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**ASRock Z890 LIVEMIXER WIFI**

# ASRock Z890 LiveMixer WiFi Motherboard User Manual

Model: Z890 LIVEMIXER WIFI

## 1. Introduction

This manual provides detailed instructions for the installation, configuration, and operation of your ASRock Z890 LiveMixer WiFi ATX Motherboard. Designed for Intel Core Ultra Processors (Series 2) with an LGA1851 socket, this motherboard features DDR5 memory support up to 9066+ (OC), integrated WiFi 7, Dual Thunderbolt 4 Type-C ports, and extensive USB connectivity. Please read this manual thoroughly before proceeding with installation to ensure proper setup and optimal performance.

## 2. Safety Information

Always observe the following safety precautions when handling computer components:

- **Electrostatic Discharge (ESD) Prevention:** Always wear an anti-static wrist strap or frequently touch a grounded metal object before handling the motherboard or other components.
- **Power Disconnection:** Ensure the power supply is disconnected from the wall outlet before installing or removing any components.
- **Component Handling:** Handle components by their edges. Avoid touching pins or circuit paths.
- **Ventilation:** Ensure adequate ventilation within your computer case to prevent overheating.
- **Battery Safety:** The motherboard contains a CR2032 battery. Refer to local regulations for proper disposal.

## 3. Package Contents

Verify that all items are present in your motherboard package:

- ASRock Z890 LiveMixer WiFi Motherboard
- Quick Installation Guide
- Regulatory Notice
- WiFi Antennas (2x)
- SATA Data Cables
- M.2 Screws/Standoffs
- ASRock Sticker




Image: The ASRock Z890 LiveMixer WiFi motherboard shown with its retail packaging, two WiFi antennas, a quick installation guide, a regulatory notice, SATA cables, and an ASRock sticker.

## 4. Motherboard Layout and Features

Familiarize yourself with the various components and connectors on your motherboard.




Image: An angled view of the ASRock Z890 LiveMixer WiFi motherboard next to its retail box, highlighting the overall design and included WiFi antennas.




Image: A top-down view of the ASRock Z890 LiveMixer WiFi motherboard, showing the CPU socket, DDR5 DIMM slots, M.2 slots with heatsinks, and various headers.

## 4.1 Memory OC Performance

The motherboard supports DDR5 memory with speeds up to 9066 MHz (OC). It features DDR5 XMP & EXPO support and ASRock's unique Memory OC Shield, which effectively absorbs EMI noise to enhance memory overclocking performance and signal stability.




Image: Diagram illustrating the motherboard's memory overclocking capabilities, showing support for DDR5 up to 9066 MHz and the Memory OC Shield.

## 4.2 Efficient Circuit Design

The motherboard incorporates an 18+1+1+1+1 Power Phase design with 80A SPS for VCore, GT, and SA, ensuring stable power delivery to the CPU. It utilizes a 6-layer 2oz PCB for high conductivity and improved signal integrity.

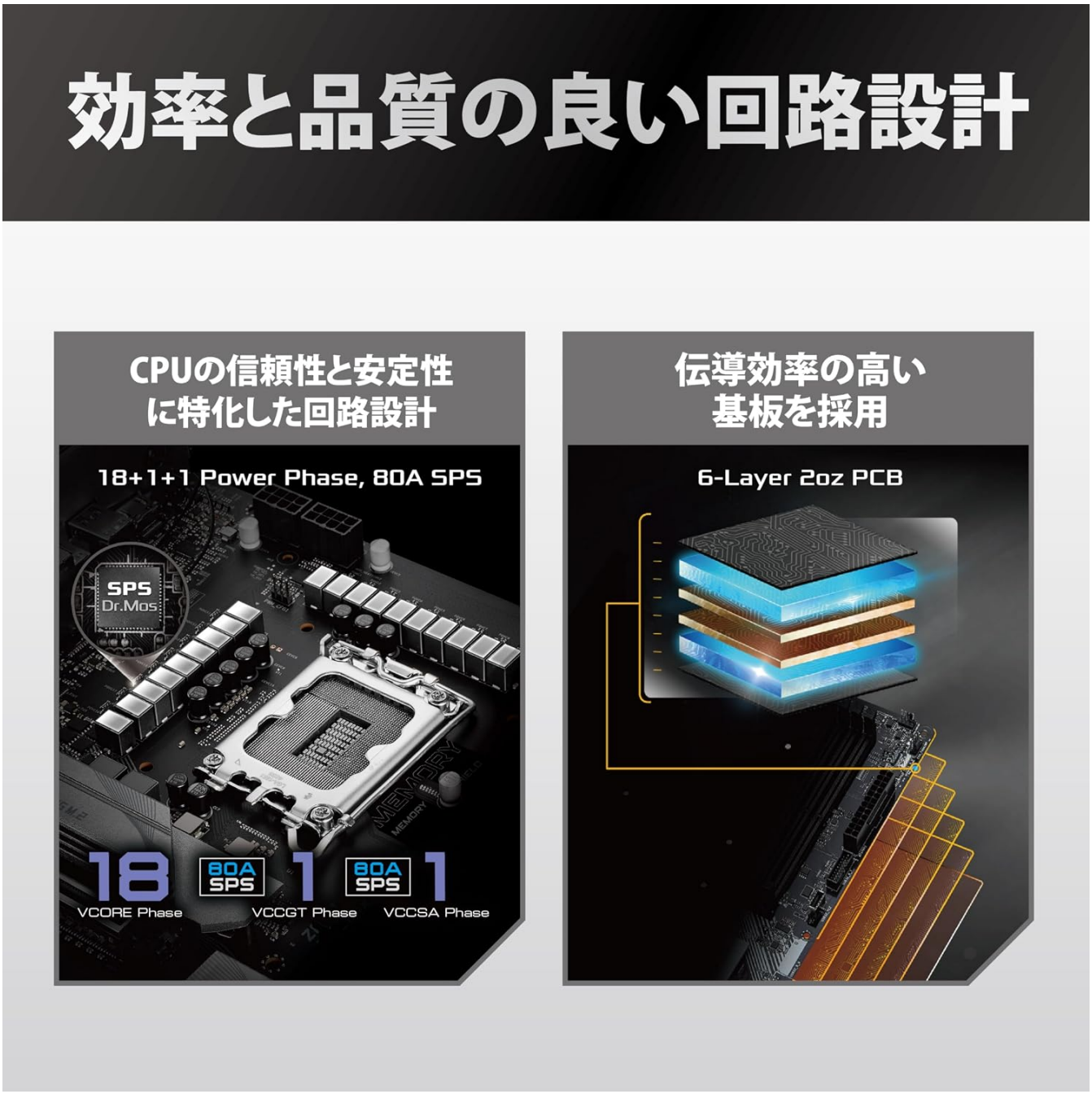



Image: Diagrams detailing the 18+1+1+1+1 power phase design and the 6-layer 2oz PCB construction for enhanced stability and efficiency.

## 4.3 SSD Cooling Technology

The Z890 LiveMixer WiFi features comprehensive cooling solutions for optimal performance and longevity:

- **LM VRM Heatsink:** Effectively manages thermal performance for sustainable system stability.
- **Tool-less Multi-Layer M.2 Heatsink:** Robust aluminum heatsinks for continuous heat dissipation from high-performance M.2 SSDs.
- **M.2 Bottom Heatsink:** Efficiently dissipates SSD heat through a high-efficiency thermal conductive baseplate.
- **Chipset Heatsink:** Revised structure for improved performance stability.




Image: An illustration highlighting the various heatsinks for VRM, M.2 slots, and chipset, designed for efficient thermal management.

## 4.4 Latest Interfaces

The motherboard is equipped with a wide array of modern connectivity options:

- **4 M.2 Sockets:** Supports the latest PCI-Express 5.0 standard for multiple M.2 SSDs.
- **2 Thunderbolt 4 Type-C Ports:** High-speed data transfer and display connectivity.
- **23 USB Ports:** Extensive USB connectivity for various peripherals.
- **WiFi 7:** Integrated latest generation wireless connectivity.




Image: Visual representation of the motherboard's advanced interfaces, including M.2 Gen5 x4, Thunderbolt 4, numerous USB ports, and WiFi 7 capabilities.

## 4.5 User-Friendly Features

Additional features designed for user convenience and system stability:

- **Low-Jitter Ultra USB Power Ports:** Provides stable power for USB devices.
- **8K Mouse Compatible Lightning Gaming Ports:** Optimized for high-report rate gaming peripherals.
- **Ultra-Large Capacity High-Durability 20K Capacitors:** Ensures long-term stability and reliability.
- **BIOS Flashback:** Allows BIOS updates without a CPU, RAM, or graphics card installed.




Image: Graphics illustrating features like Ultra USB Power, Lightning Gaming Ports, 20K capacitors, and the BIOS Flashback button.

## 4.6 Rear I/O Panel

The rear I/O panel provides various ports for external device connectivity.

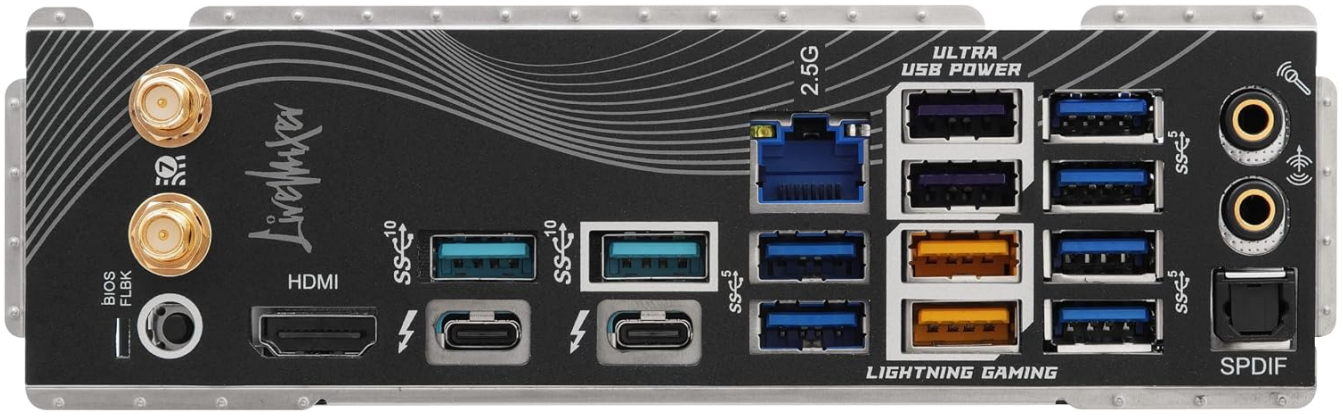



Image: A detailed view of the motherboard's rear input/output panel, showing WiFi antenna connectors, USB ports, HDMI, Thunderbolt 4

Type-C, Ethernet, and audio jacks.

### 4.7 Motherboard Rear View

The back of the motherboard provides a clear view of the PCB and CPU socket backplate.

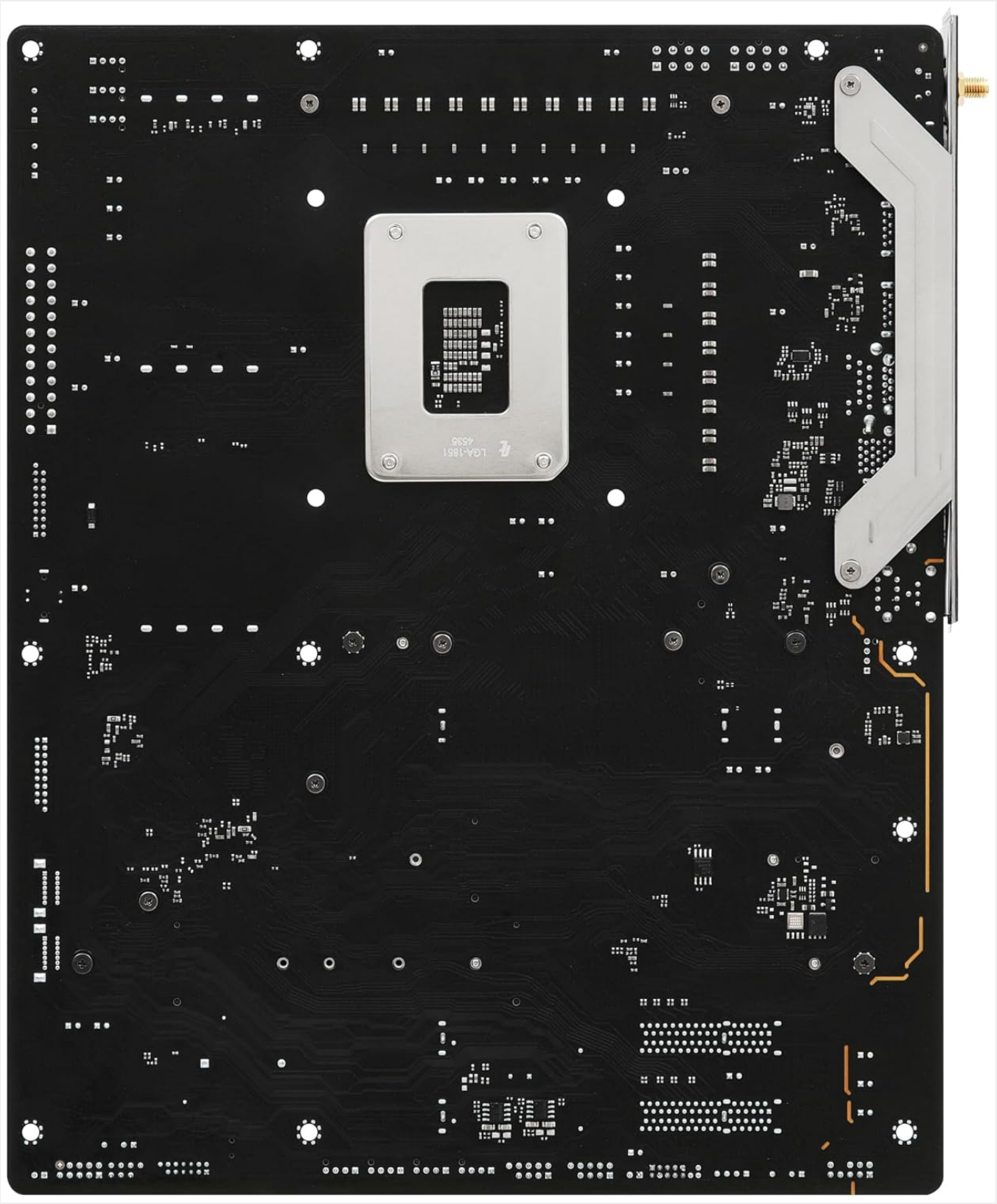


Image: The rear side of the ASRock Z890 LiveMixer WiFi motherboard, displaying the solder points and the CPU socket retention plate.

## 5. Setup and Installation

Follow these steps to install your motherboard and essential components.

### 5.1 CPU Installation (LGA1851)

1. Open the CPU socket lever.
2. Carefully align the CPU with the socket, ensuring the triangular mark on the CPU matches the mark on the socket.
3. Gently place the CPU into the socket. Do not force it.
4. Close the socket lever to secure the CPU.
5. Apply thermal paste and install the CPU cooler according to its instructions.

### 5.2 Memory (RAM) Installation

1. Open the clips on both ends of the DDR5 DIMM slots.
2. Align the notch on the DDR5 memory module with the key in the DIMM slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.
4. For dual-channel operation, install memory modules into the recommended slots (refer to the motherboard's printed guide or BIOS for specific slot pairing).

### 5.3 Storage Device Installation (M.2 SSDs and SATA Drives)

1. **M.2 SSD:** Locate an M.2 slot. Remove the M.2 heatsink if present. Insert the M.2 SSD into the slot at an angle, then gently push it down and secure it with the provided screw/standoff. Reattach the M.2 heatsink.
2. **SATA Drives:** Connect one end of a SATA data cable to a SATA port on the motherboard and the other end to your SATA HDD/SSD. Connect a SATA power cable from your power supply to the drive.

### 5.4 Expansion Card Installation (PCIe)

1. Align your PCIe expansion card (e.g., graphics card) with the desired PCIe slot.
2. Press down firmly until the card is seated securely in the slot and the retention clip engages.
3. Secure the card to your chassis with a screw.

### 5.5 Power Connections

1. Connect the 24-pin ATX power connector from your power supply to the corresponding header on the motherboard.
2. Connect the 8-pin (or 4+4-pin) CPU power connector(s) from your power supply to the CPU power header(s) on the motherboard.

### 5.6 Front Panel Connections

Connect your chassis' front panel cables (power button, reset button, HDD LED, power LED, front USB, front audio) to the corresponding headers on the motherboard. Refer to the motherboard diagram in the Quick Installation Guide for exact pin assignments.

## 6. Operating Instructions

### 6.1 Initial Boot and BIOS/UEFI Setup

1. After assembling all components, connect your monitor, keyboard, and mouse.
2. Power on your system. During startup, press the `Del` or `F2` key to enter the BIOS/UEFI setup utility.
3. Configure basic settings such as date/time, boot order, and enable XMP/EXPO for your memory if desired.
4. Save changes and exit the BIOS. The system will restart.

### 6.2 Operating System and Driver Installation

1. Install your preferred operating system (e.g., Windows 11) from a bootable USB drive or DVD.
2. After OS installation, install all necessary drivers for the motherboard chipset, audio, LAN, WiFi, and graphics card. Drivers can be found on the ASRock support website for your specific motherboard model.

## 7. Maintenance

### 7.1 Cleaning

Regularly clean your computer to prevent dust buildup, which can lead to overheating. Use compressed air to remove dust from fans, heatsinks, and other components. Ensure the system is powered off and unplugged before cleaning.

### 7.2 BIOS Updates

ASRock periodically releases BIOS updates to improve compatibility, stability, and performance. Visit the ASRock website for the latest BIOS versions and instructions on how to update. The Z890 LiveMixer WiFi motherboard supports BIOS Flashback, allowing updates without a CPU, RAM, or graphics card.

## 8. Troubleshooting

If you encounter issues, consider the following common troubleshooting steps:

- **No Power:** Check all power connections (24-pin ATX, 8-pin CPU, GPU power). Ensure the power supply switch is on.
- **No Display:** Verify monitor connection and input source. Reseat the graphics card and memory modules. Try using integrated graphics if available.
- **System Instability/Crashes:** Check memory seating. Ensure CPU cooler is properly installed. Update BIOS and drivers.
- **Component Not Detected:** Reseat the component. Check cable connections (SATA, M.2). Ensure drivers are installed.
- **BIOS Reset:** If system fails to boot after BIOS changes, clear the CMOS by removing the CR2032 battery for a few minutes or using the CMOS clear jumper (refer to the Quick Installation Guide).

For further assistance, refer to the comprehensive troubleshooting section in the full user manual available on the ASRock website or contact ASRock technical support.

## 9. Specifications

| | |
|---|---|
| **Brand** | ASRock |
| **Model Name** | Z890 LIVEMIXER WIFI |
| **CPU Socket** | LGA 1851 |
| **Compatible Processors** | Intel Core Ultra Processors (Series 2) |
| **Chipset Type** | Intel Z890 |
| **RAM Memory Technology** | DDR5 |
| **Memory Clock Speed** | Up to 9066 MHz (OC) |
| **Memory Slots** | 4 x DDR5 DIMMs (Dual Channel) |
| **Max Memory Capacity** | 256 GB |
| **Storage Interfaces** | M.2 (PCIe 5.0), SATA3 6.0 Gb/s |

| | |
|---|---|
| **Expansion Slots** | PCIe 5.0 |
| **Wireless Connectivity** | WiFi 7 |
| **USB Ports** | Up to 23 (Front + Rear), Dual Thunderbolt 4 Type-C |
| **Form Factor** | ATX |
| **Product Dimensions** | 7.87 x 1.18 x 5.91 inches |
| **Item Weight** | 4.4 pounds |
| **Platform** | Windows 11 |

## 10. Warranty and Support

ASRock provides a limited warranty for its motherboards. The specific terms and duration of the warranty may vary by region and retailer. Please retain your proof of purchase for warranty claims.

For technical support, driver downloads, BIOS updates, and detailed product information, please visit the official ASRock website:

www.asrock.com

You may also contact ASRock customer service directly through their website for assistance with product-related inquiries or troubleshooting.


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**Details**

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