**Industrial L2+ Managed TSN Ethernet Switch**

**Industrial L2+ Managed TSN Media Converter**

**TSN-5225-4T2S/TSN-5225-4T**

**TSN-900-2T2S**

**Quick Installation Guide**

# Table of Contents

# 1. Package Contents

Thank you for purchasing PLANET L2+ Industrial Managed TSN Switch/Media Converter, TSN-5225-4T2S, TSN-5225-4T or TSN-900-2T2S. The number of the ports of these models is as follows:

| Device | 10/100/1000T RJ45 Ports | 1G/2.5G SFP Slots |
|---|---|---|
| Ethernet Switch | | |
| TSN-5225-4T2S | 4 | 2 |
| TSN-5225-4T | 4 | - |
| Media Converter | | |
| TSN-900-2T2S | 2 | 2 |

**"Industrial Managed TSN Device"** mentioned in this Quick Installation Guide refers to the above models.

Open the box of the Industrial **Managed TSN Device** and carefully unpack it. The box should contain the following items:

| Device | The Industrial Managed TSN Device | Quick Installation Guide Sheet | Wall Mounting Kit | DB9 to RJ45, RS232 Console Cable | RJ45 Dust Cap | SFP Dust Cap |
|---|---|---|---|---|---|---|
| TSN-5225-4T2S | ■ | ■ | ■ | ■ | 5 | 2 |
| TSN-5225-4T | ■ | ■ | ■ | ■ | 5 | - |
| TSN-900-2T2S | ■ | ■ | ■ | ■ | 3 | 2 |

If any of these are missing or damaged, please contact your dealer immediately. If possible, retain the carton including the original packing materials to enable you to repack the product in case there is a need to return it to us for repair.

## *2. Requirements*

The Industrial Managed TSN Device provides remote login interface for management purposes. The following equipment is necessary for further management:

● **Workstations** running Windows 7/8/10/11, macOS 10.12 or later, Linux Kernel 2.6.18 or later, or other modern operating systems that are compatible with TCP/IP Protocols.

● Workstations are installed with Ethernet NIC (Network Interface Card).

● **Serial Port Connection** (Terminal)

> ➢ The above Workstations come with **COM Port** (DB9) or USB-to-RS232 converter.

> ➢ The above Workstations have been installed with **terminal emulator**, such as putty or Tera Term.

> ➢ **Serial cable** -- One end is attached to the RS232 serial port, while the other end to the **console port** of the Industrial Managed TSN Device.

● **Ethernet Port Connection**

> ➢ **Network cables** -- Use standard network (UTP) cables with RJ45 connectors.

> ➢ The above PC is installed with **Web browser**.

| | |
|---|---|
| Note | It is recommended to use Google Chrome, Microsoft Edge or Firefox to access the Industrial Managed TSN Device. If the Web interface of the Industrial Managed TSN Device is not accessible, please turn off the anti-virus software or firewall and then try it again. |

# 3. Wiring the Power Inputs

The Upper Panel of the **Industrial Managed TSN Device** indicates an inlet power socket and consists of one green terminal block connector within 6 contacts. Please follow the steps below to insert the power wire.

1. Insert positive/negative DC power wires into Contacts 1 and 2 for Power 1, or Contacts 5 and 6 for Power 2.

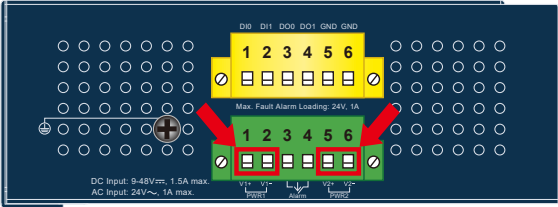■ **TSN-5225-4T2S/TSN-5225-4T/TSN-900-2T2S: DC 9-48V, AC 24V**



**Figure 3-1:** TSN-5225-4T2S/TSN-5225-4T/TSN-900-2T2S Upper Panel

2. Tighten the wire-clamp screws for preventing the wires from loosening.
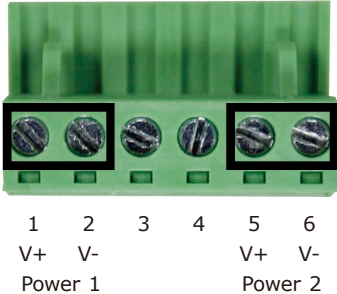


| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| V+ | V- | | | V+ | V- |
| Power 1 | | | | Power 2 | |

**Figure 3-2:** Power 1 & 2 Pins of Terminal Block Connector

| Note | 1. The wire gauge for the terminal block should be in the range from 12 to 24 AWG. |
|---|---|
| | 2. Please check the AWG Ampere specification before connecting PLANET Industrial Managed TSN Device. |

## 3.1 Grounding the Device

Users **MUST** complete grounding wired with the Device; otherwise, a sudden lightning could cause fatal damage to the Device.
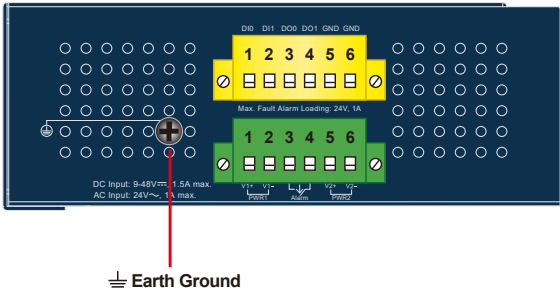


**≡ Earth Ground**

**Figure 3-3:** TSN-5225-4T2S/TSN-5225-4T/TSN-900-2T2S Earth Ground

| | |
|---|---|
| **Note** | EMD (Lightning) damage is not covered under warranty. |

# *4. Terminal Setup*

To configure the system, connect a serial cable to a **COM port** on a PC or notebook computer and to RJ45 type serial (console) port of the Industrial Managed TSN Device.
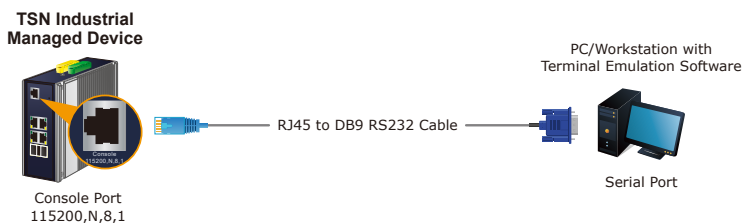


**Figure 4-1:** TSN Industrial Managed Device Console Connectivity

A terminal program is required to make the software connected to the Industrial Managed TSN Device.

1. Run terminal program on the OS.

2. When the following screen appears, make sure that the COM port should be configured as:

◆ Baud: 115200

◆ Parity: None

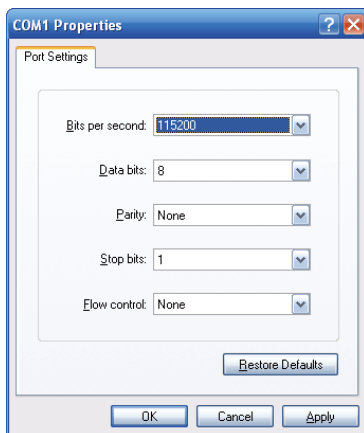◆ Data bits: 8

◆ Stop bits: 1

◆ Flow control: None



**Figure 4-2:** COM Port Configuration

## 4.1 Logging on to the Console

Once the terminal has been connected to the Device, power on the Industrial Managed TSN Device and the terminal will display "running testing procedures".

Then, the following message asks to log in user name and password. The factory default user name and password are shown as follows.

Note

The following console screen is based on the TSN-5225-4T. The display of the other TSN Device is the same as that of the TSN-5225-4T.

User Name: **admin**
Password: **sw + the last 6 characters of the MAC ID in lowercase**
(For TSN-5225-4T2S / TSN-5225-4T)
Password: **mc + the last 6 characters of the MAC ID in lowercase**
(For TSN-900-2T2S)

Find the MAC ID on your device label. The default password is "sw" or "mc" followed by the last six lowercase characters of the MAC ID.
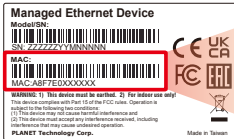


MAC ID: A8F7E0XXXXXX
Default Password: swxxxxxx
("x" means the last 6 digits of the MAC address. All characters should be in lowercase.)

**Figure 4-3:** TSN-5225-4T MAC ID Label

Enter the default username and password, then set a new password according to the rule-based prompt and confirm it. Upon success, press any key to return to the login prompt. Log in with "admin" and the "new password" to access the CLI.



**Figure 4-4:** Create a New Password and Login Again

The user can now enter commands to manage the Industrial Managed TSN Device. For a detailed description of the commands, please refer to the following chapters.

| Note | 1. For security reason, **please change and memorize the new password after this first setup**.<br>2. Only accept command in **lowercase letter** under console interface. |
|------|---|

## 4.2 Configuring IP Address via Console

The Industrial Managed TSN Device is shipped with default IP address shown below:

IP Address: **192.168.0.100**
Subnet Mask: **255.255.255.0**

To check the current IP address or modify a new IP address for the Device, please use the procedure as follows:

■ **Display of the Current IP Address**

1. At the **"#"** prompt, enter **"show ip interface brief"**.

   **TSN-5225-4T # show ip interface brief**

2. The screen displays the current IP address shown in **Figure 4-5**.



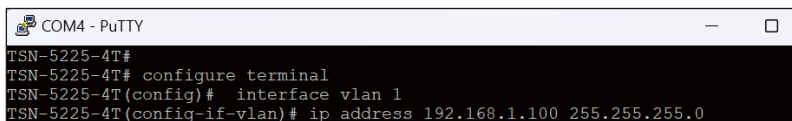**Figure 4-5:** IP Information Screen

**■ Configuration of the IP Address**

3. At the "#" prompt, enter the following command and press **<Enter>** as shown in **Figure 4-6**.

> TSN-5225-4T# **configure terminal**
> TSN-5225-4T (config)# **interface vlan 1**
> TSN-5225-4T (config-if-vlan)# **ip address 192.168.1.100 255.255.255.0**

The previous command would apply the following settings for the Industrial Managed TSN Device.

> IP Address: **192.168.1.100**
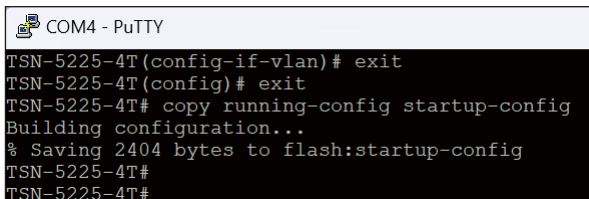> Subnet Mask: **255.255.255.0**



**Figure 4-6:** Configuring IP Address Screen

4. Repeat step 1 to check if the IP address has changed.

## 4.3 Storing Current Device Configuration

1. At the **"#"** prompt, enter the following command and press **<Enter>**.

> # **copy running-config startup-config**



**Figure 4-7:** Saving Current Configuration Command Screen

If the IP is successfully configured, the Industrial Managed TSN Device will apply the new IP address setting immediately. You can access the Web interface of the Industrial Managed TSN Device through the new IP address.

> **Note**
>
> If you are not familiar with the console command or the related parameter, enter **"help"** anytime in console to get the help description.

## 5. Starting Web Management

The following shows how to start up the **Web Management** of the Industrial Managed TSN Device. Note the Industrial Managed TSN Device is configured through an Ethernet connection. Please make sure the manager PC must be set to the same **IP subnet address**.

For example, the default IP address of the Industrial Managed TSN Device is **192.168.0.100**, then the manager PC should be set to **192.168.0.x** (where x is a number between 1 and 254, except 100), and the default subnet mask is 255.255.255.0.
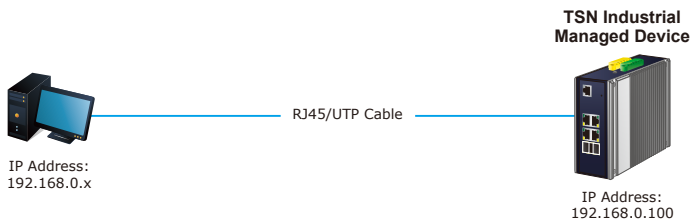


**TSN Industrial Managed Device**

RJ45/UTP Cable

IP Address: 192.168.0.x

IP Address: 192.168.0.100

**Figure 5-1:** IP Management Diagram

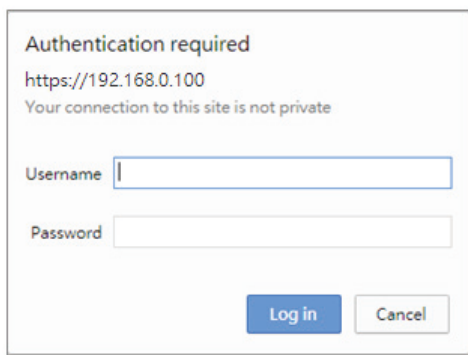## 5.1 Logging in to the Industrial Managed TSN Device

1. Use Chrome 98.0.xxx or above for Web browser and enter IP address ***https://192.168.0.100*** (the factory-default IP address) to access the Web interface.

2. When the following dialog box in **Figure 5-2** appears, please enter the default user name and password. Refer to **Figure 4-3** to determine your initial login password.

Default IP Address: **192.168.0.100**

Default User Name: **admin**

Default Password: **sw + the last 6 characters of the MAC ID in lowercase** (For TSN-5225-4T2S/TSN-5225-4T)

Default Password: **mc + the last 6 characters of the MAC ID in lowercase** (For TSN-900-2T2S)

Authentication required

https://192.168.0.100

Your connection to this site is not private

Username

Password

Log in    Cancel

**Figure 5-2:** Login Screen

Note: The following web screen is based on the TSN-5225-4T. The display of the other TSN Device is the same as that of the TSN-5225-4T.

After logging in, you will be prompted to change the initial password to a permanent one.

**Change Password**



**Figure 5-3:** Create a New Password

3. Once the password change is complete, re-enter the web interface using your new password and the main screen appears as **Figure 5-4** shows.
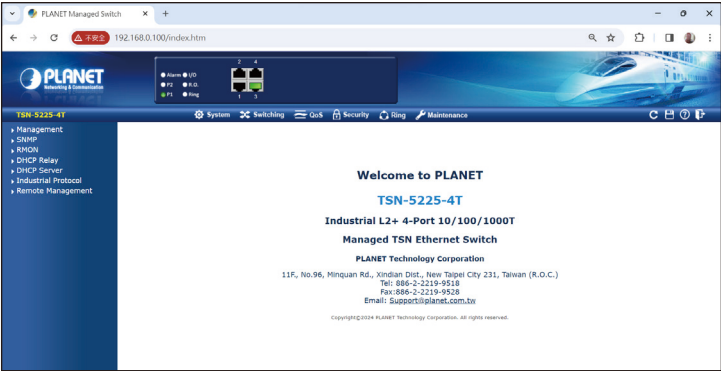


**Figure 5-4:** Web Main Screen of Industrial Managed TSN Device

The Device Menu on the top of the Web page lets you access all the commands and statistics the Industrial Managed TSN Device provides. The Device Menu always contains one or more buttons, such as **"System"**, **"Switching"**, **"QoS"**, **"Security"**, **"Ring"** and **"Maintenance"**.



**Figure 5-5:** Device Menu
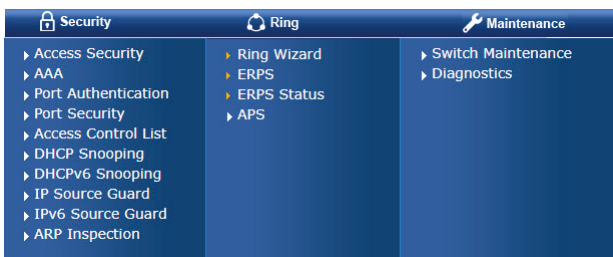
**Figure 5-6:** Device Sub-menu



**Figure 5-7:** Device Sub-menu

Now, you can use the Web management interface to continue the Device management. Please refer to the user manual for more.

| | |
|---|---|
| Note | If you are not familiar with Device functions or the related parameter, press **"Help icon"** anytime on the Web page to get the help description. |

## 5.2 Saving Configuration via Web

To save all applied changes and set the current configuration as a startup configuration, the startup-configuration file will be loaded automatically across a system reboot.

1. Click the **Save** icon on the top Device Menu bar.



**Figure 5-8:** Save icon

2. Press the **"Save Configuration"** button.



**Figure 5-9:** Save Configuration Button

3. Or the other way to save the setting is to Click **Maintenance, Save Startup Config**.
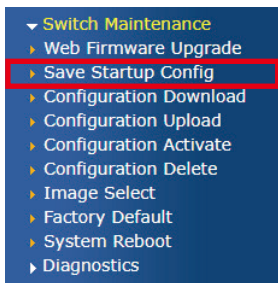


**Figure 5-10:** Save Startup Config Function

# *6.*Recovering Back to Default Configuration

■ **IP address has been changed or admin password has been forgotten –**

To reset the IP address to the default IP address **"192.168.0.100"** and the user password to factory default mode, press the hardware-based **reset button** on the front panel for about **10 seconds**. After the Device is rebooted, you can log in the management Web interface within the same subnet of 192.168.0.xx. Be noted that all the previous setups will be disappeared after the factory default reset is made.
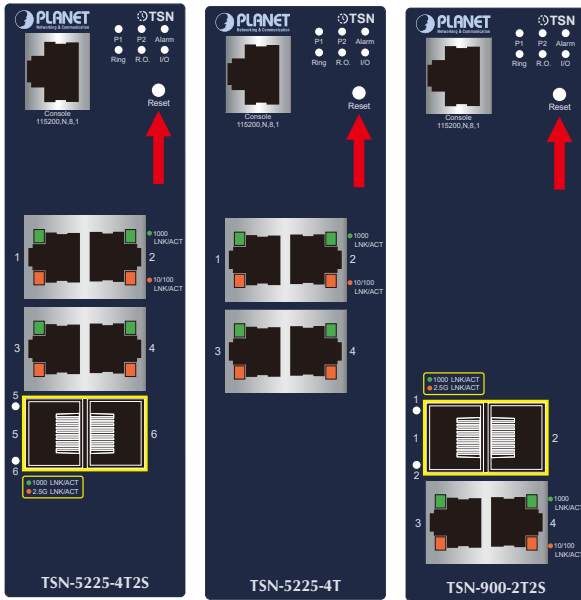


**Figure 6-1:** TSN-5225-4T2S/TSN-5225-4T/TSN-900-2T2S Reset Button

## *7. Customer Support*

Thank you for purchasing PLANET products. You can browse our online FAQ resource on PLANET web site first to check if it could solve your issue. If you need more support information, please contact PLANET switch support team.

PLANET online FAQs:
https://www.planet.com.tw/en/support/faq

Switch support team mail address:
support@planet.com.tw

TSN-5225-4T2S/TSN-5225-4T/TSN-900-2T2S User's Manual:
https://www.planet.com.tw/en/support/downloads?&method=keyword&keyword
=TSN&view=3#list



(Please select your device model name from the Product Model drop-down menu)