

- › [ACEMAGIC](#) /
- › [ACEMAGIC F2A Mini PC User Manual: Intel Ultra 7 155H, Intel Arc Graphics, WiFi 7](#)

ACEMAGIC F2A

ACEMAGIC F2A Mini PC User Manual

Model: F2A | Brand: ACEMAGIC

1. INTRODUCTION

This manual provides essential information for setting up, operating, and maintaining your ACEMAGIC F2A Mini PC. Please read this guide thoroughly before using the device to ensure optimal performance and safety.



Image: Overview of the Intel Core Ultra 7 155H processor, highlighting its 16 cores, 22 threads, 4.8GHz Turbo Boost, 24MB Cache, and 65W TDP, indicating its advanced Intel 4 process technology.

2. SAFETY INFORMATION

Observe the following safety precautions to prevent damage to the device or injury to yourself:

- Do not expose the device to water, moisture, or extreme temperatures.
- Avoid placing the device near heat sources or in direct sunlight.
- Use only the power adapter provided with the device.
- Do not attempt to open or repair the device yourself. Refer to qualified service personnel.
- Ensure proper ventilation around the device to prevent overheating.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- ACEMAGIC F2A Mini PC
- Power Adapter

- HDMI Cable
- User Manual (this document)
- Mounting Bracket (optional, may vary by package)

4. SETUP

4.1 Connecting Peripherals

Before powering on your Mini PC, connect your essential peripherals:

1. **Monitor:** Connect your monitor(s) to the HDMI 2.0 ports or the multifunctional USB-C port using appropriate cables. The device supports triple display output (2x HDMI 2.0 + 1x USB-C DP1.4).
2. **Keyboard and Mouse:** Connect your USB keyboard and mouse to the available USB 3.2 Gen2 ports.
3. **Audio:** Connect speakers or headphones to the audio jack if needed.
4. **Network:** For a wired connection, connect an Ethernet cable to the 2.5Gbps LAN port. For wireless, ensure your Wi-Fi network is available.

POWERED BY INTEL CORE **ULTRA 7 155H**

For the First Time, the Latest Generation Intel4 Process Is Used with a Disruptive 3D High-Performance Hybrid Architecture, which can Improve Performance by up to about 41%.



16
Cores



22
Threads



4.8GHz
Turbo Boost



24MB
Cache



65W
TDP



Intel 4
Process Technology

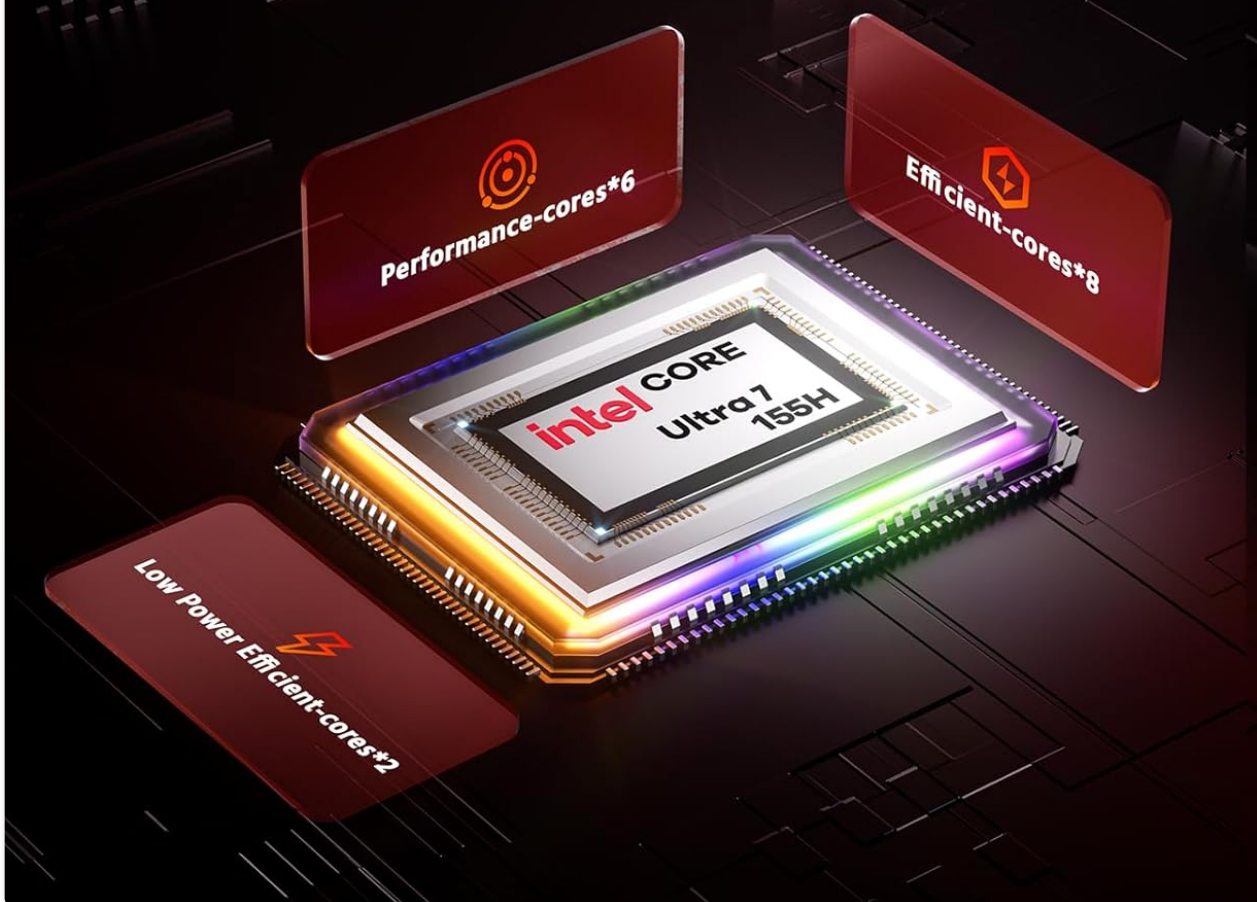


Image: The ACEMAGIC F2A Mini PC's front panel, displaying a Type-C port, two USB ports, and an audio jack, alongside the power button.

4.2 Powering On

Connect the power adapter to the DC-in port on the Mini PC and then plug it into a power outlet. Press the power button located on the front panel to turn on the device.

4.3 Initial Windows Setup

Upon first boot, you will be guided through the Windows operating system setup process. Follow the on-screen instructions to configure language, region, network, and user accounts.

4.4 Network Connectivity

Your F2A Mini PC supports advanced wireless and wired connectivity:

- **Wi-Fi 7 (802.11be):** Supports 2.4 GHz, 5 GHz, and 6 GHz frequency bands for speeds up to 5.8Gbps. To connect, select your Wi-Fi network from the Windows settings and enter the password.
- **Bluetooth 5.4:** For connecting wireless peripherals like keyboards, mice, and headphones. Pair devices through Windows Bluetooth settings.
- **2.5Gbps LAN:** For high-speed wired network connections.



Image: A visual representation of the ACEMAGIC F2A's wireless capabilities, highlighting Wi-Fi 7 and Bluetooth 5.4, with speed comparisons to older standards.

5. OPERATING INSTRUCTIONS

5.1 General Usage

The ACEMAGIC F2A Mini PC runs on Windows, providing a familiar desktop experience. Use it for office work, educational training, home theater, programming, and more.

5.2 AI Features with Intel AI Boost NPU

Leverage the integrated Intel AI Boost NPU for enhanced AI applications. This dedicated AI chip supports features such as background blur during video calls and other AI-driven tasks with optimized power consumption.

AI Ready for Tomorrow

Ready for the ever-evolving possibilities of AI, with built-in Intel's new dedicated AI engine—Intel AI Boost



AI acceleration engine

AI intelligent blur




Image: Demonstrates the AI capabilities of the F2A Mini PC, featuring Intel AI Boost NPU for AI acceleration and intelligent blur in applications like video calls.

5.3 Graphics Performance with Intel Arc GPU

The integrated Intel Arc Graphics provides significant performance for gaming and content creation. It supports technologies like XeSS, Ray Tracing, and DirectX 12, offering a smooth visual experience.

Intel Arc GPU

Achieving a 2x performance jump, for immersive, high-realism gaming and content creation.

**XeSS**

**Ray Tracing**

**DirectX 12**

Currently the most powerful integrated graphics card on PC with capabilities comparable to independent graphics cards

Intel Arc

AMD Radeon 780M

Intel Iris Xe

Up to **2.4 times**



The image features a large, detailed illustration of the Intel Arc GPU chip in the center. The chip is square with a green die and gold pins. The text 'intel ARC' is prominently displayed on the die. The background is a dark, fiery red with glowing orange and yellow light effects, suggesting high performance and gaming. Above the chip, there is a performance comparison bar chart. The chart shows three horizontal bars: a long orange bar for 'Intel Arc', a medium grey bar for 'AMD Radeon 780M', and a short grey bar for 'Intel Iris Xe'. An orange arrow points upwards from the 'Intel Iris Xe' bar towards the 'Intel Arc' bar, with the text 'Up to 2.4 times' next to it. Above the chart, there are three icons: a square with 'XeSS', a monitor with a triangle for 'Ray Tracing', and a square with 'DX' for 'DirectX 12'. Below these icons is the text 'Currently the most powerful integrated graphics card on PC with capabilities comparable to independent graphics cards'. At the top, the title 'Intel Arc GPU' is written in large white letters, followed by the subtitle 'Achieving a 2x performance jump, for immersive, high-realism gaming and content creation.'

Image: Highlights the Intel Arc GPU's performance, indicating it is up to 2.4 times faster than Intel Iris Xe graphics, suitable for immersive gaming and content creation.

5.4 Gaming and Content Creation

The F2A Mini PC is designed for modern gaming and demanding content creation tasks. Its Intel Ultra 7 155H processor and Intel Arc Graphics deliver strong performance for applications such as 3D games, 3D modeling, rendering, image editing, and video editing.



The image shows the front of the ACEMAGIC F2A Mini PC. The top surface is a dark red mesh with the 'ACEMAGIC' logo in red. The front panel is black and features a Type-C port, two USB ports, an audio jack, and a power button. Below the front panel, four game performance benchmarks are displayed in a 2x2 grid:

- CS 2**: 110FPS ± (Limited Test)
- Dota 2**: 145FPS ±
- Forza Horizon 5**: 60FPS ±
- Dead by Daylight**: 60FPS ±

F2A, BUILT FOR MODERN GAMING!

Well Rounded for Esports, Casual Gaming & Content Creation

Image: The ACEMAGIC F2A Mini PC showcasing its gaming capabilities with estimated FPS for popular titles like CS2, Dota 2, Forza Horizon 5, and Dead by Daylight.

6. MAINTENANCE

6.1 Cooling System

The F2A Mini PC features a robust cooling system with dual fans (one centrifugal, one axial) and D8 copper heat pipes to ensure stable performance even under heavy loads. Keep the ventilation openings clear of obstructions.

Wireless Reimagined

Accomplish your tasks at breathtaking speeds with the latest



And  Bluetooth 5.4



Image: An exploded view illustrating the efficient dual-fan cooling system of the ACEMAGIC F2A, including a large CPU fan, copper heat pipes, and a mini fan for DDR5 and SSD.

6.2 Memory and Storage Upgrades

The Mini PC supports memory and storage upgrades:

- **Memory:** Features 2 SO-DDR5 DIMM slots, supporting up to 96GB DDR5 5600 MT/s in dual channel.
- **Storage:** Includes 2 M.2 slots (PCIe 4.0x4) for expanding SSD storage.

To access these components for upgrade, carefully remove the bottom panel by unscrewing the feet. Consult a professional if you are unsure about the upgrade process.

Dual Channel 32GB (2*16GB) DDR5 1TB M.2 NVMe PCIe4.0X4 SSD

Maximum Capacity Support : 96GB

DDR4

Bandwidth	25.6GB/s
Frequency	1600-3200Mhz
Chip Density	4G
Voltage	1.2V
On Die ECC	NO

DDR5

Bandwidth	32GB/s  36%
Frequency	4800-6400Mhz
Chip Density	16G
Voltage	1.1V
On Die ECC	YES

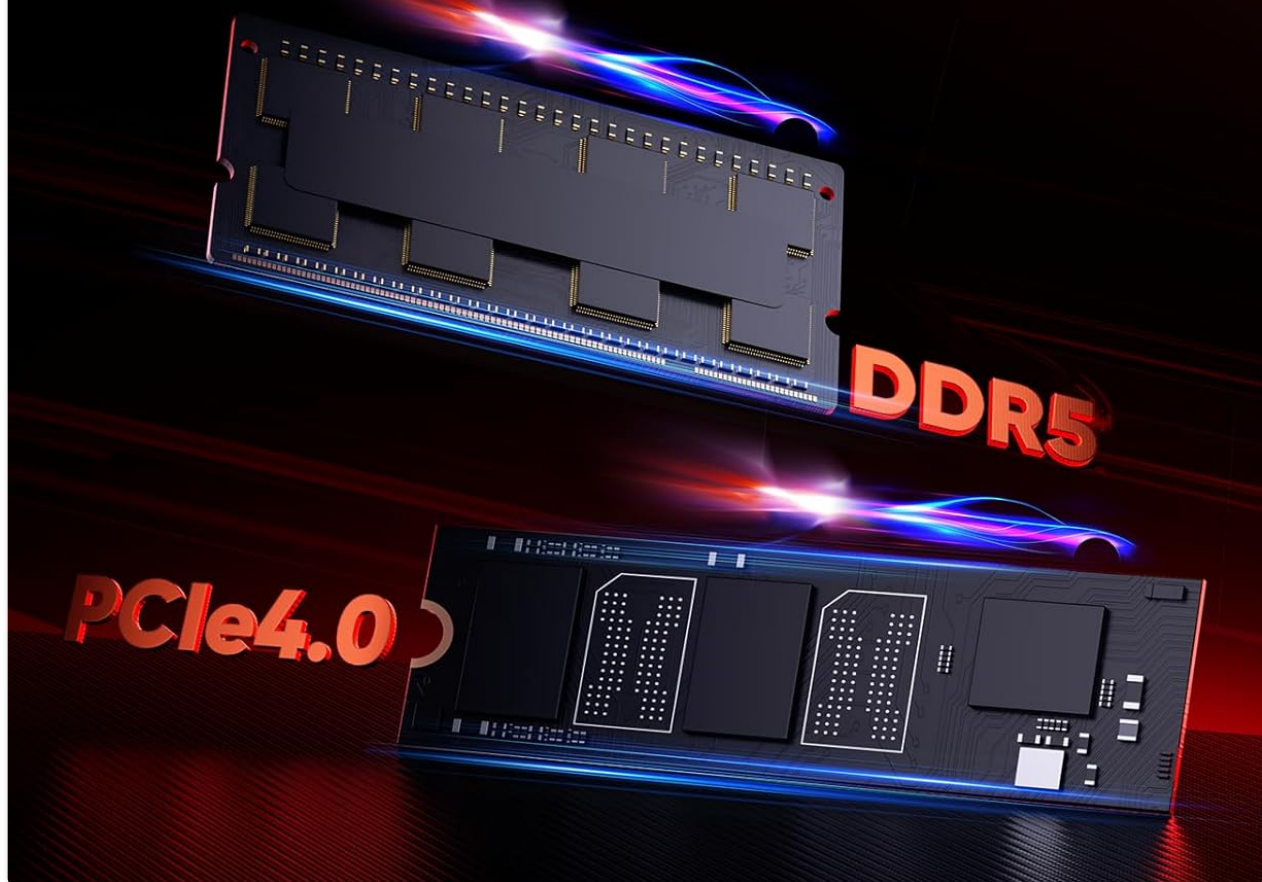


Image: Detailed information on the dual-channel 32GB DDR5 memory and 1TB M.2 NVMe PCIe 4.0x4 SSD, including a comparison table between DDR4 and DDR5 specifications.

7. TROUBLESHOOTING

If you encounter issues with your ACEMAGIC F2A Mini PC, refer to the following common problems and solutions:

- **No Power:** Ensure the power adapter is securely connected to both the Mini PC and a working power outlet. Try a different outlet.
- **No Display:** Check all HDMI or USB-C display cable connections. Ensure your monitor is set to the correct input source.

- **No Internet Connection:** For Wi-Fi, verify your network password and router status. For wired, check the Ethernet cable and router connection.
- **Device Overheating:** Ensure the Mini PC's vents are not blocked. Operate the device in a well-ventilated area.
- **Slow Performance:** Close unnecessary applications. Check for background updates. Ensure sufficient free storage space.

For persistent issues, contact ACEMAGIC customer support.

8. SPECIFICATIONS

Feature	Specification
Brand	ACEMAGIC
Item Model Number	F2A
Product Dimensions	14.7 x 14.7 x 5.2 cm; 2.08 Kilograms
Manufacturer	ACEMAGIC
Series	f2a-155h
Screen Resolution	2560 x 1440
Resolution	3840x2160
Processor Brand	Intel
Processor Type	Intel Mobile CPU (Intel Core Ultra 7 155H)
Processor Speed	4.8 GHz (Max Turbo Frequency)
Processor Socket	FCBGA2049
Number of Processors	16 (Cores)
RAM Size	32 GB
Memory Technology	DDR5
Computer Memory Type	DDR5 SDRAM
Max Supported Memory	96 GB
Memory Speed	5.6 GHz (5600 MT/s)
Hard Drive Size	1 TB
Hard Drive Description	SSD (NVMe PCIe 4.0x4)
Hard Drive Interface	Solid State
Graphics Coprocessor	Intel Arc Graphics
Graphics Card Description	Dedicated (Integrated Intel Arc)
Graphics RAM Type	DDR5 SDRAM (Shared with system memory)

Graphics RAM Size	32 GB (System Shared)
Graphics Card Interface	Integrated
Connectivity Type	Wi-Fi 7, Bluetooth 5.4, 2.5Gbps LAN
Wireless Type	Bluetooth
Number of USB 3.0 Ports	5 (USB 3.2 Gen2)
Number of HDMI Ports	2
Hardware Platform	PC
Operating System	Windows
Batteries Included	No
Specific Uses For Product	Business, Gaming, Photo Editing
Personal Computer Design Type	Mini PC

9. WARRANTY AND SUPPORT

Your ACEMAGIC F2A Mini PC comes with a standard manufacturer's warranty. Please refer to the warranty card included in your package for specific terms and conditions.

For technical support, troubleshooting assistance, or warranty claims, please contact ACEMAGIC customer service through their official website or the contact information provided in your product documentation.