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› Thermaltake Toughpower GF3 1200W Power Supply User Manual

Thermaltake PS-TPD-1200FNFAGE-4

Thermaltake Toughpower GF3 1200W Power Supply User Manual

Model: PS-TPD-1200FNFAGE-4

INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of your Thermaltake Toughpower GF3 1200W Full Modular Power Supply. Please read this manual thoroughly before installation and retain it for future reference.

The Thermaltake Toughpower GF3 series is designed to meet the demands of next-generation computing, featuring native PCIe 12+4pin modular connectors for PCIe 5.0 graphics cards and compatibility with Intel ATX 3.0 specifications. This 1200W model delivers 80 PLUS Gold efficiency, ensuring stable and reliable power delivery for high-performance systems.

SAFETY INFORMATION

- Always disconnect the power supply from the AC outlet before installation or maintenance.
- Do not open the power supply unit. High voltages are present inside, which can cause serious injury or death.
- Ensure proper grounding of the power supply.
- Install the power supply in a well-ventilated area.
- Use only the modular cables provided with this power supply. Using incompatible cables may damage the PSU or connected components.
- Avoid exposing the power supply to moisture or extreme temperatures.

PRODUCT OVERVIEW

The Thermaltake Toughpower GF3 1200W is a fully modular power supply designed for high-performance PC builds. It features a native 12VHPWR connector for PCIe 5.0 GPUs and adheres to the ATX 3.0 standard.



Figure 1: Thermaltake Toughpower GF3 1200W Power Supply and its retail packaging.



Figure 2: Side view of the power supply unit, showing the model name and wattage.

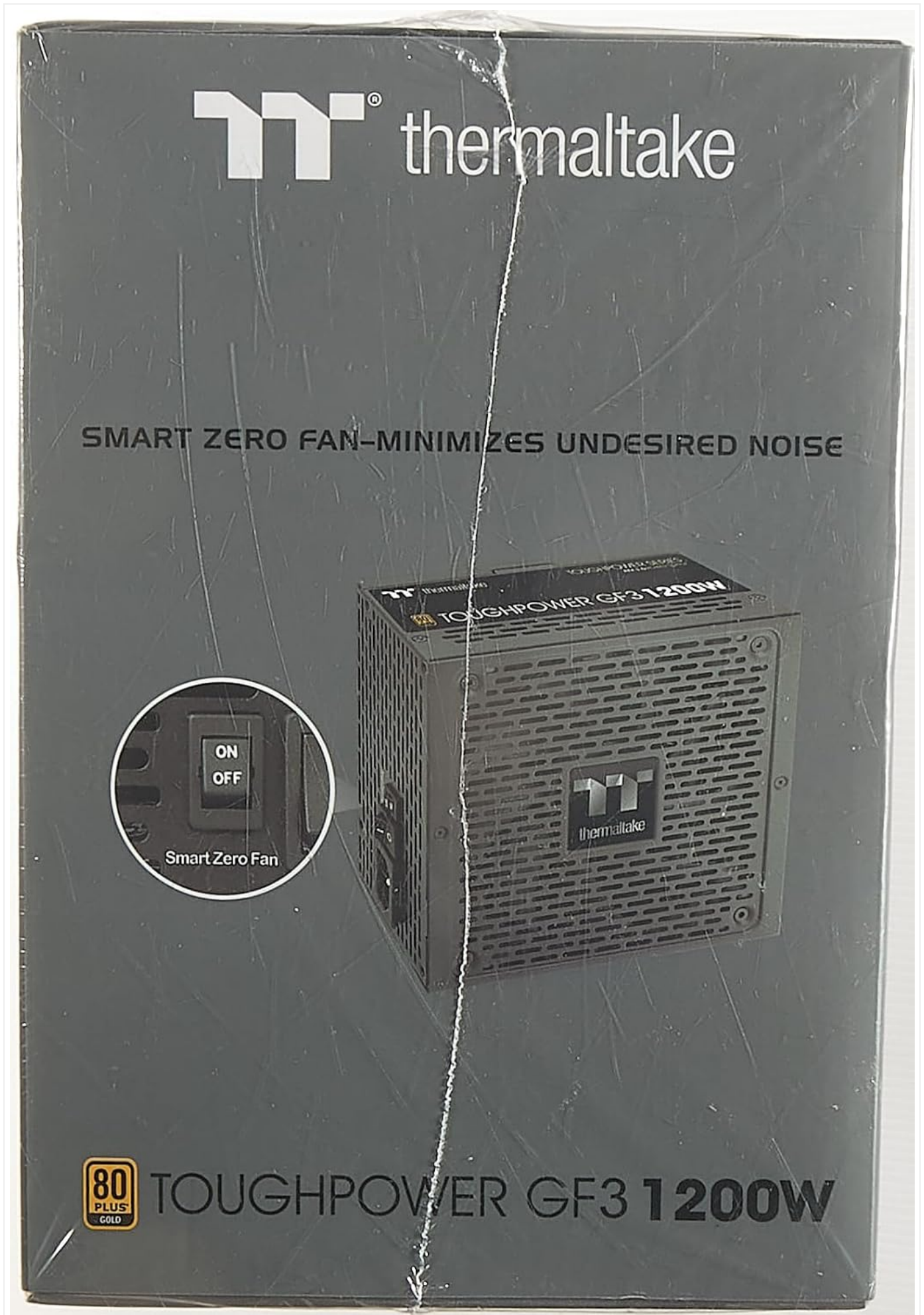


Figure 3: Angled view of the power supply, highlighting the power input and the Smart Zero Fan switch.



Figure 4: Detailed view of the fully modular cable connection ports on the power supply, including the 12VHPWR connector.

SETUP AND INSTALLATION

Pre-Installation Checklist:

- Ensure your PC case has adequate space for the power supply (dimensions: 19.69 x 19.69 x 11.02 inches).
- Verify that your motherboard and graphics card are compatible with the power supply's connectors (ATX 3.0, PCIe 5.0).
- Gather all necessary tools: screwdriver, zip ties (optional for cable management).

Installation Steps:

1. Mounting the PSU:

Carefully slide the power supply into the designated PSU bay in your PC case. Secure it with screws from the rear of the case.

2. Connecting Main Power Cables:

- Connect the 24-pin ATX cable from the PSU to the motherboard's 24-pin connector.
- Connect the 8-pin (4+4) CPU power cable(s) to the motherboard's CPU power connector(s).

3. Connecting PCIe Cables:

- For PCIe 5.0 graphics cards, connect the native 12VHPWR (12+4pin) cable directly from the PSU to your graphics card. This cable can deliver up to 600W.
- For older graphics cards or additional power, use the standard 6+2 pin PCIe cables as needed.

4. Connecting SATA and Peripheral Cables:

Connect SATA power cables to your storage drives (SSDs, HDDs) and peripheral cables to other components like fans or RGB controllers as required.

5. **Cable Management:**

Route cables neatly to ensure optimal airflow within the case. Use zip ties or Velcro straps for organization.

6. **Final Checks:**

Double-check all connections to ensure they are secure. Ensure no loose cables are obstructing fans.

OPERATING INSTRUCTIONS

Powering On:

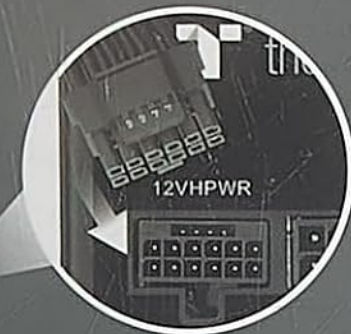
- After installation, connect the AC power cord to the power supply and then to a wall outlet.
- Flip the main power switch on the back of the power supply to the 'ON' position.
- Press the power button on your computer case to start the system.

Smart Zero Fan Feature:

The Toughpower GF3 1200W features a Smart Zero Fan mode. When enabled (switch on the PSU set to 'ON'), the fan will remain off until the load exceeds approximately 30% of the PSU's maximum wattage, minimizing noise during low-load operations. When disabled (switch set to 'OFF'), the fan will spin continuously.



SUPPORT PCIe GEN 5.0 GRAPHICS CARD



TOUGHPOWER GF3 1200W

Figure 5: Diagram illustrating the Smart Zero Fan feature, which minimizes noise by keeping the fan off at low loads.



Figure 6: Top view of the power supply, showing the fan grille and Thermaltake logo.

MAINTENANCE

- **Dust Cleaning:** Periodically clean dust from the power supply's fan grille and vents using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Cable Inspection:** Regularly inspect all modular cables for any signs of wear, damage, or loose connections.
- **Environmental Conditions:** Ensure the operating environment remains within recommended temperature and humidity ranges to prolong the life of the power supply.

TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
System does not power on.	Power cord not connected. PSU switch is off. Loose internal connections. Faulty component.	Ensure AC power cord is securely plugged into PSU and wall outlet. Flip the PSU switch to 'ON'. Check all modular cable connections (24-pin, CPU, PCIe). Test PSU with a PSU tester or try a different PSU if available.
System powers on but no display.	Graphics card not properly seated or powered. RAM issues.	Ensure PCIe power cables are fully connected to the graphics card. Reseat the graphics card. Reseat RAM modules.
System shuts down unexpectedly.	Overload or overheating. Faulty PSU.	Ensure adequate ventilation. Check component temperatures. Reduce system load or consider a higher wattage PSU if consistently overloaded. Contact support if issues persist.
Fan is not spinning (Smart Zero Fan enabled).	Normal operation at low load.	This is expected behavior. The fan will activate when the load exceeds approximately 30%. If the fan does not spin under heavy load, disable Smart Zero Fan mode to force continuous operation. If it still doesn't spin, contact support.

SPECIFICATIONS

Feature	Detail
Model Number	PS-TPD-1200FNFACE-4
Wattage	1200W
Efficiency	80 PLUS Gold Certified
Form Factor	ATX
Modularity	Fully Modular
PFC	Active PFC
Capacitors	100% High Quality Japanese Capacitors
Fan Type	135mm Fluid Dynamic Bearing Fan
Fan Control	Smart Zero Fan Mode (Switchable)
ATX Version	ATX 3.0 Compatible
PCIe Connector	Native 12+4pin (12VHPWR) for PCIe 5.0 GPUs
Ripple Noise	<30mV (low ripple noise design)
Voltage Regulation	<±3% (extremely strict)

Feature	Detail
Hold Up Time	>17ms
Dimensions (L x W x H)	19.69 x 19.69 x 11.02 inches (approx.)
Operating Temperature	0°C to 50°C
Safety Approvals	CE, FCC, EAC, UKCA, RCM, CCC, BSMI, KC, CB

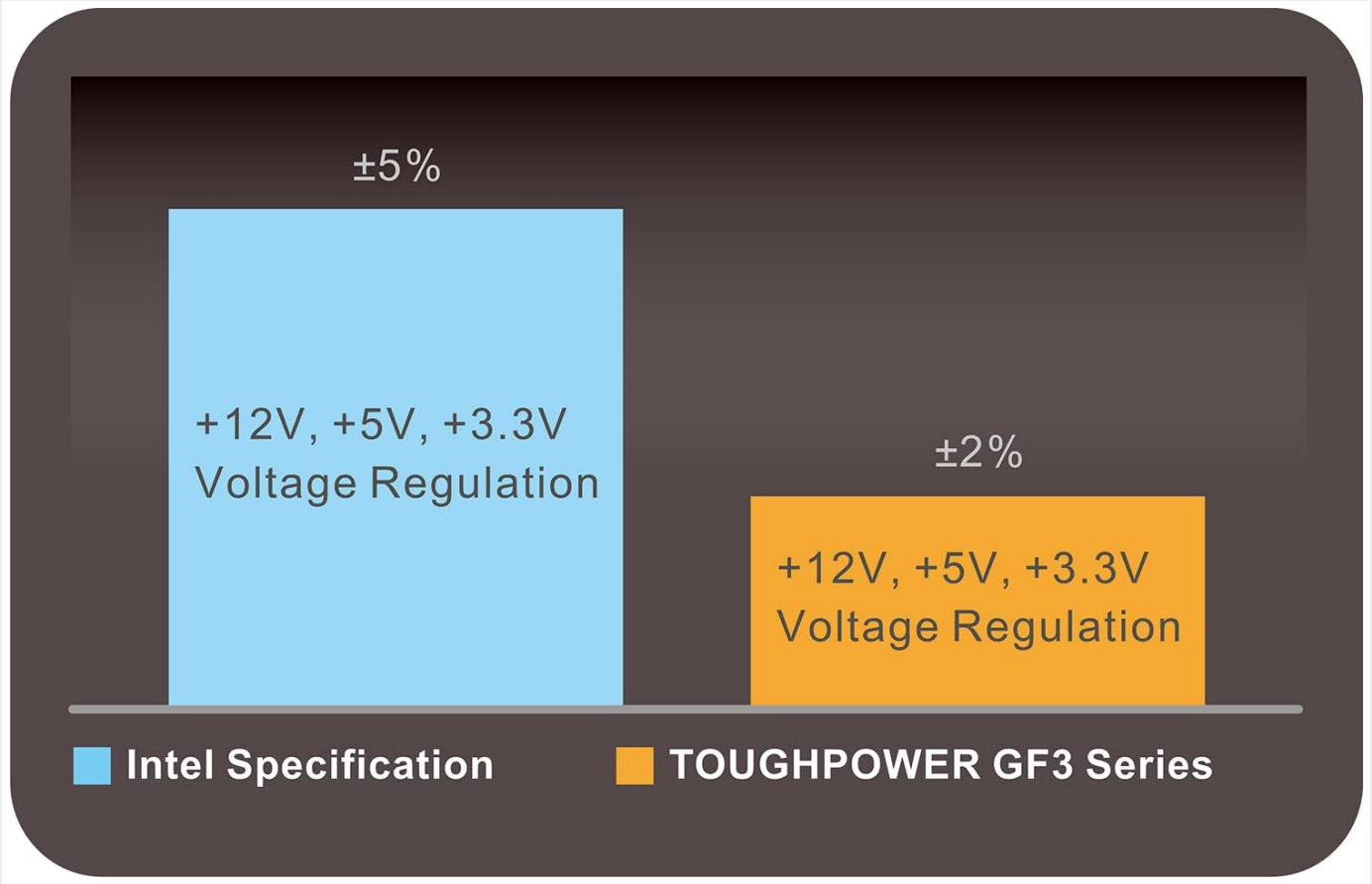


Figure 7: Chart comparing the voltage regulation of the Toughpower GF3 series against Intel specifications, showing superior performance.

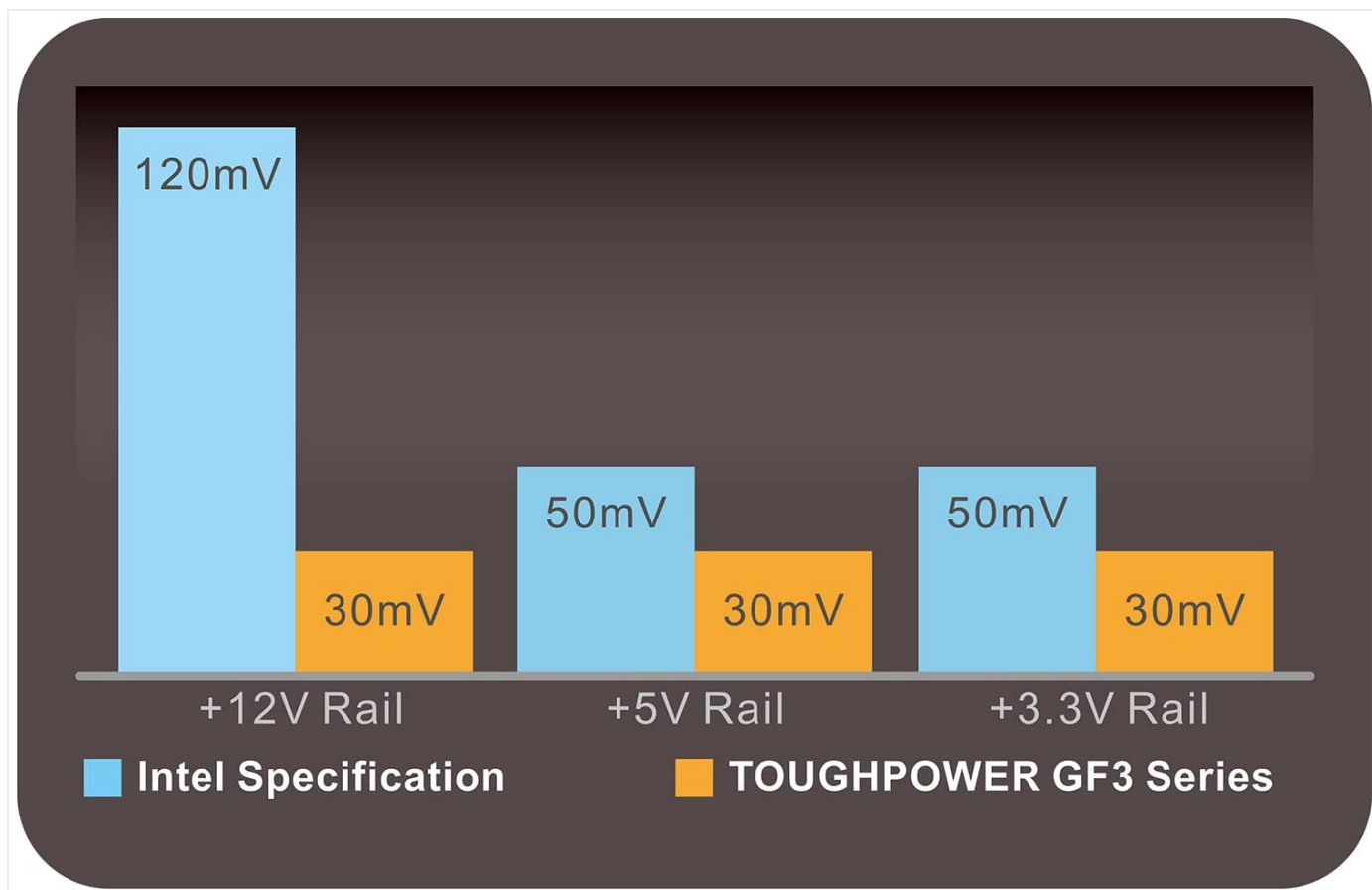


Figure 8: Chart illustrating the low ripple noise performance of the Toughpower GF3 series compared to Intel specifications.



Figure 9: Internal view of the power supply, showcasing the high-quality Japanese capacitors and other premium components.

WARRANTY INFORMATION

Thermaltake Toughpower GF3 series power supplies typically come with a **10-year warranty**. This warranty covers defects in material and workmanship under normal use. Please refer to the official Thermaltake website or your product packaging for the most current and detailed warranty terms and conditions.

Proof of purchase is required for all warranty claims.

SUPPORT

For technical support, troubleshooting assistance, or warranty inquiries, please visit the official Thermaltake support website:

www.thermaltake.com/support

You may also find helpful resources, FAQs, and driver downloads on their website.

ASK A QUESTION ABOUT THIS MANUAL

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Example: How do I reset this device or fix this error?

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