EVGA 220-T2-0850-X1

EVGA Supernova 850 T2 Power Supply User Manual

Model: 220-T2-0850-X1

Introduction Safety Information Package Contents Setup & Installation Operating Instructions Maintenance Troubleshooting Specifications Warranty & Support

1. Introduction

This manual provides comprehensive instructions for the EVGA Supernova 850 T2 Power Supply (Model: 220-T2-0850-X1). It covers installation, operation, maintenance, and troubleshooting to ensure safe and efficient use of your power supply unit (PSU). The EVGA Supernova T2 series is designed for high performance and reliability, featuring 80 PLUS Titanium certification for superior efficiency and a fully modular design for optimized cable management.



Image 1: The EVGA Supernova 850 T2 Power Supply unit. This image displays the main unit with its fan grille and side branding.

2. Safety Information

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

- **Electrical Hazard:** This device contains high voltage components. Do not open the PSU casing. There are no user-serviceable parts inside.
- **Ventilation:** Ensure adequate ventilation around the PSU. Do not block any ventilation openings.
- **Moisture:** Keep the PSU away from water, humidity, and other liquids.
- **Power Source:** Connect the PSU only to a grounded power outlet with the correct voltage and frequency as specified on the product label.
- **Static Electricity:** Always discharge static electricity from your body before handling internal computer components. Use an anti-static wrist strap if available.
- **Professional Installation:** If you are unsure about any installation steps, consult a qualified technician.

3. Package Contents

Verify that all items listed below are included in your package:

- EVGA Supernova 850 T2 Power Supply Unit
- Modular Cable Set (ATX, EPS, PCIe, SATA, Four-Pin Peripheral, Floppy Adapter)
- AC Power Cord
- Mounting Screws (4)
- Power On Self Tester
- Installation Guide



Image 2: A collection of modular cables and accessories included with the EVGA Supernova 850 T2 Power Supply. This includes various power cables, mounting screws, and a power tester.

4. Setup & Installation

Follow these steps to properly install your EVGA Supernova 850 T2 Power Supply into your computer system.

4.1 Pre-Installation Checklist

1. Ensure your computer is powered off and unplugged from the wall outlet.
2. Open your computer case to access the PSU mounting area.
3. If replacing an existing PSU, disconnect all cables from the old PSU and remove it from the case.

4.2 PSU Installation

1. Carefully place the EVGA Supernova 850 T2 PSU into the designated power supply bay in your computer case.
2. Secure the PSU to the case using the provided mounting screws.

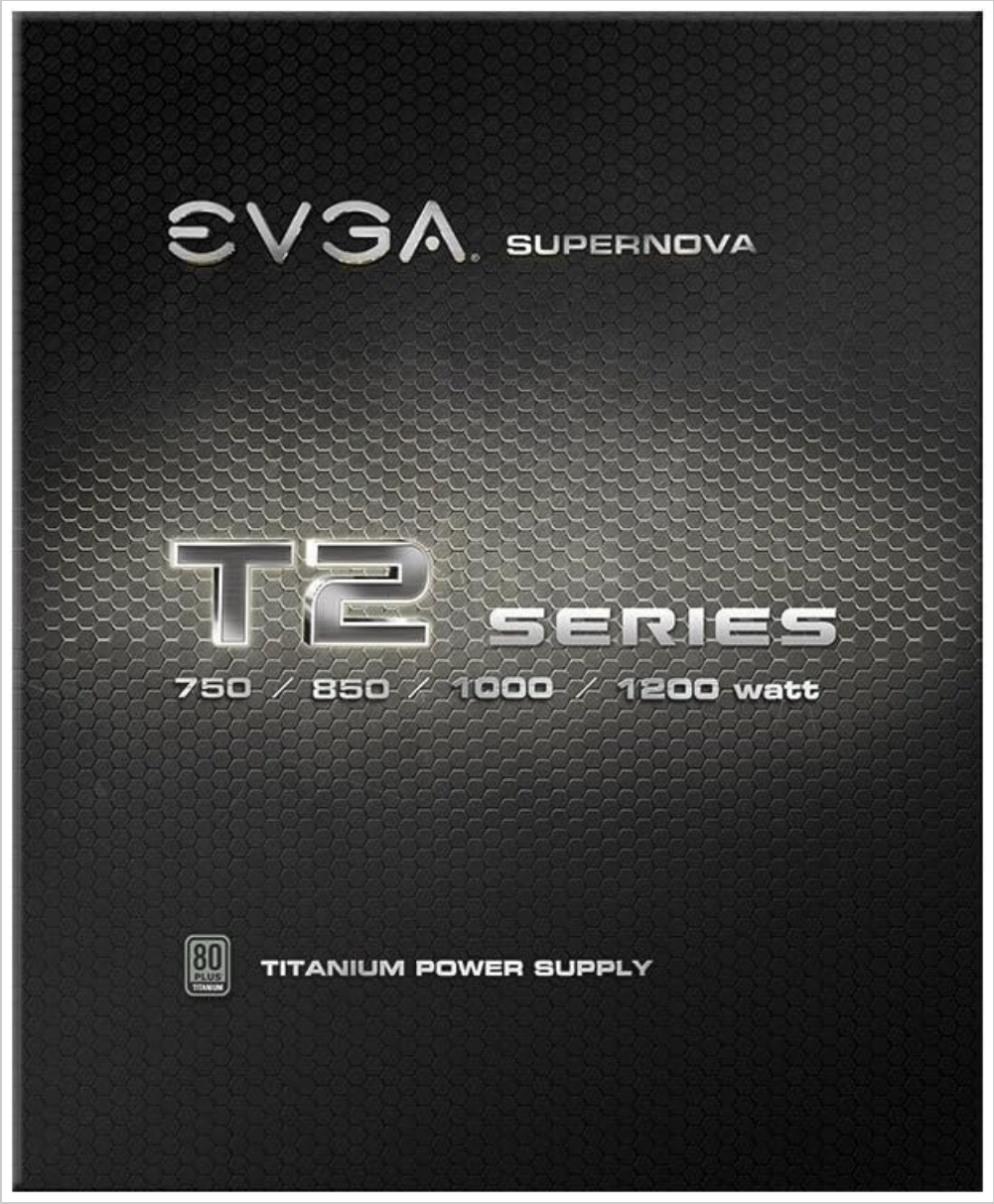


Image 3: An angled view of the EVGA Supernova 850 T2 Power Supply, showing its textured finish and fan. This view helps in identifying the unit during installation.

4.3 Cable Connections

The EVGA Supernova 850 T2 features a fully modular design, allowing you to connect only the necessary cables. Refer to the image below for connector identification.



Image 4: The modular connector panel of the EVGA Supernova 850 T2 Power Supply. Labels for MB, CPU, VGA, SATA, and PERIF connectors are visible, along with the ECO mode switch.

1. Connect the 24-pin ATX cable to the "MB" port on the PSU and to your motherboard.
2. Connect the 8-pin (or 4+4-pin) EPS/CPU cable(s) to the "CPU1" and/or "CPU2" ports on the PSU and to your motherboard's CPU power connectors.
3. Connect the appropriate PCIe cables to the "VGA" ports on the PSU and to your graphics card(s).
4. Connect SATA power cables to the "SATA" ports on the PSU and to your storage drives (HDDs, SSDs).
5. Connect peripheral cables (Molex) to the "PERIF" port on the PSU and to any other peripherals requiring power.
6. Ensure all connections are secure.

4.4 Initial Power On

1. Connect the AC power cord to the PSU and then to a grounded wall outlet.
2. Flip the power switch on the back of the PSU to the "ON" position.
3. Power on your computer.



Image 5: The rear panel of the EVGA Supernova 850 T2 Power Supply, showing the AC power input and the main power switch. This is where the power cord connects and the unit is turned on/off.

5. Operating Instructions

5.1 ECO Mode Operation

The EVGA Supernova 850 T2 features an ECO mode, which allows the PSU fan to remain off during low to medium load operations, resulting in silent performance. The fan will automatically activate when the load increases or internal temperatures rise.

- To enable ECO mode, locate the switch on the modular connector panel (refer to Image 4) and set it to the "ON" position.
- To disable ECO mode, set the switch to the "OFF" position. The fan will then operate continuously.

5.2 Power On Self Tester

A power on self tester is included to verify basic PSU functionality before installation. Connect the 24-pin ATX cable to the PSU and then connect the self tester to the 24-pin connector. Turn on the PSU. If the PSU fan spins and the tester lights up, the basic functionality is confirmed.

6. Maintenance

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

- **Cleaning:** Periodically clean the exterior of the PSU and its fan grille to prevent dust buildup. Use compressed air to gently remove dust from the fan and internal components. Ensure the PSU is powered off and unplugged before cleaning.
- **Cable Management:** Ensure cables are neatly routed to maintain good airflow within the computer case.
- **Environmental Conditions:** Operate the PSU within recommended temperature and humidity ranges.

7. Troubleshooting

If you encounter issues with your EVGA Supernova 850 T2 Power Supply, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
PSU does not power on.	◦ AC power cord not connected or loose. ◦ PSU power switch is off. ◦ Faulty wall outlet. ◦ PSU or component failure.	◦ Ensure AC power cord is securely connected to both PSU and wall outlet. ◦ Flip the PSU power switch to "ON". ◦ Test with a different wall outlet. ◦ Use the included Power On Self Tester to check PSU functionality. If it fails, contact support.
Computer powers on but immediately shuts down.	◦ Overload or short circuit. ◦ Loose cable connections.	◦ Disconnect non-essential components and try again. ◦ Verify all modular cables are securely connected to both the PSU and components. ◦ Check for any loose screws or metal objects inside the case that could cause a short.
Fan is not spinning in ECO mode.	◦ Normal operation for ECO mode. ◦ ECO mode switch is ON.	◦ This is expected behavior. The fan will activate under higher loads. ◦ If you prefer continuous fan operation, switch ECO mode to "OFF".

If the problem persists after attempting these solutions, please contact EVGA customer support.

8. Specifications

Key technical specifications for the EVGA Supernova 850 T2 Power Supply:

Feature	Detail
Model Number	220-T2-0850-X1
Wattage	850 Watts
80 PLUS Certification	Titanium (94% efficiency at 115VAC / 96% at 220VAC~240VAC)
Form Factor	ATX12V / EPS12V
Power Supply Design	Full Modular

Feature	Detail
Fan Size / Bearing	140mm Double Ball Bearing
ECO Mode	Yes (Silent operation at low to medium loads)
Protections	OVP, UVP, OCP, OPP, SCP, OTP
Item Dimensions (L x W x H)	7.09 x 5.91 x 3.35 inches
Item Weight	8 Pounds
Capacitors	100% Japanese Solid State Capacitors



Image 6: The side label of the EVGA Supernova 850 T2 Power Supply, detailing electrical specifications and certifications like 80 PLUS Titanium. This label provides crucial technical data.

9. Warranty & Support

9.1 Warranty Information

The EVGA Supernova 850 T2 Power Supply is backed by a**10-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. For full warranty terms and conditions, please visit the official EVGA website.

9.2 Customer Support

For technical assistance, troubleshooting, or warranty claims, please contact EVGA customer support through their official website or contact channels provided in your product packaging. Have your product model number (220-T2-0850-X1) and proof of purchase ready.

10. Video Resources

The following video provides an overview of the EVGA Supernova T2 series power supplies, highlighting key features and design elements.



Video 1: An official EVGA video showcasing the Supernova T2 series power supplies, including the 850 T2 model. This video demonstrates features such as the fully modular design, 80 PLUS Titanium efficiency, and ECO mode.

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