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› [Seasonic](#) /

› Seasonic Vertex GX-850 850W Power Supply User Manual

Seasonic VERTEX GX-850

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Model: VERTEX GX-850

Brand: Seasonic

1. INTRODUCTION AND OVERVIEW

The Seasonic Vertex GX-850 is a high-performance, fully modular power supply designed to meet the demands of modern computing systems. Certified 80 PLUS Gold for energy efficiency, it is fully compliant with the ATX 3.0 and PCIe 5.0 standards, making it ideal for systems featuring the latest NVIDIA RTX 30/40 Super and AMD GPUs. This unit incorporates advanced features such as a three-phased thermal control system for optimal silence and cooling, and a unique copper plate design that enhances power quality and reliability.

Its robust construction with top-grade, Japan-sourced components ensures exceptional stability and a long operational lifespan. The full-modular design allows for flexible cable management, reducing clutter within the PC case and improving airflow.



This image displays the Seasonic Vertex GX-850 850W power supply unit alongside its retail box, highlighting the 80 PLUS Gold certification and ATX 3.0 / PCIe 5.0 readiness.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the power supply unit. Failure to comply with these instructions may result in electric shock, fire, or damage to the product and connected components.

- **High Voltage:** The power supply contains high voltage components. Do not open the power supply casing. There are no user-serviceable parts inside. Opening the unit will void the warranty.
- **Power Disconnection:** Always disconnect the AC power cord from the wall outlet before installing, removing, or cleaning the power supply or any connected components.
- **Proper Grounding:** Ensure the power supply and your computer system are properly grounded. Use only the provided AC power cord.
- **Ventilation:** Do not block the ventilation openings of the power supply. Ensure adequate airflow around the unit to prevent overheating.
- **Environment:** Do not operate the power supply in high humidity or extreme temperature environments. Keep it away from water, liquids, and heat sources.
- **Professional Installation:** If you are unsure about any installation steps, consult a qualified technician.

3. PACKAGE CONTENTS

Verify that all items are present in your Seasonic Vertex GX-850 package:

- Seasonic Vertex GX-850 Power Supply Unit
- Modular Cable Set:
 - 1 x 24-pin ATX Motherboard Cable
 - 2 x 8-pin (4+4) CPU Cables
 - 3 x 8-pin (6+2) PCIe Cables
 - 1 x 12VHPWR (12+4 pin) PCIe 5.0 Cable (600W)
 - Multiple SATA Power Cables
 - Multiple Peripheral (Molex) Power Cables
- AC Power Cord
- Mounting Screws
- Cable Ties / Velcro Straps
- User Manual
- PSU Tester (for initial functionality check)

4. SETUP AND INSTALLATION

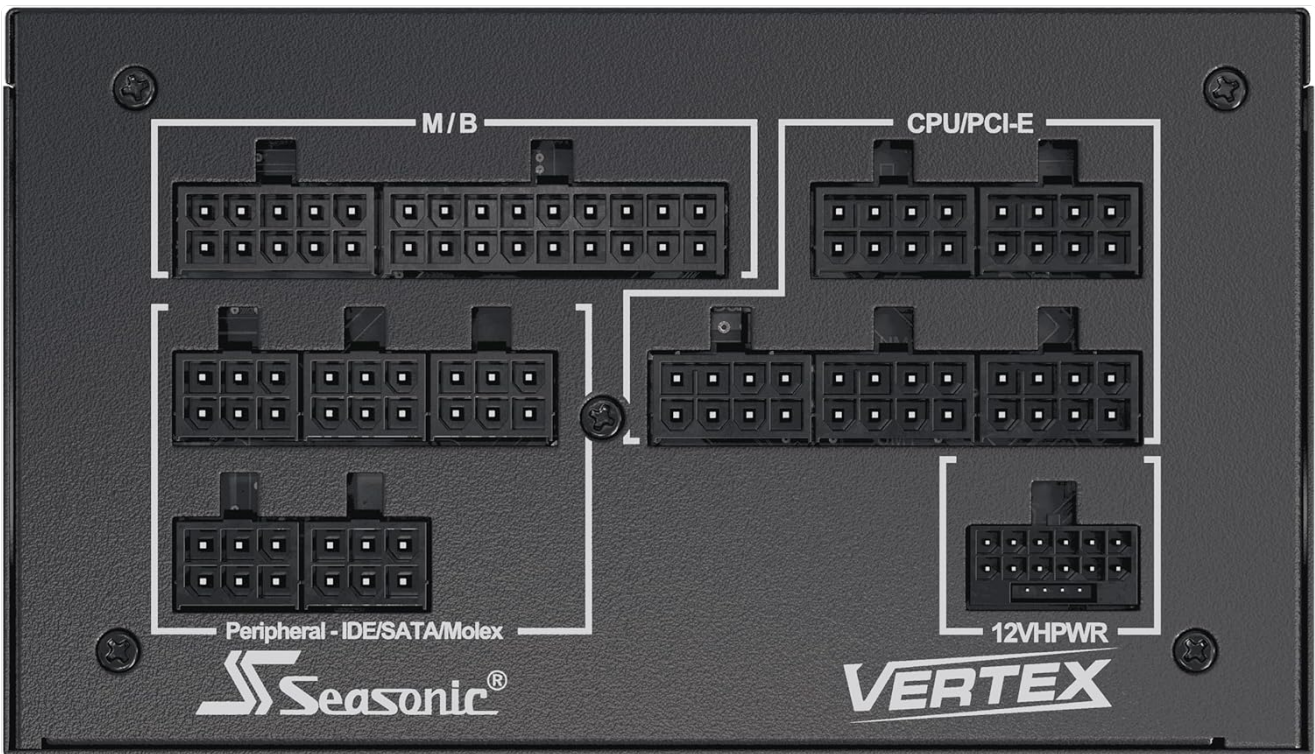
Follow these steps to properly install your Seasonic Vertex GX-850 power supply:

1. **Preparation:** Ensure your computer is completely powered off and the AC power cord is disconnected from the wall outlet. Open your computer case to access the power supply mounting area.
2. **Remove Old PSU (if applicable):** Disconnect all cables from your old power supply and remove it from the case.

3. **Mount the PSU:** Carefully slide the Seasonic Vertex GX-850 into the power supply bay of your computer case. Align the screw holes and secure the PSU with the provided mounting screws.
4. **Connect Modular Cables:** Identify the necessary cables for your components (motherboard, CPU, GPU, storage drives). Connect the appropriate modular cables to the corresponding ports on the power supply. The innovative copper plate design ensures secure and high-quality connections.

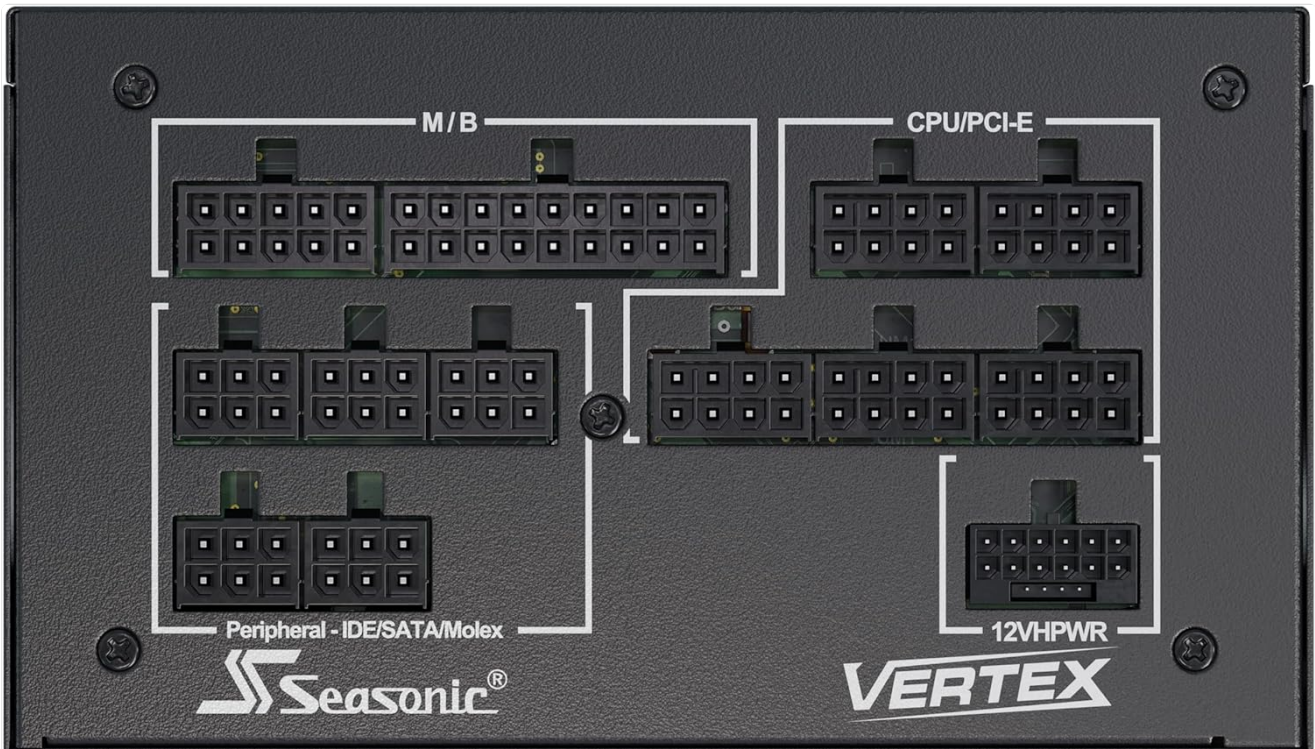


A top-down perspective of the power supply, illustrating the fan grill and the clearly labeled modular ports for various cables including 12VHPWR, CPU/PCI-E, M/B, and Peripheral/IDE/SATA/Molex.



A detailed view of the modular interface, showing the distinct sections for Motherboard (M/B), CPU/PCI-E, Peripheral/IDE/SATA/Molex, and the 12VHPWR connector, ensuring organized cable management.

5. **Connect to Components:** Route the connected modular cables to your motherboard, CPU, graphics card (especially the 12VHPWR cable for PCIe 5.0 GPUs), and storage devices. Ensure all connections are firm and secure.
6. **Cable Management:** Utilize the full modularity and included cable ties/Velcro straps to organize cables neatly within your case. This improves airflow and aesthetics.
7. **Hybrid Fan Control Switch:** Locate the Hybrid Fan Control switch on the rear of the power supply. By default, it is enabled for silent operation. If you prefer the fan to run constantly, switch it to the 'OFF' position.



The back panel of the power supply, featuring the AC power input, power switch, and the selectable Hybrid Fan Control switch.

8. **Final Connection:** Once all internal connections are made, close your computer case. Connect the AC power cord to

the power supply's inlet and then to a grounded wall outlet.

9. **Power On:** Flip the power switch on the back of the PSU to the 'ON' position, then power on your computer.

5. OPERATING INSTRUCTIONS

The Seasonic Vertex GX-850 is designed for reliable and efficient operation. Key operational features include:

- **Hybrid Fan Control:** This intelligent thermal control system operates in three stages to balance silence and cooling:
 - **Fanless Mode:** The fan remains off under low load conditions, providing completely silent operation.
 - **Silent Mode:** As the load increases, the fan spins at a very low RPM to maintain optimal temperatures while minimizing noise.
 - **Cooling Mode:** Under high load, the fan speed increases to ensure efficient heat dissipation and stable performance.

You can disable the Hybrid Fan Control via the switch on the back of the PSU if you prefer the fan to run continuously.

- **Load Regulation:** The power supply features improved load regulation, which minimizes voltage variations to ensure smooth and stable power delivery to all components.
- **Dynamic Response:** Superior dynamic response and greater system stability maximize the output of the 12V DC rail, crucial for high-performance components like modern GPUs.
- **ATX 3.0 & PCIe 5.0 Readiness:** The unit is built to fully support the latest ATX 3.0 power standard and includes a dedicated 600W 12VHPWR Gen 5 cable for next-generation graphics cards.

6. MAINTENANCE

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

- **Dust Removal:** Periodically clean the exterior of the power supply and the fan grill to prevent dust buildup, which can impede airflow and lead to overheating. Use compressed air or a soft brush. Ensure the PSU is powered off and unplugged before cleaning.
- **Cable Check:** Occasionally inspect all modular cable connections to ensure they are securely seated. Loose connections can lead to instability or component damage.
- **Environment:** Maintain a clean, dry, and well-ventilated environment for your computer system to prevent excessive dust and heat accumulation.
- **Fan Inspection:** While the Fluid Dynamic Bearing (FDB) fan is designed for long life and low noise, ensure it spins freely when active. If you notice unusual noises or the fan not spinning when it should (outside of Fanless Mode), refer to the troubleshooting section.

7. TROUBLESHOOTING

If you encounter issues with your Seasonic Vertex GX-850, try the following troubleshooting steps:

Problem	Possible Cause	Solution
System does not power on.	No AC power; PSU switch off; loose connections; faulty component.	Check AC power cord connection to wall and PSU. Ensure PSU switch is ON. Verify all modular cables are securely connected to PSU and components. Use the included PSU tester to check basic PSU functionality.
System powers on but shuts down unexpectedly.	Overload; overheating; unstable power.	Ensure total system power draw does not exceed PSU capacity. Check for proper case ventilation. Verify PSU fan is operating (if Hybrid mode is off or under load). Ensure all cables are properly seated.
Unusual fan noise or fan not spinning.	Dust buildup; Hybrid Fan Control active; fan malfunction.	Clean fan grill. If fan is not spinning, ensure system load is sufficient to activate it in Hybrid Mode, or switch Hybrid Fan Control to OFF. If noise persists or fan does not spin when it should, contact support.
Burning smell.	Component failure; short circuit.	Immediately power off and unplug the system. Do not attempt to use the PSU. Contact Seasonic support.

If the problem persists after attempting these solutions, please contact Seasonic customer support for further assistance.

8. SPECIFICATIONS

Detailed specifications for the Seasonic Vertex GX-850 850W Power Supply:

Feature	Detail
Brand	Seasonic
Series	VERTEX GX-850
Model Name	VERTEX GX-850
Output Wattage	850 Watts
80 PLUS Certification	Gold
Form Factor	ATX
Dimensions (LxWxH)	6.3 x 5.9 x 3.4 inches (160 x 150 x 86 mm)
Item Weight	4.34 pounds (1.97 kg)
Cooling Method	Air (Hybrid Fan Control)
Connector Type	ATX, PCIe (including 12VHPWR)
Modularity	Full-Modular
ATX Standard	ATX 3.0 Compliant
PCIe Standard	PCIe 5.0 Ready (with 600W 12VHPWR cable)

Feature	Detail
Capacitors	Japanese Capacitors

9. WARRANTY AND SUPPORT

The Seasonic Vertex GX-850 850W Power Supply comes with a comprehensive **12-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

For warranty claims, technical support, or any inquiries regarding your Seasonic product, please visit the official Seasonic website or contact their customer service department. You will typically need your proof of purchase (receipt or invoice) and the product's serial number.

For the most up-to-date support information and contact details, please refer to the Seasonic official website:

<https://seasonic.com/>