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› ACEMAGIC F5A AI Mini PC User Manual

ACEMAGIC F5A

ACEMAGIC F5A AI Mini PC User Manual

Model: F5A | Brand: ACEMAGIC

1. INTRODUCTION

The ACEMAGIC F5A AI Mini PC is a compact and powerful computing solution designed for demanding workloads, local AI processing, multitasking, and advanced content creation. Featuring the AMD Ryzen AI 9 HX 470 processor and Radeon 890M graphics, it offers high performance in a small form factor.



Figure 1: ACEMAGIC F5A AI Mini PC overview highlighting key features like AMD Ryzen AI 9 HX 470, Radeon 890M Graphics, Dual 2.5GbE LAN, Wi-Fi 7, BT 5.4, OCuLink, Dual USB4 Type-C, 32GB DDR5 memory, 1TB PCIe 4.0 NVMe SSD, Quad Display Support, and up to 86 TOPS AI Performance.

This manual provides essential information for setting up, operating, maintaining, and troubleshooting your device to ensure optimal performance and longevity.

2. WHAT'S IN THE BOX

Verify that all items are present in the packaging:

- 1 x F5A Mini PC (Main Unit)
- 1 x Power Adapter

- 1 x HDMI Cable
- 1 x User Manual (this document)
- 1 x VESA Mount with Screws

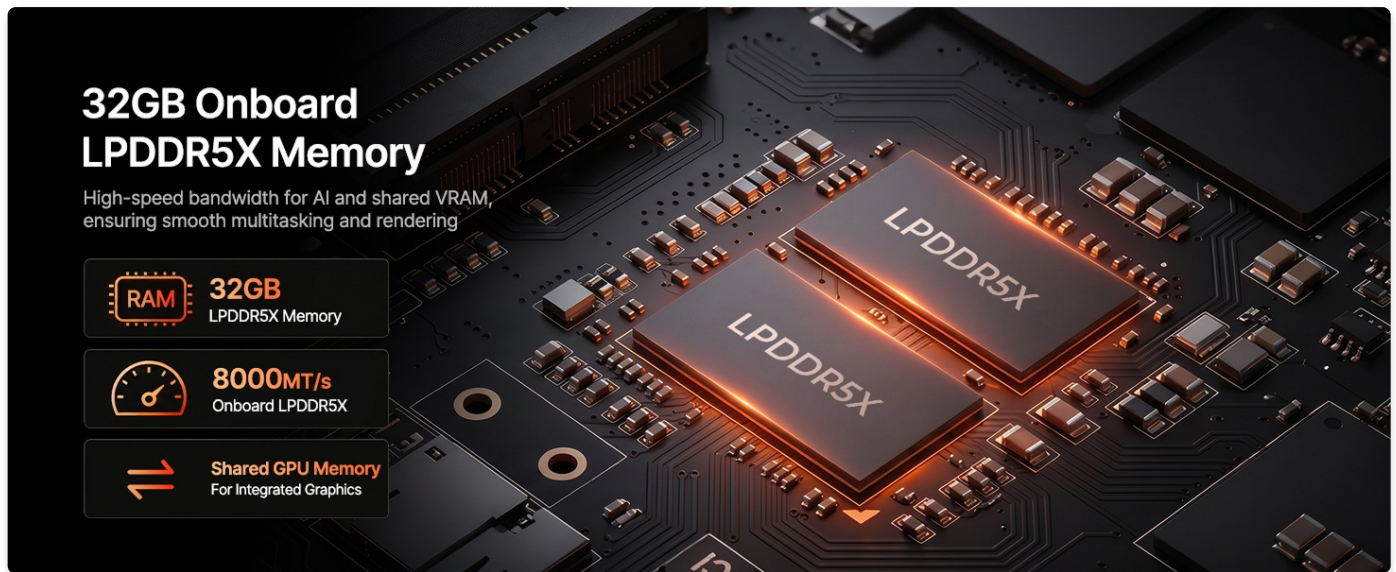


Figure 2: Included accessories: Main Unit, Adapter, Screws, User Manual, Mounting Bracket, and HDMI Cable.

3. SETUP INSTRUCTIONS

Follow these steps to set up your ACEMAGIC F5A Mini PC:

1. **Connect Peripherals:** Connect your monitor(s) using the HDMI 2.1, DisplayPort 2.1, or USB4 Type-C ports. Connect your keyboard, mouse, and other USB devices to the available USB ports.
2. **Power Connection:** Connect the power adapter to the DC IN port on the Mini PC and then plug it into a power outlet.
3. **Network Connection:** For wired internet, connect an Ethernet cable to one of the Dual 2.5G RJ45 LAN ports. For wireless internet, the device supports Wi-Fi 7 and Bluetooth 5.4 for wireless peripherals.
4. **First Boot:** Press the power button on the front of the Mini PC. The system will boot into Windows 11 Pro. Follow the on-screen instructions to complete the initial Windows setup.
5. **Multi-Display Setup:** The Mini PC supports up to three 8K@60Hz displays simultaneously using HDMI 2.1, DP 2.1, and the dual USB4 ports. Configure display settings within Windows.

Full I/O Coverage

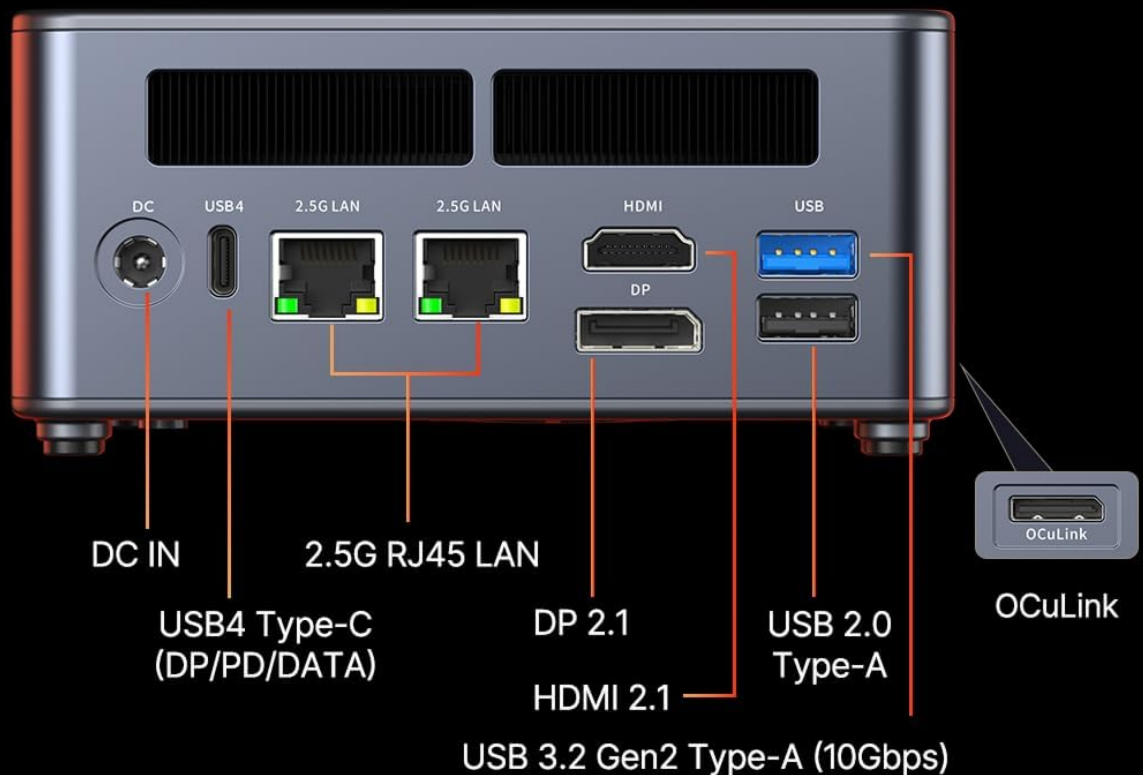
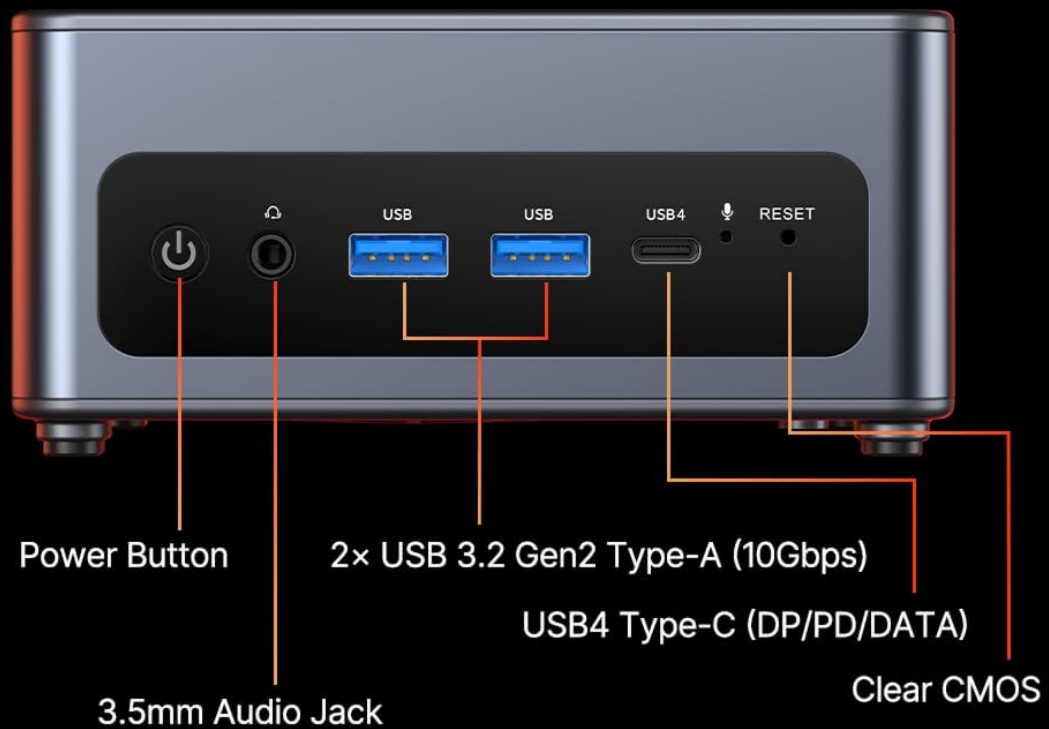


Figure 3: Front and rear I/O ports including Power Button, USB 3.2 Gen2 Type-A, USB4 Type-C (DP/PD/DATA), 3.5mm Audio Jack, Clear CMOS, DC IN, 2.5G RJ45 LAN, DP 2.1, HDMI 2.1, USB 2.0 Type-A, and OCuLink port.

Dual USB4 Connectivity

High-speed data transfer, display output,
and peripheral expansion for seamless creative workflows



2x USB 4

40Gbps Transfer Speed



Up to 8K@60Hz

Video Output



USB-C PD Input

Up to 100W



Figure 4: Detail of Dual USB4 Type-C ports, supporting 40Gbps transfer speed, up to 8K@60Hz video output, and USB-C PD input up to 100W.

4. OPERATING INSTRUCTIONS

The ACEMAGIC F5A is designed for high-performance computing. Here are key operational aspects:

4.1. Power On/Off

- **Power On:** Press the power button once.
- **Shut Down:** From Windows, go to Start > Power > Shut down. Alternatively, press and hold the power button for 5 seconds to force a shutdown (use only when necessary).

4.2. AI Computing Capabilities

Equipped with the AMD Ryzen AI 9 HX 470 processor, this Mini PC features a dedicated NPU for offline local AI computing. This enables running large language models, generating AI art, and enhancing AI video with high efficiency and privacy.

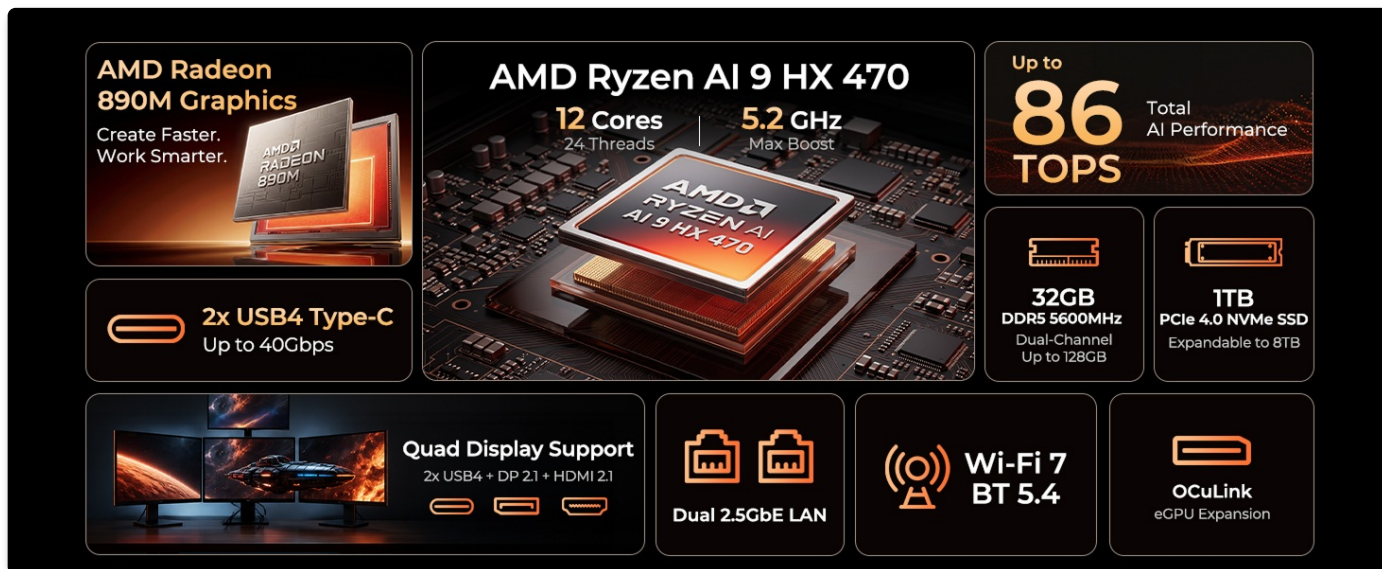


Figure 5: AMD Ryzen AI 9 HX 470 processor, designed for demanding workloads, local AI, multitasking, and advanced content creation, featuring 12 Cores, 24 Threads, 5.2GHz Turbo Frequency, and 24MB L3 Cache.

4.3. Graphics Performance

The integrated RDNA3.5 Radeon 890M iGPU provides robust graphics performance, suitable for 4K editing, 3D modeling, AI art, and smooth gaming at 1080P for many popular titles.

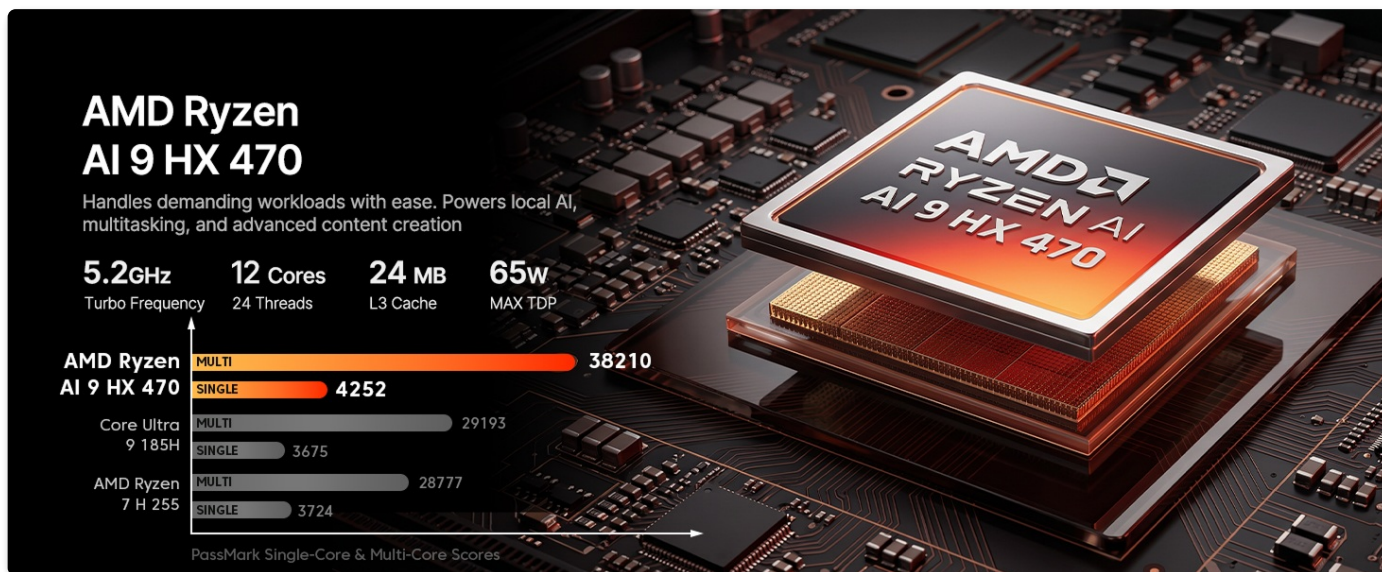


Figure 6: AMD Radeon 890M Graphics, built on RDNA 3.5 architecture with 16 Compute Units and a 3.1 GHz GPU Frequency, designed for smooth workflows, AI acceleration, and gaming.

4.4. Storage and Memory

The Mini PC comes with 32GB LPDDR5X 8000MT/s onboard RAM and a pre-installed 1TB PCIe 4.0 NVMe SSD. It supports triple M.2 NVMe SSD expansion for up to 12TB of dedicated storage.



Figure 7: Internal view showing Triple M.2 NVMe SSD slots, supporting up to 12TB storage with PCIe 4.0 (7000MB/s) and PCIe 3.0 (3500MB/s) speeds for faster file transfers and application loading.

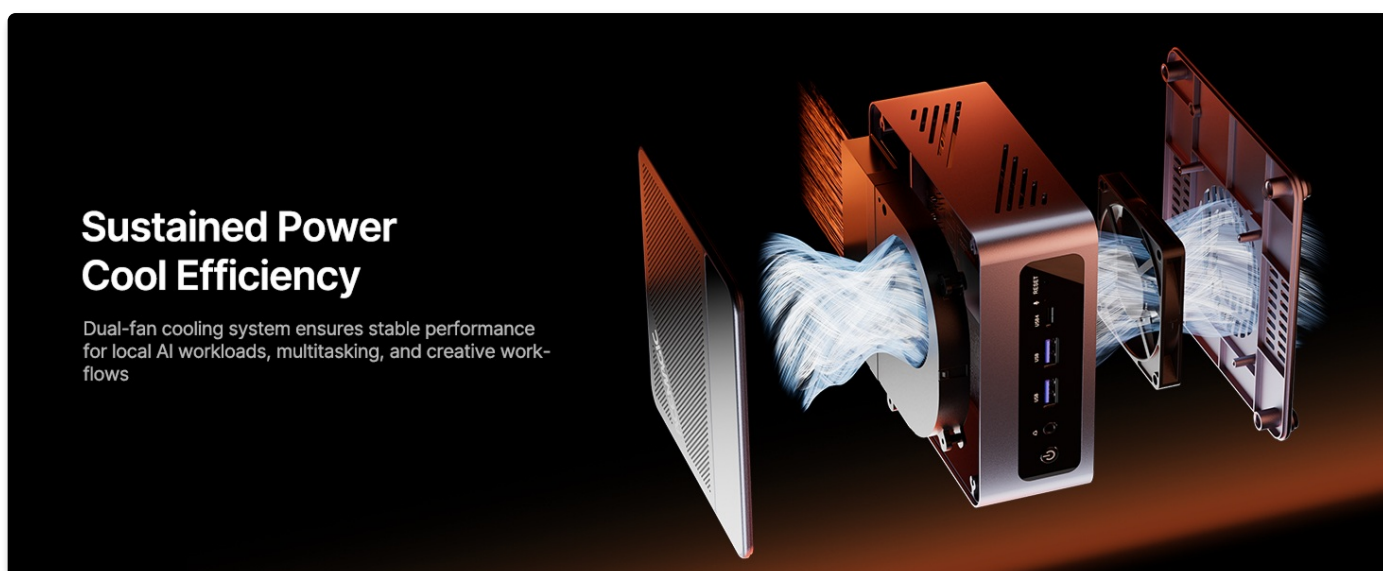


Figure 8: Illustration of 32GB Onboard LPDDR5X memory, providing high-speed bandwidth for AI and shared VRAM, ensuring smooth multitasking and rendering.

4.5. External Graphics Expansion (OCuLink)

The OCuLink port allows for direct PCIe connection to an external GPU (eGPU) dock, providing high-bandwidth, low-latency performance for maximum graphics power. A compatible eGPU dock and graphics card are sold separately.



Figure 9: The Mini PC connected to an external GPU enclosure via OCuLink for enhanced graphics performance. (eGPU dock and graphics card sold separately).

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Mini PC.

5.1. Cooling System

The ACEMAGIC F5A features a dual-fan cooling system. Ensure proper airflow by keeping the vents clear of obstructions. Regularly clean dust from the vents using compressed air.



Figure 10: Diagram illustrating the dual-fan cooling system, designed for stable performance during local AI workloads, multitasking, and creative workflows.

5.2. Software Updates

Regularly update your Windows 11 Pro operating system and device drivers to ensure security, stability, and optimal performance. Access Windows Update through Settings > Windows Update.

5.3. Cleaning

Use a soft, dry cloth to clean the exterior of the Mini PC. Avoid liquid cleaners directly on the device. For internal cleaning, consult a professional or refer to advanced maintenance guides.

6. TROUBLESHOOTING

This section addresses common issues you might encounter.

- **No Power:**
 - Ensure the power adapter is securely connected to both the Mini PC and a working power outlet.
 - Verify the power outlet is functional by plugging in another device.
- **No Display Output:**
 - Check all display cable connections (HDMI, DisplayPort, USB4) to the monitor and Mini PC.
 - Ensure the monitor is powered on and set to the correct input source.
 - Try connecting to a different display or using a different cable.
- **Network Connectivity Issues:**
 - For wired connections, ensure the Ethernet cable is properly connected and the router/modem is working.
 - For Wi-Fi, check if Wi-Fi is enabled in Windows settings and ensure you are connected to the correct network with the correct password.
 - Restart your router/modem and the Mini PC.
- **System Slowdown or Freezing:**
 - Close unnecessary applications running in the background.
 - Check Task Manager (Ctrl+Shift+Esc) for high CPU, memory, or disk usage.
 - Ensure Windows and drivers are up to date.
 - Consider running a system scan for malware.

If issues persist, refer to the ACEMAGIC support website or contact customer service.

7. SPECIFICATIONS

Key technical specifications for the ACEMAGIC F5A AI Mini PC:

Feature	Specification
Brand	ACEMAGIC
Model Number	F5A
Operating System	Windows 11 Pro
CPU Model	Ryzen AI 9 HX 470 (12C/24T)
CPU Speed	2 GHz (Base), up to 5.2 GHz (Max Boost)
AI Performance	Up to 86 TOPS
Graphics Coprocessor	Integrated AMD Radeon™ 890M Graphics (16 CU, 3.1GHz boost)

Feature	Specification
RAM Memory Installed	32 GB LPDDR5X
Memory Speed	8000 MT/s
Hard Disk Description	1 TB PCIe 4.0 NVMe SSD
Storage Expansion	Triple M.2 NVMe SSD slots (up to 12TB)
Connectivity Technology	HDMI, LAN, USB, Wi-Fi 7, Bluetooth 5.4
LAN	Dual 2.5G RJ45 Ethernet
USB Ports	2x USB4 Type-C (40Gbps, DP/PD/DATA), 2x USB 3.2 Gen2 Type-A (10Gbps), 2x USB 2.0 Type-A
Video Output	HDMI 2.1, DisplayPort 2.1, 2x USB4 Type-C (supports 8K@60Hz triple-screen)
Power Consumption	54 Watts
Cooling Method	Air (Dual-fan cooling system)
Special Features	OCuLink eGPU Expansion

8. WARRANTY AND SUPPORT

Your ACEMAGIC F5A AI Mini PC comes with a**2-Year Warranty** from the date of purchase. This warranty covers manufacturing defects and ensures repair or replacement of faulty components.

For technical assistance, troubleshooting, or warranty claims, please contact ACEMAGIC Customer Service. You can find contact information on the official ACEMAGIC website or through your purchase platform.

Please retain your proof of purchase for warranty validation.

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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