

NZXT E850

NZXT E850 ATX Gaming Power Supply User Manual

Model: NP-1PM-E850A-US (E850 Series)

Brand: NZXT

1. INTRODUCTION

The NZXT E Series ATX power supplies are designed to provide reliable and efficient power for your gaming system. Featuring digital voltage and temperature monitoring, these PSUs offer precise, real-time information about their performance, including uptime, wattage by rail, and temperature. This data can be stored and tracked using the CAM software, ensuring you have an accurate overview of your PSU's health over time. Built with top-quality components, the E Series PSUs deliver clean and stable power, backed by a comprehensive 10-year warranty for peace of mind.



Figure 1: Front view of the NZXT E850 Power Supply.

2. WHAT'S IN THE BOX

Upon unboxing your NZXT E850 Power Supply, you should find the following components:

- NZXT E850 Power Supply Unit (PSU)
- 1x 24-pin ATX power cable (length: 610mm)
- 2x 4+4-pin CPU power cables (length: 650mm)
- 3x PCIe (6+2 pin) power cables (length: 675 + 75mm)
- 2x SATA power cables (length: 50 + 100 + 100 + 100mm)
- 2x Peripheral power cables (length: 500 + 100 + 100mm)
- 1x Mini-USB cable

- 1x AC Power Cable
- 4x Mounting Screws
- 1x Storage Bag for unused cables

3. SETUP AND INSTALLATION

This section guides you through the process of installing your NZXT E850 Power Supply into your PC system. Proper installation ensures optimal performance and safety.

3.1 Attaching Connectors to PSU

Before mounting the PSU, identify and attach the necessary modular power cables. The NZXT E850 is a fully modular power supply, allowing you to connect only the cables required for your build, reducing clutter and improving airflow.



Figure 2: Modular ports on the NZXT E850 PSU. Connectors are clearly labeled for 20+4PIN (Motherboard), CPU, Peripheral & SATA, and PCI-E.

You will typically need the 24-pin ATX power connector for the motherboard, the 4+4-pin CPU power connector, and PCIe power connectors for your graphics card(s) as needed. Additionally, connect SATA and peripheral cables for drives, fans, and other accessories. Remember to connect the mini-USB cable for CAM software monitoring.



Figure 3: Rear view of the NZXT E850 PSU showing attached modular cables.

3.2 Mounting Your PSU

Identify the power supply mounting location within your PC case. Most modern PC cases feature a bottom-rear mounting position for the PSU. Consider the orientation of the PSU for optimal airflow:

- If your case has an open, vented floor panel, mount the PSU with the fan facing downwards towards the venting. This allows the PSU to draw cool air directly from outside the case and exhaust it out the back.
- If the bottom of your case is closed with no venting, mount the PSU with the fan facing upwards towards the CPU. This allows the PSU fan to draw air from within the case. Ensure there is sufficient space for air intake.

Do not block the airflow of the PSU. Secure the PSU using the four included mounting screws. For new builds, ensure all I/O jumpers are correctly connected to the motherboard.



Figure 4: NZXT E850 PSU installed in a PC case, showing cable routing.



Figure 5: Top view of the NZXT E850 PSU, highlighting the fan grille.

3.3 Attaching Connectors to Peripherals (Cable Management)

Route your connected cables neatly within your case and make the necessary connections to your components. Connect the 24-pin ATX cable to your motherboard, the 4+4-pin CPU cable to the CPU power header on your motherboard, and the PCIe cables to your graphics card(s). Connect SATA power cables to your storage drives and peripheral cables to other accessories like case fans or RGB controllers.

Ensure the mini-USB cable from the PSU is connected to an available USB 2.0 header on your motherboard. This connection is crucial for the CAM software to monitor your PSU's performance. It is recommended to finalize cable management after confirming your system successfully boots, allowing for easier adjustments if needed.

Your browser does not support the video tag.

Video 1: NZXT E Series PSU Installation Guide. This video demonstrates the process of attaching connectors, mounting the PSU, and connecting cables to peripherals for the NZXT E Series Power Supply.

4. OPERATING AND MONITORING

The NZXT E850 PSU integrates with NZXT's CAM software for advanced monitoring and control. Once your system is up and running, download and install the CAM software from the official NZXT website (www.nzxt.com/cam).

Through CAM, you can access real-time data including:

- **Power On Time:** Total hours the PSU has been powered on.
- **Wattage by Rail:** Real-time power consumption figures for CPU, GPU, and other peripherals.
- **Temperature:** Internal temperature of the PSU.
- **Output Voltages:** Precise voltage readings for the 3.3V, 5V, and 12V rails.

The CAM software also allows you to enable and configure Multi-rail Over Current Protection (OCP). OCP provides enhanced safety by protecting individual output rails (e.g., 12V1, 12V2 CPU, 12V3 GPU) from excessive current, safeguarding your components. You can adjust the current thresholds for these protections within the advanced settings of CAM.

5. MAINTENANCE

To ensure the longevity and optimal performance of your NZXT E850 Power Supply, consider the following maintenance tips:

- **Dust Removal:** Regularly clean dust from the PSU fan and ventilation grilles using compressed air. Dust buildup can impede airflow and lead to overheating.
- **Cable Management:** Maintain tidy cable routing to ensure unrestricted airflow within your PC case, which helps keep all components, including the PSU, cooler.
- **Environmental Conditions:** Operate your PC in a well-ventilated area with stable room temperature. Avoid extreme temperatures and high humidity.
- **Power Source:** Connect your PC to a reliable power outlet or a surge protector to prevent damage from power fluctuations.

6. TROUBLESHOOTING

If you encounter issues with your NZXT E850 Power Supply, consider the following common troubleshooting steps:

- **No Power/System Not Booting:**
 - Ensure the power cable is securely connected to both the PSU and the wall outlet.
 - Check that the power switch on the rear of the PSU is in the 'I' (On) position, not 'O' (Off).
 - Verify all modular cables are firmly seated in both the PSU and the respective components (motherboard, CPU, GPU).
 - Confirm the 24-pin ATX and 4+4-pin CPU power cables are correctly connected to the motherboard.
- **System Instability/Crashes:**
 - Monitor PSU voltages and temperatures using NZXT CAM software. Significant deviations from normal values may indicate an issue.
 - Ensure your system's power draw does not exceed the PSU's rated wattage (850W for E850).
 - Check for proper ventilation and ensure the PSU fan is not obstructed.
- **CAM Software Not Detecting PSU:**
 - Verify the mini-USB cable is securely connected from the PSU to a USB 2.0 header on your motherboard.
 - Try a different USB 2.0 header if available.

- Ensure CAM software is updated to the latest version.

If issues persist after performing these steps, please refer to the warranty and support information provided in this manual.

7. SPECIFICATIONS

The following table details the key specifications of the NZXT E850 Power Supply:



Figure 6: Specification label on the NZXT E850 PSU.

Feature	Detail
Brand	NZXT
Series	E850

Feature	Detail
Model Number	NP-1PM-E850A-US
Form Factor	ATX
Output Wattage	850 Watts
80 Plus Certification	Gold Certified
Modular Design	Fully Modular
Digital Monitoring	Yes (via CAM software)
Silent Operation	0 dB Mode under 100W load
Item Weight	8 Pounds
Product Dimensions (LxWxH)	5.9 x 5.9 x 3.39 inches
Color	Black
Cooling Method	Air
Country of Origin	China

8. WARRANTY AND SUPPORT

The NZXT E850 Power Supply comes with a **10-Year Limited Warranty**, ensuring long-term durability and reliability. This warranty covers defects in materials and workmanship under normal use.

For technical support, warranty claims, or further information, please visit the official NZXT support website or contact their customer service. Always refer to the latest support resources available on the NZXT website for the most up-to-date information.

NZXT Official Website: www.nzxt.com

NZXT Support: support.nzxt.com

© 2024 NZXT. All rights reserved.

This manual is for informational purposes only. NZXT reserves the right to change specifications without prior notice.

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