

GMKtec K16

GMKtec K16 Mini PC User Manual

Model: K16 (AMD Ryzen 7 7735HS)

1. INTRODUCTION

This manual provides instructions for the setup, operation, maintenance, and troubleshooting of your GMKtec K16 Mini PC. The K16 is a compact desktop computer featuring an AMD Ryzen 7 7735HS processor, designed for various applications including everyday use, gaming, and multimedia tasks.

2. GETTING STARTED (SETUP)

2.1 Box Contents

Verify that all items are present in the package:

- GMKtec Nucbox K16 AMD Ryzen 7 7735HS Mini PC
- Power Supply & Cable
- HDMI Cable
- Vertical Stand
- User Manual (this document)

2.2 Connecting Peripherals

Before powering on, connect your essential peripherals:

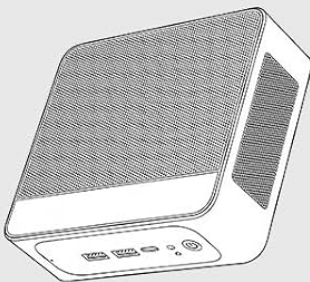
1. **Monitor Connection:** Connect your display to the Mini PC using the provided HDMI cable or a DisplayPort/USB4 cable. The K16 supports up to three displays simultaneously via HDMI 2.0, DisplayPort 1.4, and USB4/DP ports.
2. **Keyboard and Mouse:** Connect your USB keyboard and mouse to any available USB ports.
3. **Network Connection:** For wired internet, connect an Ethernet cable to one of the 2.5GbE LAN ports. For wireless, ensure your Wi-Fi network is available during initial setup.
4. **Power Connection:** Connect the power supply to the DC Power Input port on the Mini PC, then plug the

power cable into an electrical outlet.

GMKtec Nucbox K16 :



Other Ryzen 7 7735HS Mini Pc:



- ✓ Genuine AMD Ryzen 7 7735HS Processor
- ✓ 32GB 6400MT/s Memory
- ✓ Dual 2.5G LAN Ports
- ✓ OCuLink Expansion Ready
- ✓ Premium Metal Chassis
- ✓ WiFi 6E Connectivity
- ✓ Full-Function USB4
- ✓ Advanced Dual-Fan Cooling

Third Generation
Gaming PC

More Usable
Space

Connectivity &
Expansion

Stable
Performance

- ✗ Forgery Ryzen 7 7735HS Processor
- ✗ 24GB 5500MT/s Memory
- ✗ Single LAN Port
- ✗ No OCuLink Support
- ✗ Plastic Housing
- ✗ WiFi 6
- ✗ Standard USB-C
- ✗ Single-Fan Cooling

Image: The GMKtec K16 Mini PC, showcasing its compact design and various connectivity ports on the front and rear.

2.3 Powering On and Initial Setup

1. Press the power button located on the front of the Mini PC. The power indicator light will illuminate.
2. The system will boot into Windows 11 Pro. Follow the on-screen instructions to complete the initial operating system setup, including language, region, and user account creation.
3. Ensure all drivers are installed. Windows Update typically handles this automatically.

3. HARDWARE OVERVIEW

3.1 Front and Rear Ports

Familiarize yourself with the available ports for optimal connectivity:

OCuLink Port

Turn Power On. Unleash the Beast.



Image: A detailed diagram illustrating the various ports on the front and rear of the GMKtec K16 Mini PC, including USB, HDMI, DisplayPort, LAN, Oculink, and audio jacks.

- **Front Ports:**

- USB 3.2 Gen2 x2 (10Gbps)
- USB4 (40Gbps, PD Charging, Video)
- 3.5mm Audio Jack
- Power Button

- **Rear Ports:**

- USB 3.2 Gen2 x1 (10Gbps)
- USB 3.2 Gen2 x2 (10Gbps)
- HDMI 2.0 Output
- DisplayPort 1.4 Output
- 2.5GbE Ethernet Ports x2
- Kensington Lock Slot
- DC Power Input
- Oculink Port (for eGPU connection)

3.2 Internal Components

The K16 Mini PC is equipped with high-performance components:

- **Processor:** AMD Ryzen 7 7735HS (8 Cores/16 Threads, up to 4.75GHz)
- **Graphics:** Integrated AMD Radeon 680M (12 Cores)
- **Memory:** 32GB LPDDR5 6400MT/s Dual Channel RAM
- **Storage:** 1TB NVMe SSD (PCIe 3.0 M.2 2280). Supports dual M.2 2280 slots for up to 8TB total storage (4TB per slot, SATA not supported).

Dual PCIe 4.0 ×4 M.2 2280 Slots Supports PCIe Gen4 / Gen3 SSDs

Up to 16 TB Total Storage (8 TB × 2, SATA Not Supported)



Onboard Dual-Channel Design Optimized for Speed & Stability

LPDDR5 6400 MT/s Memory

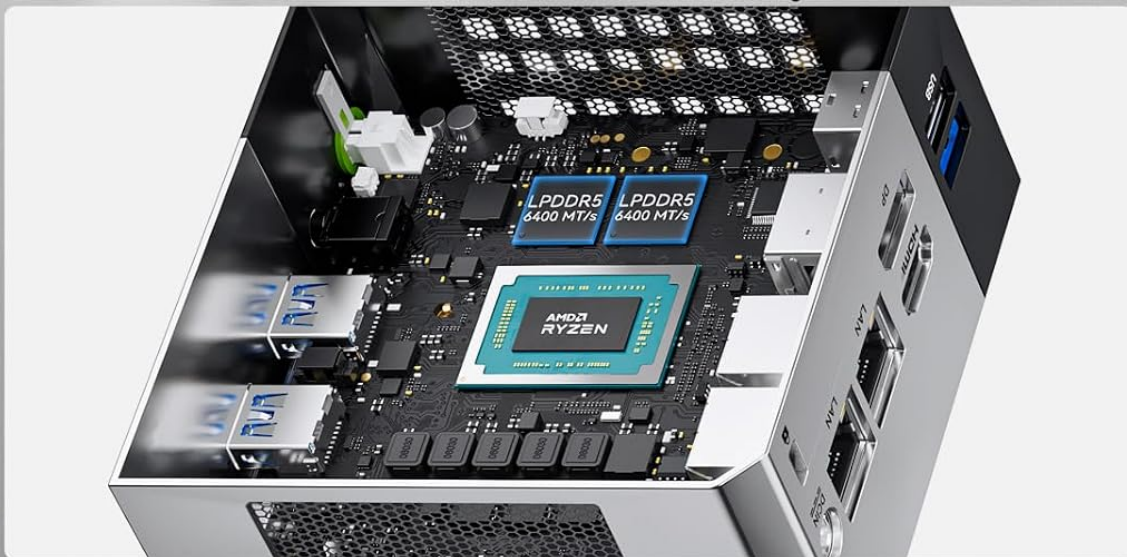


Image: An internal view of the GMKtec K16 Mini PC, highlighting the dual M.2 2280 SSD slots for storage expansion and the onboard LPDDR5 6400MT/s memory modules.

4. OPERATION

4.1 Power Management and Performance Modes

The K16 Mini PC offers three performance modes to balance power consumption and performance:

- **Quiet Mode (28W):** Optimized for low noise and power consumption, suitable for light tasks.

- **Balance Mode (35W):** Standard performance for everyday computing.
- **Performance Mode (40W):** Maximizes CPU and GPU performance for demanding applications and gaming.

These modes can be adjusted within the UEFI (BIOS) settings. Refer to Section 5.2 for BIOS access.

Dual 2.5Gbps LAN

Powered by Realtek RTL8125BG
Up to 2.5× faster than Gigabit Ethernet



WiFi 6E & Bluetooth 5.2

Faster Speeds & Lower Latency

- Cloud Backup / Streaming
- Smart Home Connectivity
- Lag-free Wireless Peripherals



Image: The GMKtec K16 Mini PC connected to three displays, illustrating its multi-tasking capabilities, alongside icons representing the 35W (Silent), 45W (Balance), and 50W (Performance) power modes.

4.2 Display Setup

The K16 supports a triple display workstation setup. Connect up to three monitors using a combination of the HDMI 2.0, DisplayPort 1.4, and USB4/DP ports. Configure display settings within your operating system.

4.3 Connectivity

- **Wireless:** Integrated WiFi 6E and Bluetooth 5.2 provide high-speed wireless networking and peripheral connectivity.
- **Wired Network:** Dual 2.5GbE LAN ports enable advanced networking configurations, including link aggregation for increased bandwidth or hosting a server.
- **USB Ports:** Multiple USB 3.2 Gen2 ports offer fast data transfer speeds (10Gbps). The versatile USB4 port supports 40Gbps data transfer, Power Delivery (PD) charging, and video output.
- **Oculink Port:** This dedicated port allows for direct, high-speed eGPU (external Graphics Processing Unit) connections, unlocking desktop-level graphics performance.

OCuLink Port

Turn Power On. Unleash the Beast.



Nucbox K16 From Mini PC to Desktop-Class Gaming Power

- PCIe 4.0 x4 · Ultra-Low Latency
- Desktop GPU Expansion Ready



From Mini PC to Desktop-Class Gaming Power

Image: The GMKtec K16 Mini PC with an Oculink cable connected to an external GPU enclosure, demonstrating its capability to expand graphics performance.

4.4 Storage Expansion

The K16 features dual M.2 2280 slots, supporting PCIe Gen4/Gen3 SSDs. Each slot can accommodate up to 4TB, allowing for a total of 8TB of storage. This provides ample space for applications, games, and media files.

5. MAINTENANCE

5.1 Cooling System

The K16 Mini PC incorporates an upgraded dual cooling fan design with 360-degree airflow and copper pipes. This system is designed to keep the unit running cool and quiet under various loads. Ensure that the ventilation openings are not obstructed to maintain optimal cooling performance.

5.2 General Care

- Keep the Mini PC in a clean, dust-free environment.
- Avoid exposing the device to extreme temperatures or humidity.
- Clean the exterior with a soft, dry cloth. Do not use liquid cleaners directly on the device.

6. TROUBLESHOOTING

6.1 Common Issues

- **No Display:** Ensure the monitor is properly connected and powered on. Try a different HDMI or DisplayPort cable. Verify the correct input source is selected on your monitor.
- **No Power:** Check that the power adapter is securely connected to both the Mini PC and the electrical outlet. Try a different outlet if necessary.
- **Peripheral Not Detected:** Ensure USB devices are firmly plugged into the ports. Try a different USB port or restart the Mini PC.
- **Network Connectivity Issues:** For wired connections, check the Ethernet cable and router status. For Wi-Fi, ensure the network is available and the correct password is entered.

6.2 UEFI (BIOS) Access

To access the UEFI (BIOS) settings, power on the Mini PC and repeatedly press the **Delete** key (or **F2**, depending on the specific BIOS version) during startup. Within the BIOS, you can configure settings such as:

- Performance Modes (Quiet, Balance, Performance)
- VRAM Allocation
- Auto Power On
- Wake-on-LAN options

A USB keyboard may be necessary for BIOS navigation.

7. SPECIFICATIONS

Feature	Specification
Brand	GMKtec
Model Name	K16
Operating System	Windows 11 Pro
CPU Model	AMD Ryzen 7 7735HS
CPU Speed	Up to 4.75 GHz

Feature	Specification
Graphics Coprocessor	AMD Radeon 680M (12 Cores)
RAM Memory Installed	32 GB LPDDR5
Memory Speed	6400 MT/s
Memory Storage Capacity	1 TB PCIe 3.0 M.2 2280 SSD
Storage Expansion	Dual M.2 2280 slots (up to 8TB total)
Wireless Connectivity	WiFi 6E, Bluetooth 5.2
Wired Network	Dual 2.5GbE LAN
Video Output	HDMI 2.0, DisplayPort 1.4, USB4 (DP Alt Mode)
USB Ports	USB 3.2 Gen2 x5 (including USB4)
Special Ports	Oculink Port for eGPU
Cooling Method	Dual Cooling Fan
Item Weight	227 g
Power Consumption	45 Watts (typical)

8. WARRANTY AND SUPPORT

8.1 Warranty Information

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

8.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact GMKtec customer support. Refer to the official GMKtec website or your purchase documentation for specific contact details.