NZXT N9-X87XT-W1

NZXT N9 X870E AM5 ATX Motherboard User Manual

1. INTRODUCTION

Welcome to the user manual for your NZXT N9 X870E AM5 ATX Motherboard. This document provides essential information for setting up, operating, and maintaining your motherboard, ensuring optimal performance and longevity. Please read through this manual carefully before installation and use.

2. KEY FEATURES

- **AMD AM5 Socket:** Ready for AMD Ryzen 9000, 8000, and 7000 series desktop processors.

- **Superior Power Delivery:** 20+2+1 power phase design with 110A Smart Power Stages and an 8-layer, 2-ounce copper PCB for stable, overclocking-ready power.

- **Advanced Cooling:** VRM heatsink array with thermal pads, dual PWM fans, and four dedicated M.2 heatsinks.

- **PCIe 5.0 Expansion:** One PCIe 5.0 x16 slot for next-gen GPUs and one PCIe 3.0 x16 slot for additional high-speed expansion cards.

- **DDR5 Memory Support:** Four dual-channel DIMM slots supporting DDR5 RAM speeds of 8000+ MT/s for faster multitasking and improved system responsiveness.

- **High-Speed Storage:** Four M.2 slots, including one PCIe 5.0 and three PCIe 4.0, with quick-release latches for ultra-fast storage speeds.

- **Next-Gen Connectivity:** USB 4 (40 Gbps), Wi-Fi 7, and 5GbE for blazing-fast data transfers and ultra-low latency networking.

- **Sleek & Stylish Design:** Premium full-metal cover concealing the PCB for a clean aesthetic, enhanced by onboard customizable RGB lighting.

3. PACKAGE CONTENTS

The following items are typically included with your NZXT N9 X870E motherboard. Please verify all components upon unboxing.

Figure 3.1: A visual representation of the items included with your NZXT N9 X870E motherboard. This typically includes the motherboard itself, two wireless antennas, four SATA cables, two NZXT 8-pin splitters, and the user manual.

- NZXT N9 X870E Motherboard
- 2 x Wireless Antennas
- 4 x SATA Cables
- 2 x NZXT 8-pin Splitters
- User Manual

4. SETUP GUIDE

4.1. Physical Installation

Before installing any components, ensure your system is powered off and unplugged. Handle the motherboard by its edges to avoid static discharge.

1. **CPU Installation:** Carefully open the AM5 socket lever. Align the triangular marker on your AMD Ryzen processor with the marker on the socket, then gently place the CPU into the socket. Close the lever to secure the CPU.
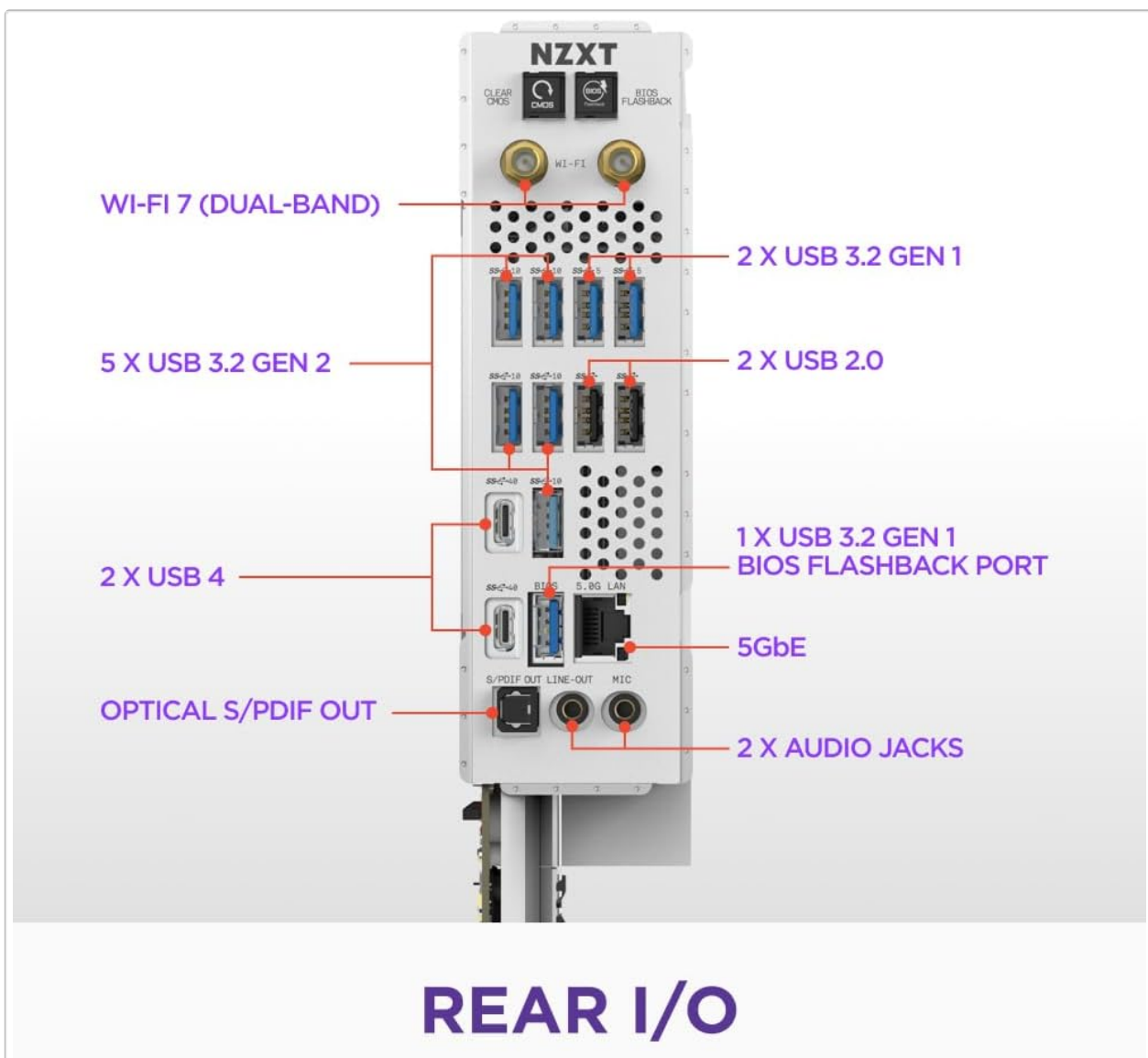
2. **RAM Installation:** Open the clips on the DDR5 DIMM slots. Align the notch on your DDR5 memory modules with the key in the slot. Press down firmly on both ends of the module until the clips snap into place. For dual-channel performance, refer to your motherboard's specific manual for recommended slot population.

3. **M.2 SSD Installation:** The NZXT N9 X870E features quick-release latches for M.2 SSDs. Locate the desired M.2 slot. Remove the M.2 heatsink cover. Insert your M.2 SSD into the slot at an angle, then gently push it down until it clicks into place with the quick-release latch. Reattach the heatsink cover.

4. **GPU Installation:** Open the retention clip on the PCIe 5.0 x16 slot. Align your graphics card with the slot and press down firmly until it is fully seated and the retention clip locks. Secure the graphics card to your chassis with screws.

4.2. Power Connections

Connect the main 24-pin ATX power cable from your power supply to the motherboard. Connect the 8-pin (and optionally the second 8-pin) CPU power cable(s) to the corresponding headers at the top of the motherboard.

4.3. Front Panel and Rear I/O Connections

Connect your chassis's front panel cables (power button, reset button, USB, audio) to the appropriate headers on the motherboard. Refer to the detailed diagram in your physical user manual for exact pin layouts.

Figure 4.1: Detailed view of the rear input/output panel of the NZXT N9 X870E motherboard, highlighting various USB ports (including USB 4), Wi-Fi 7 antenna connectors, 5GbE LAN, and audio jacks.

4.4. BIOS/UEFI Initial Setup

After assembling your system, power it on and enter the BIOS/UEFI setup. Configure basic settings such as boot order, date/time, and enable XMP/EXPO for your DDR5 memory. Ensure all installed components are recognized. It is recommended to update the BIOS to the latest version for optimal compatibility and performance.

5. OPERATING YOUR MOTHERBOARD

The NZXT N9 X870E is designed for high performance and user customization.

5.1. Software and Control

Utilize the NZXT CAM software for managing onboard RGB lighting, monitoring system temperatures, and controlling fan speeds. This software provides a centralized interface for optimizing your system's aesthetics and thermal performance.

Figure 5.1: The NZXT N9 X870E motherboard showcasing its sleek design with a full-metal cover, customizable onboard RGB lighting, and a digital debug LED for system status.

6. MAINTENANCE

Regular maintenance helps prolong the life and performance of your motherboard.

- **Cleaning:** Periodically clean dust from the motherboard and heatsinks using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Check the NZXT support website regularly for the latest BIOS/UEFI updates. Updating the BIOS can improve system stability, compatibility, and performance. Follow the instructions provided by NZXT for the update process.
- **Component Checks:** Ensure all cables and components are securely seated. Loose connections can lead to system instability.

7. TROUBLESHOOTING

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

- **No POST/Display:** Double-check all power connections (24-pin ATX, 8-pin CPU). Reseat RAM modules and the graphics card. Check the digital debug LED on the motherboard for error codes.
- **System Instability:** Ensure your BIOS is up to date. Verify RAM stability (e.g., disable XMP/EXPO to test). Check CPU and GPU temperatures.
- **M.2 SSD Not Detected:** Ensure the M.2 SSD is fully seated in its slot. Check BIOS settings to confirm M.2 slot detection.
- **Connectivity Issues (Wi-Fi/Ethernet):** Ensure antennas are securely connected for Wi-Fi. Check Ethernet cable connection. Update network drivers.

8. SPECIFICATIONS

Detailed technical specifications for the NZXT N9 X870E Motherboard:

20+2+1 POWER PHASES (110A SMART POWER STAGES)

AM5 SOCKET FOR AMD® RYZEN™ 9000/8000/7000 CPUS

4 x DDR5 DIMM (8000+ MT/s OC)

4 x M.2 SLOTS W/ QUICK-RELEASE LATCHES
- 1 x M.2 2280 (PCIe 5.0 x4)
- 3 x M.2 2280 (PCIe 4.0 x4)

2 x EXPANSION SLOTS
- 1 x PCIe 5.0 x16
- 1 x PCIe 3.0 x16

SUPERIOR POWER & SPEED

Figure 8.1: An overview of the NZXT N9 X870E motherboard highlighting its 20+2+1 power phases, AM5 socket, 4 DDR5 DIMM slots, 4 M.2 slots with quick-release latches, and 2 expansion slots.

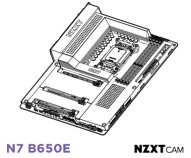| Category	Specification
Brand	NZXT
Model Name	N9 X870E
Item Model Number	N9-X87XT-W1
CPU Socket	Socket AM5
Compatible Processors	AMD Ryzen™ 9000/ 8000 / 7000 Series
Chipset Type	AMD X870E
RAM Memory Technology	DDR5
Memory Speed	8200 MHz (OC)
M.2 Slots	4 (1x PCIe 5.0 x4, 3x PCIe 4.0 x4) with Quick-Release Latches

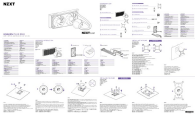| Category	Specification
PCIe Expansion Slots	1x PCIe 5.0 x16, 1x PCIe 3.0 x16
USB Ports	USB 4 (40 Gbps), USB 3.2 Gen 2, USB 3.2 Gen 1, USB 2.0
Wireless Connectivity	Wi-Fi 7, Bluetooth 5.4
Ethernet	5GbE
Color	White
Form Factor	ATX
Item Weight	5.62 pounds
Package Dimensions	13.79 x 11.23 x 3.11 inches

9. WARRANTY AND SUPPORT

Your NZXT N9 X870E Motherboard comes with a manufacturer's warranty. For detailed information regarding warranty terms, technical support, and service, please visit the official NZXT support website or refer to the warranty card included in your package. Keep your proof of purchase for warranty claims.

Related Documents - N9-X87XT-W1

	[NZXT N9 X870E AMD X870E ATX Gaming Motherboard with Wi-Fi 7](#) Detailed specifications, features, and safety information for the NZXT N9 X870E ATX Gaming Motherboard. This board features the AMD X870E chipset, Wi-Fi 7, DDR5 memory support, PCIe 5.0, multiple M.2 slots, and extensive connectivity for high-performance gaming PCs.
	[NZXT N7 B650E AMD ATX Motherboard User Manual](#) Comprehensive user manual for the NZXT N7 B650E ATX motherboard, detailing specifications, installation guides, safety precautions, and support information for AMD AM5 platform systems.
	[NZXT N7 B550 ATX Материнская плата Руководство пользователя](#) Подробное руководство пользователя для материнской платы NZXT N7 B550 ATX. Содержит информацию о комплектации, спецификациях, компонентах, портах, установке и гарантийной политике.
	[NZXT N7 B550 ATX Motherboard User Manual & Specifications](#) Detailed user manual and technical specifications for the NZXT N7 B550 ATX Motherboard, covering installation, components, ports, warranty, and regulatory information.
	[NZXT N7 Z690 ATX Motherboard User Manual](#) Comprehensive guide for the NZXT N7 Z690 ATX Motherboard, detailing specifications, installation, components, and NZXT CAM software. Essential for PC builders.

Comprehensive installation guide for the NZXT Kraken Plus RGB All-in-One (AIO) liquid CPU cooler, covering component identification, mounting procedures for Intel and AMD platforms, radiator and fan installation, and software setup with NZXT CAM.