

## GMKtec G9

# GMKtec G9 Mini PC NAS User Manual

Model: G9 | Brand: GMKtec

## 1. INTRODUCTION

The GMKtec G9 Mini PC NAS is a versatile and compact computing solution designed for a wide range of applications, from routine office tasks and home entertainment to advanced network-attached storage (NAS) functionalities and home lab environments. Featuring the Intel N150 processor and extensive storage expansion options, the G9 offers robust performance and flexibility. This manual provides essential information for setting up, operating, maintaining, and troubleshooting your device.

## 2. KEY FEATURES

- **MINI PC NAS HYBRID COMPUTER:** Equipped with 4x M.2 2280 PCIE slots for NAS software integration and standard PC features. Powered by the Intel N150 CPU (4 Core, 4 Threads, 6MB cache, up to 3.6GHz burst speed), offering improved performance over previous generations.
- **NAS STORAGE:** Transform your PC into a massive storage network for file backup, photo sharing, and video streaming. Supports hosting servers and creating home networks for multiple users (NAS software not provided by GMKtec).
- **DUAL BOOT UBUNTU & WIN 11 PRO:** Pre-installed with Windows 11 Pro (Default OS) on SSD and Ubuntu 24.10 (or higher) on 64GB EMMC storage, allowing for flexible operating system choice.
- **RICH INTERFACE:** Features USB 3.2 (10Gbps) x3, HDMI (4K@60Hz) x2, Type-C (DP/DATA/PD), 3.5mm Audio Jack. Supports WiFi 6, dual Gigabit Ethernet RJ45 2.5GbE, and Bluetooth 5.2 for extensive connectivity.
- **TRIPLE SCREEN DISPLAY:** Integrated Intel Graphics (max 1000MHz) supports 4K video playback and AV1 decoding. Two HDMI 2.0 ports and a Full Function Type-C port enable efficient multi-tasking across three 4K@60Hz displays.
- **TRIPLE COOLING FANS:** Features two cooling fans for SSD/DDR compartments and a large CPU fan, ensuring efficient cooling with minimal noise (33-36dB).
- **DUAL NIC 2.5GbE:** Dual Intel i226v 2.5 Gigabit Ethernet provides speeds up to 2.5x faster than 1.0GbE, compatible with various server OS (Ubuntu, Proxmox, Firewall Server, ESXI VMware).
- **WiFi6 & BT5.2:** Latest wireless connectivity (802.11ax up to 600Mbps) and Bluetooth 5.2 for connecting multiple wireless devices. Supports Wake On LAN, PXE Boot, RTC Wake, and Auto Power On.

## 3. WHAT'S IN THE BOX

- GMKtec Nucbox G9 Intel Twin Lake N150 Mini PC Computer
- Power Supply & Cable
- HDMI Cable

- VESA Mount and Screws
- User Manual



Figure 1: GMKtec G9 Mini PC and its retail boxed packaging and accessories.

## 4. SETUP

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### 4.1 Physical Connections

Connect your GMKtec G9 Mini PC to a power source, display(s), and peripherals using the available ports.

# NAS EXPANSION UP TO 16TB STORAGE



# 16TB

## Four M.2 NVMe Slots

For fast caching or SSD storage expansion up to **16TB (4x 4TB)**

Figure 2: GMKtec G9 Mini PC showing front and rear ports.

- **Power:** Connect the included power supply to the DC-in port on the rear.
- **Display:** Use the HDMI 2.0 ports (up to two) or the full-function Type-C port to connect to your monitor(s) or TV. The device supports up to three 4K@60Hz displays simultaneously.
- **Peripherals:** Connect your keyboard, mouse, and other USB devices to the USB 3.2 (10Gbps) ports (three on the front, one Type-C on the rear).
- **Network:** For wired network connectivity, use the dual 2.5GbE RJ45 Ethernet ports. For wireless, the device supports WiFi 6

and Bluetooth 5.2.

- **Audio:** A 3.5mm audio jack is available for headphones or speakers.

## 4.2 Powering On & OS Selection

Upon startup, press the power button on the front of the device. The GMKtec G9 supports dual boot with Windows 11 Pro and Ubuntu.

Video 1: Official GMKtec guide on how to dual boot Linux and Windows 11 Pro on the Nucbox G9. This video demonstrates the process of selecting between the pre-installed operating systems during startup.

Upon startup, you may be presented with a boot menu (GRUB bootloader) allowing you to choose between Windows 11 Pro and Ubuntu. If no selection is made, the system will typically boot into the default OS (Windows 11 Pro).

## 5. OPERATING

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### 5.1 Basic Usage

The GMKtec G9 functions as a standard desktop PC. Once booted into your preferred operating system, you can perform typical computing tasks such as web browsing, document editing, and media consumption.

# LPDDR5

Reduction in power consumption **35%**

Transfer speed increased to **44 GB/s**

Reading speed increased by **72%**



**LPDDR5**

Up to 5500Mbps

**72%**

LPDDR4X

Up to 4266Mbps

LPDDR4

Up to 3200Mbps

Figure 3: The GMKtec G9 Mini PC supporting a triple 4K display setup for enhanced productivity.

## 5.2 NAS Functionality

To utilize the NAS capabilities, you will need to install compatible NAS software (not included). The 4x M.2 NVMe slots provide ample space for creating a robust network storage solution.



# DUAL BOOT WINDOWS & UBUNTU



Figure 4: Internal view of the GMKtec G9 highlighting the four M.2 NVMe SSD slots for up to 16TB of storage.

With appropriate software, you can:

- **Backup Files:** Centralize backups from multiple devices.
- **Share Media:** Stream photos and videos across your home network.
- **Host Servers:** Set up personal cloud storage, web servers, or other network services.

## 6. MAINTENANCE

### 6.1 Storage Expansion

The GMKtec G9 supports up to 16TB of total storage across its four M.2 2280 PCIe slots. You can add or upgrade M.2 NVMe SSDs to expand your storage capacity.

### 6.2 Cooling System

The device features a triple cooling fan system to maintain optimal operating temperatures. Regular cleaning of the vents can help ensure efficient airflow.

Video 2: Official GMKtec video demonstrating the process of removing and installing thermal paste on the Nucbox G9's CPU. This can be useful for advanced maintenance or troubleshooting.

## 7. TROUBLESHOOTING

If you encounter issues with your GMKtec G9, consider the following common troubleshooting steps:

- **No Display:** Ensure all display cables are securely connected and that the monitor is set to the correct input source. Test with a different cable or monitor if possible.
- **Power Issues:** Verify the power adapter is correctly connected and the power outlet is functional.
- **OS Not Loading:** Check the boot order in the BIOS/UEFI settings to ensure the correct drive is selected. For dual boot, ensure the GRUB bootloader is functioning correctly.
- **Performance Slowdown:** Check for background processes consuming resources. Ensure adequate ventilation and clean any dust from the cooling vents. Consider updating drivers or OS.
- **Network Connectivity:** For wired connections, check Ethernet cables and router status. For Wi-Fi, ensure the correct network is selected and the password is correct.

## 8. SPECIFICATIONS

Feature	Specification
Brand	GMKtec
Model Number	G9
Processor	Intel N150 (4 Core, 4 Threads, up to 3.6 GHz)
RAM	12GB DDR5
Storage	64GB EMMC + 2TB M.2 SSD (4x M.2 NVMe slots, Max 16TB)
Graphics	Intel Graphics (max 1000MHz)
Operating System	Windows 11 Pro & Ubuntu
Ethernet	Dual Intel i226v 2.5GbE RJ45
Wireless	WiFi 6, Bluetooth 5.2
USB Ports	3x USB 3.2 (10Gbps), 1x Type-C (DP/DATA/PD)
Display Ports	2x HDMI (4K@60Hz), 1x Type-C (DP)
Audio	3.5mm Audio Jack




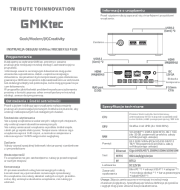


## 9. WARRANTY AND SUPPORT

GMKtec offers a 1-year limited warranty for each Mini PC, starting from the date of purchase. This warranty covers all defects due to design and workmanship.

### 9.1 Customer Support

For any inquiries or support needs, please contact GMKtec's professional after-sales team. You can typically find contact information in the included user manual or on the official GMKtec website.

### Related Documents - G9

	<p><a href="#">GMKtec NUCBOX G2 PLUS User Manual and Safety Information</a></p> <p>Comprehensive user manual for the GMKtec NUCBOX G2 PLUS mini PC, covering setup, specifications, safety precautions, and warranty information. Includes detailed descriptions of hardware interfaces and operational guidelines.</p>
	<p><a href="#">GMKtec M6 Mini PC User Manual</a></p> <p>Comprehensive user manual for the GMKtec M6 Mini PC, detailing specifications, setup, operation, and troubleshooting for this compact desktop computer powered by AMD R5 6600H.</p>
	<p><a href="#">GMKtec NUCBOX G3 PLUS User Manual and Specifications</a></p> <p>Comprehensive user manual for the GMKtec NUCBOX G3 PLUS mini PC, covering setup, specifications, safety precautions, and warranty information. Includes detailed descriptions of hardware interfaces and technical details.</p>
	<p><a href="#">Instrukcja Obsługi GMKtec NUCBOX G3 PLUS - Mini PC</a></p> <p>Szczegółowa instrukcja obsługi dla mini PC GMKtec NUCBOX G3 PLUS. Zawiera informacje o specyfikacjach, podłączeniu, bezpieczeństwie i konserwacji.</p>
	<p><a href="#">GMKtec NUCBOX7/7S User Manual</a></p> <p>User manual for the GMKtec NUCBOX7 and NUCBOX7S mini PCs, detailing specifications, safety precautions, connection steps, and after-sales support.</p>
	<p><a href="#">GMKtec NUCBOX G5 User Manual and Specifications</a></p> <p>This document provides a user manual, specifications, and setup guide for the GMKtec NUCBOX G5 Mini PC. It covers safety precautions, device interfaces, technical specifications, connection steps, and basic settings.</p>