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BIOSTAR Z890AX-E PRO

BIOSTAR Z890AX-E PRO ATX Motherboard

User Manual

1. Introduction

This manual provides detailed instructions for the installation, configuration, and operation of your BIOSTAR Z890AX-E PRO motherboard. Designed with the Intel Z890 chipset, this ATX motherboard supports the latest Intel Core Ultra 9/7/5 processors, DDR5 memory, and PCIe 5.0 M.2 storage, offering a robust foundation for various computing needs.
Please read this manual thoroughly before installing or operating the motherboard to ensure proper setup and to prevent any damage to the components.

2. Safety Information

Observe the following safety precautions during installation and operation:

- Always disconnect the power cord from the wall outlet before touching any components.
- Wear an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity.
- Handle components by their edges to avoid touching sensitive parts.
- Ensure proper ventilation within your PC case to prevent overheating.
- Keep the motherboard away from moisture and extreme temperatures.

3. Package Contents

Verify that all items are present in your motherboard package:

- BIOSTAR Z890AX-E PRO Motherboard
- I/O Shield
- SATA Cables
- Driver CD/USB (if included)
- Quick Installation Guide
- M.2 Screws/Standoffs



Image 1: The BIOSTAR Z890AX-E PRO motherboard alongside its retail packaging, showcasing the product's branding and model number.

4. Setup and Installation

4.1. Motherboard Layout



Image 2: A top-down view of the BIOSTAR Z890AX-E PRO motherboard, highlighting the CPU socket (LGA 1851), DIMM slots, PCIe slots, and M.2 slots.



Image 3: An angled view of the BIOSTAR Z890AX-E PRO motherboard, providing a clearer perspective of the various headers and connectors.

4.2. CPU Installation

1. Locate the LGA 1851 socket on the motherboard.
2. Open the CPU socket lever and lift the load plate.
3. Carefully align the notches on your Intel Core Ultra processor with the keys on the socket.
4. Gently place the CPU into the socket without forcing it.
5. Close the load plate and secure it with the lever.

4.3. Memory (RAM) Installation

1. Open the clips at 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.

4.4. Storage Device Installation (M.2 SSD / SATA Drives)

- **M.2 SSD:** Insert the M.2 SSD into the appropriate M.2 slot, secure it with the provided screw/standoff. This motherboard supports PCIe 5.0 M.2.
- **SATA Drives:** Connect SATA data cables from your storage drives to the SATA ports on the motherboard. Connect power cables from your power supply to the drives.

4.5. Expansion Card Installation (PCIe)

1. Align your graphics card or other PCIe expansion card with the desired PCIe slot.
2. Press down firmly until the card is seated securely in the slot.
3. Secure the card to the PC case with a screw.

4.6. Power Connections

- Connect the 24-pin ATX power connector from your power supply to the motherboard.
- Connect the 8-pin (or 4+4-pin) CPU power connector to the motherboard.

4.7. Front Panel Connections

Connect the front panel cables (power button, reset button, USB ports, audio jacks, LED indicators) to their corresponding headers on the motherboard. Refer to the motherboard diagram for exact locations.



Image 4: A close-up view of the rear I/O panel of the BIOSTAR Z890AX-E PRO motherboard, showing various USB ports, Ethernet, and audio jacks.

5. Operating Instructions

5.1. Initial Boot-up

1. After assembling all components, connect your monitor, keyboard, and mouse.
2. Connect the power cord to the power supply and turn on the power switch.
3. Press the power button on your PC case.
4. The system should power on and display the BIOS/UEFI splash screen.

5.2. BIOS/UEFI Setup

To enter the BIOS/UEFI setup utility, press the**DEL** or **F2** key repeatedly during the initial boot-up sequence. Here you can configure:

- Boot order
- System time and date
- CPU and memory settings

- Fan controls
- Storage configurations (e.g., RAID)

5.3. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard components. These can typically be found on the included driver CD/USB or downloaded from the official BIOSTAR website. Key drivers include:

- Chipset drivers
- LAN drivers
- Audio drivers
- USB drivers

6. Maintenance

6.1. Cleaning

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

6.2. BIOS/UEFI Updates

Periodically check the BIOSTAR website for BIOS/UEFI updates. Updates can improve system stability, add support for new hardware, or fix bugs. Follow the instructions provided by BIOSTAR carefully when performing a BIOS update to avoid damaging the motherboard.

7. Troubleshooting

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

- **No Power:** Check all power connections (24-pin ATX, 8-pin CPU, power supply switch, wall outlet).
- **No Display:** Ensure the monitor is connected to the graphics card (or motherboard if using integrated graphics) and powered on. Reseat the graphics card and RAM modules.
- **System Instability/Crashes:** Check RAM seating, run memory diagnostic tools, ensure CPU cooler is properly installed, and verify all drivers are up to date.
- **Boot Device Not Found:** Verify SATA/M.2 connections, check boot order in BIOS/UEFI, and ensure the operating system is properly installed on the drive.
- **Overheating:** Check fan operation, clean dust from heatsinks, and ensure proper airflow in the PC case.

For more complex issues, consult the BIOSTAR support website or contact technical support.

8. Specifications

Feature	Specification
Brand	BIOSTAR
Model Number	Z890AX-E PRO

Chipset	Intel Z890
CPU Socket	LGA 1851
Compatible Processors	Intel Core Ultra 13th/14th Gen (e.g., Core Ultra 9/7/5)
Memory Type	DDR5
Max Memory Capacity	Up to 192 GB (4 x DIMM slots)
Graphics Card Interface	PCI Express
Storage Support	PCIe 5.0 M.2, SATA
Item Weight	940 g
Package Dimensions	34.29 x 27.3 x 7.3 cm

9. Warranty and Support

9.1. Warranty Information

BIOSTAR products are covered by a limited warranty. The specific terms and duration of the warranty may vary by region and product. Please refer to the warranty card included with your product or visit the official BIOSTAR website for detailed warranty information.

9.2. Technical Support

For technical assistance, driver downloads, or further product information, please visit the official BIOSTAR support website. You can typically find FAQs, troubleshooting guides, and contact information for customer service there.
Website: www.biostar.com.tw

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