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Redragon RGPS-650SFX

Redragon RGPS-650SFX 650W 80 Plus Gold SFX Modular Power Supply

User Manual

1. INTRODUCTION

The Redragon RGPS-650SFX is a high-performance 650W power supply unit (PSU) designed for compact systems. It features 80 Plus Gold certification, ensuring high energy efficiency, and a fully modular design for simplified cable management. This manual provides essential information for the safe installation, operation, and maintenance of your power supply.

Key Features:

- **80 Plus Gold Certification:** Achieves an average efficiency close to 90%, reducing energy waste and heat generation.
- **SFX Form Factor:** Compact design compatible with small form factor cases.
- **ATX Adapter Included:** Allows for installation in standard ATX cases.
- **Fully Modular Cables:** White 'flat' style cables for clean builds and improved airflow.
- **Low Noise Fan:** Equipped with an 80mm fan designed for quiet operation.
- **Japanese Capacitors:** Utilizes 105°C rated industrial-grade Japanese capacitors for maximum reliability.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the power supply. Failure to do so may result in personal injury or damage to the product or other components.

- Always disconnect the power cord from the wall outlet before installing or removing the power supply or any other components.
- Do not open the power supply casing. High voltages are present inside, and opening the unit will void the warranty.
- Ensure the power supply is installed in a well-ventilated area.
- This product is designed for computer use only. Do not use it for any other purpose.
- Keep the power supply away from water, moisture, and extreme temperatures.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

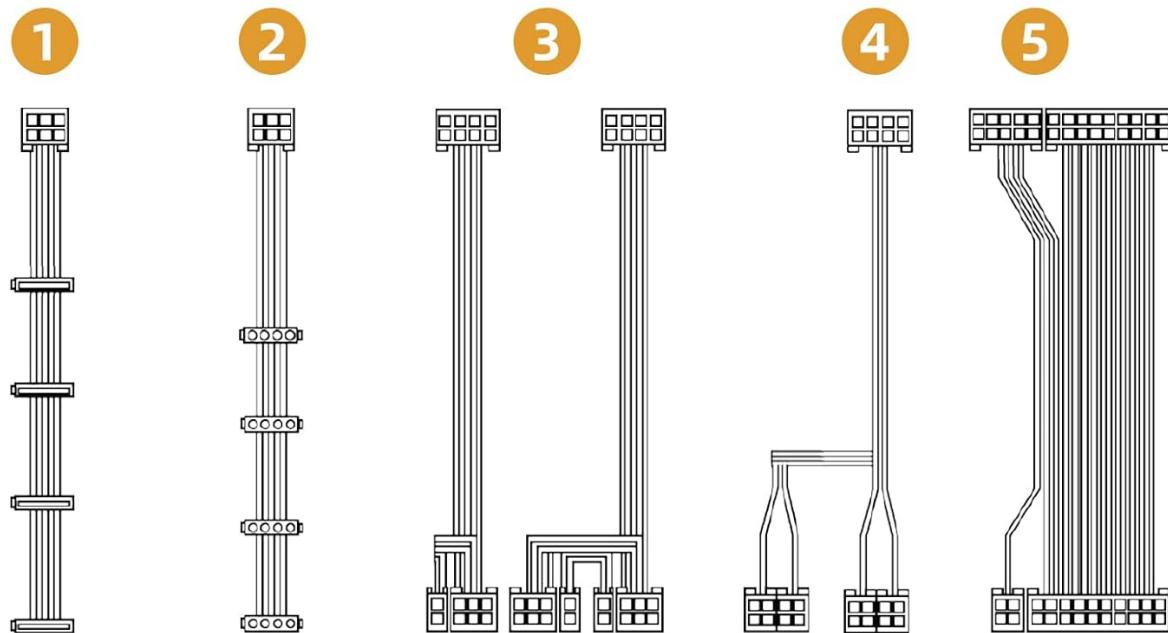
- Redragon RGPS-650SFX 650W Power Supply Unit
- SFX to ATX PSU Adapter Bracket
- Modular Cable Set (see Section 4.2 for details)
- Mounting Screws
- AC Power Cord

4. SETUP AND INSTALLATION

4.1 Physical Installation

1. **Prepare Your System:** Ensure your computer is powered off and unplugged from the wall outlet.
2. **Mount the PSU:**
 - **For SFX Cases:** Install the RGPS-650SFX directly into the SFX PSU bay of your case using the provided screws.
 - **For ATX Cases:** Attach the SFX to ATX adapter bracket to the RGPS-650SFX, then install the assembly into the ATX PSU bay of your case using the provided screws.

What Cables Included?



1. SATA (4 in 1) * 2

Hard Disk

2. IDE/Molex (4 in 1) * 1

Cooling Fans

3. PCIe 8-Pin * 2

GPU

4. SFX 12V 8-Pin (4+4) * 1

CPU

5. SFX 24-Pin (20+4) * 1

Motherboard

Figure 1: Redragon RGPS-650SFX dimensions and SFX to ATX adapter bracket.

4.2 Cable Connections

The RGPS-650SFX features a fully modular design, allowing you to connect only the cables necessary for your system. This improves airflow and reduces clutter.

PSU014 650W SFX Gold Power Supply



Figure 2: Included modular cables and their connectors.

Connect the following cables as required by your motherboard and components:

- **24-Pin ATX Motherboard Cable:** Connects to the main power connector on your motherboard. (1 cable included)
- **4+4-Pin CPU (EPS) Cable:** Connects to the CPU power connector(s) on your motherboard. (1 cable included)
- **6+2-Pin PCIe Cables:** Connects to your graphics card(s). (2 separate cables included)
- **SATA Power Cables:** Connects to SATA devices such as SSDs, HDDs, and optical drives. (2 cables included, each with 4 SATA connectors)
- **IDE/Molex Power Cable:** Connects to older peripherals or case fans. (1 cable included, with 4 Molex connectors)

Ensure all cables are securely seated in both the power supply and the respective components. Loose connections can cause system instability or damage.

5. OPERATING INSTRUCTIONS

After completing the installation and connecting all necessary cables:

1. Connect the AC power cord to the power supply and then to a wall outlet.
2. Flip the power switch on the back of the power supply to the 'ON' (I) position.
3. Power on your computer using the case's power button.

The RGP-650SFX is designed for continuous operation within its specified limits. Its 80 Plus Gold certification ensures efficient power delivery, and the low-noise fan adjusts its speed based on load to maintain optimal cooling while minimizing acoustic output.

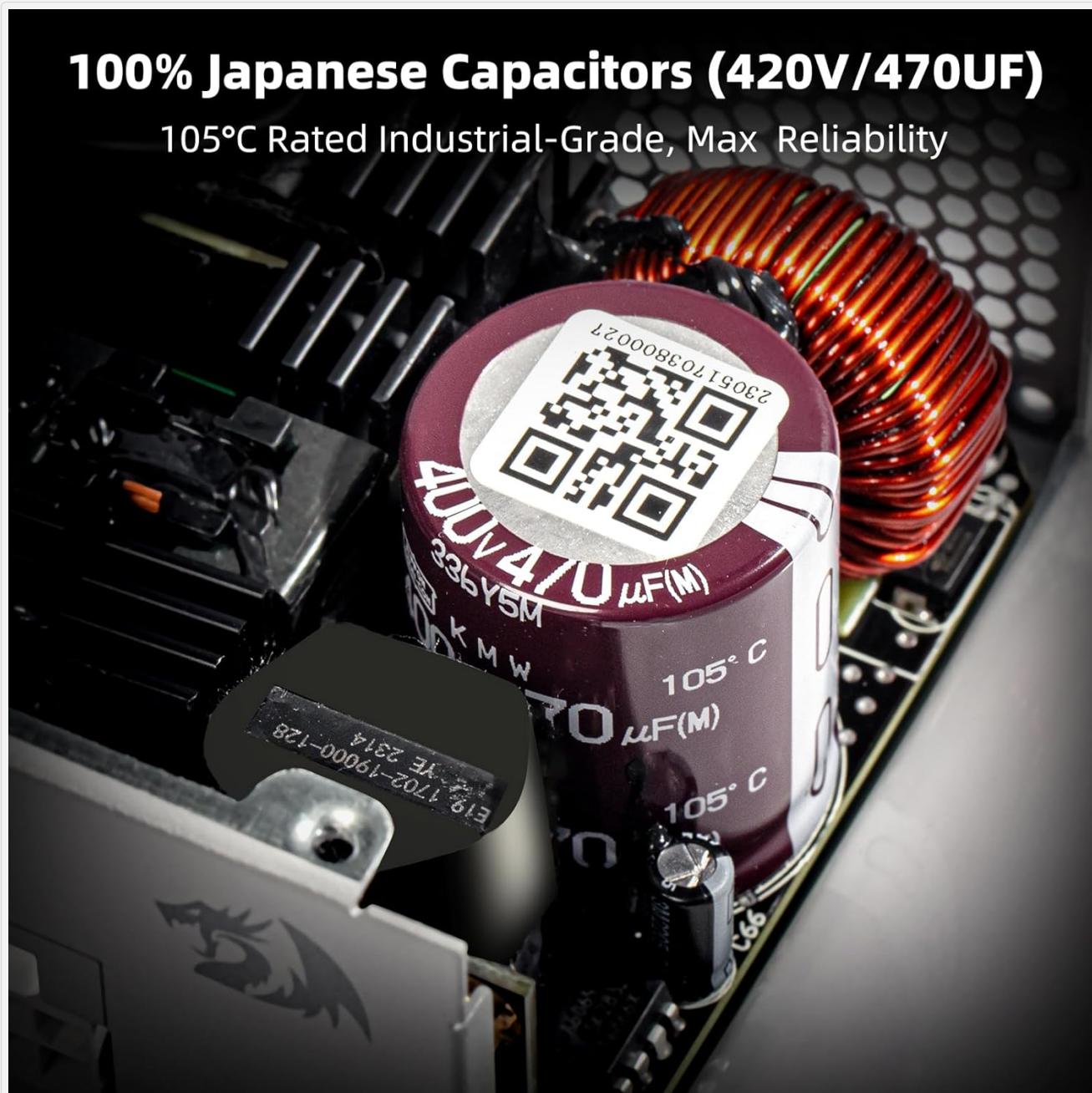
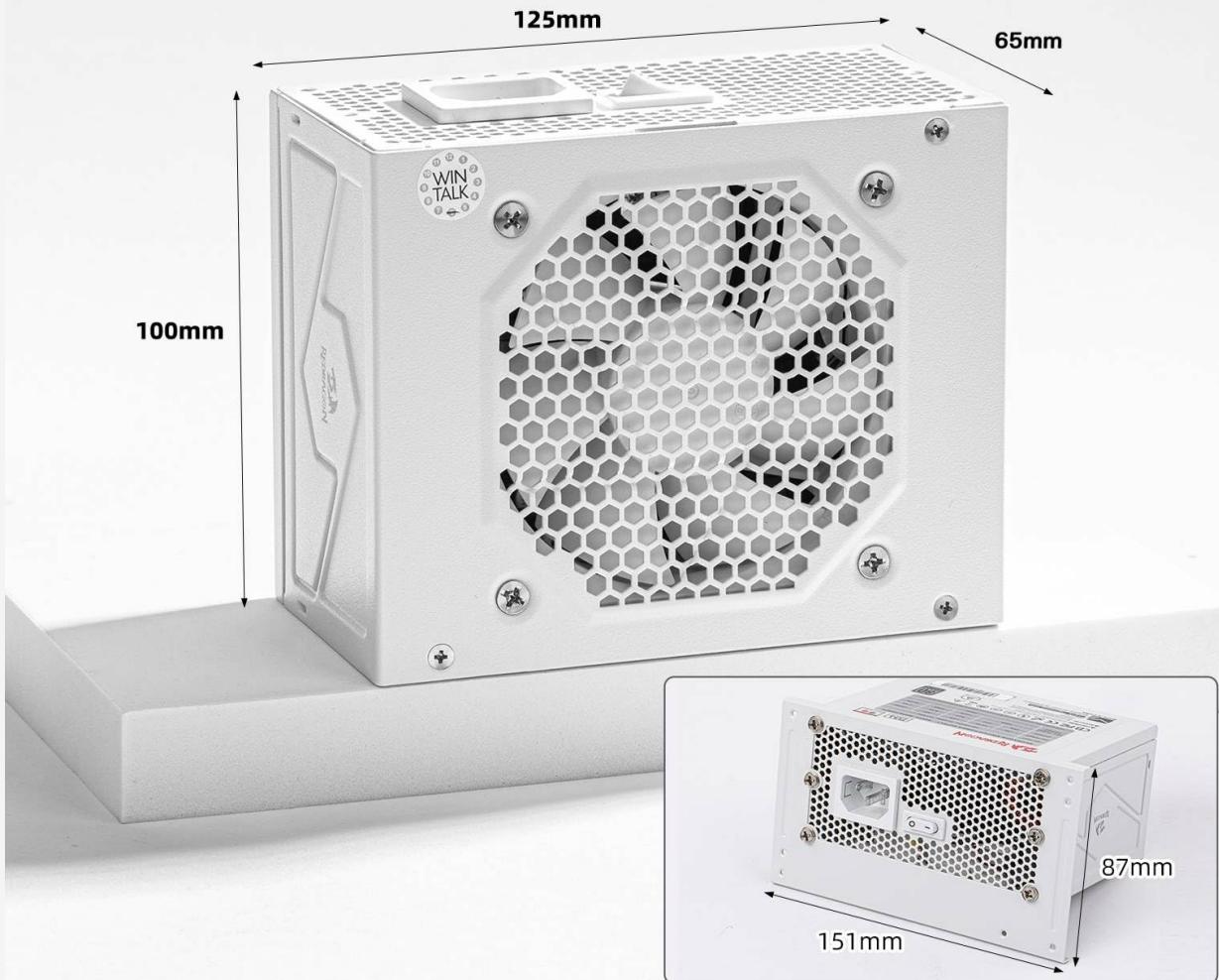


Figure 3: Power supply efficiency curve demonstrating 80 PLUS Gold performance.

Full-Modular Cabling Compatible

For Easier & Neat PC Builds



SFX to ATX PSU Adapter Bracket

Figure 4: Internal view showing 105°C rated Japanese capacitors for enhanced reliability.

6. MAINTENANCE

Proper maintenance helps ensure the longevity and optimal performance of your power supply.

- Dust Cleaning:** Periodically clean the fan grille and surrounding areas to prevent dust buildup, which can impede airflow and increase operating temperatures. Use compressed air or a soft brush. Ensure the power supply is unplugged before cleaning.
- Cable Management:** Ensure cables are neatly routed and do not obstruct airflow within the case.
- Environmental Conditions:** Operate the power supply within recommended temperature and humidity ranges.

Figure 5: Noise level (dBA) of the power supply fan at various load percentages.

7. TROUBLESHOOTING

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

- **System Does Not Power On:**

- Ensure the AC power cord is securely connected to both the power supply and the wall outlet.
- Verify the power switch on the back of the PSU is in the 'ON' (I) position.
- Check all modular cable connections, especially the 24-pin ATX and 4+4-pin CPU cables, to ensure they are fully seated. Loose connections are a common cause of power issues.
- Test the wall outlet with another device to confirm it has power.
- If possible, test the power supply with a different set of cables or in another system to isolate the issue.

- **System Powers On But Shuts Down Immediately:**

- This could indicate an overload or a short circuit. Disconnect non-essential components (e.g., extra drives, peripherals) and try again.
- Ensure no metal objects are touching the motherboard or other components, causing a short.
- Verify that all power connectors are correctly installed and not reversed.

- **Unusual Noises (e.g., Clicking):**

- A clicking sound can sometimes indicate a fault within the power supply. If this occurs, immediately power off the system and unplug the PSU. Contact customer support.
- Ensure the fan is not obstructed by cables or debris.

- **System Instability or Random Restarts:**

- Ensure the power supply is providing sufficient wattage for all your components.
- Check for loose cable connections.
- Monitor system temperatures to ensure components are not overheating.

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

8. SPECIFICATIONS

Feature	Specification
Model Number	RGPS-650SFX (PSU014)
Brand	Redragon
Wattage	650W
Certification	80 PLUS Gold
Form Factor	SFX (with ATX adapter included)
PFC	Active PFC
Fan Size	80mm
Product Dimensions (PSU)	100mm (W) x 125mm (L) x 50mm (H)

Feature	Specification
ATX Adapter Dimensions	151mm x 87mm
Weight	1.76 kg
Protections	OVP (Over Voltage Protection), UVP (Under Voltage Protection), SCP (Short Circuit Protection), OTP (Over Temperature Protection), OPP (Over Power Protection), OCP (Over Current Protection)
Modular Cables	Fully Modular, Flat White Cables
DC Output +5V	20A
DC Output +3.3V	20A
DC Output +12V	54A
DC Output -12V	0.3A
DC Output +5VSB	2.5A
Maximum Combined Power	650W

9. WARRANTY AND SUPPORT

Redragon products are manufactured to the highest quality standards. For information regarding warranty coverage, terms, and conditions, please refer to the warranty card included with your product or visit the official Redragon website.

For technical support, troubleshooting assistance, or inquiries about replacement parts, please contact Redragon customer service through their official channels. When contacting support, please have your product model number (RGPS-650SFX) and purchase information readily available.