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## Redragon RGPS-650W

# Redragon RGPS-650W 650W 80+ Gold ATX Fully Modular Power Supply User Manual

Model: RGPS-650W | Brand: Redragon

## 1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Redragon RGPS-650W 80+ Gold 650 Watt ATX Fully Modular Power Supply. Please read this manual thoroughly before installation and retain it for future reference. This power supply unit (PSU) is designed to deliver stable and efficient power to your personal computer system.

## 2. PRODUCT FEATURES

- **80 Plus Gold Certification:** Ensures high energy efficiency, reduced heat generation, and lower operating noise.
- **100% Japanese Capacitors:** Built for enhanced reliability, durability, and stable power delivery.
- **Zero RPM Mode Fan:** The cooling fan operates only when the internal temperature reaches 60°C, providing silent operation under low loads.
- **Compact 160mm Size:** Designed for broad chassis compatibility and improved cable management space.
- **RGB Lighting:** Features up to 9 RGB modes with 26 selected colors to customize your PC's aesthetic.
- **Advanced Circuitry:** Utilizes LLC resonant + DC-DC structure for stable CPU and GPU power, supporting dual CPU P8 (4+4) for server motherboards.
- **Comprehensive Protections:** Includes Over Voltage Protection (OVP), Over Current Protection (OCP), Over Power Protection (OPP), Over Temperature Protection (OTP), Under Voltage Protection (UVP), and Short Circuit Protection (SCP).
- **Fully Modular Flat Black Cables:** Reduces cable clutter and improves airflow within the PC case, optimizing overall efficiency and thermal performance.

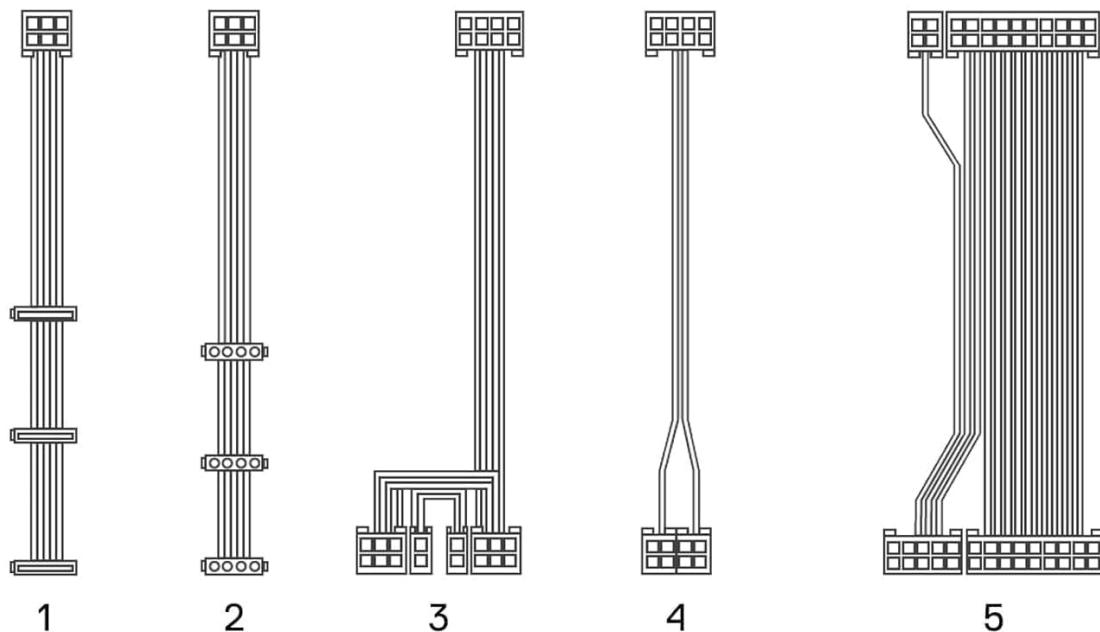
## 3. PACKAGE CONTENTS

Verify that all components are present in the package:

- Redragon RGPS-650W Power Supply Unit
- AC Power Cord
- Modular Cable Set:
  - 2x SATA (3 in 1) cables for Hard Disk Drives

- 1x IDE/Molex (3 in 1) cable for Cooling Fans
- 2x PCIe 8-Pin (6+2) cables for Graphics Processing Units (GPU)
- 1x ATX 12V 8-Pin (4+4) cable for Central Processing Unit (CPU)
- 1x ATX 24-Pin (20+4) cable for Mainboard
- Mounting Screws
- User Manual (this document)

## What Cables Included?



1. SATA (3 in 1) x 2  
**Hard Disk**

2. IDE/Molex (3 in 1) x 1  
**Cooling Fans**

3. PCIe 8-Pin (6+2) x 2  
**GPU**

4. ATX 12V 8-Pin (4+4) x 1  
**CPU**

5. ATX 24-Pin (20+4) x 1  
**Mainboard**

Figure 3.1: Included Modular Cables

## 4. SAFETY INFORMATION

- Always disconnect the AC power cord from the wall outlet before installing or removing the power supply or any other components.
- Do not open the power supply unit. High voltages are present inside, even when disconnected from power. There are no user-serviceable parts inside. Opening the casing will void the warranty.
- Ensure the power supply is installed in a well-ventilated area, away from heat sources, direct sunlight, and liquids.
- Use only the modular cables provided with this power supply. Using incompatible cables may cause damage to the PSU or connected components.
- Connect the power supply to a grounded power outlet.

- If the power supply is not functioning correctly, contact Redragon customer support immediately. Do not attempt to repair it yourself.

## 5. INSTALLATION GUIDE

Follow these steps to install your Redragon RGPS-650W power supply:

### 1. Prepare Your System:

- Turn off your computer and disconnect the AC power cord from the wall outlet.
- Open your computer case. Refer to your case's manual for specific instructions.

### 2. Remove Old Power Supply (if applicable):

- Disconnect all power cables from your motherboard, graphics card, and other components.
- Unscrew the old power supply from the case and carefully remove it.

### 3. Install New Power Supply:

- Place the Redragon RGPS-650W into the power supply mounting area of your case. Ensure the fan is facing the correct direction for optimal airflow (usually facing down if there's a bottom vent, or up if the case has a top vent and the PSU is top-mounted).
- Secure the power supply to the case using the provided mounting screws.

### 4. Connect Modular Cables:

Due to the fully modular design, connect only the cables required for your system. This reduces clutter and improves airflow.

- Connect the 24-Pin ATX cable to your motherboard.
- Connect the 8-Pin (4+4) ATX 12V cable to your motherboard's CPU power connector.
- Connect the 8-Pin (6+2) PCIe cables to your graphics card(s). Use separate cables for each GPU power input if your card requires multiple.
- Connect SATA cables to your SSDs, HDDs, and optical drives.
- Connect IDE/Molex cables to any other peripherals that require them (e.g., case fans, fan controllers).



Figure 5.1: Fully Modular Cabling Ports

### 5. Cable Management:

- Route cables neatly behind the motherboard tray or in designated cable management areas of your case to improve airflow and aesthetics.

## 6. Final Checks:

- Double-check all connections to ensure they are secure.
- Close your computer case.
- Connect the AC power cord to the power supply and then to a grounded wall outlet.

## 6. OPERATING INSTRUCTIONS

Your Redragon RGPS-650W power supply is designed for straightforward operation.

- Power On:** After installation, flip the power switch on the back of the PSU to the 'ON' position. Then, power on your computer as usual.
- Zero RPM Fan Mode:** The PSU features a Zero RPM fan mode. The fan will remain off under low to moderate loads to ensure silent operation. It will automatically activate when the internal temperature reaches approximately 60°C to maintain optimal cooling.
- RGB Lighting Control:** The integrated RGB fan offers multiple lighting modes. A dedicated button on the PSU allows you to cycle through 9 RGB modes and 26 selected colors to match your system's aesthetic.

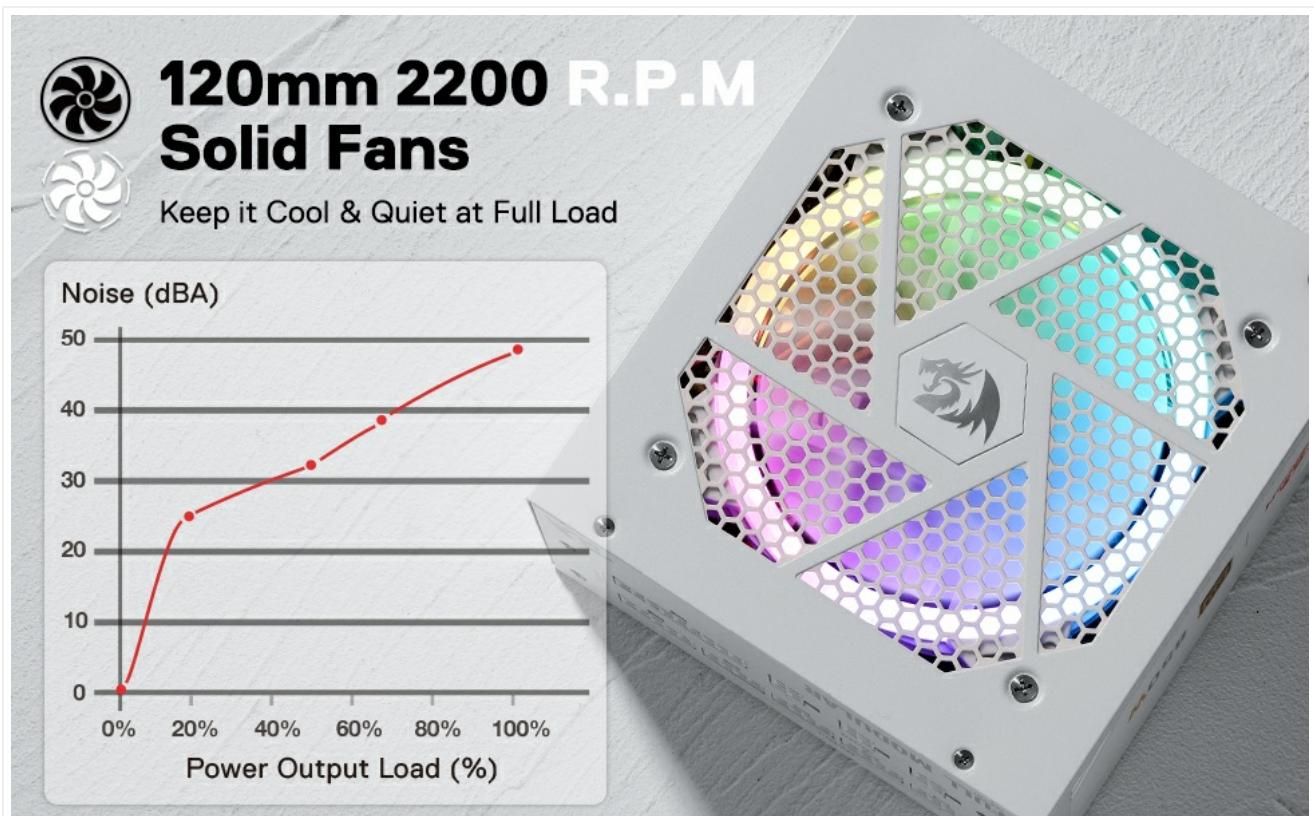


Figure 6.1: Redragon RGPS-650W with RGB Fan

## 7. MAINTENANCE

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

- Dust Cleaning:** Periodically clean the exterior of the power supply and its fan grille to prevent dust buildup, which can impede airflow and lead to overheating. Use compressed air or a soft brush. Always disconnect the power supply from the wall outlet before cleaning.
- Fan Inspection:** Occasionally check the fan for any obstructions or unusual noises. If the fan is not spinning when it should (under load) or makes excessive noise, contact support.

- **Cable Integrity:** Ensure all modular cables remain securely connected and are not pinched or damaged.

## 8. 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.                    | AC power cord not connected or loose.<br>PSU power switch is OFF.<br>Mainboard 24-Pin or CPU 8-Pin cable not connected properly.<br>Short circuit in the system. | Ensure AC power cord is securely connected to both the PSU and the wall outlet.<br>Flip the PSU power switch to the 'ON' position.<br>Verify all modular cables are firmly seated in both the PSU and the components.<br>Disconnect all components except the motherboard and CPU. If it powers on, reconnect components one by one to identify the faulty part. |
| System powers on but shuts down immediately. | Overload or short circuit.<br>Overheating.   | Check for short circuits (e.g., loose screws, misplaced standoffs).<br>Ensure adequate ventilation and clean any dust from the PSU fan and case.<br>Verify all power connections are correct and secure.   |
| PSU fan is not spinning.                     | Zero RPM mode is active (normal under low load).<br>Fan malfunction.   | This is normal behavior if the system load is low and the internal temperature is below 60°C.<br>If the fan does not spin under heavy load (when temperatures exceed 60°C), contact customer support.  |
| RGB lighting is not working or incorrect.    | RGB control button not pressed.<br>Faulty RGB component.   | Press the RGB control button on the PSU to cycle through modes.<br>If the issue persists, contact customer support.  |

## 9. SPECIFICATIONS

| Feature                        | Detail   |
|--------------------------------|--|
| Model Name                     | RGPS-650W  |
| Item Model Number              | PSU013   |
| Brand                          | Redragon   |
| Output Wattage                 | 650 Watts  |
| Efficiency Certification       | 80 Plus Gold                                       |
| Form Factor                    | ATX  |
| Power Supply Design            | Fully Modular                                      |
| Cooling Method                 | Air (Zero RPM Mode)                                |
| Capacitors                     | 100% Japanese Capacitors (105°C Rated, 400V/680UF) |
| Protections                    | OVP, OCP, OPP, OTP, UVP, SCP                       |
| Product Dimensions (L x W x H) | 11.81 x 7.87 x 4.72 inches (160mm Compact Size)    |
| Item Weight                    | 5.3 pounds   |

| Feature            | Detail            |
|--------------------|-------------------|
| Compatible Devices | Personal Computer |



Figure 9.1: 80 Plus Gold Efficiency Curve



Figure 9.2: Compact 160mm Size

## 10. WARRANTY AND SUPPORT

The Redragon RGPS-650W Power Supply comes with a **5-Year Warranty**, ensuring reliability and peace of mind. This warranty covers defects in materials and workmanship under normal use.

For technical support, warranty claims, or any inquiries regarding your product, please visit the official Redragon website or contact their customer service department. Keep your proof of purchase for warranty validation.

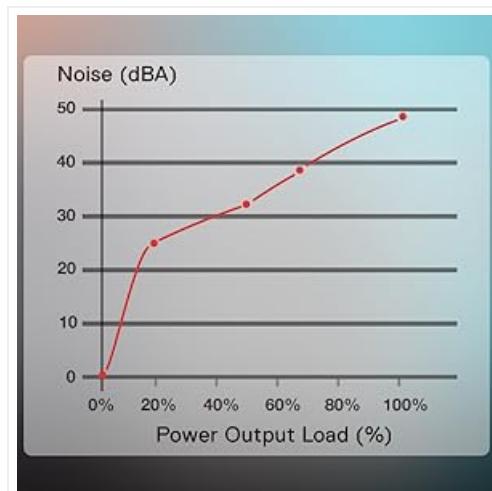


Figure 10.1: 5-Year Warranty

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