

Thermaltake PS-SPD-0600NPCWUS-W

Thermaltake Smart 600W Power Supply User Manual

Model: PS-SPD-0600NPCWUS-W

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Thermaltake Smart 600W Power Supply. Please read this manual thoroughly before installation and retain it for future reference.

Product Features:

- Delivers 600 watt Continuous output at +40°C.
- Compliance with Intel ATX 12 Volt 2.31 & EPS 12V 2.92 standards.
- 80 PLUS Certified for 80% efficiency under typical load.
- Supports (2) PCI-E 6+2pin Connectors.
- Active Power Factor Correction (PFC).
- Industry Grade Protections: Over Power Protection (OPP), Over Voltage Protection (OVP), Short Circuit Protection (SCP).
- Mean Time Between Failures (MTBF): 100,000 hours.



This image displays the Thermaltake Smart 600W Power Supply alongside its retail box, highlighting key features such as 5-year warranty, Haswell Ready compatibility, continuous power delivery, ultra-quiet 120mm fan, and 80 PLUS certification.

2. SAFETY INFORMATION

Please observe the following safety guidelines to prevent injury and damage to your equipment:

- **Do not** open the power supply unit. High voltages are present inside, even when disconnected from power.
- **Do not** insert any objects into the fan grille or ventilation openings.
- Ensure the power supply is installed in a well-ventilated area.
- Use only the cables provided with the power supply.
- Connect the power supply to a grounded outlet.
- Disconnect the AC power cord before installing or removing the power supply or any components.

3. PACKAGE CONTENTS

Verify that your package contains the following items:

- Thermaltake Smart 600W Power Supply Unit
- AC Power Cord
- Mounting Screws
- User Manual (this document)

4. SETUP AND INSTALLATION

Follow these steps to install your power supply unit:

1. **Prepare your PC Case:** Ensure your PC case is compatible with ATX power supplies. Remove the side panel of your PC case.
2. **Mount the PSU:** Gently slide the power supply into the designated PSU bay in your PC case. Align the screw holes on the PSU with those on the case. Secure the PSU using the provided mounting screws.
3. **Connect Motherboard Power:**
 - Connect the 24-pin ATX power connector from the PSU to the corresponding port on your motherboard.
 - Connect the 4+4-pin (or 8-pin) EPS/CPU power connector to the CPU power port on your motherboard.
4. **Connect Graphics Card Power (PCIe):** If your graphics card requires external power, connect the 6+2-pin PCIe power connectors from the PSU to your graphics card.
5. **Connect Peripherals:** Connect SATA power connectors to your SSDs, HDDs, and optical drives. Use Molex connectors for other peripherals if needed.
6. **Cable Management:** Route cables neatly to improve airflow and aesthetics within your PC case.
7. **Connect AC Power:** Once all internal connections are secure, connect the AC power cord to the power supply's inlet and then to a wall outlet. Ensure the power switch on the PSU is in the 'OFF' (O) position before connecting to the wall outlet.



An angled view of the power supply unit, showing the bundle of non-modular cables including the 24-pin ATX, 8-pin EPS, PCIe, SATA, and Molex connectors, ready for system integration.



The rear panel of the power supply, featuring the AC power input socket and the main power on/off switch, along with extensive ventilation.

5. OPERATING INSTRUCTIONS

After installation, ensure all connections are secure. Flip the power switch on the rear of the power supply to the 'ON' (I) position. You can then power on your computer using the case's power button. The power supply will provide stable power to all connected components.

6. MAINTENANCE

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

- **Dust Removal:** Periodically clean the power supply's fan and ventilation grilles to prevent dust buildup, which can impede airflow and cooling. Use compressed air for this purpose, ensuring the system is powered off and unplugged.
- **Environmental Conditions:** Operate the power supply in a clean, dry environment with adequate ventilation. Avoid extreme temperatures and humidity.



This close-up view shows the 120mm cooling fan of the power supply, which is designed for quiet operation and efficient heat dissipation.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
System does not power on.	Power cord not connected, PSU switch off, faulty connection.	Check AC power cord connection. Ensure PSU switch is 'ON'. Recheck all internal power connections.
System powers on but shuts down immediately.	Overload, short circuit, overheating.	Verify total power consumption. Check for short circuits in components/cables. Ensure adequate ventilation.

Problem	Possible Cause	Solution
Unusual noise from PSU.	Fan obstruction, faulty fan.	Clean fan and grilles. If noise persists, contact support.
System instability or random reboots.	Insufficient power, faulty PSU.	Ensure PSU wattage meets system requirements. Test with another PSU if possible.

8. SPECIFICATIONS

Detailed technical specifications for the Thermaltake Smart 600W Power Supply:

Feature	Specification
Model Name	TMT-PSSPD0600NPCWUSW
Item Model Number	PS-SPD-0600NPCWUS-W
Output Wattage	600 Watts
Input Voltage	120 Volts (AC)
Product Dimensions (L x W x H)	22.61 x 10.16 x 17.78 cm
Item Weight	1 kg
Compatible Devices	Personal Computer
Connector Type	ATX, EPS, PCI-E
Date First Available	8 September 2015

Electrical Output Specifications:



SMART SERIES POWER SUPPLY

SMART 600W

MODEL: SPD-600AH2NLW					
AC INPUT	Input Voltage : 100V - 240V Input Current : 10A Frequency : 47Hz - 63Hz				
DC OUTPUT	+3.3V	+5V	+12V	-12V	+5VSB
Max Output Current	18A	18A	45A	0.3A	2.5A
Max Output Power	110W		540W	3.6W	12.5W
Total Power	600W				

WARNING
HAZARDOUS VOLTAGES CONTAINED WITHIN
THIS POWER SUPPLY. NOT USER SERVICEABLE.
RETURN TO SERVICE CENTER FOR REPAIR.

ATTENTION
TENSIONS DANGEREUSES NE PEUT ÊTRE
REPARÉ PAR L'UTILISATEUR. POUR TOUTE
REPARATION RENVOYER AU SERVICE APRÈS
VENTE.

WARNUNG
NETZTEIL UNTER GEFAHRLICHER SPANNUNG.
NICHT VOM BENUTZER ZU REPARIEREN. ZUR
REPARATUR AN KUNDENDIENST ZURÜCKSENDEN.

PELIGRO
ESTA FUENTE DE PODER UTILIZA ALTA TENSION.
NO CONTIENE NINGUN ELEMENTO REPARABLE
POR EL USUARIO FAVOR DE ENVIAR AL
CENTRO DE SERVICIO PARA SU REPARACION.

CAUTION! HAZARDOUS AREA
DO not remove this cover.
Trained service people only.
No serviceable components inside.

REV : A TV001
Switching Power Supply
Made in Vietnam

<http://my.thermaltake.com/usa/csWarranty.aspx> Support Hotline: 1-800-988-1088 E-mail: ttsupport@thermaltakeusa.com

The product label detailing input voltage, current, frequency, and DC output specifications for +3.3V, +5V, +12V, -12V, and +5VSB rails, along with total power output and safety warnings.

DC Output Rail	Max Output Current	Max Output Power
+3.3V	18A	110W
+5V	18A	
+12V	45A	540W
-12V	0.3A	3.6W
+5VSB	2.5A	12.5W
Total Power		600W

9. WARRANTY AND SUPPORT

The Thermaltake Smart 600W Power Supply comes with a 5-year warranty. For warranty claims or technical support, please contact Thermaltake customer service.

You can find more information and support resources on the official Thermaltake website: www.thermaltake.com

For specific support regarding this model, you may also refer to the support hotline or email provided on the product label: Support Hotline: 1-800-988-1088, E-mail: ttsupport@thermaltakeusa.com

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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