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› Thermaltake Smart BM3 850W 80Plus Bronze ATX 3.0 & PCIe 5.0 Semi-Modular Power Supply User Manual

Thermaltake PS-SPD-0850MNFABU-3

Thermaltake Smart BM3 850W 80Plus Bronze ATX 3.0 & PCIe 5.0 Semi-Modular Power Supply User Manual

Model: PS-SPD-0850MNFABU-3

1. INTRODUCTION

Thank you for choosing the Thermaltake Smart BM3 850W 80Plus Bronze ATX 3.0 & PCIe 5.0 Semi-Modular Power Supply. This power supply unit (PSU) is engineered to deliver reliable and efficient power to your computer system, supporting the latest ATX 3.0 standards and PCIe Gen 5.0 graphics cards. This manual provides essential information for proper installation, operation, and maintenance of your new power supply.



Figure 1: Thermaltake Smart BM3 850W Power Supply

2. SAFETY INFORMATION

Please read and follow these safety guidelines carefully to prevent injury and damage to your equipment:

- Do not open the PSU casing. High voltages are present inside, even when the unit is unplugged.
- Install the PSU in a well-ventilated area, away from heat sources, direct sunlight, and moisture.
- Ensure the power supply is turned off and unplugged from the wall outlet before installation or handling.
- Use only the modular cables provided with this power supply. Third-party cables may not be compatible and could cause damage.
- Connect the PSU to a grounded power outlet.
- Avoid placing heavy objects on the power supply or its cables.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Thermaltake Smart BM3 850W Power Supply Unit
- AC Power Cord
- Modular Cable Set (including 12VHPWR cable)
- Mounting Screws
- User Manual

4. SETUP AND INSTALLATION

4.1 Physical Installation

1. Ensure your computer system is powered off and unplugged from the wall outlet.
2. Remove the side panel of your computer case to access the PSU mounting area.
3. If replacing an existing PSU, disconnect all cables from the old unit and remove it.
4. Carefully insert the Thermaltake Smart BM3 PSU into the designated bay in your computer case.
5. Secure the PSU to the case using the provided mounting screws.



SMART BM3 BRONZE 850W - TT PREMIUM EDITION

80 PLUS Bronze certified semi modular PSU, compatible with Intel's ATX 3.0 specifications. Designed with a native PCIe Gen 5.0 connector, it can power up next-gen entry level GPUs with one 12VHPWR cable.

Figure 2: Rear view of the PSU with power switch and Smart Zero Fan switch

4.2 Cable Connections

Connect the necessary modular cables to your components. This semi-modular PSU allows you to connect only the cables you need, reducing clutter.

- **24-pin Main Power Connector:** Connect to your motherboard.
- **CPU (EPS 4+4 pin) Connector:** Connect to your motherboard's CPU power socket.
- **PCIe (6+2 pin) Connectors:** Connect to your graphics card(s) as required.
- **PCIe Gen 5.0 (12VHPWR) Connector:** For compatible PCIe Gen 5.0 graphics cards. This PSU includes one native 12VHPWR connector.
- **SATA Connectors:** Connect to SATA devices such as SSDs, HDDs, and optical drives.
- **Peripheral (Molex) Connectors:** For older peripherals or case fans.



FULLY COMPATIBLE WITH INTEL ATX 3.0 STANDARDS

Smart BM3 series is fully compatible with Intel ATX 3.0 Specifications which supports up to 200% power excursion, reaches 60% low load efficiency and complies with required power supply timing standards.

Figure 3: Modular cable connection ports



PCIe GEN 5.0 READY

Smart BM3 Bronze series comes with a 16-pin connector to offer powerful and stable performance allowing the PSU to natively run next-generation GPUs.

The wattage marked on the 12VHPWR's connector is the recommended wattage. (Ref. Intel design guideline)

The native 16-pin (12VHPWR) PCIe connector of the Smart BM3 650W can deliver up to 300W for PCIe 5.0 graphics cards.

Figure 4: PCIe Gen 5.0 (12VHPWR) Connector

After connecting all necessary cables, organize them for optimal airflow and close your computer case.

5. OPERATING INSTRUCTIONS

5.1 Initial Power On

1. Connect the AC power cord to the PSU and then to a wall outlet.
2. Flip the main power switch on the back of the PSU to the 'ON' position.
3. Power on your computer system.

5.2 Smart Zero Fan Function

The Smart BM3 series features a Smart Zero Fan function. When enabled, the 120mm Fluid Dynamic Bearing (FDB) fan will not spin until the load on the power supply exceeds 20% of its maximum capacity. This minimizes noise during low-load operations.

- **To Enable/Disable:** Use the dedicated switch on the back of the PSU (refer to Figure 5).
- When disabled, the fan will operate continuously, providing constant airflow regardless of load.



BE SMART, STAY QUIET

Featuring a 120mm FDB fan to deliver excellent airflow. Furthermore, with the Smart Zero Fan function the fan will not spin until the load exceeds 20% of the power supply, minimizing undesired noise.

Figure 5: Smart Zero Fan switch

6. MAINTENANCE

To ensure optimal performance and longevity of your power supply:

- Keep the PSU and surrounding area free from dust. Use compressed air to gently clean the fan and vents periodically.
- Ensure adequate airflow around the PSU within your computer case.
- Avoid exposing the PSU to extreme temperatures or humidity.

7. TROUBLESHOOTING

If you encounter issues with your power supply, refer to the following common problems and solutions:

- **No Power:**

- Check if the AC power cord is securely connected to both the PSU and the wall outlet.
- Ensure the main power switch on the back of the PSU is in the 'ON' position.
- Verify that all modular cables are correctly and firmly seated in both the PSU and the components.
- Test the wall outlet with another device to confirm it has power.

- **System Instability/Random Shutdowns:**

- Ensure your system's power requirements do not exceed the PSU's capacity.
- Check for loose cable connections.
- Ensure adequate ventilation to prevent overheating.

- **Fan Not Spinning (Smart Zero Fan enabled):**

- This is normal if the system load is below 20%. The fan will activate automatically when the load increases.
- If the fan does not spin even under heavy load, ensure the Smart Zero Fan switch is not stuck, or try disabling it to force continuous fan operation.

If problems persist, contact Thermaltake customer support for assistance.

8. SPECIFICATIONS

Feature	Specification
Model	PS-SPD-0850MNFABU-3 (SPD-850AH2CLB)
Max Output Capacity	850W
Efficiency Certification	80 PLUS Bronze (at 115Vac input)
ATX Standard	ATX 3.0 Compatible
PCIe Gen 5.0 Ready	Yes (1x 12VHPWR connector, 450W)
PFC (Power Factor Correction)	Active PFC
Input Voltage	100-240V~
Input Current	15A-8A
Input Frequency Range	50Hz/60Hz
Cooling System	12cm FDB Fan with Smart Zero Fan function
Capacitors	High quality Japanese 105°C/221°F main electrolytic capacitor
MTBF	100,000 hrs minimum
Safety Approvals	FCC/ICES/CB/cTUVus/S-mark
Protections	OCP, OVP, UVP, OPP, OTP, SCP
Dimensions (WxHxD)	150mm x 86mm x 140mm (5.9 x 3.4 x 5.5 inches)
Item Weight	3.75 pounds

8.1 DC Output Specifications

Rail	Max Output Current	Max Output Power
+3.3V	18A	110W
+5V	18A	110W
+12V	70.85A	850W
-12V	0.3A	3.6W
+5VSB	3A	15W
Total Power	N/A	850W

8.2 Cable Configuration



Figure 6: Semi-Modular Cable Configuration (Example image, actual cable count/length may vary slightly)

9. WARRANTY AND SUPPORT

The Thermaltake Smart BM3 850W Power Supply comes with a **5-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

For warranty claims, technical support, or further inquiries, please visit the official Thermaltake website or contact their customer service department. Keep your proof of purchase for warranty validation.

Online Support: www.thermaltake.com/support.aspx

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