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› GMKtec G9 Mini PC NAS Instruction Manual

GMKtec G9

GMKtec G9 Mini PC NAS Instruction Manual

Model: G9

1. INTRODUCTION

This manual provides comprehensive instructions for setting up, operating, maintaining, and troubleshooting your GMKtec G9 Mini PC NAS. Please read this manual thoroughly before using the device to ensure optimal performance and longevity.

2. PRODUCT OVERVIEW

The GMKtec G9 Mini PC NAS is a versatile desktop computer designed for both general computing and network-attached storage (NAS) functionalities. It features an Intel N150 CPU, 12GB DDR5 RAM, and extensive storage options, making it suitable for various applications from office work to home entertainment and data management.



Figure 2.1: GMKtec G9 Mini PC with its top cover removed, illustrating the internal layout and accessible ports including USB-C, HDMI, Ethernet, and USB 3.2 ports.

Key Features:

- **Intel N150 CPU:** 4 Cores, 4 Threads, 6MB Cache, up to 3.6GHz burst speed.
- **Memory:** 12GB LPDDR5 4800MT/s.
- **Storage:** 64GB EMMC (for Ubuntu OS) + 1TB M.2 SSD (for Windows 11 Pro).
- **Expandable Storage:** 4x M.2 2280 PCIe slots for up to 16TB total NVMe storage.
- **Network:** Dual Intel i226v 2.5GbE RJ45 ports, WiFi 6, Bluetooth 5.2.
- **Display:** Dual HDMI 2.0 (4K@60Hz) + Full Function Type-C (DP/DATA/PD) for triple 4K display output.
- **Cooling:** Triple cooling fans for CPU, SSD, and DDR compartments, ensuring quiet operation.

NEW TWIN LAKE INTEL N150

2025 NEW RELEASE

(4 Core/4 Threads)



HDMI*2+ USB-C*1
Triple Screen 4k output





Intel Graphics up to 1000MHz



QUAD STORAGE
(4*M.2 PCIE Slots, Max 16TB Total)



12GB
LPDDR5 4800MT/S



GMKtec Nucbox G9



Intel i226V DUAL NIC (RJ45)



WiFi6
(3x the speed of WiFi 5)



Bluetooth5.2
(Faster Stable Connection)

Additional Function

- 1.Auto Power On
- 2.Wake On LAN
- 3.Compatible with Linux, Win 11 Pro, Ubuntu



Ubuntu

Dual Boot System
Default Boot to Windows 11 Pro, can be switched to ubuntu

Figure 2.2: Detailed feature overview of the GMKtec Nucbox G9, highlighting its processor, graphics, storage, memory, and connectivity options.

3. SETUP

3.1 Initial Connection

1. **Connect to Display:** Use an HDMI cable to connect the Mini PC to your monitor or TV. The device supports up to three 4K displays via two HDMI ports and one USB-C port.
2. **Connect Peripherals:** Plug in your keyboard and mouse into the available USB 3.2 ports.
3. **Connect to Network:** For wired internet, connect an Ethernet cable to one of the dual 2.5GbE RJ45 ports. For wireless, ensure WiFi 6 is enabled in the operating system settings after initial boot.
4. **Power On:** Connect the power supply to the Mini PC and then to a power outlet. Press the power button on the front of the device.

3.2 Placement and Installation

The GMKtec G9 is designed for flexible placement, including desktop use or VESA mount installation.

SPACE-SAVING VESA INSTALLATION & DESKTOP PLACEMENT



Desktop Placement



VESA Installation

Figure 3.1: Examples of space-saving desktop placement and VESA mount installation for the GMKtec G9 Mini PC.

For VESA mounting, attach the included VESA mount bracket to the back of your compatible monitor using the provided screws, then secure the Mini PC to the bracket.

4. OPERATING SYSTEM MANAGEMENT

The G9 Mini PC supports dual boot functionality with Windows 11 Pro (default OS on SSD) and Ubuntu 24.10 (on 64GB

EMMC).

4.1 Switching Between Operating Systems

To switch between Windows and Ubuntu, you need to access the boot menu during startup.

1. Power on or restart the Mini PC.
2. Continuously press the **F7** key on your keyboard immediately after pressing the power button. This will bring up the boot menu.
3. From the boot menu, select your desired operating system (e.g., "Ubuntu" or "Windows Boot Manager") using the arrow keys and press **Enter**.

DUAL BOOT WINDOWS & UBUNTU



Figure 4.1: The GMKtec G9 supports dual booting Windows and Ubuntu, allowing users to switch between operating systems as needed.

4.2 Ubuntu Installation Tutorial

For a detailed guide on installing Ubuntu, refer to the official tutorial video provided by GMKtec.



Video 4.1: GMKtec G9 Mini PC NAS Ubuntu Installation Tutorial. This video provides step-by-step instructions on how to install Ubuntu on your G9 Mini PC.

4.3 Dual Booting Windows and Linux

Learn how to effectively manage and switch between your pre-installed Windows 11 Pro and Ubuntu operating systems with this helpful video guide.



Video 4.2: Nucbox G9: How to Dual Boot Linux and Win 11 Pro. This video demonstrates the process of dual booting Windows and Linux on the Nucbox G9.

5. HARDWARE MAINTENANCE & UPGRADES

The GMKtec G9 is designed for user-friendly maintenance and upgrades, particularly for storage expansion.

5.1 Storage Expansion (NAS Capability)

The G9 Mini PC is equipped with four M.2 2280 PCIe slots, allowing for significant storage expansion up to 16TB (4x 4TB drives). This makes it an ideal solution for Network Attached Storage (NAS) applications, enabling you to backup files, share photos, and stream videos across your network.

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 5.1: Illustration of the four M.2 NVMe slots available for expanding storage capacity up to 16TB, enhancing the NAS capabilities of the G9.

5.2 Fan Removal and Installation

Regular cleaning of the cooling fans can help maintain optimal performance. This video guides you through the process of

removing and installing the fans.



Video 5.2: GMKtec G9 Removing and installing a fan detailed tutorial. This video provides a step-by-step guide on how to safely remove and reinstall the cooling fans.

5.3 Thermal Paste Application

Proper application of thermal paste is crucial for efficient heat dissipation from the CPU. This tutorial demonstrates the correct procedure.



Video 5.3: Detailed tutorial for installing thermal paste about G9. This video shows how to apply thermal paste to the CPU for optimal cooling.

Note: The LPDDR5 memory is integrated onto the motherboard and is not user-replaceable or upgradeable.

6. CONNECTIVITY

The GMKtec G9 offers a rich set of interfaces for diverse connectivity needs.

- **USB Ports:** 3x USB 3.2 (10Gbps) for high-speed data transfer and peripheral connections.
- **Video Output:** 2x HDMI (4K@60Hz) and 1x Type-C (DP/DATA/PD) for triple display support.
- **Audio:** 3.5mm Audio Jack.
- **Network:** Dual Intel i226v 2.5GbE RJ45 for lightning-fast wired network speeds, WiFi 6 (802.11ax) for high-speed wireless, and Bluetooth 5.2 for wireless device connections.

TRIPLE DISPLAY

2*HDMI 4K+Type C 4K
Easily Office, Film and Television, Design



Figure 6.1: The G9 supports triple 4K display output, enhancing productivity and entertainment experiences.

DUAL 2.5G HIGH SPEED ETHERNET

Intel i226V DUAL LAN RJ45 NETWORK
COMPATIBLE WITH LINUX UBUNTU ESXI VMWARE

Read/Write Speed



Figure 6.2: Dual 2.5GbE ports provide significantly faster wired network speeds compared to standard Gigabit Ethernet.

7. SPECIFICATIONS

Feature	Specification
Processor	Intel N150 (4 Core, 4 Threads, up to 3.6GHz)
RAM	12GB LPDDR5 4800MHz
Internal Storage	64GB EMMC + 1TB M.2 SSD
Expandable Storage	4x M.2 2280 NVMe Slots (Max 16TB)
Graphics	Intel Graphics (max 1000MHz)
Operating System	Windows 11 Pro (Default), Ubuntu 24.10 (on EMMC)
Ethernet	Dual Intel i226v 2.5GbE RJ45
Wireless Connectivity	WiFi 6 (802.11ax), Bluetooth 5.2
USB Ports	3x USB 3.2 (10Gbps)
Video Ports	2x HDMI (4K@60Hz), 1x Full Function Type-C (DP/DATA/PD)
Audio Port	3.5mm Audio Jack
Dimensions	5.74 x 4 x 1.52 inches
Weight	2.41 pounds

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your GMKtec G9 Mini PC NAS.

8.1 General Issues

- **No Power:**
 - Ensure the power adapter is securely connected to the Mini PC and a working power outlet.
 - Verify the power outlet is functional by plugging in another device.
- **No Display:**
 - Check HDMI/USB-C cable connections to both the Mini PC and the monitor.
 - Ensure the monitor is powered on and set to the correct input source.
 - Try a different display cable or monitor if available.
- **No Internet Connection (Wired):**
 - Verify the Ethernet cable is securely plugged into both the Mini PC and the router/modem.
 - Check router/modem status lights.
 - Restart your router/modem.
- **No Internet Connection (Wireless):**
 - Ensure WiFi is enabled in the operating system settings.
 - Verify you are connected to the correct WiFi network and have entered the correct password.
 - Move the Mini PC closer to the wireless router to improve signal strength.

8.2 Operating System Specific Issues

- **Cannot Boot into Desired OS:**

- Ensure you are pressing the **F7** key repeatedly immediately after powering on the device to access the boot menu.
- Verify the correct boot drive is selected in the BIOS/UEFI settings if the F7 menu is not appearing or not showing the correct options.

- **Ubuntu Installation Issues:**

- Refer to the "Ubuntu Installation Tutorial" video in Section 4.2 for detailed steps.
- Ensure your USB installation media is created correctly using Rufus and the correct ISO image.

9. WARRANTY & SUPPORT

GMKtec offers comprehensive support for your Mini PC.

- **Warranty:** GMKtec provides a 1-year limited warranty for each Mini PC, effective from the date of purchase. This warranty covers defects arising from design and workmanship.
- **Customer Support:** For any inquiries or technical assistance, you can contact GMKtec's professional after-sales team.

Contact Information:

Email Support: support@gmktec.com (24/7 Customer Support)

Amazon Support: Log in to your Amazon account, navigate to "Your Orders," and select "Ask Product Question" for assistance.