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› Thermaltake Toughpower GF3 750W, True 300W 12VHPWR Connectors on PSU & NVIDIA RTX 40 series, ATX 3.0/PCI-E 5.0 Ready, 80+ Gold, SLI/Crossfire Ready Power Supply, PS-TPD-0750FNFAGU-4, 10 Year Warranty Gold ATX 3.0 750W Black User Manual

Thermaltake PS-TPD-0750FNFAGU-4

Thermaltake Toughpower GF3 750W Power Supply User Manual

Comprehensive guide for installation, operation, and maintenance of your Thermaltake Toughpower GF3 750W power supply.

PRODUCT OVERVIEW

The Thermaltake Toughpower GF3 750W is a high-performance power supply unit designed to meet the demands of modern computing systems. It features a native PCIe 12+4pin connector, making it fully compatible with Intel's ATX 3.0 specification and ready for next-generation PCIe 5.0 graphics cards, capable of delivering up to 600W of power. This unit ensures stable and efficient power delivery for your PC components.



Image: The Thermaltake Toughpower GF3 750W power supply unit, showcasing its compact design and modular connectors.

KEY FEATURES

- **Fully Compatible With Intel PSDG ATX 3.0 Specifications:** Ensures optimal performance and compatibility with the latest PC hardware standards.
- **PCIe Gen 5.0 Ready:** Equipped with a native 12+4pin connector for direct support of next-generation PCIe 5.0 graphics cards.
- **100% High Quality Japanese 105°C/221°F Capacitors:** Provides enhanced durability, stability, and reliability for long-term use.
- **Fully Modular Low-Profile Flat Cable:** Offers flexible cable management, reduces clutter, and improves airflow within the PC chassis.
- **Ultra Quiet Smart Zero Fan:** The fan remains off until the load exceeds 30% of the power supply's capacity, minimizing noise during low-load operations.



TOUGHPower GF3 750W GOLD - TT PREMIUM EDITION

Designed with a native PCIe 12+4pin connector, the Toughpower GF3 series is compatible with Intel's ATX 3.0 specification and is built for next-gen PCIe 5.0 graphics cards.

Image: Product packaging highlighting key features such as 80 PLUS Gold certification, fully modular design, Smart Zero Fan, 100% Japanese capacitors, and 10-year warranty.



MADE TO COMPLY WITH THE LATEST GRAPHICS CARDS

Toughpower GF3 Gold comes with a 16pin connector to offer powerful and stable performance allowing the PSU to run next-generation GPUs naturally. Please follow the recommended power requirements from the GPU manufactures before using the 12VHPWR cable

Image: Close-up of the PCIe Gen 5.0 16-pin connector, indicating readiness for next-generation graphics cards.



ULTRA QUIET SMART ZERO FAN

Designed with our Smart Zero Fan, the fan will not spin until the load exceeds 30% of the power supply, minimizing the fan noise.

Image: A view of the power supply unit showing the physical switch for the Smart Zero Fan feature, allowing users to enable or disable the fan's silent mode.



Wattage	Connector Type	Connector Quantity per cable	Cable Quantity	Cable Length	
Toughpower GF3 1350W	Main Power (24Pin)		1	1	600mm
	ATX 12V (8/4+4Pin)		1	ATX 12V 8Pin x1 ATX 12V 4+4Pin x1	700mm
	PCIe (6+2Pin)		2	2	500mm + 150mm
	PCIe (12+4Pin)		1	1	500mm
	SATA		4	3	500mm + 150mm + 150mm
	Peripheral		4	1	500mm + 150mm + 150mm + 150mm
	Floppy Adapter		1	1	150mm

FULLY MODULAR LOW-PROFILE FLAT CABLE

Offers cable selection for users while powering the system at an advantageous voltage. Low-profile flat black cable makes cable management easier, reduces clutter and increases airflow inside the chassis.

Image: A table detailing the types, quantities, and lengths of the fully modular low-profile flat cables included with the power supply, such as Main Power, ATX 12V, PCIe, SATA, and Peripheral connectors.

SETUP GUIDE

Proper installation of your power supply is crucial for system stability and safety. Follow these general steps for setting up your Thermaltake Toughpower GF3 750W:

- 1. Prepare Your System:** Ensure your computer case is compatible with ATX power supplies. Turn off and unplug your computer from the wall outlet.
- 2. Mount the PSU:** Secure the power supply into the designated PSU bay in your computer case using the provided screws. Ensure the fan is oriented correctly for optimal airflow (usually facing down if there's a bottom vent, or up if not).
- 3. Connect Main Power:** Connect the 24-pin ATX main power cable from the PSU to the corresponding port on your motherboard.
- 4. Connect CPU Power:** Connect the 8-pin (or 4+4-pin) CPU power cable(s) to the CPU power connector(s) on your motherboard.
- 5. Connect GPU Power:** For PCIe 5.0 graphics cards, use the native 12+4pin (12VHPWR) cable. For older or multiple GPUs, use the appropriate PCIe 6+2pin cables.
- 6. Connect Peripherals:** Connect SATA power cables to your storage drives (HDDs, SSDs) and peripheral power cables to any other components requiring power (e.g., fan hubs, RGB controllers).
- 7. Cable Management:** Utilize the fully modular design and flat cables to route cables neatly behind the

motherboard tray, improving airflow and aesthetics.

8. **Final Checks:** Double-check all connections to ensure they are secure. Close your computer case.
9. **Power On:** Plug the AC power cord into the PSU and then into a wall outlet. Flip the power switch on the PSU to the 'ON' position. You can now power on your computer.

OPERATION

The Thermaltake Toughpower GF3 750W is designed for reliable and efficient operation. Once installed, it will automatically provide power to your system components as needed.

- **Smart Zero Fan:** By default, the Smart Zero Fan feature is active. This means the PSU fan will not spin until the power load exceeds 30%. This ensures silent operation during light tasks. If you prefer the fan to spin constantly, you can disable this feature using the physical switch on the PSU.
- **Power Efficiency:** The 80 PLUS Gold certification indicates high power efficiency, meaning less energy is wasted as heat, leading to lower electricity bills and a cooler system.
- **Protection Features:** The PSU includes multiple protection mechanisms (OCP, OVP, UVP, OPP, SCP, OTP) to safeguard your components against electrical anomalies.

MAINTENANCE

Regular maintenance helps prolong the life of your power supply and ensures optimal performance.

- **Dust Cleaning:** Periodically clean dust from the PSU fan and vents using compressed air. Ensure the system is powered off and unplugged before cleaning. Dust buildup can impede airflow and lead to overheating.
- **Cable Inspection:** Occasionally inspect all power cables for any signs of wear, fraying, or loose connections. Re-seat any loose cables.
- **Environmental Conditions:** Ensure your PC operates in a well-ventilated area with stable room temperature. Avoid exposing the PSU to excessive humidity or extreme temperatures.

TROUBLESHOOTING

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

- **PC Not Powering On:**
 - Check if the power cable is securely plugged into both the PSU and the wall outlet.
 - Ensure the power switch on the back of the PSU is in the 'ON' position.
 - Verify all internal power connections (24-pin ATX, CPU, GPU) are firmly seated.
 - Test the wall outlet with another device to ensure it has power.
- **System Instability/Crashes:**
 - Ensure your PSU wattage is sufficient for all your components, especially high-power GPUs.
 - Check for overheating. Ensure proper airflow within the case and that the PSU fan is operating (if load is above 30% or Smart Zero Fan is off).
 - Verify that all modular cables are correctly inserted into the PSU and components.
- **Fan Not Spinning:**
 - If the Smart Zero Fan feature is enabled, the fan will only spin when the load exceeds 30%. This is normal behavior.

- If the load is high and the fan is still not spinning, or if Smart Zero Fan is disabled and the fan is not spinning, contact customer support.

If problems persist after attempting these solutions, consult the official Thermaltake support resources or a qualified technician.

TECHNICAL SPECIFICATIONS

Specification	Value
P/N	PS-TPD-0750FNFAGU-4
Watts	750W
Model	TPD-0750AH3FCG
Max. Output Capacity	750W
Color	Black
Dimension (W / H / D)	150mm(W) x 86mm(H) x 160mm(D)
Weight	1.63 KG (3.59 pounds)
PFC (Power Factor Correction)	Active PFC
Power Good Signal	100-150 msec
Hold Up Time	> 17msec at 100% of full load
Input Current	10.0A / 5.0A
Input Frequency Range	50/60Hz
Input Voltage	100V – 240V~
Operating Temperature	0°C to + 40°C
Operating Humidity	20% to 90%, non-condensing
Storage Temperature	-20°C to + 70°C
Storage Humidity	5% to 95%, non-condensing
Cooling System	13.5cm fluid bearing fan
Efficiency	Meet 80 PLUS® Gold at 115Vac input
MTBF	100,000 hrs minimum
Safety Approval	CE/UKCA/cTUVus/TÜV/FCC/IC/BSMI/EAC/CB/CCC
PCI-E 6+2PIN	PCIe 6+2Pin X 4, PCIe 12+4Pin X 1
Protection	OCP, OVP, UVP, OPP, SCP, OTP

WARRANTY AND SUPPORT

Thermaltake stands behind the quality of its Toughpower GF3 series power supplies.

- **Warranty:** The Thermaltake Toughpower GF3 750W power supply comes with a 10-year warranty, ensuring long-term peace of mind.
- **User Manual:** For detailed instructions and diagrams, please refer to the official user manual [PDF Download User Manual \(PDF\)](#).
- **Protection Plans:** Additional protection plans may be available for purchase to extend coverage beyond the standard warranty. Please check with your retailer for options.
- **Customer Support:** For technical assistance, troubleshooting, or warranty claims, please visit the official Thermaltake support website or contact their customer service.