



# User Manual

## TNS042/082/162/242 switches

Article		Article no.		
TNS Switches	Gigabit PoE network switches TNS042 / TNS082 / TNS162 / TNS242	308002		
		308003		
		308004		
		308005		
Version	V1.0	Date	2026/04	EN

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## 1 Safety Instructions



**Read these instructions carefully before connecting the unit**

### ATTENTION

- Failure to comply with the specified precautionary measures may cause serious injury to persons or damage to property.
- The assembly, installation, additional electrical wiring, servicing and commissioning may only be performed by suitably qualified persons, technicians or installers in compliance with safety regulations.
- Damage due to improper installation and commissioning, defective connectors on cables or any other incorrect handling will void the warranty.

### CAUTION

- Observe the relevant country-specific standards, regulations and guidelines on the installation and operation of such products.
- Before starting installation or service work disconnect the system from mains.
- Installation or service work should NEVER be undertaken during electrical / thunderstorms.
- Avoid short circuits!
- To ensure electromagnetic compatibility, make sure all connections are tight and that the covers are screwed on securely.
- Take action to prevent static discharge when working on the device!
- Refer to the rating label on the bottom of your product and ensure your power supply complies with this rating.
- DO NOT place the product on uneven or unstable work surfaces. Seek servicing if the casing has been damaged.
- DO NOT mount this equipment higher than 2 meters.



### **To prevent fire, short circuit or shock hazard:**

- Do not expose the unit to rain or moisture.
- Install the unit in a dry location without infiltration or condensation of water.
- Do not expose it to dripping or splashing.
- Do not place objects filled with liquids, such as vases, on the apparatus.
- If any liquid should accidentally fall into the cabinet, disconnect the power plug.

 **To avoid any risk of overheating:**




- Do not place any items such as newspapers, tablecloths, curtains, on the unit that might cover the ventilation holes to prevent overheating.
- Do not place any naked flame sources, such as lit candles, on the apparatus.
- Do not install the product in a dusty place.
- Use the apparatus only in moderate climates (not in tropical climates).
- Respect the minimum and maximum temperature specifications.

 **To avoid any risk of electrical shocks:**

- The mains plug shall remain readily operable.
- Pull out power plug to make the different connections of cables.
- To avoid electrical shock, do not open the housing of the product.
- If the power supply is broken, do not attempt to repair it yourself. Contact a qualified service technician or your retailer.



### Maintenance

-  Only use a dry soft cloth to clean the cabinet.
-  Do not use solvent.
-  For repairing and servicing, refer to qualified personnel.



### Dispose according your local authority's recycling processes

Electronic devices should never be disposed of in the household rubbish. In accordance with directive 2002/96/EC of the European Parliament and the European Council from January 27, 2003 which addresses old electronic and electrical devices, such devices must be disposed of at a designated collection facility. At the end of its service life, please take your device to one of these public collection facilities for proper disposal.

## 2 Introduction

### 2.1 Product description

The TRIAX TNS switch range consists of high-performance Gigabit PoE network switches designed for both professional and residential installations.

Available with 4, 8, 16 or 24 Gigabit PoE ports, the range delivers power and high-speed data over a single Ethernet cable, making it ideal for powering compatible devices such as IP cameras, wireless access points and other PoE-enabled equipment.

Integrated uplink ports allow for flexible and scalable network expansion, while the plug-and-play design ensures fast and straightforward installation with no configuration required.

Featuring a non-blocking Gigabit architecture, robust metal housing, and flexible installation options, TRIAX TNS switches provide a reliable and efficient solution for high-density PoE network infrastructures.





### 2.2 Main features

- Flexible range – 4 models available with 4, 8, 16 or 24 PoE ports, plus 2 or 4 dedicated uplink ports
- True Plug & Play for fast, hassle-free installation
- Single-cable PoE – delivers power and data over one Ethernet cable
- Extended transmission up to 300 m for long-distance deployments
- Built-in VLAN & AI Watchdog for improved security and network stability
- Robust metal housing for reliable performance and long service life

### 2.3 Package contents

- 1 x TNS switch
- 1 x Power Supply cord with UK plug
- 1 x Quick installation guide
- 1 x Mounting brackets screws and hanging ears set (16/24-port)

### 2.4 Available models

Model	TNS042	TNS082	TNS162	TNS242
Art. Number	308002	308003	308004	308005
				
PoE Ports	4	8	16	24
Uplink Ports	2 x RJ45	2 x RJ45	2 x RJ45 2 x SFP Fibre	2 x RJ45 2 x SFP Fibre
Power Supply	65W	120W	300W	300W



300meter



Port Isolation



803.af/at/bt



PoE Watchdog



AUTO Speed Change



Port Priority

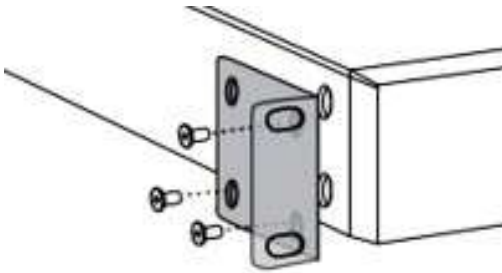
## 2.5 Installation

Preparation before installation:

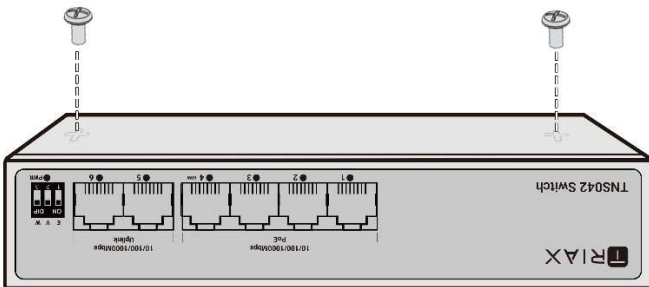
- **Observe instructions given at chapter 1**
- Connect the RJ45 connectors and finally connect the supplied power supply
- Once the device is powered, check that the switch completes its self-check and that the connected port LEDs are working normally (see chapter 3.3).

## 2.6 Installation Methods

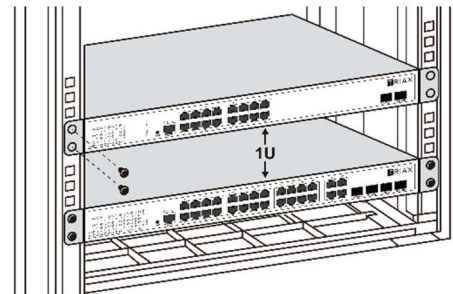
Mounting ear installation



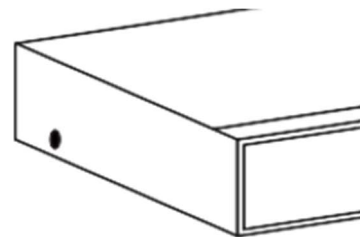
Wall-mount installation



Rack-mount installation



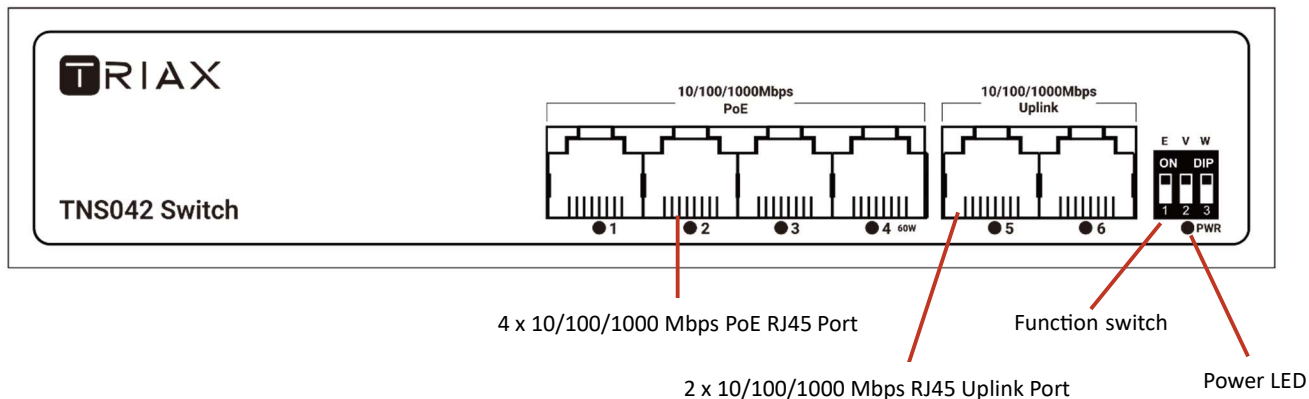
Desktop mount



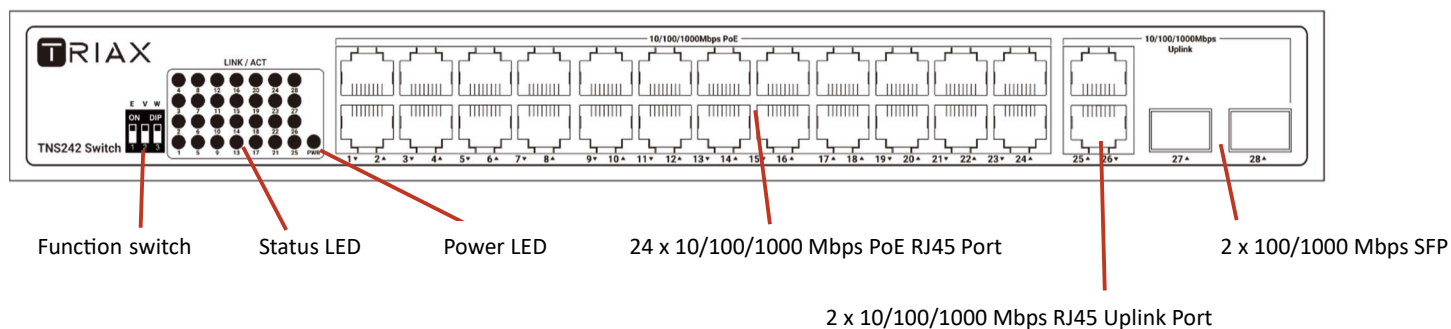
### 3 Interface overview

#### 3.1 Front panel

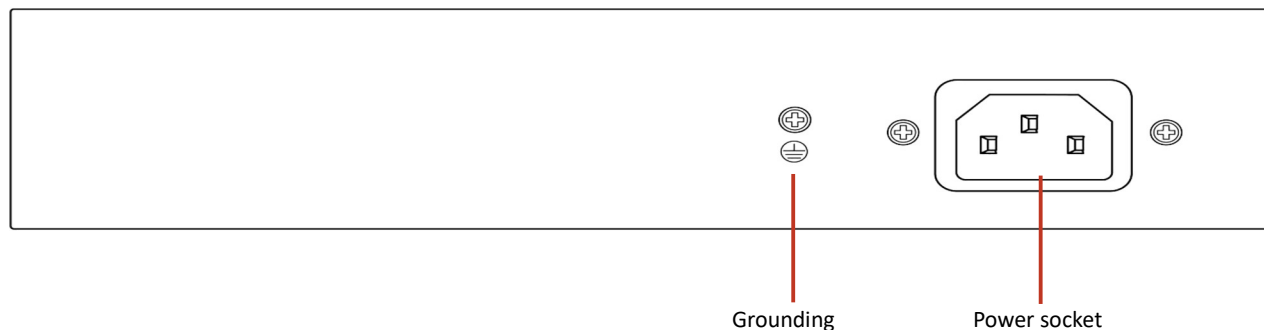
Example TNS042 switch



Example TNS242 switch



#### 3.2 Rear panel



### 3.3 LED

LED	Color	Description
Power	Green	On: Indicates that the TNS switch is receiving power Off: Indicates that no power is supplied to the TNS switch
Network	Green	Blinking: Data activity detected On: Network link is active Off: Network link is inactive

### 3.4 Unique Features

Below features are selected via a DIP switch located on the front of the device:

- **300 m Long-Range Transmission (AI Extend Mode):** Designed for long-distance deployments, the AI Extend function allows a single port to transmit data up to 300 meters, with automatic speed adjustment (up to 10 Mbps). All other ports continue to operate at 1000 Mbps over distances up to 100 meters, ensuring optimal overall performance.
- **VLAN Support for Network Isolation:** Built-in VLAN functionality enables logical network segmentation between departments, effectively isolating broadcast domains. This prevents issues such as virus spread from infected devices, enhances network stability, and significantly improves security and management efficiency.
- **AI Watchdog for Automatic Recovery:** The AI Watchdog continuously monitors device operating status. In the event of a port malfunction, it automatically attempts connection recovery and restarts abnormal ports or devices, reducing maintenance effort, improving system reliability, and minimising the need for manual intervention.

#### DIP Switch



Switch position	Function	Description when set to ON
E - Extend	PoE + Extend 300m	Single-port long-range mode enables up to 300m transmission with automatic speed adjustment (max. 10 Mbps), while PoE ports maintain 100/1000 Mbps performance within 100m
V - Vlan	VLAN	PoE port isolation and VLAN mode enabled
W - Watchdog	Watchdog	PoE network self-healing mode enabled (PoE Watchdog)

- **Intelligent Port Priority Power Management:** When power resources are limited, the system intelligently allocates power based on port priority, ensuring uninterrupted power delivery to critical equipment while maintaining overall network stability.

Ports Priority / Power Management function		
Power Priority Mode	Port Priority by default	Smart PoE port cutoff when the PoE budget is exceeded

## 4 Technical Specifications

Model	TNS042	TNS082	TNS162	TNS242
<b>Art. Number</b>	<b>308002</b>	<b>308003</b>	<b>308004</b>	<b>308005</b>
EAN	5061038089103	5061038089110	5061038089127	5061038089134
PoE Ports	4*10/100/1000Mbps	8*10/100/1000Mbps	16*10/100/1000Mbps	24*10/100/1000Mbps
Uplink Ports	2*10/100/1000Mbps RJ45	2*10/100/1000Mbps RJ45	2*10/100/1000Mbps RJ45 2*100/1000Mbps SFP Fibre	2*10/100/1000Mbps RJ45 2*100/1000Mbps SFP Fibre
Switching Capacity	12Gbps	20Gbps	40Gbps	56Gbps
Forwarding Rate	8.9Mpps	14.88Mpps	29.76Mpps	41.67Mpps
MAC Address Table	2K	4K	8K	8K
Buffer Memory	768K	4M	4M	4M
Power Supply	65W 100-240VAC 50-60Hz	120W 100-240VAC 50-60Hz	300W 100-240VAC 50-60Hz	300W 100-240VAC 50-60Hz
Power Consumption	Standby: <2W Full load: <65W	Standby: <2W Full load: <120W	Standby: <5W Full load: <300W	Standby: <5W Full load: <300W
LED Indicators	Power: PWR (Green) Network: 1-4 (Link/Act)/(Green) 5-6 (Link/Act)/(Green)	Power: PWR (Green) Network: 1-8 (Link/Act)/(Green) 9-10 (Link/Act)/(Green)	Power: PWR (Green) Network: 1-16 (Link/Act)/(Green) 17-20 (Link/Act)/(Green)	Power: PWR (Green) Network: 1-24 (Link/Act)/(Green) 25-28 (Link/Act)/(Green)
Dimensions	195 x 130 x 40mm	195 x 145 x 44mm	290 x 181 x 44mm	330 x 215 x 44mm
Net Weight	<0.8kg	<0.8kg	<1.6kg	<2.5kg
PoE Standard	Ports 1-4 support: @IEEE802.3af/at Port 4 support: @IEEE 802.3af/at/bt (Max. 60W/port)	Ports 1-8 support: @IEEE802.3af/at Ports 7-8 support: @IEEE 802.3af/at/bt (Max. 60W/port)	All PoE Ports support @IEEE802.3af/at (Max 30W/port).	
Network Protocol	IEEE802.3 10BASE-T IEEE802.3i 10Base-T IEEE802.3x IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T		IEEE802.3 10BASE-T IEEE802.3i 10Base-T IEEE802.3x IEEE802.3u 100Base-T IEEE802.3ab 1000Base-T IEEE802.3z 1000base-X IEEE802.3u 100Base-FX	
EVD Function	With the Dial code switch, support ports priority by default. E-1: AI Extend 300 meters transmission and auto speed change of single port (limit 10Mbps), other ports maintain 1000M within 100 meters V-2: When On each Port support port Isolation & VLAN D-3: When On, each Port support AI-PoE Network self-healing mode (PoE Watchdog function)			
Ethernet Ports Feature	10/100/1000Base-T(X) automatic detection, full/half Duplex MDI/MDI-X adaptive			
Fiber Port Feature	Gigabit SFP Ports (Fiber module is not included, to be ordered separately), module options include single/multi-mode, single/dual fibre, LC			
Forwarding Mode	Store and forward			
Twisted Pair Transmission	10BASE-T: Cat5 UTP (≤300 meter) 100BASE-TX: Cat5 or later UTP (≤100 meter) 1000BASE-T: Cat5 or later UTP (≤100 meter)			
Power Supply Pin	Default 1/2(+), 3/6(-)			
Power Supply	Built-in power supply AC100~240V 50-60Hz/65W	Built-in power supply AC100~240V 50-60Hz/120W	Built-in power supply AC100~240V 50-60Hz/300W	Built-in power supply AC100~240V 50-60Hz/300W
Temperature & humidity Storage Operation	-20~+55°C; 5%~90% RH noncondensing -40~+75°C; 5%~95% RH noncondensing			
Installation Method	desktop type, wall mount. TNS162 and TNS242 support 1U Rack Mount			
Protection	IEC61000-4-2 (ESD): ±8kV contact discharge, ±15kV air discharge IEC61000-4-5 (Lightning protection/Surge): Power: CM±4kV/DM±2kV; Port: ±4kV			
Protection Level	IP30			

## 5 EU Declaration of Conformity

The product Declaration of Conformity can be downloaded from the product page at [www.com](http://www.com)

## 6 Conditions of warranty

TRIAX UK warrants the product as being free from defects in material and workmanship for a period of 24 months starting from the date of production indicated on it. See note below.

If during this period of warranty, the product proves defective, under normal use, due to defective materials or workmanship, TRIAX UK, at its sole option, will repair or replace the product. Return the product to your local dealer for reparation.

**THE WARRANTY IS APPLIED ONLY FOR DEFECTS IN MATERIAL AND WORKMANSHIP AND DOES NOT COVER DAMAGE RESULTING FROM:**

- Misuse or use of the product outside of its specifications,
- Installation or use in a manner inconsistent with the technical or safety standards in force in the country where the product is used,
- Use of non-suitable accessories (power supply, adapters...),
- Installation in a defective system,
- External cause beyond the control of TRIAX UK such as drop, accidents, lightning, fire, ...

**THE WARRANTY IS NOT APPLIED IF**

- Production date or serial number on the product is illegible, altered, deleted or removed.
- The product has been opened or repaired by a non-authorized person.

**NOTE**

Date of production can be found in the product’s serial number code. Each device has a unique 18 digits serial number, the format is “<item-number><HW-version><production-year-week><consecutive-number>”, Example: 308003012026150001. 308003 = TNS082 switch, 01 = hardware version, year 2026 week 15, product No.01 of this batch.



308002



308003



308004



308005

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