

MINIX NGC N512

MINIX NGC N512 Mini PC User Manual

Model: NGC N512

1. INTRODUCTION

This manual provides essential information for setting up, operating, and maintaining your MINIX NGC N512 Mini PC. Please read it thoroughly before use to ensure optimal performance and longevity of your device.



Image 1.1: The MINIX NGC N512 Mini PC, a compact desktop computer.

2. PACKAGE CONTENTS

Verify that all items listed below are included in your product packaging:

- 1 x MINIX NGC N512 Mini PC
- 2 x Dual-band Antennas
- 1 x HDMI Cable
- 1 x VESA Mount with Screws
- 1 x Power Adapter (with US/EU/UK Plug)
- 1 x User Manual (this document)



Image 2.1: Diagram illustrating the contents of the MINIX NGC N512 Mini PC package.

3. SETUP GUIDE

3.1 Connecting Peripherals

Before powering on, connect your essential peripherals:

1. **Display:** Connect your monitor(s) to the HDMI, Thunderbolt 4, or USB-C ports using appropriate cables. The device supports up to four displays.
2. **Keyboard and Mouse:** Connect your USB keyboard and mouse to the available USB 3.2 Gen 2 Type-A ports.
3. **Network:** For wired internet, connect an Ethernet cable to either the 2.5Gbps or 1Gbps RJ-45 port. For wireless, ensure the dual-band antennas are securely attached.
4. **Audio:** Connect speakers or headphones to the 3.5mm audio combo jack if needed.

Product Interfaces

Premium Aluminum Alloy Design

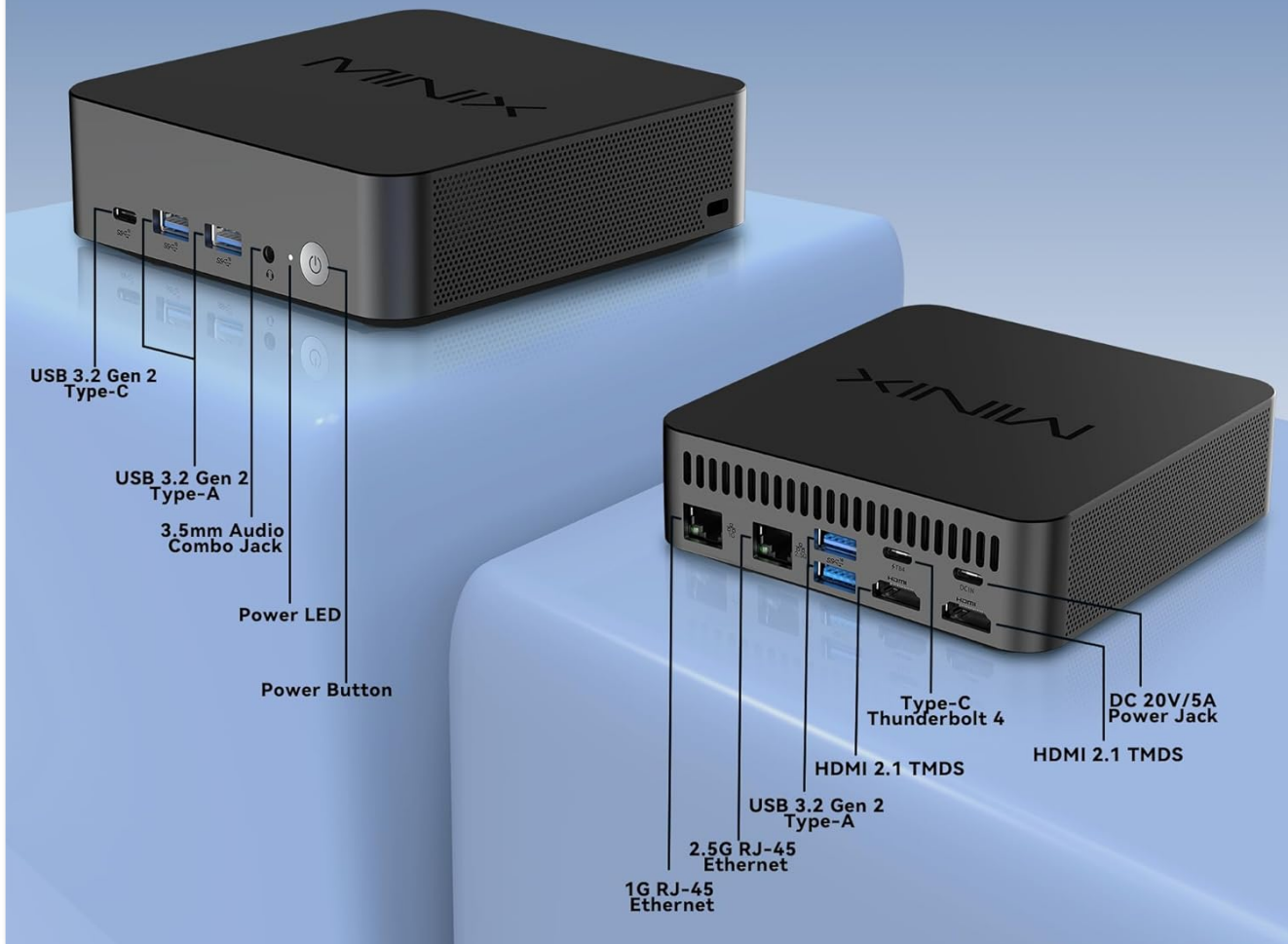


Image 3.1: Detailed view of the MINIX NGC N512's front and rear ports, including USB, HDMI, Thunderbolt, Ethernet, and audio jacks.

3.2 Powering On

1. Connect the power adapter to the DC 20V/5A power jack on the Mini PC.
2. Plug the power adapter into a wall outlet.
3. Press the power button located on the front of the device. The power LED will illuminate.

3.3 Initial Windows 11 Pro Setup

Upon first boot, the system will guide you through the Windows 11 Pro setup process. Follow the on-screen instructions to configure language, region, network, user accounts, and other settings.

3.4 VESA Mounting

The MINIX NGC N512 can be mounted to the back of a VESA-compatible monitor or TV using the included VESA mount and screws. This allows for a clutter-free workspace.

VESA Mount



Image 3.2: Illustration of the MINIX NGC N512 being mounted to the rear of a monitor using the VESA bracket.

4. OPERATING INSTRUCTIONS

4.1 Basic Operation

- **Power On/Off:** Press the power button to turn the device on. To turn off, use the Windows shutdown option or press and hold the power button for a few seconds.
- **Restart:** Use the restart option within Windows for proper system restarts.

4.2 Display Configuration

The NGC N512 supports multiple display outputs for enhanced productivity:

- **HDMI 2.1 TMDS:** Two ports supporting 4K resolution.
- **Thunderbolt 4:** One port supporting up to 8K@60Hz.
- **USB 3.2 Gen 2 Type-C:** One port supporting 4K resolution.

You can configure display settings within Windows to extend or duplicate your desktop across connected monitors.

4K Quad Screen Display



Image 4.1: A MINIX NGC N512 Mini PC connected to four monitors, demonstrating its quad-display capability for multitasking.



Image 4.2: A large monitor displaying 8K content, connected to the MINIX NGC N512 via its Thunderbolt 4 port, highlighting 40Gbps transfer speed.

4.3 Network Connections

- **Wi-Fi 6:** Connect to wireless networks via the built-in Wi-Fi 6 module.
- **Bluetooth 5.2:** Pair Bluetooth devices such as keyboards, mice, or audio peripherals.
- **Dual LAN:** Utilize the 2.5Gbps and 1Gbps Ethernet ports for high-speed wired network connections.

4.4 Storage and Memory Upgrades

The MINIX NGC N512 offers flexible upgrade options:

- **RAM:** Two DDR5 SO-DIMM slots support up to 64GB total DDR5 memory (32GB per slot).
- **SSD:** One M.2 2280 PCIe 4.0 x4 SSD slot and one M.2 2280 PCIe 3.0 x4 SSD slot (compatible with SATA 3.0 SSD) support a total storage capacity of up to 4TB.

Consult a qualified technician for hardware upgrades to avoid damaging the device.

Expandable Storage Space



1×M.2 2280 PCIe 4.0×4 SSD Slot
1×M.2 2280 PCIe 3.0×4 SSD Slot
(compatible with SATA 3.0 SSD) Total support up to 4TB



2×DDR5 SO DIMM
Total support up to 64GB



Image 4.3: Internal view of the MINIX NGC N512 showing the M.2 SSD slots and DDR5 SO-DIMM slots for memory expansion.

5. MAINTENANCE

5.1 Cleaning

To maintain optimal performance, regularly clean the exterior of the Mini PC with a soft, dry cloth. Ensure ventilation grilles are free from dust accumulation. Do not use liquid cleaners directly on the device.

5.2 System Updates

Keep your Windows 11 Pro operating system and drivers updated to ensure security, stability, and performance. Access Windows Update through the system settings.

5.3 Cooling System

The NGC N512 features an active cooling design with large copper heat sinks and dual copper heat pipes to manage heat effectively. Ensure the device is placed in a well-ventilated area and that its vents are not obstructed.



Image 5.1: Diagram illustrating the internal components of the MINIX NGC N512's heat dissipation system, including active SSD heatsink and dual copper heat pipes.

6. TROUBLESHOOTING

If you encounter issues with your MINIX NGC N512, refer to the following common solutions:

- **No Power:** Ensure the power adapter is securely connected to both the device and a working power outlet. Try a different outlet.
- **No Display:** Verify that the monitor is powered on and correctly connected to the Mini PC. Try a different display cable or port. Ensure the correct input source is selected on your monitor.
- **Network Connectivity Issues:** For Wi-Fi, check if the antennas are attached and if the Wi-Fi adapter is enabled in Windows settings. For wired Ethernet, ensure the cable is properly connected and check network adapter status in Windows.
- **Slow Performance:** Close unnecessary applications. Check for system updates. Ensure adequate ventilation to prevent overheating.

For persistent issues, refer to the support section below.

7. SPECIFICATIONS

Feature	Detail
Processor	Intel Core i5-12600H (12 Cores, 16 Threads, up to 4.5 GHz)
Graphics	Intel Iris Xe Graphics
RAM	16GB DDR5-4800MHz (Expandable to 64GB)
Storage	512GB M.2 PCIe 4.0 x4 SSD (Expandable up to 4TB with additional M.2 PCIe 3.0 x4 slot)
Operating System	Windows 11 Pro
Video Output	2x HDMI 2.1 TMDS (4K), 1x Thunderbolt 4 (8K@60Hz), 1x USB-C (4K)
USB Ports	4x USB 3.2 Gen 2 Type-A, 1x USB 3.2 Gen 2 Type-C (front), 1x Thunderbolt 4 (rear)
Network	Dual LAN (1x 2.5Gbps, 1x 1Gbps), Wi-Fi 6 (802.11ax), Bluetooth 5.2

Audio	3.5mm Audio Combo Jack
Dimensions (LxWxH)	4.69 x 4.69 x 1.54 inches (119 x 119 x 39 mm)
Weight	1.04 pounds (0.47 kg)
Color	Dark Gray

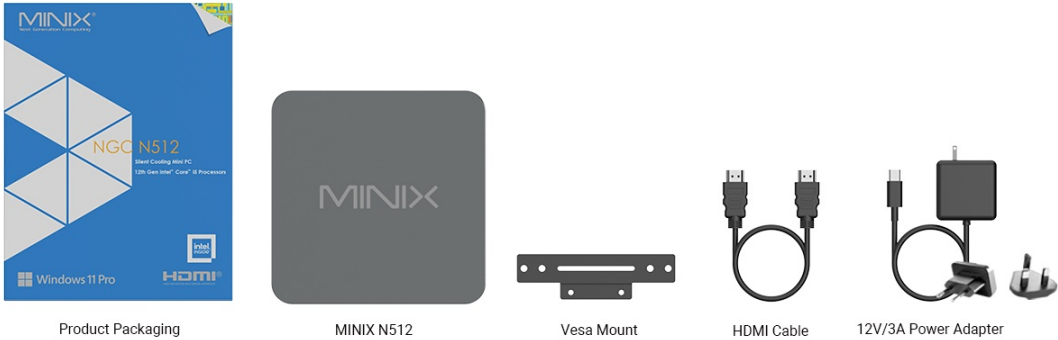
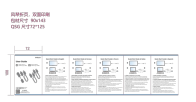
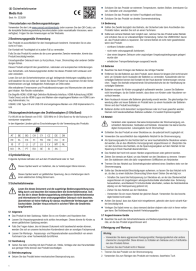


Image 7.1: Technical diagram showing the dimensions and port layout of the MINIX NGC N512 Mini PC.

8. WARRANTY AND SUPPORT

For product support and warranty inquiries, please use the following methods:

- **Amazon Support:** Log in to your Amazon account, navigate to "Your Orders," and select "Ask Product Question" for the MINIX NGC N512.
- **Official Website:** For offline maintenance services and additional support resources, please visit the official MINIX website.

	<p>Minix NEO J50C-8SE Mini PC User Guide</p> <p>User guide for the Minix NEO J50C-8SE Mini PC featuring Intel Celeron J4125 processor, 8 GB RAM, 240 GB SSD, and Windows 10 Pro. Learn about setup and usage.</p>
	<p>MINIX C1/H1 Wireless HDMI Dongle Quick Start Guide</p> <p>Quick start guide for MINIX C1 (USB-C) and H1 (HDMI) wireless HDMI dongles, enabling 1080P screen mirroring and extension. Includes setup instructions in English.</p>
	<p>MINIX Wireless USB-C to HDMI Dongle (1080P) Quick Start Guide</p> <p>Step-by-step instructions for setting up the MINIX Wireless USB-C to HDMI Dongle (1080P), including connection details for C1 and H1 transmitters and FCC compliance information.</p>
	<p>MINIX NEO Z83-4 Max Fanless Mini PC User Guide</p> <p>Comprehensive guide for the MINIX NEO Z83-4 Max fanless mini PC, covering specifications, contents, overview of ports and features, and setup instructions.</p>
	<p>MINIX NEO Z83-4 Max Fanless Mini PC Setup Guide</p> <p>A comprehensive setup guide for the MINIX NEO Z83-4 Max fanless mini PC, covering specifications, connections, and basic setup for Windows 10 Pro.</p>
	<p>Minix Media Hub Safety Instructions and Technical Data</p> <p>Safety instructions, intended use, operating environment, cleaning, disposal, and detailed technical specifications for the Minix Media Hub (Model 3335291).</p>

