

## COUGAR GEX850

# COUGAR GEX 850W 80 Plus Gold Certified Fully Modular Power Supply Unit User Manual

Model: GEX850

## 1. INTRODUCTION

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This manual provides essential information for the proper installation, operation, and maintenance of your COUGAR GEX850 80 Plus Gold Certified Fully Modular Power Supply Unit (PSU). Please read this manual thoroughly before using the product to ensure optimal performance and safety.

## 2. SAFETY INFORMATION

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- Always disconnect the power cord from the wall outlet before installing or removing the PSU or any other components.
- Do not open the PSU casing. High voltages are present inside, and opening the unit will void the warranty.
- Ensure the PSU is installed in a well-ventilated area. Do not block the fan or ventilation openings.
- This product is designed for use in personal computer systems. Do not use it for any other purpose.
- Keep the PSU away from water, moisture, and extreme temperatures.
- Use only the modular cables provided with your COUGAR GEX850 PSU. Using incompatible cables may cause damage to the PSU or connected components.

## 3. PACKAGE CONTENTS

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Verify that your package contains the following items:

- COUGAR GEX850 Power Supply Unit
- Modular Cable Set (including ATX 24-pin, CPU 4+4-pin, PCIe 6+2-pin, SATA, and Peripheral 4-pin cables)
- AC Power Cord
- Mounting Screws
- User Manual (this document)

## 4. PRODUCT OVERVIEW

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The COUGAR GEX850 is an 80 Plus Gold certified fully modular power supply designed for high efficiency and stable power delivery to your computer system. It features a robust cooling system and multiple safeguards to protect your components.



An angled view of the COUGAR GEX850 power supply unit, showcasing its black casing, modular cable connectors on the side, and the fan grille on the top.

### Key Features:

- **80 PLUS Gold Certified:** Achieves up to 91% efficiency, reducing electricity consumption and heat generation.
- **Fully Modular Design:** Allows connection of only necessary cables, improving airflow and cable management within the PC case.
- **Extreme Cooling System:** Features a COUGAR exclusive 120 mm silent fan with an advanced frame and fine-tuned fan curvature for concentrated airflow and reduced vibration.
- **Enhanced Durability:** Designed for optimal performance in 40°C working environments and incorporates 105°C Japanese capacitors for main and standby power, ensuring stable electrical supply.
- **Stable Operation:** Utilizes LLC, DC-DC, and Tri-Sense (3.3V, 5V, and 12V) design for high-quality outputs with an extremely tight 3% voltage regulation.
- **Strong Safeguards:** Includes comprehensive protection mechanisms: Over Current Protection (OCP), Over Power Protection (OPP), Over Voltage Protection (OVP), Under Voltage Protection (UVP), Short Circuit Protection (SCP), and Over Temperature Protection (OTP).
- **COUGAR HDB Fan:** Hydro Dynamic Bearing fan for extended durability and lower noise levels.

## 5. INSTALLATION

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Follow these steps to install your COUGAR GEX850 PSU into your computer system:

1. **Prepare Your System:** Ensure your computer is powered off and the power cord is disconnected 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 PSU:** Insert the COUGAR GEX850 into the PSU mounting bay of your computer case. Secure it with the provided screws. Ensure the fan is facing the correct direction for optimal airflow (typically facing down if there's a bottom vent, or up if not).
4. **Connect Essential Cables:**
  - **24-pin ATX Motherboard Cable:** Connect the large 24-pin cable to the corresponding port on your motherboard.
  - **CPU 4+4-pin Cable:** Connect the 4+4-pin CPU power cable to the CPU power connector on your motherboard (usually near the CPU socket).
  - **PCIe 6+2-pin Cables:** Connect the 6+2-pin PCIe cables to your graphics card(s) as required.
5. **Connect Peripheral Cables:** Connect SATA power cables to your storage drives (HDDs, SSDs) and optical drives. Connect Peripheral 4-pin cables to any other components requiring this type of power.
6. **Cable Management:** Utilize the fully modular design and flat cables to route cables neatly behind the motherboard tray or in other designated areas to improve airflow and aesthetics.
7. **Close Case and Connect Power:** Once all connections are secure, close your computer case. Connect the AC power cord to the PSU and then to a wall outlet.

## 6. OPERATION

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After successful installation, you can power on your computer system. The COUGAR GEX850 PSU will provide stable and efficient power to all connected components.

- **Power On:** Press the power button on your computer case. The PSU fan will begin to spin, and your system should boot normally.
- **Efficiency:** The 80 Plus Gold certification ensures high power conversion efficiency, which translates to less wasted energy and lower operating temperatures.
- **Cooling:** The integrated 120mm HDB fan operates quietly and adjusts its speed based on the PSU's temperature and load, maintaining optimal operating conditions.

## 7. MAINTENANCE

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Regular maintenance helps ensure the longevity and optimal performance of your PSU.

- **Dust Removal:** Periodically clean dust from the PSU's fan grille and interior of your computer case. Use compressed air to gently blow out dust. Ensure the system is powered off and unplugged before cleaning.
- **Ventilation:** Ensure that the PSU's intake and exhaust vents are not obstructed. Maintain adequate airflow around your computer case.
- **Cable Inspection:** Occasionally check that all modular cables are securely connected to both the PSU and your components.

## 8. TROUBLESHOOTING

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If you encounter issues with your COUGAR GEX850 PSU, refer to the following common troubleshooting steps:

- **No Power:**
  - Ensure the AC power cord is securely connected to both the PSU and the wall outlet.
  - Check that the power switch on the back of the PSU is in the 'ON' position.
  - Verify all modular cables (24-pin ATX, CPU, PCIe) are firmly seated in both the PSU and the respective components.
  - Test the wall outlet with another device to ensure it is supplying power.
- **System Instability/Random Shutdowns:**
  - Ensure the PSU is adequately ventilated and not overheating.
  - Check for loose cable connections.
  - The PSU's built-in safeguards (OCP, OPP, OVP, UVP, SCP, OTP) may be activating due to an issue. If this occurs frequently, it could indicate a component drawing too much power or a fault within the system. Consult a qualified technician.
- **Fan Not Spinning:**
  - Some PSUs feature a 'zero RPM' mode at low loads for silent operation. The fan may not spin until the PSU reaches a certain temperature or load threshold.
  - If the fan never spins even under load, and the system is unstable, contact support.

If these steps do not resolve your issue, please contact COUGAR customer support or your retailer for further assistance.

## 9. SPECIFICATIONS

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Feature	Specification
Model Name	GEX 850
Brand	COUGAR
Output Wattage	850 Watts
80 PLUS Certification	Gold
Power Supply Design	Fully Modular
Form Factor	ATX
Connector Type	ATX
Cooling Method	Air (120mm HDB Fan)
Operating Temperature	Up to 40°C
Product Dimensions (L x W x H)	6.3 x 5.91 x 3.39 inches (160 x 150 x 86 mm)

Feature	Specification
Item Weight	6.05 pounds
Compatible Devices	Personal Computer
Safeguards	OCP, OPP, OVP, UVP, SCP, OTP

## 10. WARRANTY AND SUPPORT

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For warranty information and technical support, please refer to the official COUGAR website or contact your local COUGAR distributor. Keep your purchase receipt as proof of purchase for warranty claims.

**COUGAR Official Website:** [cougargaming.com](https://cougargaming.com)