TP-Link TX401

TP-Link TX401 10 Gigabit PCIe Network Adapter User Manual

Model: **TX401** | Brand: **TP-Link**

1. INTRODUCTION

The TP-Link TX401 is a 10 Gigabit PCIe Network Adapter designed to upgrade your desktop computer's network capabilities to ultra-fast 10 Gbps speeds. This adapter utilizes the PCI Express 3.0 x4 interface to provide a high-bandwidth connection for demanding tasks such as large file transfers, 4K/8K video streaming, and online gaming. It is backward compatible with various Ethernet standards, allowing for seamless integration into existing network environments.

2. SETUP AND INSTALLATION

Follow these steps to properly install your TP-Link TX401 10 Gigabit PCIe Network Adapter into your computer.

1. **Power Off Your PC:** Before beginning, ensure your computer is completely powered off and disconnected from the power outlet.

2. **Open the PC Case:** Remove the side panel of your computer case to access the motherboard.

3. **Locate an Available PCIe Slot:** Identify an available PCI Express 3.0 x4 slot or higher (e.g., x8, x16) on your motherboard. The TX401 requires a PCIe x4 slot for optimal performance. *Note: This adapter is not compatible with PCIe x1 slots.*

4. **Remove Slot Cover:** Carefully remove the metal slot cover corresponding to the chosen PCIe slot on the back of your PC case.

5. **Insert the Network Adapter:** Align the gold contacts of the TX401 with the PCIe slot. Gently but firmly push the adapter straight down into the slot until it is fully seated. Ensure the bracket is flush with the back of the PC case.
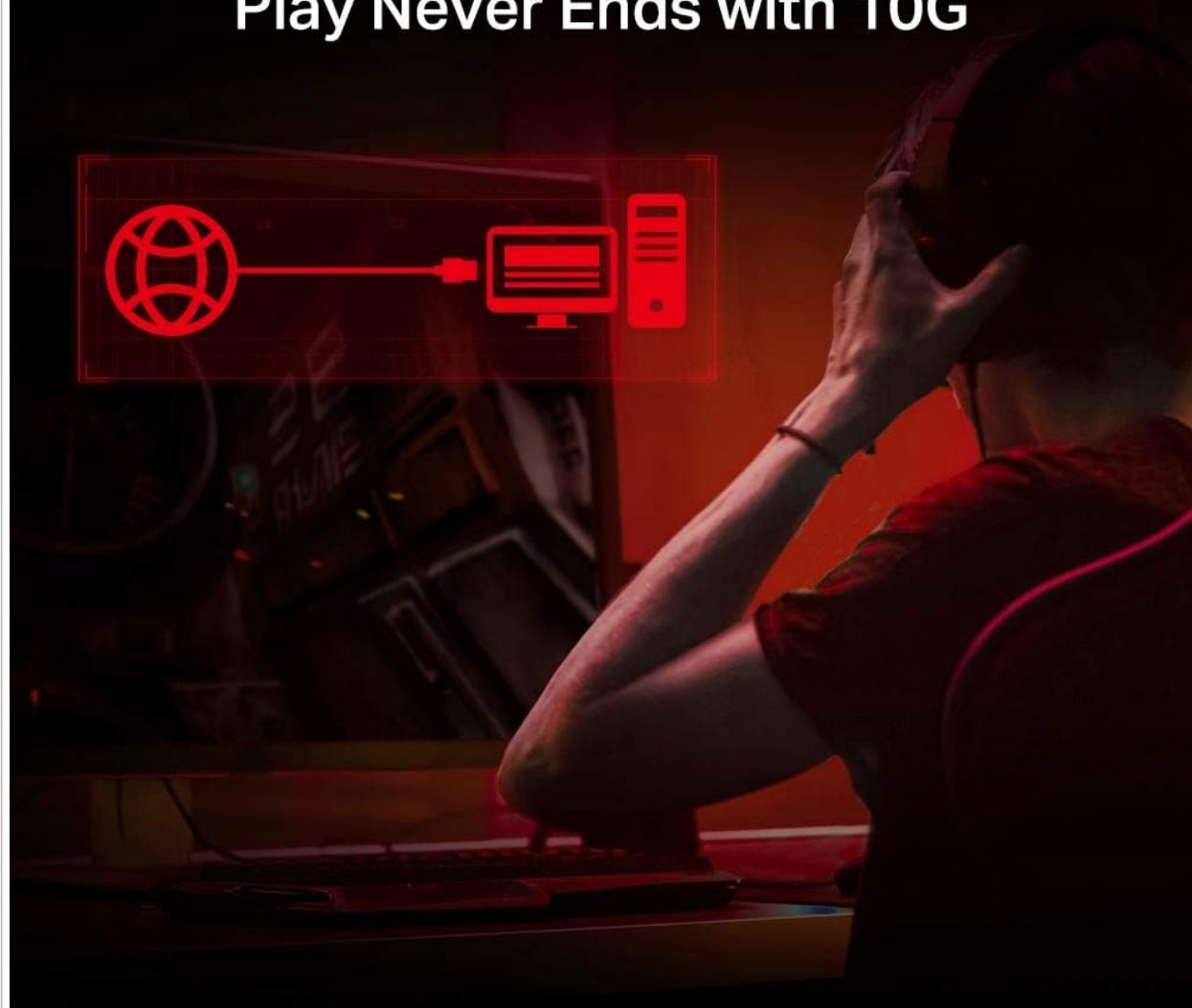
Image: The TP-Link TX401 Network Adapter securely installed into a PCI Express slot within a desktop computer case.

6. **Secure the Adapter:** Use a screw to secure the adapter's bracket to the PC case.

7. **Close the PC Case:** Reattach the side panel of your computer case.

8. **Power On Your PC:** Reconnect the power cable and turn on your computer.

Low-Profile Bracket: The TX401 includes both a standard-height and a low-profile bracket. If your PC case requires a low-profile bracket, you can replace the pre-installed standard bracket by unscrewing it and attaching the low-profile one.

Image: The TP-Link TX401 Network Adapter shown with both its standard-height and optional low-profile mounting brackets.

3. OPERATING INSTRUCTIONS

After physical installation, follow these steps to get your TX401 operational.

3.1 Driver Installation

- **Automatic Installation:** For most modern operating systems (e.g., Windows 10/11), the TX401 drivers may install automatically upon first boot.
- **Manual Installation:** If drivers do not install automatically, or if you wish to update them, download the latest drivers from the official TP-Link support website. Follow the on-screen instructions for installation.

3.2 Connecting to Your Network

Connect a Cat6a or Cat7 Ethernet cable from your 10 Gigabit capable router or switch to the RJ45 port on the TX401 adapter.
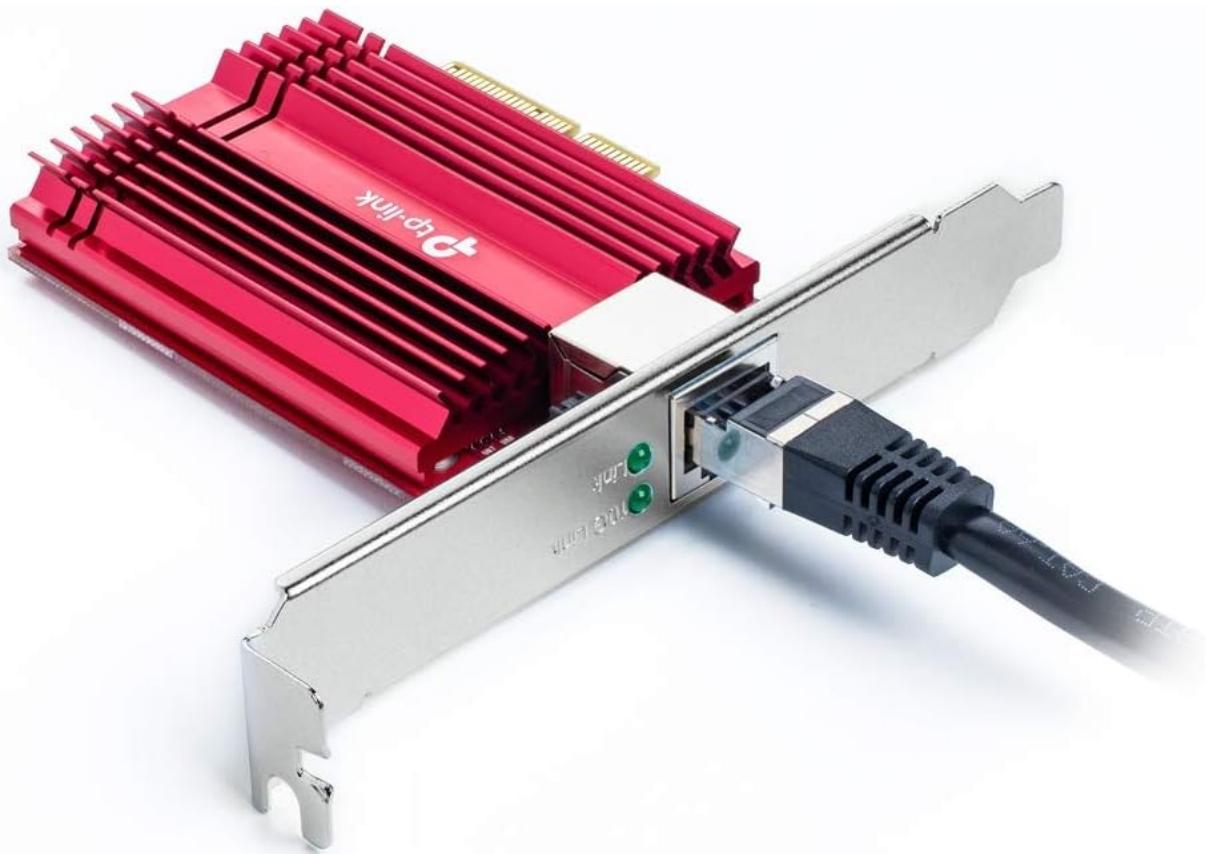
Image: An Ethernet cable plugged into the RJ45 port of the TP-Link TX401 Network Adapter.

3.3 Multi-Speed Compatibility and QoS

- **Automatic Speed Negotiation:** The TX401 automatically negotiates the highest possible speed with your network device, supporting 10 Gbps, 5 Gbps, 2.5 Gbps, 1 Gbps, and 100 Mbps Base-T connections.
- **Quality of Service (QoS):** The adapter supports QoS technology, which helps prioritize network traffic for specific applications, ensuring smoother performance for activities like online gaming or video conferencing by reducing latency and preventing congestion.
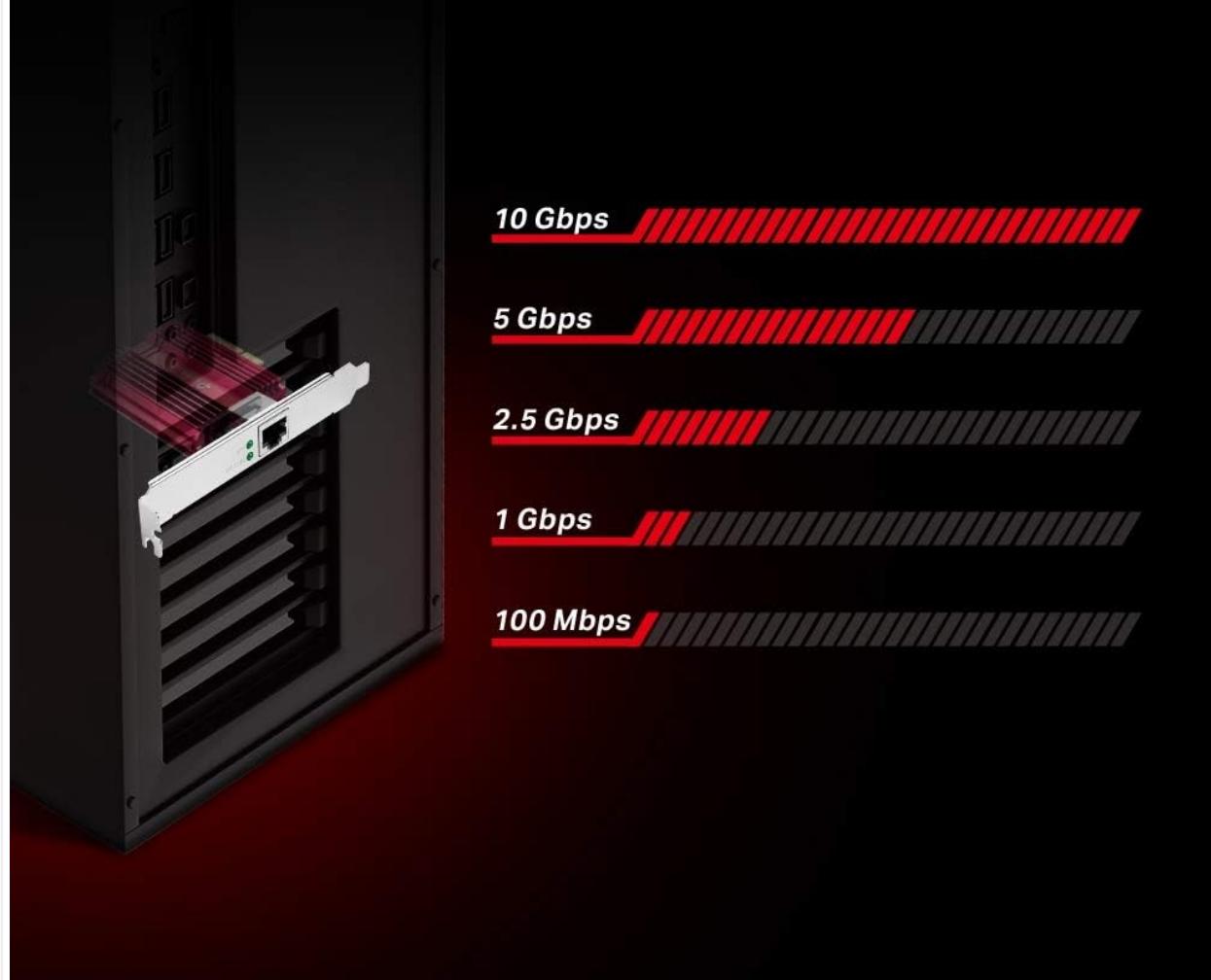
Image: A visual representation of the TX401's multi-speed compatibility, supporting 10 Gbps, 5 Gbps, 2.5 Gbps, 1 Gbps, and 100 Mbps connections.

4. MAINTENANCE

To ensure the longevity and optimal performance of your TX401 network adapter, consider the following maintenance tips:

- **Driver Updates:** Periodically check the official TP-Link website for the latest driver updates. Keeping your drivers current can improve performance, stability, and compatibility.
- **Physical Inspection:** Occasionally inspect the adapter inside your PC to ensure it remains securely seated in its PCIe slot and that the Ethernet cable is firmly connected.
- **Ventilation:** Ensure your PC case has adequate airflow to prevent overheating, which can affect the performance and lifespan of internal components, including the network adapter.

5. TROUBLESHOOTING

If you encounter issues with your TX401 network adapter, refer to the following common troubleshooting steps:

- **Adapter Not Detected or Not Working:**
  - Ensure the adapter is fully and correctly seated in a compatible PCIe slot (PCIe 3.0 x4 or higher).
  - Verify that the correct drivers are installed. Check Device Manager in Windows for any error indicators.
  - Try installing the adapter in a different available PCIe slot if possible.
  - Confirm your motherboard's BIOS/UEFI settings are configured to enable PCIe slots.

- **Slow Network Speeds:**
  - Ensure your router/switch and other network devices support 10 Gigabit Ethernet.
  - Use a high-quality Ethernet cable, specifically Cat6a or Cat7, for 10 Gbps connections. Older cables (e.g., Cat5e) may limit speeds.
  - Check your network adapter settings in your operating system to ensure it's configured for the correct speed and duplex (usually 'Auto Negotiation').
  - Update the network adapter drivers to the latest version from the TP-Link website.

- **Intermittent Connection:**
  - Check the integrity of your Ethernet cable for any damage.
  - Ensure the Ethernet cable is securely plugged into both the TX401 and your network device.
  - Verify the adapter is firmly seated in its PCIe slot.
  - Update drivers.

6. SPECIFICATIONS

Feature	Specification
Model	TX401
Hardware Interface	PCI Express 3.0 x4
Data Transfer Rate	10 Gbps, 5 Gbps, 2.5 Gbps, 1 Gbps, 100 Mbps
Data Link Protocol	Ethernet
Compatible Devices	Desktop PCs
Product Dimensions	3.86 x 4.76 x 0.87 inches (98 x 121 x 22 mm)
Item Weight	3.17 ounces (90 grams)
UPC	753459392331

7. WARRANTY AND SUPPORT

The TP-Link TX401 Network Adapter comes with a manufacturer's warranty. For detailed warranty information, technical support, driver downloads, and further assistance, please visit the official TP-Link support website. You can typically find support resources by searching for your product model (TX401) on their website.

TP-Link Official Website: www.tp-link.com