MINIX NGC-7 Pro

MINIX NGC-7 Pro Mini PC User Manual
Model: NGC-7 Pro

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of your MINIX NGC-7 Pro Mini PC. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent damage.

The MINIX NGC-7 Pro is a compact and powerful mini PC designed for various applications, including home entertainment, digital signage, and office productivity. It features an Intel Core i7-10510U processor, 16GB DDR4 RAM, and a 512GB M.2 NVMe SSD, running Windows 11 Pro.

2. PACKAGE CONTENTS

Verify that all items are present in your package:

- MINIX NGC-7 Pro Mini PC
- Power Adapter
- VESA Mount (with screws)
- User Manual (this document)
- Dual Band Antennas (2x)

Note: Specific accessories may vary by region or retailer.

3. PRODUCT OVERVIEW

Familiarize yourself with the ports and features of your MINIX NGC-7 Pro Mini PC.

Image 3.1: Front and Rear Panel Ports and Dimensions
This image displays the MINIX NGC-7 Pro Mini PC from a slightly elevated angle, highlighting its compact dimensions (153mm x 153mm x 43mm). All ports on the front and rear panels are clearly labeled. On the front, from left to right, are the Power Button, 3.5mm Audio Jack + S/PDIF, Micro SD Card Reader, 2x USB 3.1 ports, and an RS232 COM port. The rear panel features Gigabit Ethernet ports, DisplayPort 1.2, 2x USB 3.1 ports, HDMI 2.0a, USB-C, and the DC 12-24V Power Jack.

Image 3.2: Top and Bottom Panel Features
This image shows the top and bottom views of the MINIX NGC-7 Pro Mini PC. The top view indicates the Reset Button, two Dual Band Antenna Screw Mounts, and a Kensington Lock slot. The bottom view highlights the LED Power Indicator, which illuminates when the device is powered on.

Front Panel:

- **Power Button:** Turns the device on or off.
- **3.5mm Audio Jack + S/PDIF:** For audio output and optical digital audio.
- **Micro SD Card Reader:** For reading Micro SD cards.
- **USB 3.1 Ports (2x):** For connecting USB devices.
- **RS232 COM Port:** For commercial applications and serial communication.

Rear Panel:

- **Gigabit Ethernet Ports (2x):** For wired network connectivity.
- **DisplayPort 1.2:** For video output.
- **USB 3.1 Ports (2x):** For connecting USB devices.
- **HDMI 2.0a:** For video output.
- **USB-C Port:** For video output only. *Note: This port does not support audio output.*
- **DC 12-24V Power Jack:** For connecting the power adapter.

Side/Top Panel:

- **Reset Button:** For system reset.
- **Dual Band Antenna Screw Mounts (2x):** For attaching the Wi-Fi antennas.
- **Kensington Lock Slot:** For securing the device.
- **LED Power Indicator:** Indicates the power status of the device.

4. SETUP INSTRUCTIONS

1. **Connect Antennas:** Screw the two dual-band antennas onto the designated mounts on the rear of the Mini PC.
2. **Connect Display:** Connect your monitor(s) to the Mini PC using HDMI, DisplayPort, or USB-C cables. The device supports up to three 4K @ 60Hz displays simultaneously.
3. **Connect Peripherals:** Connect your keyboard, mouse, and any other USB devices to the available USB 3.1 ports.
4. **Connect Network (Optional):** For wired internet access, connect an Ethernet cable from your router or modem to one of the Gigabit Ethernet ports. For wireless access, ensure antennas are connected.
5. **Connect Power:** Plug the power adapter into the DC 12-24V Power Jack on the Mini PC, then plug the adapter into a power outlet.
6. **Power On:** Press the Power Button on the front panel. The LED Power Indicator will illuminate.
7. **Initial Setup:** Follow the on-screen instructions to complete the Windows 11 Pro initial setup, including language, region, network connection, and user account creation.

5. OPERATING INSTRUCTIONS

Basic Operation:

- **Power On/Off:** Press the Power Button to turn the device on. To turn off, use the Windows Shut Down option or press and hold the Power Button for 5 seconds.
- **Restart:** Use the Windows Restart option.
- **Sleep Mode:** Use the Windows Sleep option or briefly press the Power Button.

Display Configuration:

The MINIX NGC-7 Pro supports triple 4K @ 60Hz display output. To configure multiple displays:

1. Ensure all monitors are connected to the Mini PC via HDMI, DisplayPort, or USB-C.
2. Right-click on the desktop and select "Display settings".
3. In the Display settings, you can detect, arrange, and extend or duplicate your displays.

Image 5.1: Triple Display Setup Example

This image illustrates the MINIX NGC-7 Pro Mini PC connected to three separate monitors, each displaying different content. This demonstrates the device's capability for multi-monitor setups, ideal for enhanced productivity or digital signage applications.

Network Connectivity:

- **Wired Ethernet:** Connect an Ethernet cable to one of the two Gigabit Ethernet ports for a stable and fast wired connection.
- **Wi-Fi:** The device comes with Intel Dual Band Wireless-AC 3168. To connect to Wi-Fi, click the network icon in the Windows taskbar, select your desired network, and enter the password.
- **4G LTE (Optional):** The device supports 4G LTE via an M.2 (2242) B-Key slot and a Nano SIM card slot. A 4G module is not included and must be purchased separately. Refer to the "Maintenance" section for installation.

6. MAINTENANCE AND UPGRADES

The MINIX NGC-7 Pro is designed for easy maintenance and upgrades. Always power off and disconnect the power adapter before performing any internal maintenance.

RAM Upgrade:

The device comes with 16GB DDR4 RAM (2x SODIMM slots, dual channel supported) and can be upgraded to a maximum of 64GB DDR4 RAM.

Image 6.1: Internal View - RAM and M.2 B-Key Slot

This image provides an internal view of the MINIX NGC-7 Pro, highlighting the two SODIMM slots for DDR4 RAM. It also shows the M.2 (2242) B-Key slot, which supports 4G LTE modules and SATA SSDs. The 4G module is not included and must be installed separately.

Storage Upgrade:

The pre-installed 512GB M.2 NVMe SSD (2280) can be upgraded to a maximum capacity of 2TB. Additionally, the M.2 (2242) B-Key slot supports SATA SSDs.

Image 6.2: Internal View - M.2 NVMe SSD Slot

This image shows the internal layout of the MINIX NGC-7 Pro, specifically pointing out the 1x 2280 M.2 slot for NVMe SSDs. The pre-installed 512GB M.2 NVMe SSD is visible, and the image indicates that this slot is upgradeable to 2TB.

4G LTE Module Installation (Optional):

To enable 4G LTE connectivity, you will need to install a compatible 4G module (M.2 2242 B-Key) and a Nano SIM card.

Image 6.3: Detailed Internal Components

This detailed internal view of the MINIX NGC-7 Pro highlights various components including the COM Port RS232, Lithium Battery (CR2032 3.0V 220mAh), 1xLPC 10Pin, 1x6bit GPIO 8Pin, 1xM.2(2230)E-Key (for WIFI module), 1xM.2(2242)B-Key (supports 4G LTE and SSD SATA), 1xNANO SIM Card Slot, and the 2x SODIMM slots for DDR4 RAM. This image is crucial for identifying locations for upgrades and maintenance.

1. Carefully open the Mini PC casing.
2. Locate the M.2 (2242) B-Key slot.
3. Insert the 4G module into the slot and secure it with a screw.
4. Insert a Nano SIM card into the designated Nano SIM card slot.
5. Close the casing.

Note: The 4G module is not included with the Mini PC.

Cleaning:

Regularly clean the exterior of the Mini PC with a soft, dry cloth. Ensure ventilation vents are free from dust to maintain optimal cooling performance.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power / Device does not turn on.	Power adapter not connected or faulty. Power outlet issue.	Ensure the power adapter is securely connected to the Mini PC and a working power outlet. Test the power outlet with another device. Try a different power adapter if available and compatible.
No display output.	Monitor not connected or turned on. Incorrect input source on monitor. Faulty cable.	Ensure the monitor is powered on and connected to the Mini PC. Select the correct input source on your monitor (e.g., HDMI, DisplayPort). Try a different display cable. Test with a different monitor if possible.
No internet connection (Wi-Fi).	Wi-Fi antennas not connected. Incorrect Wi-Fi password. Router issue.	Ensure the dual-band antennas are securely attached. Verify the Wi-Fi password. Restart your Wi-Fi router. Check if other devices can connect to the Wi-Fi network.

Problem	Possible Cause	Solution
No internet connection (Wired Ethernet).	Ethernet cable not connected or faulty. Router/modem issue.	Ensure the Ethernet cable is securely connected to both the Mini PC and the router/modem. Try a different Ethernet cable. Restart your router/modem.
System slow or unresponsive.	Too many applications running. Insufficient RAM. Overheating.	Close unnecessary applications. Check Task Manager for resource-intensive processes. Ensure proper ventilation and that vents are not blocked. Consider upgrading RAM if performance issues persist (refer to Section 6).

8. SPECIFICATIONS

Feature	Detail
Model	MINIX NGC-7 Pro
Processor	Intel Core i7-10510U (4 Cores)
Graphics	Intel UHD Graphics 620 (Integrated)
RAM	16GB DDR4 (2x SODIMM slots, upgradeable to 64GB)
Storage	512GB M.2 NVMe SSD (2280, upgradeable to 2TB)
Operating System	Windows 11 Pro
Video Output	HDMI 2.0a, DisplayPort 1.2, USB-C (Triple 4K @ 60Hz support)
Audio Output	3.5mm Audio Jack + S/PDIF (5.1 Surround Sound)
USB Ports	4x USB 3.1
Network	2x Gigabit Ethernet (Intel I211AT+Intel I219LM), Intel Dual Band Wireless-AC 3168 (Wi-Fi), Bluetooth
Other Ports	1x RS232 COM, Micro SD Card Reader, 1x M.2 (2242) B-Key (supports 4G LTE/SATA SSD), Nano SIM Card Slot
Dimensions (L x W x H)	15.3 x 15.3 x 4.3 cm
Weight	1 kg
Special Features	VESA Mount support, Kensington Lock, 24/7 operation capability

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official MINIX website or contact your local

retailer. Keep your proof of purchase for warranty claims.

MINIX Technology Limited

Manufacturer of MINIX products.

For further assistance, visit the [MINIX Official Website](#).