

Supermicro PWS-605P-1H

Supermicro PWS-605P-1H 600W 1U Power Supply User Manual

1. INTRODUCTION AND OVERVIEW

This manual provides essential information for the proper installation, operation, and maintenance of the Supermicro PWS-605P-1H 600W 1U Power Supply. The PWS-605P-1H is a high-efficiency 600-watt power supply unit designed for 1U server chassis and compatible personal computer systems. It features Active Power Factor Correction (PFC) and 80PLUS certification, ensuring stable and efficient power delivery. This unit is equipped with a 24-pin ATX connector and other standard power connectors for various system components.



Image 1.1: Front view of the Supermicro PWS-605P-1H 600W 1U Power Supply, showing its compact form factor and ventilation.

2. SAFETY INFORMATION

Read all safety instructions carefully before installing or operating the power supply. Failure to follow these instructions may result in electric shock, fire, or damage to the product and connected equipment.

- **Electrical Hazard:** Always disconnect the power cord from the wall outlet before installing, removing, or servicing the power supply.
- **Grounding:** Ensure the power supply is properly grounded. Do not defeat the purpose of the grounding-type plug.
- **Ventilation:** Do not block any ventilation openings. Ensure adequate airflow around the power supply to prevent overheating.
- **Moisture:** Do not expose the power supply to water or excessive moisture.
- **Qualified Personnel:** Installation and servicing should only be performed by qualified service personnel.
- **Voltage:** Verify that the voltage rating of the power supply matches the local power grid voltage before connecting.

3. SETUP AND INSTALLATION

This section details the steps for installing the PWS-605P-1H power supply into a compatible system chassis.

3.1 Pre-Installation Checks

- Ensure the system chassis is compatible with a 1U form factor power supply.
- Verify that all system components (motherboard, CPU, GPU, storage drives) are compatible with the power output and connectors provided by the PWS-605P-1H.
- Gather necessary tools, including a screwdriver.

3.2 Physical Installation

1. **Power Off:** Disconnect the system from all power sources.
2. **Open Chassis:** Open the computer chassis according to its manufacturer's instructions.
3. **Remove Old PSU (if applicable):** If replacing an existing power supply, carefully disconnect all cables and remove the old unit.
4. **Mount PSU:** Slide the PWS-605P-1H into the designated power supply bay in the chassis. Secure it with screws provided with the chassis or power supply.

3.3 Cable Connections

Connect the power supply cables to the corresponding components. Refer to your motherboard and component manuals for specific connector locations.

- **24-pin ATX Motherboard Connector:** Connect the main 24-pin connector to the motherboard. Ensure it clicks into place.
- **CPU Power Connector:** Connect the 4-pin or 8-pin CPU power connector (EPS12V) to the motherboard.
- **PCIe Power Connectors:** If your graphics card requires additional power, connect the appropriate 6-pin or 8-pin PCIe power connectors.
- **SATA Power Connectors:** Connect SATA power cables to your SATA hard drives, SSDs, and optical drives.
- **Peripheral (Molex) Connectors:** Connect Molex connectors to any legacy devices or case fans that require them.

Ensure all connections are firm and secure. Route cables neatly to improve airflow within the chassis.

4. OPERATING INSTRUCTIONS

Once the power supply is installed and all connections are secure, you can power on your system.

1. **Close Chassis:** Close the computer chassis cover.
2. **Connect Power Cord:** Connect the AC power cord to the power supply's inlet and then to a grounded electrical outlet.
3. **Power On:** Flip the power switch on the back of the power supply to the 'ON' position (usually marked 'I').
4. **System Start-up:** Press the power button on your computer case to initiate system start-up.

The power supply will provide stable power to all connected components. No further user interaction is typically required during normal operation.

5. MAINTENANCE

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

- **Dust Removal:** Periodically (e.g., every 6-12 months), power down and unplug the system. Open the chassis and use compressed air to gently remove dust accumulation from the power supply's fan and vents. Excessive dust can impede cooling and reduce efficiency.
- **Cable Inspection:** During dust removal, inspect all power cables for any signs of wear, fraying, or loose connections. Re-seat any loose connectors.
- **Environment:** Ensure the system operates in a clean, dry, and well-ventilated environment to prevent dust buildup and overheating.

6. TROUBLESHOOTING

If you encounter issues with your system, the power supply may be a factor. Here are some common troubleshooting steps:

6.1 System Does Not Power On

- **Check Power Cord:** Ensure the AC power cord is securely connected to both the power supply and the wall outlet.
- **Power Switch:** Verify that the power supply's main switch is in the 'ON' position (I).
- **Wall Outlet:** Test the wall outlet with another device to ensure it is functional.
- **Internal Connections:** Power down and unplug the system. Re-check all internal power connections (24-pin ATX, CPU, PCIe, SATA) to ensure they are firmly seated.

6.2 System Instability or Random Shutdowns

- **Overheating:** Check for excessive dust buildup in the power supply and chassis. Ensure proper ventilation.
- **Overload:** Ensure the total power draw of your components does not exceed the 600W capacity of the power supply.
- **Loose Connections:** Re-check all power cable connections.

6.3 Excessive Fan Noise

- **Dust:** Clean the power supply fan and vents to remove any dust that might be obstructing the fan blades.

- **Obstruction:** Ensure no cables or foreign objects are interfering with the fan's rotation.

If issues persist after performing these steps, contact Supermicro technical support or a qualified technician.

7. SPECIFICATIONS

The following table outlines the key specifications for the Supermicro PWS-605P-1H power supply:

Feature	Specification
Model Name	PWS-605P-1H
Brand	Supermicro
Output Wattage	600 Watts
Form Factor	1U / ATX
Efficiency	80PLUS Certified
PFC	Active PFC
Connector Type	ATX (24-pin main)
Cooling Method	Air
Item Weight	3.5 Pounds (1.59 kg)
Product Dimensions (LxWxH)	13.23 x 2.99 x 1.57 inches (33.6 x 7.6 x 4.0 cm)
Compatible Devices	Personal Computer, Server

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Supermicro website or contact your point of purchase. Keep your proof of purchase for warranty claims.

Supermicro Support: <https://www.supermicro.com/support>