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› [WAVLINK](#) /

› WAVLINK 10G PCIe Network Card (Model WL-NWP004-10G) User Manual

## WAVLINK WL-NWP004-10G

# WAVLINK 10G PCIe Network Card User Manual

Model: WL-NWP004-10G

<a href="#">Safety Information</a>	<a href="#">Package Contents</a>	<a href="#">Product Overview</a>	<a href="#">Setup</a>	<a href="#">Operating Instructions</a>
<a href="#">Maintenance</a>	<a href="#">Troubleshooting</a>	<a href="#">Specifications</a>	<a href="#">Warranty &amp; Support</a>	

## 1. SAFETY INFORMATION

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Please read all instructions carefully before installing or operating the WAVLINK 10G PCIe Network Card. Retain this manual for future reference.

- Always power off your computer and disconnect it from the power source before opening the case or installing any internal components.
- Discharge any static electricity from your body by touching a grounded metal object (e.g., the computer chassis) before handling the network card.
- Handle the network card by its edges to avoid touching the gold contacts or components.
- Ensure proper ventilation inside your computer case to prevent overheating.
- **Important:** Remove the protective plastic film from the PCI-e interface before connecting the card to the PC's PCI-e slot.

## 2. PACKAGE CONTENTS

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Verify that all items are present in your package:

- WAVLINK 10G PCIe Network Card (Model: WL-NWP004-10G)
- Standard Profile Bracket (pre-installed)
- Low Profile Bracket
- Mounting Screws
- USB Flash Drive (containing drivers)
- Quick Installation Guide



Image: Contents of the WAVLINK 10G PCIe Network Card package, including the card, brackets, screws, and USB drive.

### 3. PRODUCT OVERVIEW

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The WAVLINK 10G PCIe Network Card is designed to provide high-speed network connectivity for desktop computers. It features the AQC113 controller for reliable performance and supports multiple speed options.

#### Key Features:

- **10G High-Speed Transmission:** Achieves network speeds up to 10 times faster than traditional gigabit rates, supporting 10000/5000/2500Mbps.
- **PCIe Compatibility:** Compatible with PCIe x4, x8, and x16 slots. *Note: Not compatible with PCI slots.*
- **Operating System Support:** Seamless compatibility with Windows 11, Windows 10, and Linux operating systems.
- **Flexible Bracket Versatility:** Includes both standard and low-profile brackets for installation in various computer case sizes.
- **Robust Metal Shielding & Heat Sink:** Minimizes electromagnetic interference and provides excellent heat dissipation for stable network transmission.
- **Thickened Gold Finger:** Ensures stable and reliable connection to the PCIe slot.

#### Component Identification:



Image: The WAVLINK 10G PCIe Network Card highlighting the AQC113C-B1 controller for stable transmission.

- **PCIe Interface:** Connects to the motherboard's PCIe slot.
- **RJ45 Ethernet Port:** Connects to your network cable.
- **AQC113C-B1 Controller:** The main chip responsible for network processing.
- **Heat Sink:** Dissipates heat from the controller for optimal performance.
- **Gold Finger:** The gold-plated contacts that interface with the PCIe slot.



Image: The WAVLINK 10G PCIe Network Card showing both standard and low-profile brackets.

## 4. SETUP: PHYSICAL INSTALLATION

Follow these steps to physically install the WAVLINK 10G PCIe Network Card into your computer:

Your browser does not support the video tag.

*Video: A detailed guide on how to install a PCIe network card into a desktop computer. This video demonstrates the process of opening the PC case, identifying an available PCIe slot, removing the slot cover, inserting the card, and securing it with a screw.*

### 1. **Power Off and Open PC Case:**

Completely power off your computer and disconnect all cables. Open the computer case to access the motherboard.



Image: Illustration of powering off a PC and opening its side panel to reveal internal components.

2. **Identify an Available PCIe Slot:**

Locate an available PCIe x4, x8, or x16 slot on your motherboard. Ensure it is clear of obstructions.

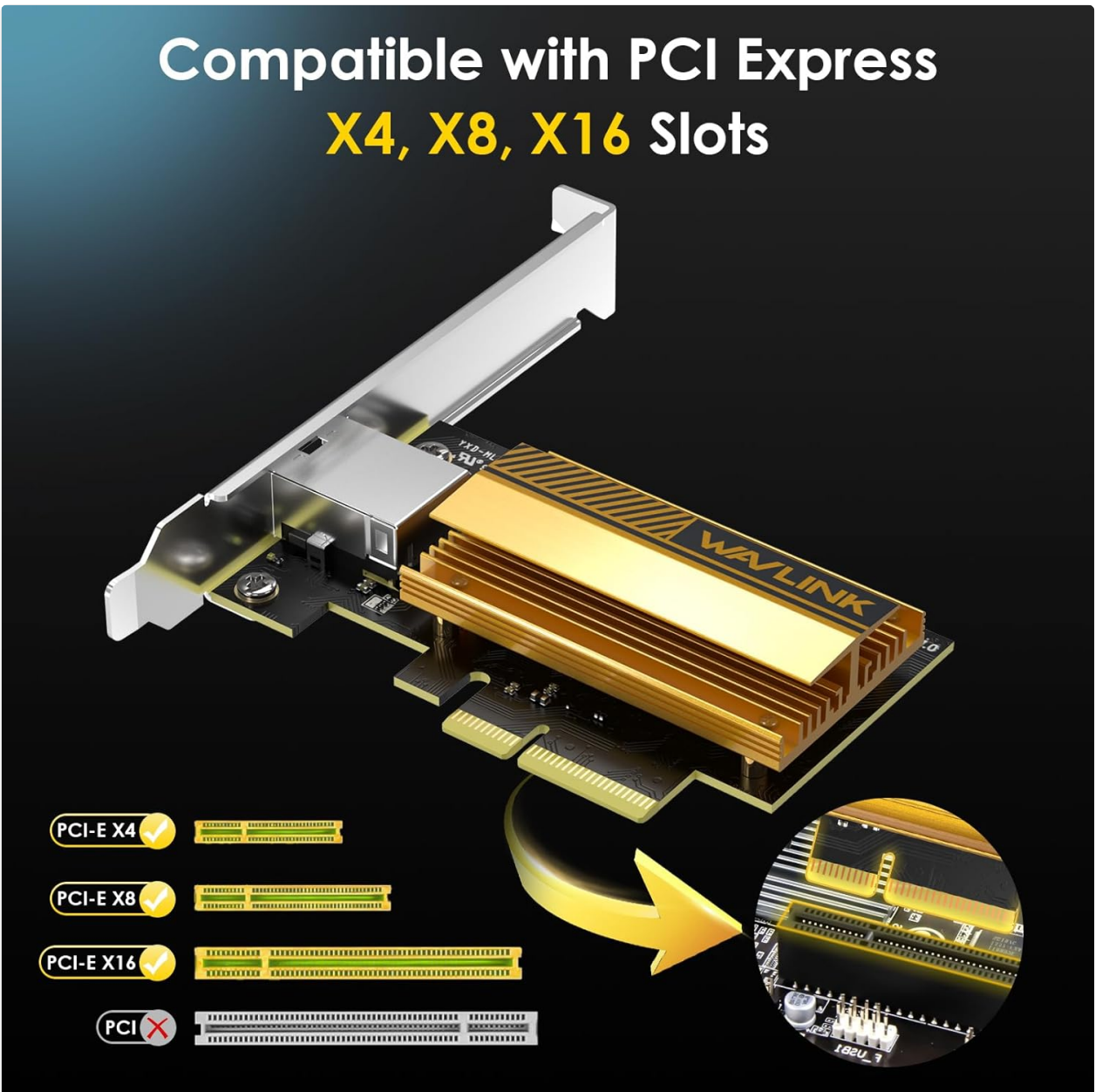


Image: Diagram showing compatible PCIe x4, x8, and x16 slots on a motherboard.

3. **Remove Slot Cover:**

Unscrew and remove the metal slot cover corresponding to the chosen PCIe slot from the back of your computer case.



*Image: Illustration of inserting the PCIe network card into an available slot on the motherboard.*

#### 4. **Install the Network Card:**

Carefully align the network card with the PCIe slot and press it firmly until it is fully seated. Ensure the bracket aligns with the opening in the case.



*Image: Illustration of securing the network card with screws and connecting an Ethernet cable to its RJ45 port.*

#### 5. **Secure the Card:**

Use the screw removed earlier to secure the network card's bracket to the computer case.

#### 6. **Close Case and Reconnect:**

Close the computer case, reconnect all cables, and power on your PC.

## 5. OPERATING INSTRUCTIONS

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### Driver Installation:

After physical installation, you need to install the appropriate drivers for the network card to function correctly.

#### 1. **Using the Included USB Flash Drive:**

Insert the provided USB flash drive into an available USB port on your computer. Navigate to the drive and run the driver installation executable. Follow the on-screen prompts to complete the installation.



*Image: A USB flash drive, typically included for driver installation.*

## 2. **Downloading Drivers Online:**

Alternatively, you can download the latest drivers from the official WAVLINK website. Visit [www.wavlink.com](http://www.wavlink.com), navigate to the support section, and search for model WL-NWP004-10G. Download and install the drivers according to the instructions provided on the website.

## 3. **Verification:**


After installation, check Device Manager (Windows) or network settings (Linux) to ensure the network card is recognized and functioning correctly.

## **Network Cable Requirements:**

To achieve optimal performance, use appropriate Ethernet cables:

- For 10Gbps speeds, a Cat6A or higher Ethernet cable is recommended.
- Cat5E and Cat6 cables can support lower speeds (2.5G/5G) but may not consistently achieve 10Gbps over longer distances.

Cable Type	2.5G	5G	10G
CAT 5E	✓	✓	✓
CAT 6	✓	✓	✓
CAT 6A	✓	✓	✓



## Ethernet Cable Requirement

*Image: Chart detailing recommended Ethernet cable types for 2.5G, 5G, and 10G network speeds.*

### Advanced Network Configuration (Optional):

- **Jumbo Frames:** For maximum throughput, especially with large file transfers, enable Jumbo Frames (e.g., 9K MTU) on your network card, router, and other network devices. Ensure consistent settings across all devices.
- **Full Duplex:** The card supports full duplex operation. In most cases, leaving this setting on "Auto" is sufficient. If manual configuration is required, set it to "10Gbps Full Duplex".

## 6. MAINTENANCE

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Proper maintenance ensures the longevity and optimal performance of your network card:

- **Keep Clean:** Periodically clean your computer's interior to prevent dust buildup on the network card and its heat sink. Dust can impede heat dissipation.
- **Airflow:** Ensure good airflow within your PC case. The card's excellent heat sink helps manage temperature, but proper case ventilation is crucial.
- **Driver Updates:** Regularly check the WAVLINK website for updated drivers to ensure compatibility and performance improvements.

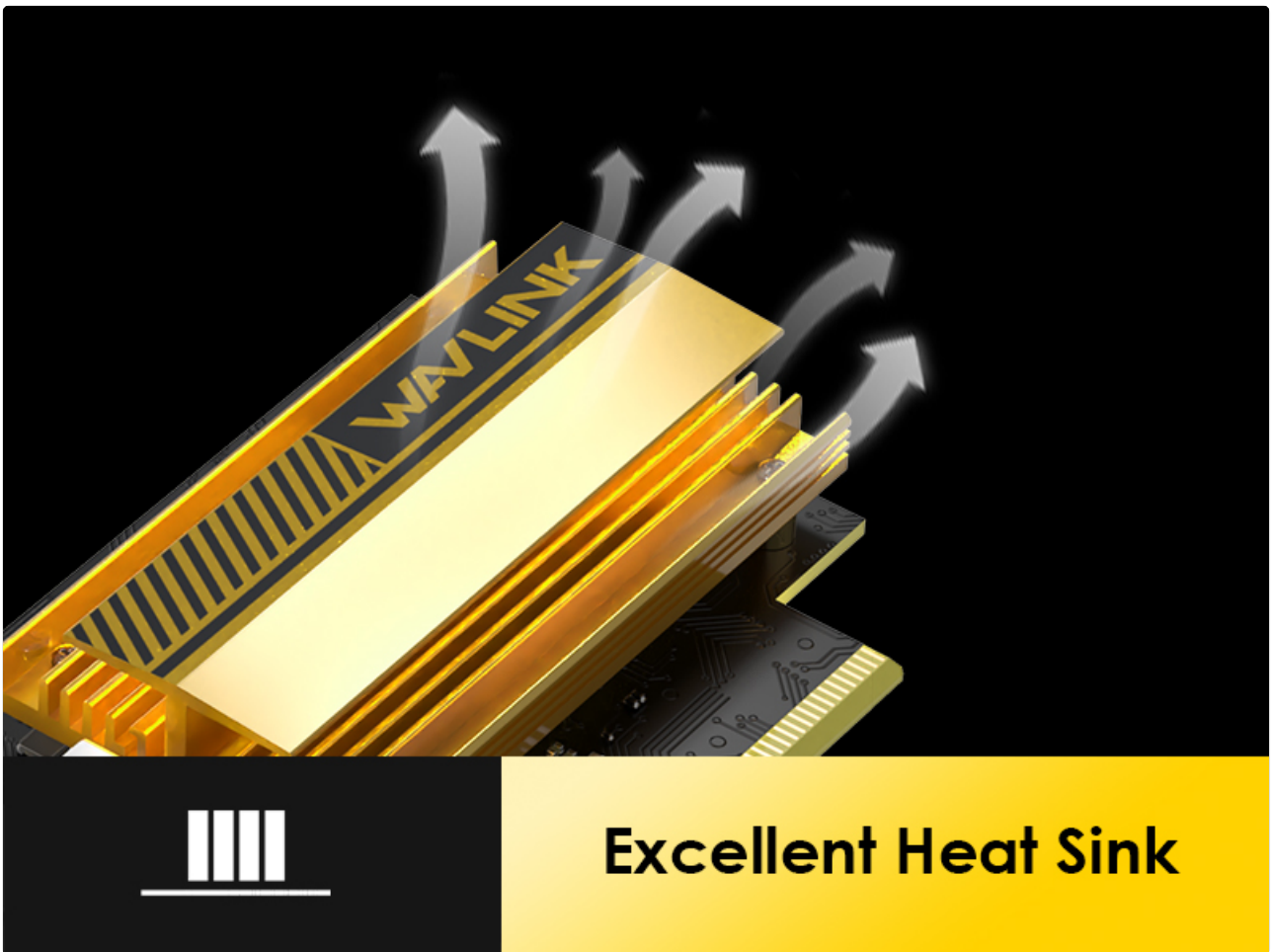


Image: Close-up of the WAVLINK 10G PCIe Network Card's heat sink, designed for efficient heat dissipation.

## 7. TROUBLESHOOTING

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If you encounter issues with your WAVLINK 10G PCIe Network Card, refer to the following common solutions:

- **No Network Connection / Card Not Detected:**

- Ensure the card is fully seated in the PCIe slot.
- Verify that the correct drivers are installed. Reinstall drivers if necessary.
- Check the network cable connection to both the card and your router/switch.
- Try a different PCIe slot if available.

- **Slow Network Speeds:**

- Confirm you are using a Cat6A or higher Ethernet cable for 10Gbps.
- Check if Jumbo Frames are enabled and consistently configured across all network devices (card, switch, router).
- Ensure your router/switch supports 10Gbps speeds.
- Update network card drivers to the latest version.

- **Driver Installation Warnings (e.g., Antivirus Flags):**

Some antivirus software may flag driver installation files as suspicious. If you encounter such warnings, download the drivers directly from the official WAVLINK website ([www.wavlink.com](http://www.wavlink.com)) to ensure authenticity. Temporarily disable antivirus during installation if confident in the source, then re-enable immediately.

- **Intermittent Connection:**

- Check for loose connections.
- Ensure the card is not overheating; verify proper case ventilation.
- Test with a different Ethernet cable.

## 8. SPECIFICATIONS

<b>Brand</b>	WAVLINK
<b>Model Number</b>	WL-NWP004-10G
<b>Hardware Interface</b>	PCIe x1 (Compatible with x4, x8, x16 slots)
<b>Compatible Devices</b>	Desktop PC
<b>Data Link Protocol</b>	Gigabit Ethernet (10G Base-T)
<b>Data Transfer Rate</b>	10 Gigabits Per Second (10000/5000/2500Mbps)
<b>Controller Chipset</b>	AQC113C-B1 (Marvell AQtion)
<b>Operating System Support</b>	Windows 11, Windows 10, Linux
<b>Item Weight</b>	0.15 Kilograms

## 9. WARRANTY & SUPPORT

### Warranty Information:

The WAVLINK 10G PCIe Network Card comes with a **1-Year Warranty** from the date of purchase. This warranty covers manufacturing defects and ensures product reliability. Please retain your proof of purchase for warranty claims.

### Customer Support:

For technical assistance, troubleshooting, or warranty inquiries, please contact WAVLINK customer support:

- **Email:** [support@wavlink.com](mailto:support@wavlink.com)
- **Live Chat Support:** Visit [www.wavlink.com](http://www.wavlink.com) (Mon-Fri 08:30 am - 5:30 pm UTC+8)
- **Phone (US Local):** +1(888)973-0883 (Mon-Fri 09:00 am - 10:00 pm UTC-5)

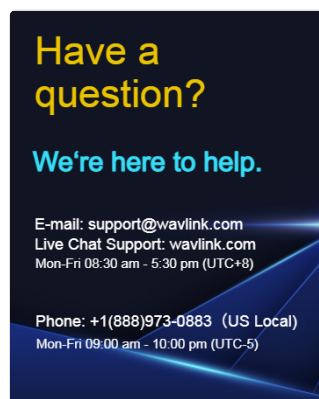


Image: WAVLINK customer support contact details.

