Thermaltake PS-SPD-0650NNFABB-1

Thermaltake Smart BX1 650W 80 PLUS Bronze Power Supply
MODEL: PS-SPD-0650NNFABB-1

1. Introduction

Thank you for choosing the Thermaltake Smart BX1 650W 80 PLUS Bronze Power Supply. This power supply unit (PSU) is designed to provide stable and efficient power to your computer system. Featuring 80 PLUS Bronze certification and all-flat cables, it offers reliable performance and simplified cable management for a clean build. Please read this manual thoroughly before installation and operation to ensure proper usage and safety.

2. Key Features

- **650W Continuous Power:** Delivers stable and reliable power output for demanding PC components.

- **80 PLUS Bronze Certified:** Achieves up to 85% efficiency at 115Vac input, reducing heat generation and operating costs.

- **All Flat Cables:** Designed with flat, non-modular cables for improved flexibility, easier routing, and enhanced airflow within your PC case.

- **12cm Hydraulic Bearing Fan:** Features a low-noise 120mm fan with a hydraulic bearing for quiet operation and extended lifespan (100,000 hours minimum MTBF).

- **Comprehensive Circuit Protection:** Includes multiple protection mechanisms such as Over Current Protection (OCP), Over Voltage Protection (OVP), Under Voltage Protection (UVP), Over Power Protection (OPP), Short Circuit Protection (SCP), and Over Temperature Protection (OTP) to safeguard your system.

- **Wide Input Voltage Range:** Supports input voltage from 100V to 240V, making it a versatile 'Bivolt' product.

- **PCI-E 6+2pin Connectors:** Equipped with two PCI-E 6+2pin connectors for graphics card compatibility.

- **Safety Approvals:** Certified by CE, CB, TUV, UL, FCC, and BSMI for global safety standards.

3. Safety Information

Always observe the following safety precautions to prevent injury or damage to your system:

- Ensure the power supply is disconnected from the AC power outlet before installation or maintenance.

- Do not open the power supply casing. High voltages are present inside, and opening it will void the warranty.

- Install the power supply in a well-ventilated area, away from heat sources and direct sunlight.

- Use only the cables provided with the power supply. Using incompatible cables may cause damage.

- This product is designed for use in personal computers only. Any other use may result in damage and void the warranty.

- If the power supply malfunctions, discontinue use immediately and contact customer support.

4. Package Contents

- Thermaltake Smart BX1 650W Power Supply Unit

- AC Power Cord

- Mounting Screws

- User Manual (this document)

5. Setup & Installation

Follow these steps to install your Thermaltake Smart BX1 650W Power Supply:

1. **Prepare Your System:** Ensure your computer is completely powered off and unplugged from the wall outlet. Open your PC case to access the power supply mounting area.

2. **Mount the Power Supply:** Carefully place the Thermaltake Smart BX1 PSU into the designated power supply bay in your PC case. Secure it with the provided mounting screws.

3. **Connect Main Power (24-pin ATX):** Connect the large 24-pin ATX cable from the PSU to the corresponding port on your motherboard. Ensure it clicks securely into place.

4. **Connect CPU Power (8-pin EPS/ATX12V):** Connect the 8-pin (4+4 pin split) CPU power cable to the CPU power connector on your motherboard. If your motherboard uses an 8-pin connector, use both halves. If it uses a 4-pin connector, use only one half.

5. **Connect Graphics Card Power (PCI-E):** For your graphics card, use the PCI-E 6+2pin connectors. Connect the appropriate number of connectors to your graphics card. Avoid using a single cable for multiple high-power graphics cards if separate cables are available.

6. **Connect SATA Devices:** Use the SATA power cables to connect your storage drives (HDDs, SSDs) and optical drives.

7. **Connect Peripheral Devices (Molex):** Use the Molex connectors for any other peripheral devices that require them, such as case fans or older components.

8. **Cable Management:** Utilize the flat design of the cables to route them neatly behind the motherboard tray or through designated channels in your case. This improves airflow and aesthetics.

9. **Close Case and Power On:** Once all connections are secure, close your PC case, plug the AC power cord into the PSU and a wall outlet, and power on your system.

Image: The Thermaltake Smart BX1 650W Power Supply, showcasing its compact design and attached flat cables for various components.

6. Operating Instructions

The Thermaltake Smart BX1 650W Power Supply operates automatically once installed and connected correctly. The 12cm hydraulic bearing fan will adjust its speed based on the power supply's temperature and load to maintain optimal cooling while minimizing noise. No user intervention is typically required for its operation.

7. Maintenance

To ensure the longevity and optimal performance of your power supply, consider the following maintenance tips:

- **Keep it Clean:** Periodically clean the exterior of the power supply and the fan grille to prevent dust buildup, which can impede airflow and reduce cooling efficiency. Use compressed air or a soft brush.

- **Ensure Proper Airflow:** Make sure your PC case has adequate airflow. Avoid blocking the intake or exhaust vents of the power supply.

- **Avoid Overloading:** Do not exceed the rated wattage of the power supply. Overloading can lead to instability

and premature failure.

- **Regular Checks:** Occasionally check cable connections to ensure they are secure.

8. Troubleshooting

If you encounter issues with your power supply, try the following steps:

- **No Power:**

  - Ensure the AC power cord is securely plugged into both the power supply and a working wall outlet.
  - Check the power switch on the back of the PSU; it should be in the 'ON' position.
  - Verify all internal power connections (24-pin ATX, 8-pin CPU, PCI-E) are firmly seated.

- **System Instability/Random Shutdowns:**

  - This could indicate an overloaded PSU or a component issue. Ensure your system's power requirements do not exceed 650W.
  - Check for proper ventilation and ensure the PSU fan is spinning freely.
  - If the issue persists, test components individually or consult a professional.

- **Excessive Noise:**

  - Ensure no cables or obstructions are interfering with the fan blades.
  - Clean any dust buildup from the fan and vents.

If these steps do not resolve your issue, please contact Thermaltake customer support for further assistance.

9. Specifications

Feature	Specification
Brand	Thermaltake
Model Name	PS-SPD-0650NNFABB-1
Output Wattage	650 Watts
Efficiency Certification	80 PLUS Bronze
Form Factor	ATX12V
Cooling Method	Air (12cm Hydraulic Bearing Fan)
Input Voltage	100V - 240V
Input Frequency Range	50Hz - 60Hz
Input Current	12A max
Hold Up Time	16ms at 70% of full load
Power Good Signal	100-500 msec
Operating Temperature	5°C to +40°C

Feature	Specification
Operating Humidity	20% to 85%, non-condensing
Storage Temperature	-40°C to +55°C
Storage Humidity	10% to 95%, non-condensing
Mean Time Between Failures (MTBF)	100,000 hours minimum
Dimensions (LxWxH)	8.03 x 9.92 x 3.78 inches
Item Weight	4.4 pounds (2 Kilograms)

10. Warranty & Support

The Thermaltake Smart BX1 650W Power Supply is built with high-quality components and designed for long-term reliability, boasting a Mean Time Between Failures (MTBF) of 100,000 hours minimum. For specific warranty terms and conditions, please refer to the warranty information provided with your product packaging or visit the official Thermaltake website. For technical support or service inquiries, please contact Thermaltake customer service.