Cooler Master MPX-8503-AFAG-2BUV

Cooler Master MWE Gold 850 V3 ATX 3.1 Full Modular PSU User Manual

Model: MWE Gold 850 V3 (MPX-8503-AFAG-2BUV)

Brand: Cooler Master

1. Introduction

The Cooler Master MWE Gold V3 sets a new standard of durability and efficiency for Cooler Master power supplies. This 80 Plus Gold certified unit can achieve Titanium-level efficiency at light loads in a 115V test. Featuring an APFC half-bridge LLC and DC-to-DC design, the MWE Gold V3 ensures top-tier performance with 80 Plus Gold efficiency. Smart thermal control and zero-RPM mode reduce noise and improve heat dissipation. The ATX 3.1 12V-2x6 native cable with a durable 90-degree connector.



Figure 1.1: Cooler Master MWE Gold 850 V3 Power Supply, highlighting its modular cable connections.

2. Key Features

- **Designed For Durability:** The MWE Gold V3 sets a new benchmark for durability and efficiency, now with ATX 3.1 support.



Figure 2.1: The MWE Gold V3 is built for long-lasting performance and reliability.

- **90° Durable Cables:** Featuring a 90° 12V-2x6 PCIe 5.1 connector, for improved electrical durability and safety.



Figure 2.2: The 90-degree connector design enhances cable durability and simplifies routing.

- **ATX 3.1 Cables:** The ATX 3.1 delivers up to 600W power to your GPU.



Figure 2.3: ATX 3.1 cables provide robust power delivery for modern GPUs.

- **Advanced Thermal Performance:** Hexagonal fan cover with 80% airflow intake and dedicated heat sink enhance thermal performance.



Figure 2.4: Internal design elements contribute to superior heat dissipation.

- **80+ Gold Efficiency:** With Gold-level performance at 90% efficiency, it ensures effective power transfer from the wall to your components.

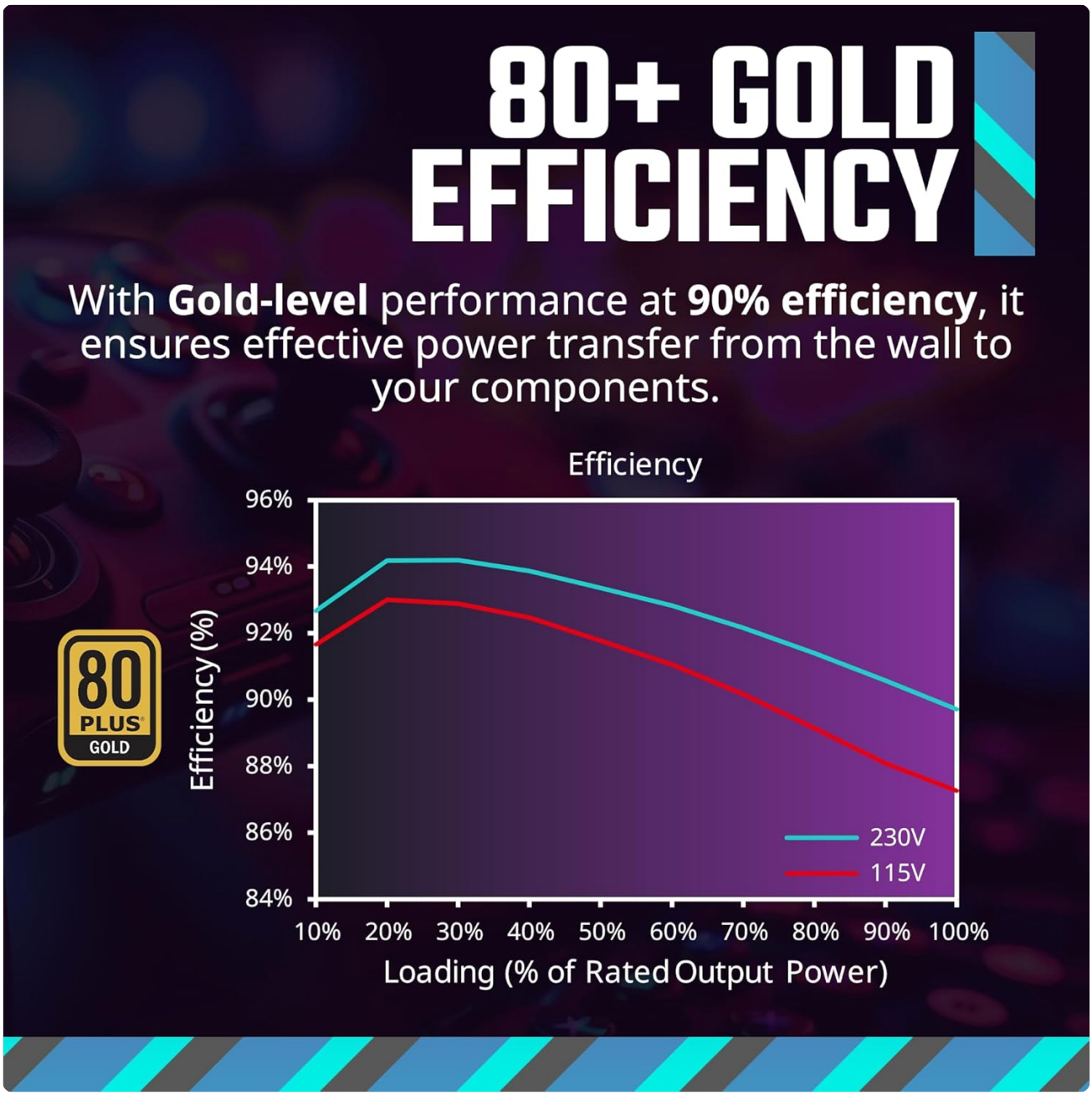


Figure 2.5: The 80 Plus Gold certification indicates high energy efficiency, reducing wasted power.

- **Japanese Capacitors:** By integrating large, high-quality 100% Japanese capacitors, we improve efficiency and reduce ripple noise.



Figure 2.6: High-quality Japanese capacitors ensure stable and clean power output.

- **Silent Fan Performance:** A Zero-RPM mode automatically activates the fan when your PC reaches a specific temperature, reducing noise during lighter tasks.

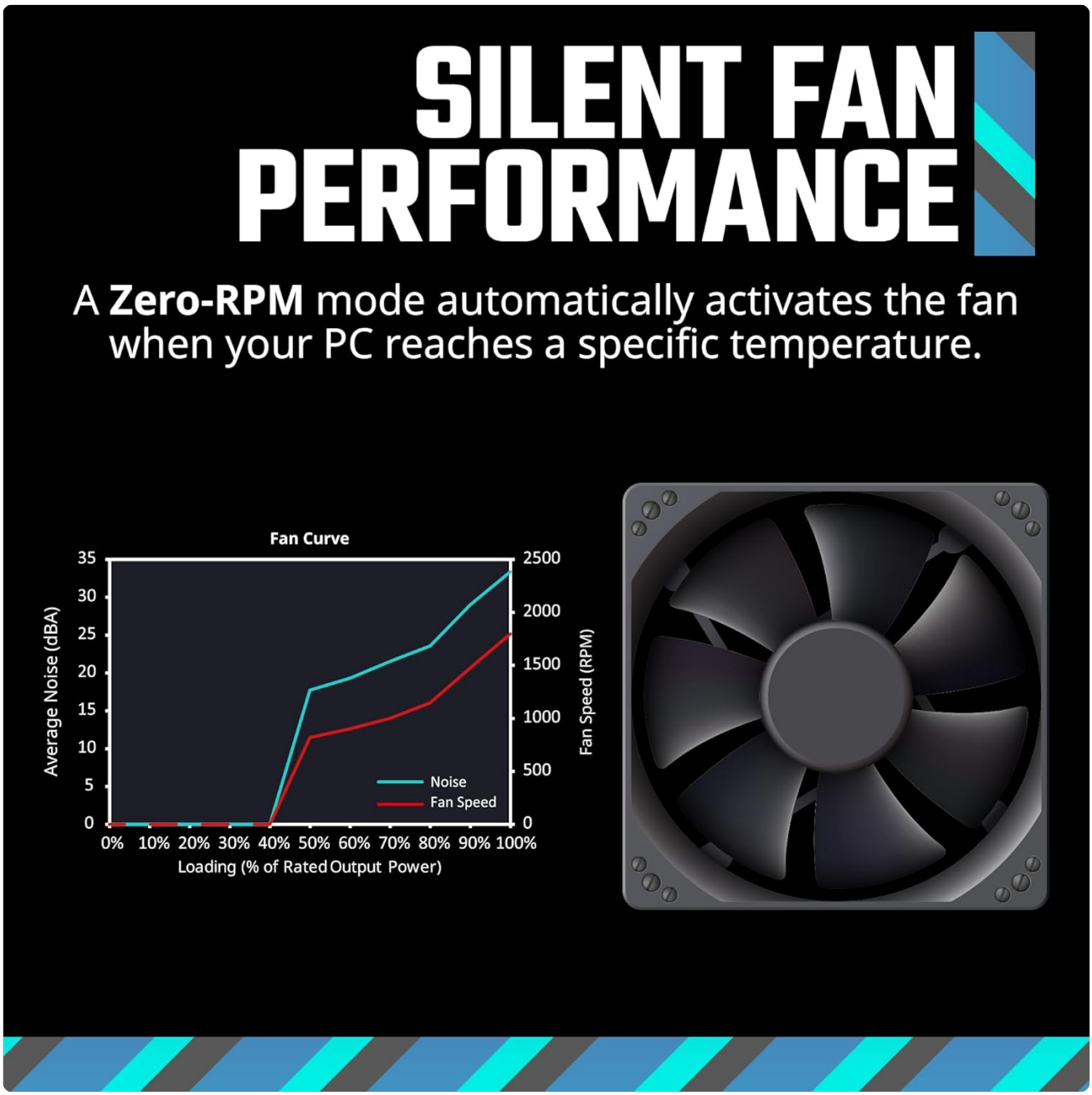


Figure 2.7: The Zero-RPM mode ensures quiet operation under low loads.

- **Fully Modular Design:** Modular cables not only reduce clutter but also enhance airflow, leading to improved overall efficiency.



Figure 2.8: The fully modular design allows for cleaner builds and better airflow.

3. Setup and Installation

Proper installation of your power supply unit (PSU) is crucial for system stability and longevity. Follow these steps carefully.

3.1 Unboxing and Preparation

Carefully remove the MWE Gold 850 V3 PSU and all included modular cables from its packaging. Ensure all components are present and undamaged. It is recommended to perform installation on a clean, static-free surface.



Figure 3.1: The MWE Gold 850 V3 PSU as it appears out of the box.

3.2 Power Supply Installation in PC Case

Most PC cases have a dedicated compartment for the power supply, typically at the bottom rear. Slide the PSU into this bay and secure it with screws from the rear of the case. Ensure the fan is oriented correctly for optimal airflow (usually facing downwards if there's a bottom vent, or upwards if not).

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Video 3.1: This video demonstrates the installation process of a Cooler Master power supply into a PC case, including mounting and initial cable connections. (Source: Cooler Master)

Connecting Modular Cables: Connect only the necessary cables to the modular ports on the PSU. This includes the 24-pin ATX motherboard power, 8-pin (or 4+4-pin) CPU power, PCIe power cables for your graphics card (including the 90° 12V-2x6 PCIe 5.1 connector for compatible GPUs), and SATA/Molex cables for storage drives and other peripherals.



Figure 3.2: Overview of the modular ports on the PSU for connecting various system components.

Route the connected cables through the designated cutouts in your PC case to the respective components (motherboard, GPU, SSDs/HDDs).

3.3 Cable Management

Effective cable management improves airflow and aesthetics. Use cable ties or Velcro straps to bundle cables neatly behind the motherboard tray. Ensure cables do not obstruct fans or airflow paths.

4. Operating Instructions

Once installed, connect the AC power cord to the PSU and a wall outlet. Flip the power switch on the back of the PSU to the 'ON' position. The MWE Gold 850 V3 features a Zero-RPM mode, meaning the fan will not spin under low loads to maintain silent operation. The fan will automatically activate when the system load or temperature increases, ensuring optimal cooling when needed.



Figure 4.1: The power switch on the rear of the PSU controls the unit's power state.

5. Maintenance

To ensure the longevity and optimal performance of your power supply, regular maintenance is recommended:

- **Dust Removal:** Periodically clean dust from the PSU's fan and ventilation grilles using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Cable Inspection:** Occasionally check all connected cables for secure connections and any signs of wear or damage.
- **Environment:** Operate the PSU in a well-ventilated area, avoiding extreme temperatures or humidity.

6. Troubleshooting

If you encounter issues with your Cooler Master MWE Gold 850 V3 PSU, refer to the following common troubleshooting steps:

- **No Power:**
  - Ensure the AC power cord is securely plugged into both the PSU and the wall outlet.
  - Verify the PSU's power switch on the back is in the 'ON' position.
  - Check all modular cables are firmly seated in both the PSU and the respective components (motherboard, GPU).
  - Test the wall outlet with another device to confirm it has power.
- **System Instability/Crashes:**
  - Ensure your system's power requirements do not exceed the PSU's 850W capacity.
  - Verify all power connections are secure.

- Check for proper ventilation within your PC case to prevent overheating.

- **Excessive Fan Noise:**
  - The Zero-RPM mode keeps the fan off at low loads. If the fan is constantly spinning loudly, your system might be under heavy load or experiencing high temperatures.
  - Clean any dust buildup from the fan and vents (refer to Maintenance section).
  - Ensure no cables are obstructing the fan blades.

If issues persist after following these steps, please contact Cooler Master customer support.

7. Technical Specifications

Feature	Specification
Product Dimensions	7.09 x 5.91 x 3.39 inches
Item Weight	5.76 pounds
Manufacturer	Cooler Master
ASIN	B0D68VH8DR
Country of Origin	Vietnam
Item model number	MPX-8503-AFAG-2BUV
Model Name	MWE Gold 850 V3
Brand	Cooler Master
Compatible Devices	Desktop
Connector Type	ATX, 12VHPWR, EPS, PCI Express, SATA
Output Wattage	800
Form Factor	ATX
Wattage	50 watts
Cooling Method	Air

Note: Some specifications may vary slightly based on regional models or revisions.

8. Warranty and Support

The Cooler Master MWE Gold 850 V3 PSU comes with a**10-Year Warranty**, ensuring long-term reliability and peace of mind. For technical support, warranty claims, or further assistance, please visit the official Cooler Master support website or contact their customer service department.

Cooler Master Support Website

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.

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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.

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