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› GMKtec M7 Ultra Mini PC User Manual

## GMKtec M7 Ultra

# GMKtec M7 Ultra Mini PC User Manual

Your comprehensive guide to setup, operation, and maintenance.

## 1. GETTING STARTED

### 1.1 Unboxing Your M7 Ultra Mini PC

Carefully unpack all components from the retail box. Ensure all items are present before proceeding with setup.

- GMKtec Nucbox M7 Ultra AMD Ryzen 7 PRO 6850U 32GB+1TB Mini PC
- 1 x Power Adapter
- 1 x VESA Mount with Screws
- 1 x HDMI Cable
- 1 x User Manual

# Retail Boxed Packaging



1. Nucbox M7 Ultra Mini PC

2. Power Supply & Cable

3. User Manual

4. HDMI Cable

5. VESA Mount with Screws

*Image: Retail Boxed Packaging. This image displays the GMKtec M7 Ultra Mini PC alongside its included accessories: power adapter, VESA mount with screws, HDMI cable, and user manual, all neatly arranged as they would appear in the product packaging.*

## 1.2 Physical Overview

Familiarize yourself with the ports and indicators on your M7 Ultra Mini PC.

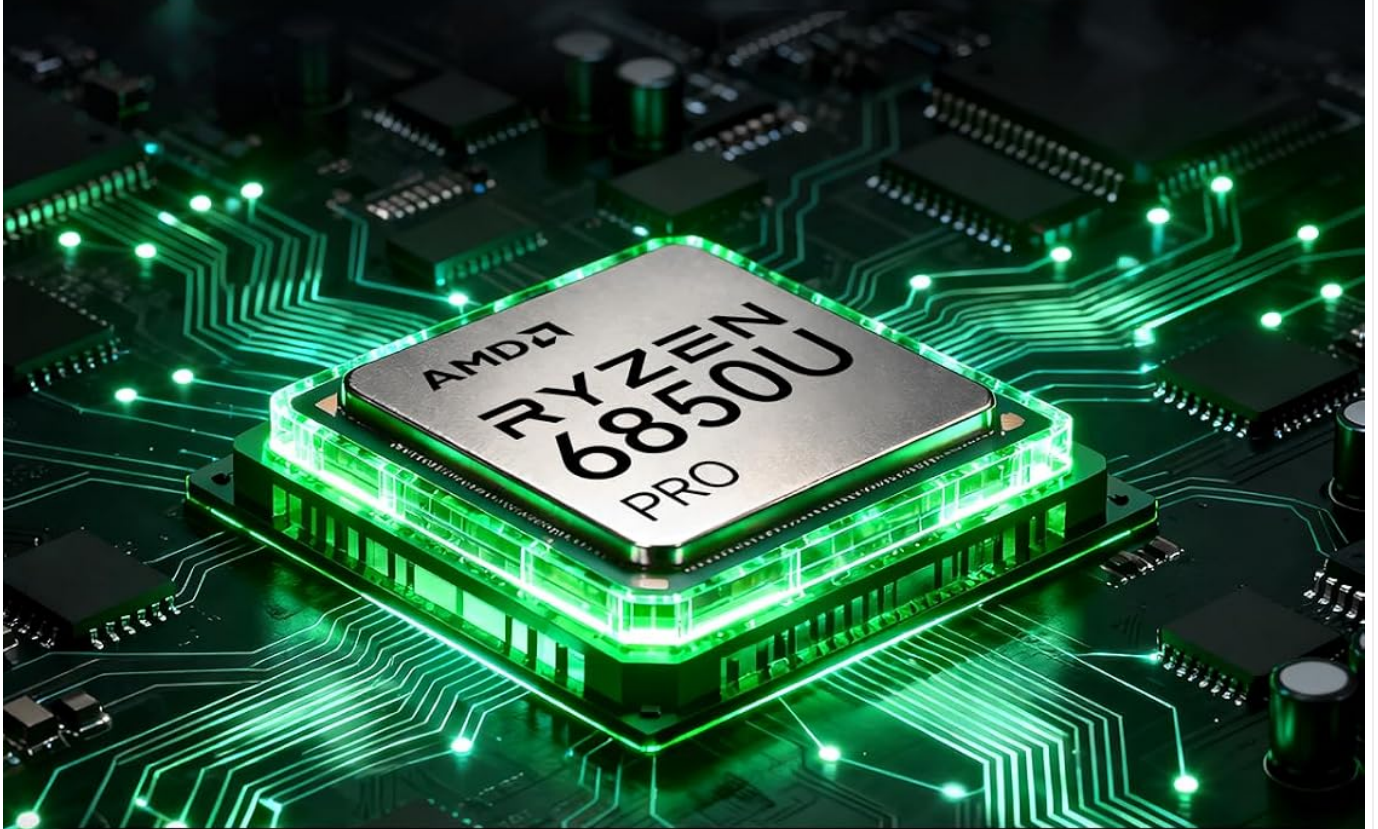
# AMD Ryzen 7 PRO 6850U

**2.7~4.7**  
GHz

**8**  
Cores

**16**  
Threads

**16 MB**  
Cache



## Cinebench R23 Multi-Core

### Ryzen 7 PRO 6850U



*Image: Front and Rear Ports. This image highlights the various connectivity options on the GMKtec M7 Ultra Mini PC, including USB ports, HDMI, DisplayPort, LAN ports, and the power input.*

The front panel typically includes the power button, audio jack, USB 3.2 (Gen2) ports, and USB4 (Type-C) ports. The rear panel features additional USB 2.0 ports, HDMI 2.1, DisplayPort 2.0, dual 2.5G LAN ports, DC power input, and an Oculink port.

## 2. SETUP AND INITIAL USE

### 2.1 Connecting Peripherals

1. Connect your monitor(s) to the HDMI 2.1, DisplayPort 2.0, or USB4 (Type-C) ports. The M7 Ultra supports up to four simultaneous displays.
2. Connect your keyboard and mouse to the available USB ports.
3. For wired network access, connect an Ethernet cable to one of the 2.5G LAN ports.
4. Plug the power adapter into the DC IN port and then into a power outlet.



Image: Quad Display Setup. This image illustrates the GMKtec M7 Ultra Mini PC connected to four monitors, demonstrating its capability for extensive multi-display configurations for productivity or entertainment.

### 2.2 Powering On

Press the power button on the front panel. The system will boot up, and you will see the operating system interface on your connected display(s).

## 3. OPERATING YOUR MINI PC

### 3.1 Performance Modes

The M7 Ultra features an updated BIOS with three selectable performance modes to optimize for your usage:

- **Quiet Mode (35W):** Ideal for light tasks and silent operation.
- **Balance Mode (50W):** A good balance between performance and noise for everyday use.
- **Performance Mode (65W-70W):** Maximizes CPU and GPU performance for demanding applications and gaming.

You can also adjust VRAM allocation and enable features like Auto Power On and Wake-on-LAN through the BIOS settings.

### 3.2 Network Connectivity

The M7 Ultra offers robust network options:

- **Dual Intel I226V 2.5Gbps LAN:** Provides high-speed wired network connections, suitable for network-intensive tasks, firewalls, or file servers.
- **WiFi 6 & Bluetooth 5.2:** For fast wireless internet and seamless connection to wireless peripherals.

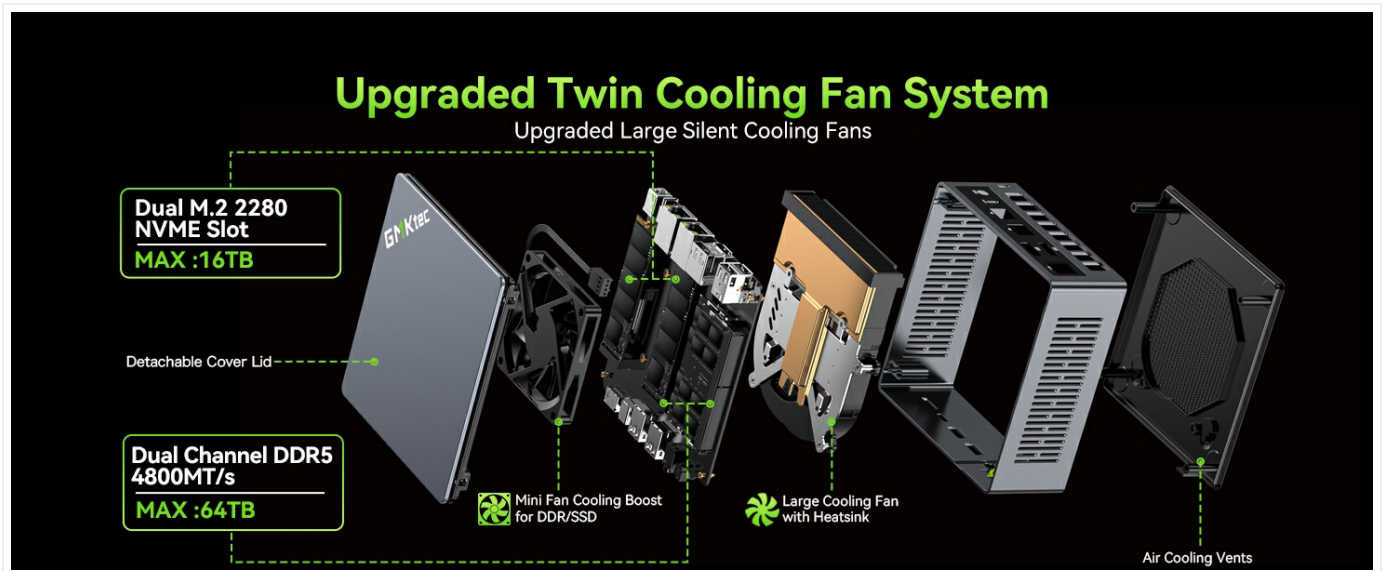


Image: Dual 2.5G LAN Ports. This image shows the two 2.5 Gigabit Ethernet ports on the GMKtec M7 Ultra, emphasizing its high-speed wired networking capabilities.



Image: WiFi 6E and Bluetooth 5.2. This image highlights the wireless connectivity features of the GMKtec M7 Ultra, including support for WiFi 6E and Bluetooth 5.2 for enhanced wireless performance.

### 3.3 Oculink Port

The M7 Ultra includes an Oculink port, which provides higher bandwidth (PCIe x4 speeds) compared to Thunderbolt. This is beneficial for connecting external GPUs (eGPUs) for enhanced graphics performance, particularly for gamers and content creators.

**Note:** Oculink does not support hot-plugging. Always power off the Mini PC before connecting or disconnecting Oculink devices.

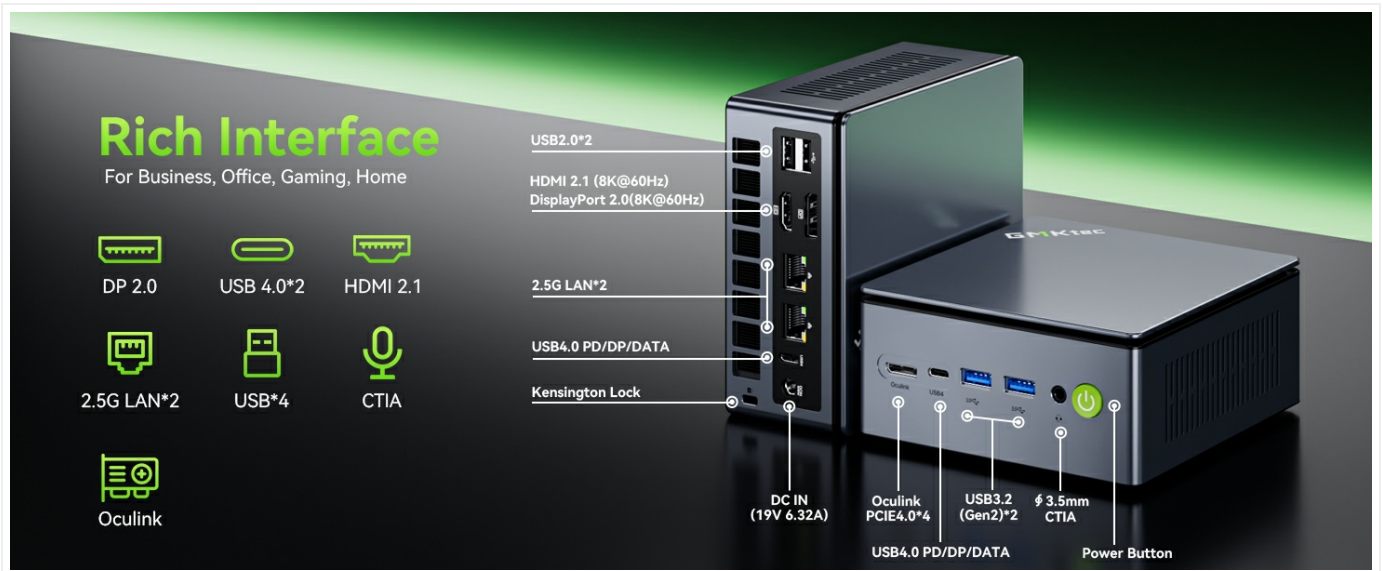


Image: Oculink Port for eGPU. This image demonstrates the Oculink port on the GMKtec M7 Ultra, illustrating its use for connecting an external GPU to boost graphics performance.

Video: GMKtec M7 Ultra Mini PC Gaming Overview. This video provides a general overview of the GMKtec M7 Ultra Mini PC, showcasing its design, features, and potential applications in a gaming context.

## 4. MAINTENANCE AND UPGRADES

### 4.1 Cooling System

The M7 Ultra features an upgraded Hyper Ice Chamber 2.0 cooling design with larger top and bottom fans and a copper base. This system provides 360-degree airflow, keeping the unit cool and maintaining fan noise at approximately 35dB in Quiet mode.



Image: Hyper Ice Chamber 2.0 Cooling System. This image provides an exploded view of the GMKtec M7 Ultra's cooling system, detailing the larger top and bottom fans and copper base designed for efficient heat dissipation.

### 4.2 Storage and Memory Expansion

The M7 Ultra is designed for easy upgrades:

- **RAM:** Comes with 32GB DDR5 4800MHz (2x16GB SO-DIMM) and supports expansion up to 96GB RAM.
- **SSD:** Features a 1TB M.2 2280 PCIe 3.0 SSD and supports dual slot expansion to 2x PCIe 4.0 2TB SSDs, for a total of up to 4TB storage.

To access the RAM and SSD slots, carefully remove the bottom cover of the Mini PC. Refer to the detailed instructions in the included user manual for specific steps.

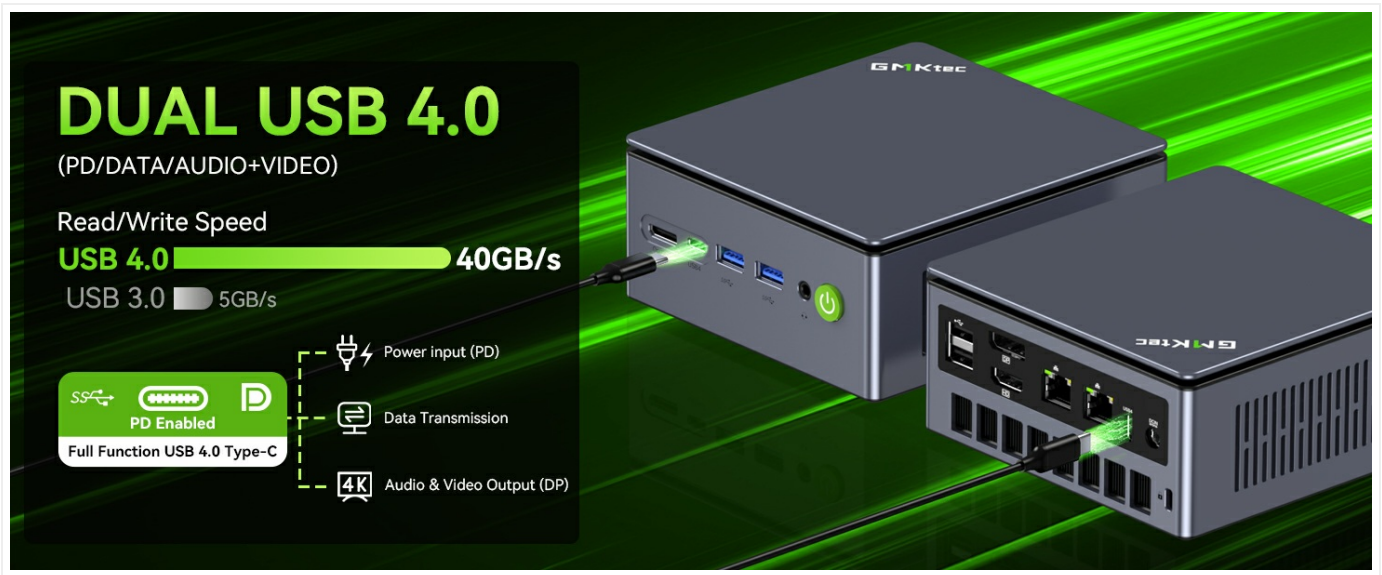


Image: Easy Installation for Upgrades. This image shows the internal layout of the GMKtec M7 Ultra, highlighting the accessible slots for upgrading DDR5 RAM and M.2 2280 SSDs.

## 5. TROUBLESHOOTING

This section addresses common issues you might encounter with your GMKtec M7 Ultra Mini PC.

- **No Display Output:** Ensure all display cables (HDMI, DisplayPort, USB-C) are securely connected to both the Mini PC and the monitor. Verify the monitor is set to the correct input source.
- **No Power:** Check that the power adapter is correctly plugged into the Mini PC and a working power outlet. Try a different outlet if necessary.
- **Network Connectivity Issues:** For wired connections, ensure the Ethernet cable is properly connected and the network lights on the port are active. For Wi-Fi, check your router and ensure the Mini PC's Wi-Fi is enabled and connected to the correct network.
- **Excessive Fan Noise:** If the fan noise is louder than expected, especially during light use, check the selected performance mode in the BIOS. Switching to 'Quiet Mode' (35W) can reduce fan speed and noise. Ensure the air vents are not obstructed.
- **System Slowdown/Lag:** This could be due to high resource usage. Close unnecessary applications. Ensure the system is in 'Balance' or 'Performance' mode for demanding tasks. Check for sufficient free storage space.

If issues persist, consult the full user manual or contact GMKtec customer support.

## 6. TECHNICAL SPECIFICATIONS

|                  |                                                                                 |
|------------------|---------------------------------------------------------------------------------|
| Processor        | AMD Ryzen 7 PRO 6850U (8C/16T, up to 4.7GHz)                                    |
| Graphics         | AMD Radeon 680M (12 Cores, 2200MHz)                                             |
| RAM              | 32GB DDR5 4800MHz SO-DIMM (Dual Channel, expandable to 96GB)                    |
| Storage          | 1TB M.2 2280 PCIe 3.0 SSD (Dual slot expansion to 2x PCIe 4.0 2TB SSD, max 4TB) |
| Operating System | Windows 11 Pro OS                                                               |

|                     |                                                                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Video Output</b> | 2x USB4 (Type-C, 4K@144Hz), 1x HDMI 2.1 (8K@60Hz), 1x DisplayPort 2.0 (8K@60Hz)                                                                 |
| <b>Network</b>      | Dual Intel I226V 2.5Gbps LAN, WiFi 6, Bluetooth 5.2                                                                                             |
| <b>Ports</b>        | 2x USB 2.0, 2x USB 3.0, 2x USB4 (Type-C), 1x Oculink (PCIe 4.0 x4), 1x 3.5mm Audio Jack, 2x 2.5G LAN, 1x HDMI 2.1, 1x DisplayPort 2.0, 1x DC IN |
| <b>Dimensions</b>   | Approximately 5 x 5 x 2 inches                                                                                                                  |
| <b>Weight</b>       | Approximately 3.91 pounds                                                                                                                       |

## 7. WARRANTY AND SUPPORT

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

For technical assistance, troubleshooting, or warranty claims, please contact GMKtec customer support through their official channels. Keep your purchase receipt and product serial number readily available for faster service.

### ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

### Answered questions about this manual

**How do I activate the top lock or secure the top cover on the GMKtec M7 Ultra Mini PC?**

Based on the GMKtec M7 Ultra manual, there is no mention of a software-based "lock" for the top of the device. If

you are referring to the physical assembly or securing the chassis, please...

[Read full answer](#)

**How can I troubleshoot no sound from my Logik LSP20SB21 PC soundbar when connected to my GMKtec NUCBOX M7 Ultra?**

If your Logik LSP20SB21 soundbar is listed as a device on your GMKtec NUCBOX M7 Ultra but produces no sound, please follow these troubleshooting steps: Set as Default Output: Go to Settings > System >...

[Read full answer](#)