Tenda TEM2010X

Tenda TEM2010X 8-Port 2.5G Ethernet Switch User Manual

Model: TEM2010X

1. Introduction

The Tenda TEM2010X is an unmanaged 8-port 2.5G Ethernet switch designed to enhance network performance for various applications, including 2.5G WiFi 6 APs, NAS devices, gaming computers, and 4K/8K video streaming. It features eight 2.5 Gigabit RJ45 ports and two 10 Gigabit SFP+ slots, offering flexible connectivity and high-speed data transfer capabilities. This device supports multiple operating modes, including Standard, VLAN, and Static Link Aggregation, to adapt to different network requirements. Its fanless metal design ensures quiet operation and efficient heat dissipation.

2. Package Contents

Verify that all items are present in your package:

- Tenda TEM2010X 8-Port 2.5G Ethernet Switch
- Power Adapter
- User Manual (this document)

3. Product Overview

The TEM2010X switch features a robust metal casing and a clear layout for easy identification of ports and indicators.

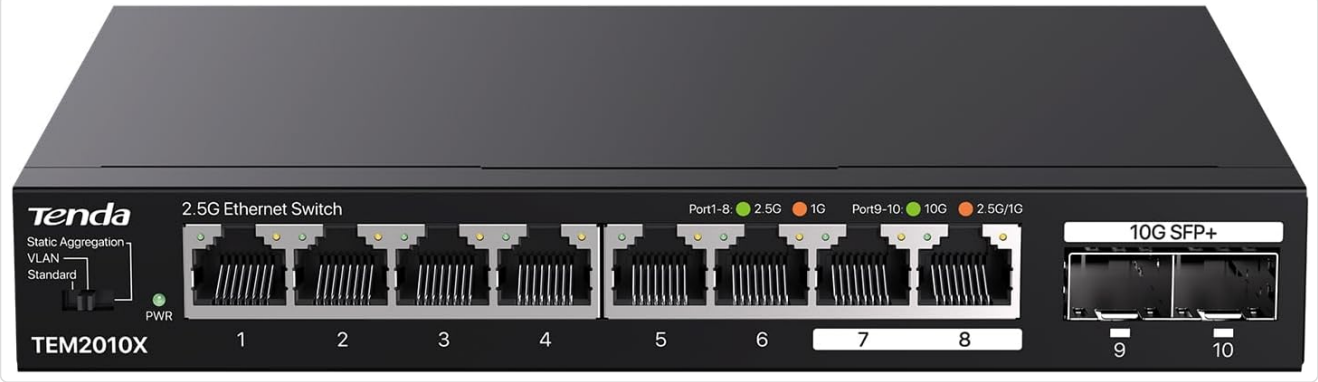

Figure 3.1: Front panel of the Tenda TEM2010X switch, showing 8 RJ45 ports, 2 SFP+ slots, a power LED, and a mode toggle switch.

Front Panel

- **PWR LED:** Indicates power status. Green for power on.
- **Mode Toggle Switch:** Selects between Standard, VLAN, and Static Aggregation operating modes.
- **Ports 1-8 (2.5G RJ45):** Eight 2.5 Gigabit Ethernet ports for connecting network devices. Each port has an indicator LED for link/activity status.
- **Ports 9-10 (10G SFP+):** Two 10 Gigabit SFP+ slots for fiber optic connections, supporting 1G, 2.5G, and 10G modules (modules not included). Each slot has an indicator LED for link/activity status.

Rear Panel

- **Power Input:** Connects to the included power adapter.
- **Grounding Terminal:** For optional grounding connection to protect against electrical surges.

4. Setup Instructions

The TEM2010X switch is designed for plug-and-play operation, requiring no software configuration for basic functionality.

1. **Placement:** Place the switch on a stable, flat surface or mount it to a wall using appropriate hardware (not included). Ensure adequate ventilation around the device.
2. **Power Connection:** Connect the power adapter to the switch's power input port and then plug the adapter into a standard electrical outlet. The PWR LED on the front panel should illuminate green.
3. **Network Connections:**
    - Connect your router or modem to any of the 2.5G RJ45 ports (Ports 1-8) using an Ethernet cable.
    - Connect your network devices (e.g., computers, NAS, gaming consoles, WiFi APs) to the remaining 2.5G RJ45 ports.
    - For 10G fiber optic connections, insert compatible SFP+ modules (not included) into Ports 9-10, then connect fiber optic cables to these modules.
4. **Verify Connection:** Once devices are connected, the corresponding port LEDs on the switch should light up, indicating an active link. A blinking LED signifies data activity.

Figure 4.1: Illustrates how the TEM2010X switch expands network connectivity for devices such as 4K/8K video systems, laptops with 2.5G adapters, WiFi 5/6/7 routers, WiFi 6 APs, 2.5G gaming PCs, and 2.5G NAS/servers.

Figure 4.2: Depicts the two 10Gbps SFP+ slots, highlighting their support for 1G, 2.5G, and 10G optical fiber modules to meet diverse transmission speed requirements. Modules are sold separately.

5. Operating Modes

The TEM2010X switch offers three distinct operating modes, selectable via the toggle switch on the front panel. These modes cater to different network isolation and performance needs.

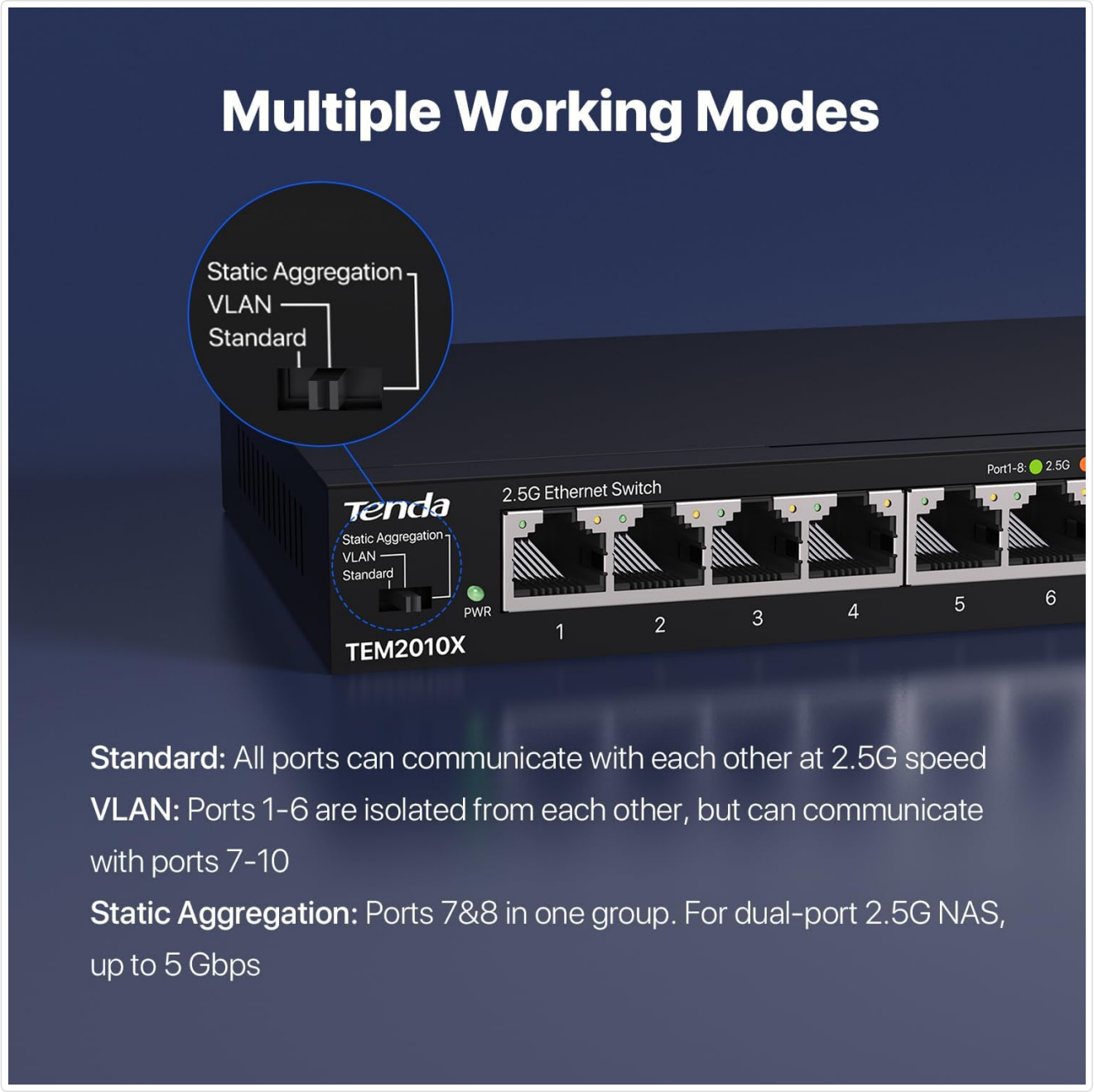

Figure 5.1: Overview of the three selectable operating modes: Standard, VLAN, and Static Aggregation.

- **Standard Mode:** This is the default mode. All ports (1-10) can communicate with each other at their respective speeds (2.5G for RJ45, up to 10G for SFP+). The switch functions as a standard unmanaged switch, allowing full connectivity between all connected devices.
- **VLAN Mode:** In this mode, ports 1-6 are isolated from each other, preventing direct communication between them. However, all isolated ports (1-6) can communicate with ports 7-10 (RJ45 ports 7 and 8, and SFP+ ports 9 and 10). This mode helps to isolate DHCP broadcast domains and reduce broadcast storms, enhancing network security and efficiency for specific segments.
- **Static Aggregation Mode:** This mode groups ports 7 and 8 together to form a single logical link, providing increased bandwidth and redundancy. This is particularly useful for dual-port 2.5G NAS devices, allowing for a combined throughput of up to 5 Gbps.

6. Maintenance

The Tenda TEM2010X switch is designed for reliable, low-maintenance operation.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the switch. Do not use liquid or aerosol cleaners.

- **Ventilation:** Ensure that the ventilation openings on the sides of the switch are not blocked. The fanless metal design relies on natural convection for heat dissipation.
- **Environmental Conditions:** Operate the switch within the specified temperature range of 0°C to 40°C (32°F to 104°F) and humidity range of 10% to 90% non-condensing.
- **Power Cycle:** If the switch experiences unexpected behavior, try disconnecting and reconnecting the power adapter to restart the device.

Figure 6.1: Highlights key features contributing to the switch's reliability: fanless quiet operation, an operating temperature range of 32°F-104°F, a durable metal case, and effective heat dissipation.

Figure 6.2: Illustrates the energy-efficient technology integrated into the TEM2010X, designed to expand network capacity with reduced power consumption.

7. Troubleshooting

If you encounter issues with your Tenda TEM2010X switch, refer to the following common problems and solutions:

- **No Power:**
  - Ensure the power adapter is securely connected to both the switch and a working electrical outlet.
  - Verify that the power outlet is functional.
- **No Link/Activity on a Port:**
  - Check that the Ethernet cable is securely connected to both the switch port and the connected device.
  - Try a different Ethernet cable to rule out cable damage.
  - Ensure the connected device is powered on and its network adapter is functioning correctly.
  - Verify that the connected device's network adapter supports 2.5G Ethernet or is set to auto-negotiate speed.

- **Slow Network Speed:**
  - Ensure all connected devices and cables support 2.5G Ethernet for optimal performance. Older Gigabit (1G) devices will operate at their maximum speed, which is slower than 2.5G.
  - Check the mode toggle switch. If in VLAN mode, ensure your network configuration is appropriate for isolated ports.
  - For SFP+ ports, ensure compatible 10G modules and fiber optic cables are used.
- **Intermittent Connectivity:**
  - Inspect all cable connections for looseness or damage.
  - Ensure the switch is placed in a well-ventilated area to prevent overheating.
  - Consider potential electromagnetic interference from other electronic devices.

8. Specifications

Figure 8.1: Illustrates the compact design of the TEM2010X, suitable for various installations, including desktop and wall mounting, with dimensions provided.

Feature	Description
Model	TEM2010X
Brand	Tenda
Number of Ports	10 (8 x 2.5G RJ45, 2 x 10G SFP+)
Data Transfer Rate	2500 Gigabits Per Second (for RJ45 ports)
Switching Capacity	80Gbps
Interface Type	RJ45, SFP+
Case Material	Metal
Fanless Design	Yes
Operating Temperature	0°C to 40°C (32°F to 104°F)
Voltage	AC 240 Volts (Input)
Item Weight	1.56 pounds
Package Dimensions	8.46 x 5.47 x 3.31 inches
Compatible Devices	2.5G NAS, Wifi 6/7 AP, Wifi 6/7 Router & Mesh, 2.5G Gaming PC, 4K/8K Video

9. Warranty and Support

Tenda Technology provides professional support for its products.

- **Manufacturer Support:** This product comes with a 3-year manufacturer support warranty.
- **Contact Support:** For technical assistance or warranty inquiries, please contact Tenda support at support.us@tenda.cn.