WAVLINK WL-NWU342G

WAVLINK USB4 to 10Gbps Ethernet Adapter WL-NWU342G User Manual

Model: WL-NWU342G

1. Introduction

The WAVLINK USB4 to 10Gbps Ethernet Adapter provides high-speed wired network connectivity for devices equipped with USB4, Thunderbolt 3, Thunderbolt 4, or Thunderbolt 5 ports. This adapter is designed to deliver stable and low-latency network performance, suitable for demanding applications such as 4K/8K video editing, large file transfers, and multi-gigabit internet access.

2. Package Contents

Please verify that all items listed below are included in your package:

- 1x USB4 10 Gigabit Ethernet Adapter
- 1x USB4 C to C Cable (50cm)
- 1x Read Before Use Card
- 1x Driver Download Links
- 1x Safety Information
- 1x Quick Start Guide

Image: Package contents including the adapter, USB-C cable, and documentation.

3. Product Overview

The WAVLINK USB4 to 10Gbps Ethernet Adapter features a compact design with an aluminum alloy housing for efficient heat dissipation. It includes an RJ45 10G Ethernet port and a USB-C port for connection to your host device. Dual LED indicators provide visual feedback on link speed and data activity.

Image: Detailed view of the adapter showing the RJ45 10G Ethernet Port, USB-C Port, LED indicators, included 0.5M 40Gbps USB-C Cable, and dimensions (3.5 x 2.4 x 0.9 inches).

LED Indicators:

- **Green (Solid):** 10Gbps Link
- **Orange (Solid):** 5G / 2.5G / 1G Link Speed
- **Green (Flashing):** Data Activity

4. Setup Instructions

4.1 Driver Installation

- **Mac OS:** Native drivers are included. No manual installation is typically required.
- **Windows 10/11 & Linux:** Manual driver installation is required. Please refer to the provided Driver Download Links card or visit the WAVLINK official website to download and install the appropriate driver software for your operating system.

4.2 Connection Steps

1. Ensure your computer has a USB4, Thunderbolt 3, Thunderbolt 4, or Thunderbolt 5 port.

2. Connect the WAVLINK USB4 to 10Gbps Ethernet Adapter to your computer's compatible USB-C port using the provided USB4 C to C cable.
3. Connect a Cat6A or higher grade Ethernet cable from your 10G-capable modem/router/switch to the RJ45 10G Ethernet port on the adapter.
4. Verify the LED indicators on the adapter for link status and data activity.

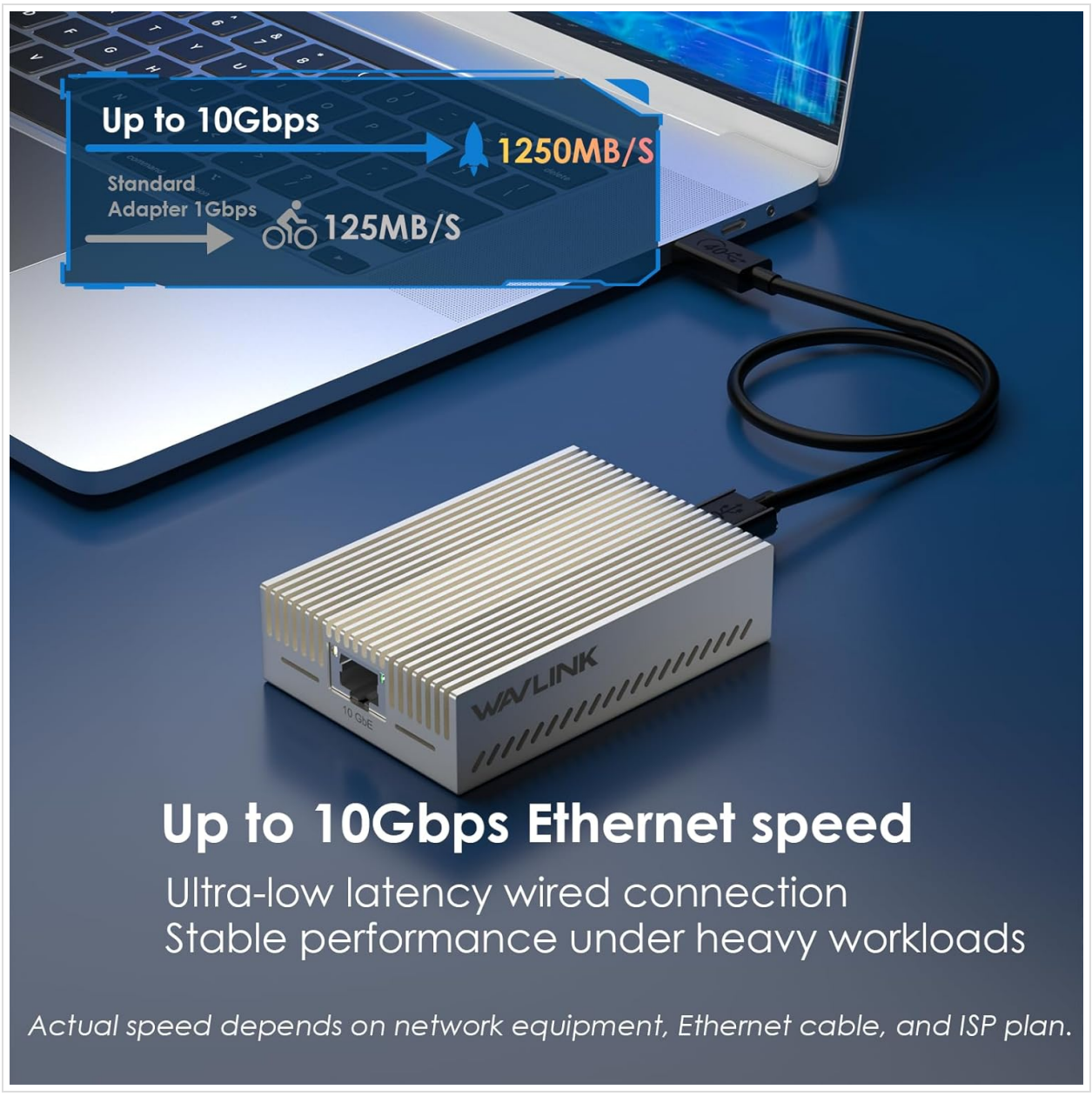

Image: The adapter connected to a laptop, illustrating the physical connection.

4.3 Requirements for 10Gbps Speed

To achieve true 10Gbps wired performance, the following conditions must be met:

- Your broadband internet speed must exceed 10Gbps.
- Your modem/router/switch must support 10Gbps network output.
- The Ethernet cable used must be of CAT6A or higher grade.
- The laptop or desktop port connected to the adapter must be USB4, Thunderbolt 3, Thunderbolt 4, or Thunderbolt 5.
- Internet speed is dependent on your service plan.

Note: Actual speed depends on your network infrastructure (router/switch), Ethernet cable, network interface, and internet service plan.

5. Operating Instructions

5.1 Adaptive Multi-Gig Speed Compatibility

The adapter automatically negotiates network speeds, supporting 10Gbps, 5Gbps, 2.5Gbps, 1Gbps, 100Mbps, and 10Mbps without manual configuration. This ensures reliable performance across various network environments.

Image: Illustration of the adapter's intelligent auto-speed adjustment capability across different network speeds.

5.2 Advanced AQC113-B1 Controller

The adapter is powered by the AQC113-B1 chipset, which provides consistent throughput, low latency, and stable connections, even under heavy network loads. This design aims to prevent packet drops, throttling, and random disconnects during long-duration transfers.

Image: A detailed view of the AQC113-B1 chipset, highlighting its role in performance.

5.3 Passive Cooling Design

The adapter features a premium aluminum alloy housing that facilitates efficient passive heat dissipation. This design ensures stable long-term operation without the need for an internal fan, resulting in silent performance. It is normal for the adapter to feel warm during sustained high-speed data transfers.

Image: Diagram illustrating the passive cooling mechanism of the adapter's aluminum housing.

6. Compatibility

6.1 Compatible Interfaces and Systems

This adapter is designed for next-generation USB4 and Thunderbolt ports. It is compatible with:

- **Interfaces:** USB4, Thunderbolt 3, Thunderbolt 4, Thunderbolt 5
- **Operating Systems:** Windows 10/11, Mac OS, Linux 3.10 and higher, Chrome OS
- **Devices:** Modern laptops and desktops with compatible ports (e.g., MacBook Pro/Air, Dell XPS 15, HP Spectre x360 14", Mac Mini, Lenovo X1 Carbon)

Image: A visual guide to compatible interfaces, operating systems, and example devices.

6.2 Not Compatible With

- Windows with USB 3.2 ports only
- Mobile phones or tablets
- ARM-based Windows RT and Windows Mobile
- Nintendo Switch, TiVo Series 2, Wii, or other non-PC/Mac platforms
- Not recommended for use with FreeBSD or pfSense

7. Troubleshooting

- **No Network Connection:**
  - Ensure the adapter is securely connected to both your computer's USB-C port and the Ethernet cable.
  - Verify that the necessary drivers are installed for Windows or Linux operating systems.
  - Check your network router/switch and internet connection.
  - Confirm that your computer's USB-C port supports USB4 or Thunderbolt.
- **Slow Network Speed:**

- Ensure all components in your network chain (broadband, modem/router/switch, Ethernet cable) support 10Gbps speeds.
- Use a Cat6A or higher grade Ethernet cable.
- Check your internet service plan for maximum supported speeds.
- Confirm that your computer's USB4/Thunderbolt port is operating correctly.

- **Adapter is Warm:**

  It is normal for the aluminum housing to become warm during sustained high-speed data transfers due to its passive cooling design. This does not indicate a malfunction.

8. Specifications

Feature	Specification
Model Number	WL-NWU342G
Hardware Interface	Ethernet, USB Type C
Data Link Protocol	Gigabit Ethernet, USB
Data Transfer Rate	10 Gigabits Per Second (10Gbps)
Compatible Speeds	10Gbps / 5Gbps / 2.5Gbps / 1Gbps / 100Mbps / 10Mbps
Chipset	AQC113-B1
Product Dimensions	3.5 x 2.4 x 0.9 inches (8.9 x 6.1 x 2.3 cm)
Item Weight	7 ounces (199 g)
Color	Silver
Minimum OS Required	Linux Mint 16, Windows 10

9. Warranty and Support

WAVLINK products come with a standard manufacturer's warranty. For detailed warranty information, technical support, or customer service inquiries, please refer to the documentation included in your package or visit the official WAVLINK website. You may also contact WAVLINK customer support directly through their provided contact channels.