6. Running indicator (RUN)
7. Alarm indicator (ALARM)
8. Console port
9. 100M copper port (M12)
10. 100M copper port connection indicator
11. Gigabit copper port (M12)
12. Gigabit copper port connection indicator



Model II Model III

1. Hanger
2. Power supply port
3. Grounding screw
4. Gigabit copper port (M12, group G17 G18 bypass, group G19 G20 bypass)
5. Restore factory setting button
6. Console port
7. Link/Act indicator

8. Power supply indicator (P1,P2)
9. Alarm indicator (ALM)
10. Running indicator(RUN)

### ➤ Rear view



### ➤ Left view

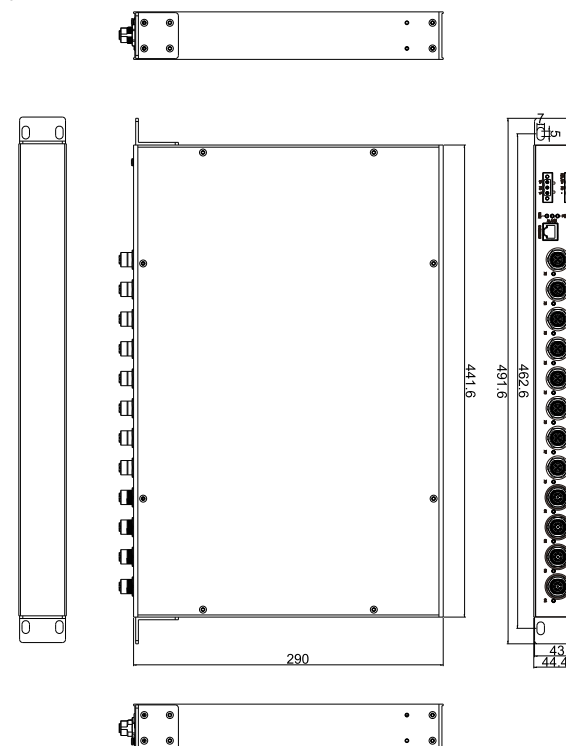


### ➤ Right view



## 【Mounting Dimension】

Unit: mm





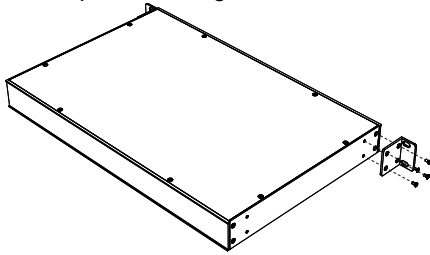
### Attention before mounting:

- 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.

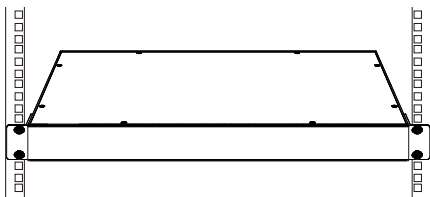
### 【Rack-mounting the Device】

Step 1 Select the device installation location to reserve sufficient size.

Step 2 Adopt screws to install the mounting lugs in the device position as figure below.



Step 3 Place the device in the rack; adopt 4 screws to install the mounting lugs on the left and right side in the rack.



Step 4 Check and confirm the product is firmly installed on the rack, then mounting ends.

### 【Rack-mounting Device Disassembling】

- Step 1 Power off the device.
- Step 2 Unscrew the fixing screw of mounting lug on the rack.

Step 3 Remove the device from the rack, disassembling ends.

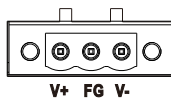


### Note:

- Power ON operation: first connect power line to the connection terminal of device power supply, then power on.
- Power OFF operation: first unpin the power plug, then remove the power line, please note the operation order above.

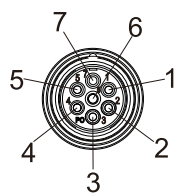
### 【Power Supply Connection】

#### ➤ Model I



Model I provides 3-Pin 5.08mm pitch power supply terminal blocks. Power supply range: 110VAC/DC (100-240VAC/DC).

#### ➤ Model II Model III

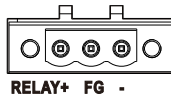


Model II model III provide 7-Pin M23 power supply port. Pin 1 and Pin 2 are power supply P1(Pin 1 is V+,Pin2 is V-); Pin 3 and Pin 4 are power supply P2(Pin 3 is V+,Pin 4 is V-);Pin 6 is ground. Model II power supply range: 110VAC/DC (100~240VAC/DC) ,

Model III power supply range: 24VDC.

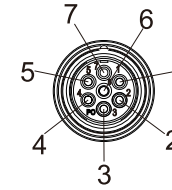
### 【Relay Connection】

#### ➤ Model I



This device provides 3-Pin 5.08mm pitch relay terminal blocks. Relay terminal blocks is a pair of normally open contacts of device alarm relay. They are open circuit in normal non alarm state, closed when any alarm information occurs. Such as: it's closed when power off, and send out alarm. This series switches support 1 channel relay alarm information output, support DC power alarm information or network abnormal alarm output, it can be connected to alerting lamp, alarm buzzer, or other switching value collecting devices for timely warning operating staffs when alarm information occurs.

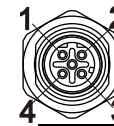
#### ➤ Model II Model III



Model II Model III provide 7-Pin M23 port in which Pin 5 and Pin 7 are relay pins. Relay is a pair of normally open contacts of device alarm relay. They are open circuit in normal non alarm state, closed when any alarm information occurs. Such as: it's closed when power off, and send out alarm. This series switches support 1 channel relay alarm information output, support DC power alarm information or network abnormal alarm output, it can be connected to alerting lamp, alarm buzzer, or other switching value collecting devices for timely warning operating staffs when alarm information occurs.

### 【Communication Interface Connection】

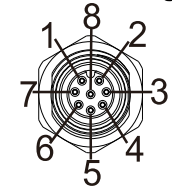
#### ➤ M12 100M Copper Port



Model I provides 8 10/100Base-T(X) ports. The interface type is M12 D-Coded 4-Pin slot (female). The pin definitions of M12 are as follows:

No.	Definition	Description
1	TD+	100M Ethernet transmitted signal Positive
2	TD-	100M Ethernet transmitted signal Negative
3	RD+	100M Ethernet received signal Positive
4	RD-	100M Ethernet received signal Negative

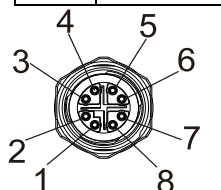
#### ➤ M12 Gigabit Copper Port



Model I provides 4 10/100/1000Base-T(X) interfaces. The interface type is M12 A-Coded 8-Pin slot (female) and its pin definitions are as follows:

No.	Definition	Description
1	D0+ (DA+)	The first group of bi-directional data of Gigabit Ethernet positive

2	D0- (DA-)	The first group of bi-directional data of Gigabit Ethernet negative
3	D1+ (DB+)	The second group of bi-directional data of Gigabit Ethernet positive
4	D1- (DB-)	The second group of bi-directional data of Gigabit Ethernet negative
5	D3+ (DD+)	The fourth group of bi-directional data of Gigabit Ethernet positive
6	D3- (DD-)	The fourth group of bi-directional data of Gigabit Ethernet negative
7	D2- (DC-)	The third group of bi-directional data of Gigabit Ethernet negative
8	D2+ (DC+)	The third group of bi-directional data of Gigabit Ethernet positive



Model II Model III provide 20 10/100/1000Base-T(X) interfaces. The interface type is M12 X-Coded 8-Pin slot (female) and its pin definitions are as follows:

No.	Definition	Description
1	BI + (DA+)	The first group of bi-directional data of Gigabit Ethernet positive
2	BI - (DA-)	The first group of bi-directional data of Gigabit Ethernet negative
3	BI + (DB+)	The second group of bi-directional data of Gigabit Ethernet positive
4	BI - (DB-)	The second group of bi-directional data of Gigabit Ethernet negative
5	BI + (DD+)	The fourth group of bi-directional data of Gigabit Ethernet positive
6	BI - (DD-)	The fourth group of bi-directional data of Gigabit Ethernet negative
7	BI - (DC-)	The third group of bi-directional data of Gigabit Ethernet negative

8	BI + (DC+)	The third group of bi-directional data of Gigabit Ethernet positive
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### 【Console Port Connection】

This device provides 1 program debugging port based on RS232, which could be connected to PC for device CLI command management. The interface adopts RJ45 port. The pin definitions of RJ45 are as follows:

No.	2	3	5
Definition	TXD	RXD	GND

### 【Restoring Factory Settings】

The steps of restoring factory settings of Model II Model III are as follows: press and hold restore factory setting button to power on the device again. Release the button after 3-4s to finish restoring factory settings.

### 【Checking LED Indicator】

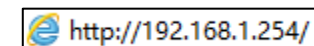
This device provides LED indicators for monitoring the work status of the device, which has simplified the troubleshooting process comprehensively. The function of each LED is described in the table as below:

LED	Status	Description
PWR	ON	PWR is connected and running normally
	OFF	PWR is disconnected and running abnormally.
ALARM	ON	Power supply, port link alarm
	OFF	Power supply, port link without alarm
RUN	ON	The device is powered on or the device is abnormal.
	OFF	The device is powered off or the device is abnormal.
	Blinking	Blink 1 time/s, system is running well.
Link/Act	ON	Ethernet port connection is active.
	Blinking	Data transmitted
	OFF	Ethernet port connection is inactive.

### 【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 "OK" 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 is "admin123".
- If the username or password is lost, user can restore it to factory settings via device DIP switch 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 M12	10/100Base-T(X), M12 (Female), 4-Pin D-Coded, automatic flow control, full/half duplex mode, MDI/MDI-X automatic detection
Gigabit M12	10/100/1000Base-T(X), M12(Female), 8-Pin A-Coded/X-Coded automatic flow control, full/half duplex mode, MDI/MDI-X automatic detection; support Bypass function
Console port	CLI command management port, RJ45
Alarm interface	Model I:3-Pin 5.08mm pitch terminal blocks, Model II,model III:7-Pin female M23 portSupport 1 relay alarm output, the current loading capability is 5A@30VDC or 10A@125VAC
Indicator	Power indicator, run indicator, interface indicator, alarm indicator
Exchange attributes	
Backplane bandwidth	128G
Packet buffer size	12Mbit
MAC table size	16K
Power supply	

Model I	power supply :110VAC/DC (100~240VAC/DC) input terminal: 3-Pin 5.08mm pitch terminal blocks
Model II	power supply: 110VAC/DC (dual) input terminal: 7-Pin female M23 port
Model III	Power supply: 24VDC(dual) Input terminal: 7-Pin female M23 port
Consumption	
Model I	No-load : 14.30W @110VDC Full-load : 14.85W @110VDC
Model II	No-load :15.5W @110VDC Full-load : 17.9W @110VDC
Model III	No-load :13.6W @24VDC Full-load :16.3W @24VDC
Working environment	
Model I	Working temperature : -40~75℃ Storage temperature : -40~75℃ Working humidity : 5%~95%(no condensation) Protection grade : IP40 (metal shell)
Model II Model III	Working temperature : -40~75℃ Storage temperature : -40~85℃ Working humidity : 5%~95%(no condensation) Protection grade :IP40 (metal shell)