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Thermaltake PS-TPI-0750F3FDGU-1

Thermaltake Toughpower iRGB Plus 750W 80+ Gold Power Supply User Manual

Model: PS-TPI-0750F3FDGU-1

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of your Thermaltake Toughpower iRGB Plus 750W 80+ Gold Power Supply. This fully modular digital power supply features a patented 16.8 million-color Ring Duo 14 RGB fan and supports Smart Power Management (SPM) for advanced control and monitoring.



Image 1.1: Front view of the Thermaltake Toughpower iRGB Plus 750W Power Supply, showcasing its design and RGB fan.

2. SAFETY INFORMATION

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

- **Disconnect Power:** Always disconnect the AC power cord from the wall outlet before installing, removing, or performing any maintenance on the power supply or other computer components.
- **Do Not Open:** The power supply unit contains high voltage components. Do not open the PSU casing. There are no user-serviceable parts inside. Opening the casing voids the warranty.
- **Proper Grounding:** Ensure your computer system is properly grounded to prevent electrical shock.
- **Ventilation:** Ensure adequate ventilation around the power supply. Do not block the fan or ventilation openings.
- **Moisture and Temperature:** Avoid exposing the power supply to moisture, high humidity, or extreme temperatures. Operate within the specified operating temperature range (0°C to +50°C).
- **Correct Cables:** Use only the modular cables provided with this power supply. Using incompatible cables may cause damage to the PSU or connected components.

3. PRODUCT FEATURES

The Thermaltake Toughpower iRGB Plus 750W Power Supply offers several advanced features:

- **Smart Power Management (SPM):** Monitor real-time PSU, CPU, VGA, RAM, and HDD status, control lighting, and receive warning alerts via PC and mobile applications.
- **Razer Chroma Compatibility:** Synchronize gaming and RGB lighting effects with the Razer Chroma ecosystem for a unified lighting experience.
- **Alexa Voice Control:** Control lighting or fan speed by speaking to an Alexa-enabled device.
- **Smart Zero Fan:** The fan activates only when the power supply reaches 30% of its rated load, minimizing noise during low-load operation.
- **Built-in Ring Duo RGB Fan:** Features a 16.8 million-color Ring Duo 140mm RGB fan with 18 addressable LEDs to customize your build's aesthetics.

Built-In 140mm 16.8 Million Color Riing Duo RGB Fan with 18 Addressable LEDs



Image 3.1: Two views of the power supply highlighting the built-in 140mm Riing Duo RGB fan with 18 addressable LEDs.



Image 3.2: Top-down view of the power supply fan, showing the RGB lighting capabilities.

4. PACKAGE CONTENTS

Verify that your package contains the following items:

- Thermaltake Toughpower iRGB Plus 750W Power Supply Unit
- AC Power Cord
- Modular Cable Set (as detailed below)

- Mounting Screws
- User Manual (this document)

Modular Cable Set:

750W			
Connector Type		Cable Length	Connector Q'TY
	Main Power Connector (24 Pin)	600mm	1
	ATX 12V (4 + 4Pin)	650mm	1
	SATA (5Pin)	500mm+150mm+150mm 500mm+150mm+150mm 500mm+150mm+150mm	9
	PCI-E (6 + 2Pin)	500mm+150mm 500mm+150mm	4
	Peripheral (4 Pin)	500mm+150mm+150mm+150mm	4
	Floppy Adapter (4 Pin)	100mm	1



Image 4.1: A table detailing the connector types, cable lengths, and quantities included with the 750W power supply.



Full Modular Cable Design

Image 4.2: The power supply unit with its fully modular cable design, showing the various ports for connecting cables.

Included Modular Cables (750W Model)

Connector Type	Cable Length	Quantity
Main Power Connector (24 Pin)	600mm	1
ATX 12V (4 + 4 Pin)	650mm	1
SATA (5Pin)	500mm+150mm+150mm+150mm+150mm	9
PCI-E (6 + 2 Pin)	500mm+150mm+150mm	4
Peripheral (4 Pin)	500mm+150mm+150mm+150mm	4
Floppy Adapter (4 Pin)	100mm	1



Image 4.3: The power supply unit shown with a selection of its modular cables connected, demonstrating the flexibility of the design.

5. SETUP AND INSTALLATION

Follow these steps to install your power supply:

1. **Prepare Your System:** Ensure your computer is completely powered off and unplugged from the wall outlet. Open your computer case.
2. **Remove Old PSU (if applicable):** Disconnect all cables from your old power supply and remove it from the case.
3. **Mount the New PSU:** Place the Thermaltake Toughpower iRGB Plus 750W into the power supply bay of your computer case. Secure it with the provided mounting screws. Ensure the fan is facing the correct direction for optimal airflow (typically facing down if your case has a bottom vent, or up if it's a top-mounted PSU).
4. **Connect Essential Cables:**
 - Connect the **24-pin Main Power Connector** to your motherboard.
 - Connect the **4+4-pin ATX 12V Connector** to your motherboard's CPU power socket.
 - Connect the necessary **6+2-pin PCI-E Connectors** to your graphics card(s).
 - Connect **SATA Power Connectors** to your storage drives (HDDs, SSDs) and optical drives.
 - Connect **Peripheral (4-pin Molex) Connectors** to any other components requiring them (e.g., case fans, fan controllers).
 - If needed, use the **Floppy Adapter** for older devices.

5. **Connect USB Cable for Digital Control:** Locate the USB port on the power supply and connect one end of the provided USB cable. Connect the other end to an available USB 2.0 header on your motherboard. This connection is essential for Smart Power Management (SPM) and RGB control software.
6. **Cable Management:** Route cables neatly to improve airflow and aesthetics.
7. **Close Case and Power On:** Close your computer case, connect the AC power cord to the power supply, and then plug it into a wall outlet. Flip the power switch on the back of the PSU to the 'ON' position.



Image 5.1: Rear panel of the power supply, indicating the AC power inlet and the main power switch.

6. OPERATING INSTRUCTIONS

Once installed, you can utilize the advanced features of your power supply:

6.1. Smart Power Management (SPM)

The SPM platform allows you to monitor and manage your power supply digitally. Download and install the Thermaltake SPM software from the official Thermaltake website. This software provides:

- Real-time monitoring of power consumption, efficiency, voltage, and temperature.
- Fan speed control and Smart Zero Fan mode management.
- Customizable warning alerts for abnormal conditions.
- Access via PC application and mobile app.

6.2. RGB Lighting Control

The iRGB Plus series offers extensive RGB lighting customization:

- **TT RGB Plus Software:** Use the Thermaltake TT RGB Plus software to customize the 16.8 million-color RGB fan. This software allows for various lighting modes, effects, and color synchronization with other compatible Thermaltake RGB products.
- **Razer Chroma:** Integrate your PSU's RGB lighting with the Razer Chroma ecosystem for synchronized effects across your Razer peripherals and other Chroma-compatible devices.
- **Alexa Voice Control:** If configured, you can use voice commands through an Alexa-enabled device to change lighting colors, effects, or adjust fan speed.



Image 6.1: Side view of the power supply, illustrating the vibrant RGB lighting effects.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your power supply:

- **Dust Removal:** Periodically clean the power supply's fan and ventilation grilles using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Cable Check:** Occasionally check all modular cable connections to ensure they are securely seated.
- **Software Updates:** Keep the Thermaltake SPM and TT RGB Plus software updated to the latest versions for improved features and stability.

8. TROUBLESHOOTING

If you encounter issues with your power supply, refer to the following common troubleshooting steps:

- **No Power:**

- Ensure the AC power cord is securely plugged into both the PSU and the wall outlet.
- Verify the power switch on the back of the PSU is in the 'ON' position.
- Check all modular cable connections, especially the 24-pin and 4+4-pin motherboard connectors.
- Test the wall outlet with another device to ensure it has power.

- **RGB Lighting Not Working:**

- Ensure the internal USB cable from the PSU is correctly connected to a USB 2.0 header on your motherboard.
- Install or update the Thermaltake TT RGB Plus software.
- Check software settings to ensure RGB lighting is enabled and configured.
- Restart your computer.

- **Smart Zero Fan Not Functioning / Fan Always On:**

- The Smart Zero Fan feature only activates the fan when the PSU load exceeds 30%. If your system load is consistently above this threshold, the fan will remain on.
- Check the SPM software settings to ensure Smart Zero Fan mode is enabled.
- Ensure the internal USB cable is connected for software control.

- **Software Glitches (SPM/TT RGB Plus):**

- Ensure you have the latest version of the software installed from the official Thermaltake website.
- Temporarily disable any conflicting RGB software from other manufacturers.
- Check your firewall settings to ensure the software is not being blocked.
- Reinstall the software if issues persist.

9. SPECIFICATIONS

Detailed technical specifications for the Thermaltake Toughpower iRGB Plus 750W Power Supply:

Feature	Specification
Model Number	PS-TPI-0750F3FDGU-1
Type	ATX 12V V2.4 and EPS V2.92
Max. Output Capacity	750W
Peak Output Capacity	900W
Dimension (W/H/D)	150mm(W) x 86mm(H) x 160mm(D)
PFC (Power Factor Correction)	Active PFC
Efficiency	80 PLUS Gold at 115Vac Input
Cooling System	14cm Hydraulic bearing fan
MTBF (Mean Time Between Failures)	120,000 hrs minimum

Feature	Specification
Safety Approval	CE/cTUVus/TUV/FCC/EAC/s-mark
Input Current	10A max.
Input Frequency Range	50Hz - 60Hz
Input Voltage	100V – 240V~
Operating Temperature	0°C to +50°C
Operating Humidity	20% to 90%, non-condensing
Storage Temperature	-20°C to +70°C
Storage Humidity	5% to 95%, non-condensing
Capacitors	100% Japanese 105°C/221°F



Image 9.1: Product label showing model number, input/output specifications, and safety warnings.

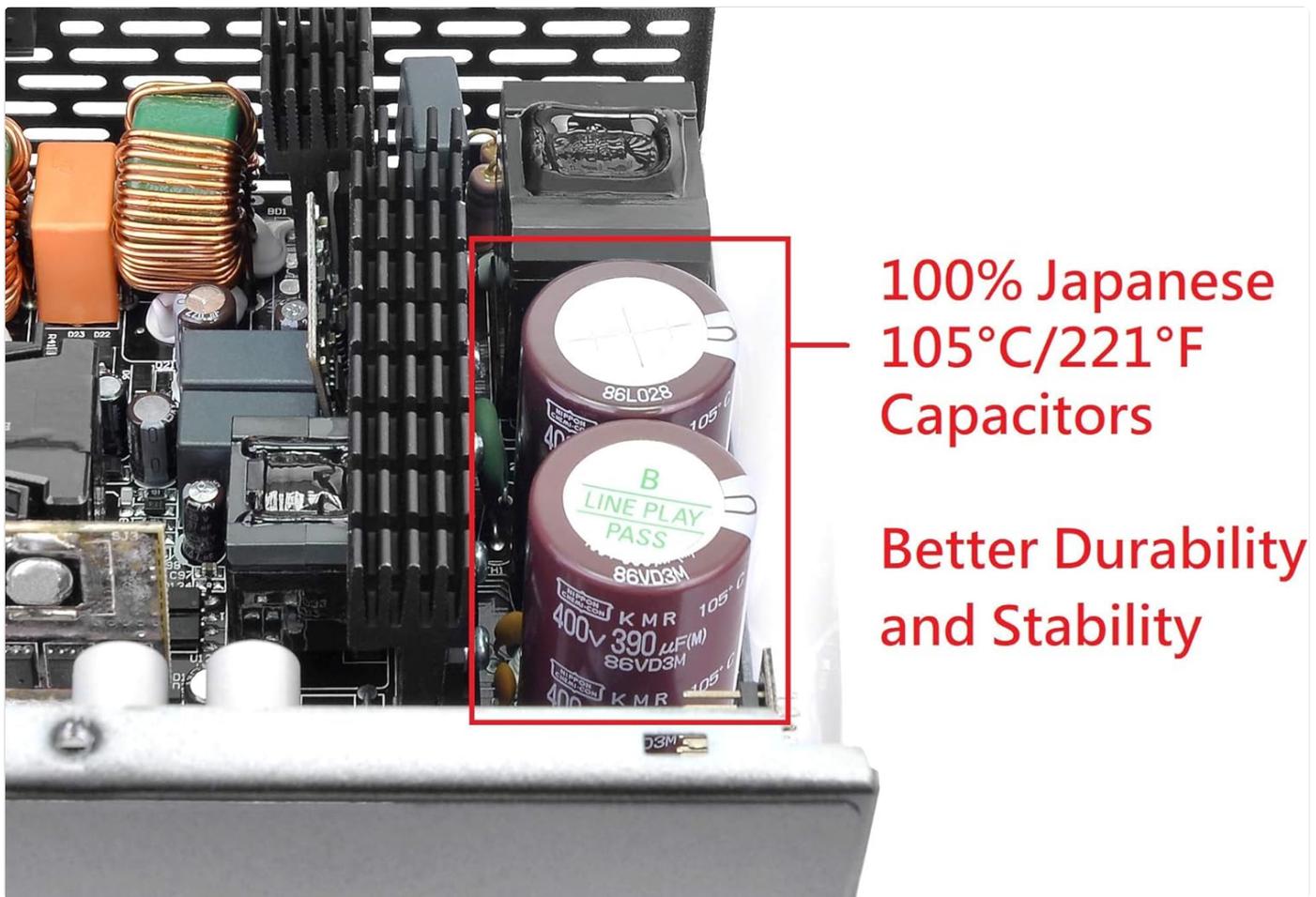


Image 9.2: Close-up internal view of the power supply, highlighting the 100% Japanese 105°C/221°F capacitors for enhanced durability and stability.

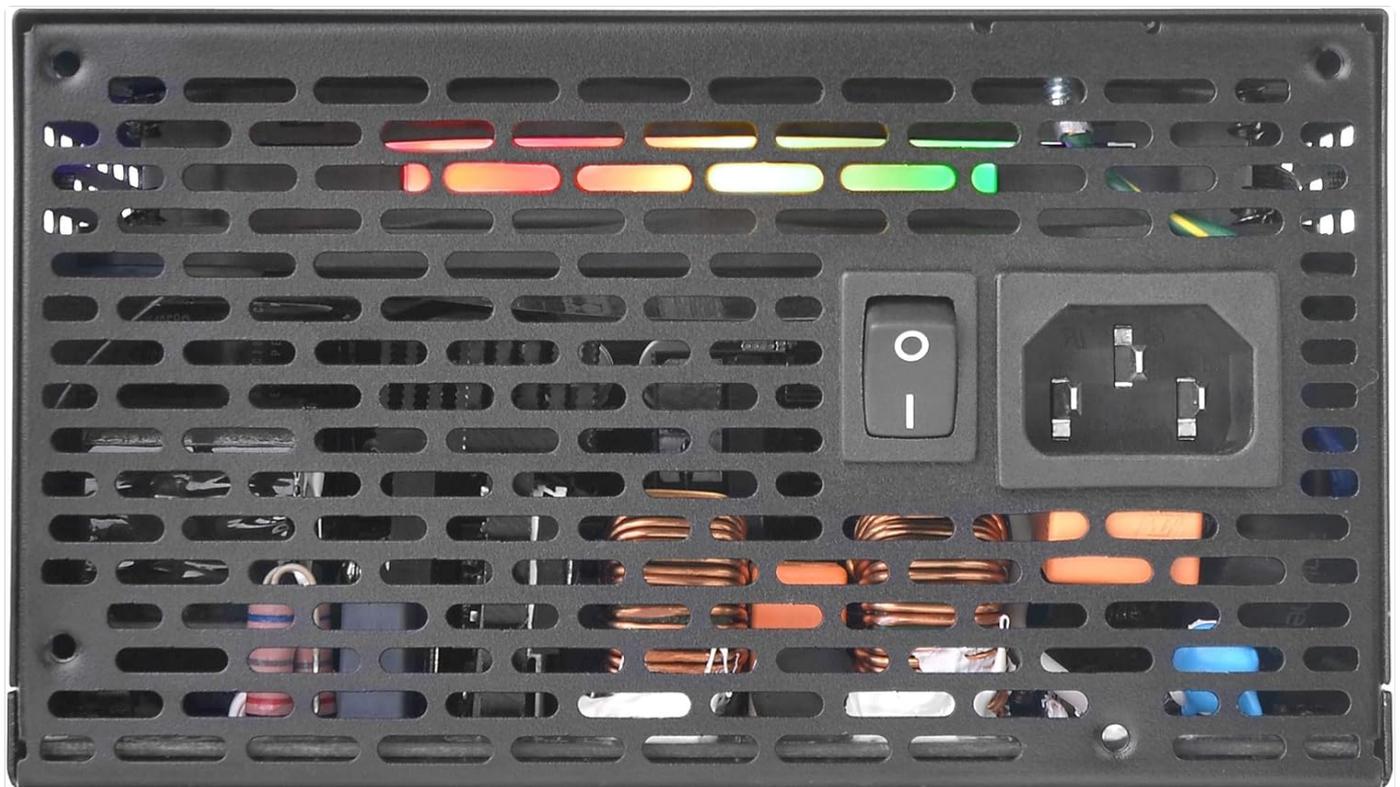


Image 9.3: An internal view of the power supply's circuit board and components, demonstrating quality construction.

10. WARRANTY INFORMATION

The Thermaltake Toughpower iRGB Plus 750W Power Supply comes with a **10-year warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims. For full

warranty terms and conditions, please refer to the official Thermaltake website or contact their customer support.

11. SUPPORT

For further assistance, technical support, or to download the latest software and drivers, please visit the official Thermaltake website:

www.thermaltake.com

You may also find helpful resources and FAQs on their support pages.

Official Product Video:

Your browser does not support the video tag.

Video 11.1: An official product video demonstrating features and functionality of the Thermaltake Toughpower iRGB Plus Power Supply. This video provides a visual overview for users.

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