

Corsair CX650M

Corsair CX-M Series CX650M Power Supply User Manual

Model: CX650M | Brand: Corsair

1. IMPORTANT SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating your power supply unit (PSU). Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Power Disconnection:** Always disconnect the power supply from the AC outlet before installing, removing, or servicing any components inside your computer.
- **Grounding:** Ensure the power supply is properly grounded. Use the provided power cord and connect it to a grounded outlet.
- **Ventilation:** Do not block any ventilation openings of the power supply. Ensure adequate airflow around the unit.
- **Moisture:** Do not operate the power supply in high humidity environments or expose it to water or other liquids.
- **Voltage:** This power supply is designed for specific voltage ranges. Verify your local voltage matches the power supply's input requirements.
- **Professional Installation:** If you are unsure about any installation steps, consult a qualified technician.

Refer to the "Safety and Compliance Information" booklet included in your package for detailed safety guidelines.

2. PACKAGE CONTENTS

Verify that all components listed below are present in your Corsair CX-M Series CX650M power supply package:

- Corsair CX-M Series CX650M Power Supply Unit
- AC Power Cord (region-specific)
- Modular Cable Set:
 - 24-pin ATX Motherboard Cable (fixed)
 - EPS12V/ATX12V (CPU) Cables

- PCIe (GPU) Cables
- SATA Power Cables
- Molex (Peripheral) Power Cables
- Mounting Screws
- Cable Ties
- Safety and Compliance Information Booklet



Image: The Corsair CX650M power supply unit shown alongside its full set of semi-modular cables, including the fixed 24-pin ATX cable, EPS12V/CPU cables, PCIe cables, SATA power cables, and Molex power cables.

3. SETUP AND INSTALLATION

Follow these steps to properly install your Corsair CX-M Series CX650M power supply into your personal computer:

1. Prepare Your System:

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

2. Mount the PSU:

- Position the CX650M PSU in the designated power supply bay of your computer case. Ensure the fan faces the correct direction (typically downwards if your case has a bottom vent, or upwards if it's a top-mounted PSU).
- Secure the PSU to the case using the provided mounting screws.

3. Connect Essential Cables:

- Connect the 24-pin ATX motherboard cable (fixed to the PSU) to the corresponding port on your motherboard.
- Connect the EPS12V/ATX12V (CPU) cable(s) to the CPU power connector(s) on your motherboard. The CX650M includes Dual EPS12V cables for modern systems.

4. Connect Modular Cables:

- Identify the necessary PCIe (GPU) cables for your graphics card(s). The CX650M provides two/four PCIe 8-pin power connectors. Connect these to your GPU(s).
- Connect SATA power cables to your storage drives (HDDs, SSDs) and optical drives.
- Connect Molex power cables to any other peripherals requiring them (e.g., case fans, older accessories).
- Only connect the cables you need for a cleaner build and improved airflow.

5. Cable Management:

- Route cables neatly behind the motherboard tray or in designated cable management areas of your case. Use cable ties to secure them.
- Ensure cables do not obstruct airflow or fan blades.

6. Final Checks:

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



Image: The Corsair CX650M power supply unit is shown installed within a computer case, highlighting its position and the routing of its semi-modular cables to various components.

4. OPERATING INSTRUCTIONS

The Corsair CX-M Series CX650M is designed for reliable and efficient operation. Once installed, operating the PSU is straightforward:

1. **Power On:** Flip the power switch on the back of the PSU to the 'ON' (I) position.
2. **System Boot:** Press the power button on your computer case to boot your system. The PSU will provide stable power to all connected components.
3. **Low-Noise Operation:** The CX650M features a rifle bearing fan designed for quiet operation, ensuring minimal acoustic distraction during use.
4. **80 PLUS Bronze Efficiency:** This power supply is 80 PLUS Bronze certified, meaning it operates with high efficiency, converting more AC power into usable DC power and generating less waste heat. This results in lower operating temperatures and reduced energy consumption.
5. **Robust DC-DC Conversion:** The unit utilizes robust DC-DC conversion for +3.3V and +5V rails, providing clean and consistent power delivery to all your system's components and peripherals.



Image: A graph illustrating the efficiency of the CX650M power supply at different system loads, demonstrating its 80 PLUS Bronze certification.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Corsair CX-M Series CX650M power supply:

- **Regular Cleaning:** Periodically clean the exterior of the PSU and its fan grille to prevent dust buildup. Use compressed air to gently clear dust from the fan blades and internal components. Ensure the PSU is powered off and unplugged before cleaning.
- **Airflow Check:** Ensure that the air intake and exhaust vents of your computer case are clear and unobstructed to allow for proper airflow to and from the PSU.
- **Cable Integrity:** Occasionally inspect all connected cables for any signs of wear, fraying, or damage. Replace any damaged cables immediately.
- **Operating Environment:** Operate the PSU in a cool, dry, and well-ventilated environment to prevent overheating.

6. TROUBLESHOOTING

If you encounter issues with your Corsair CX-M Series CX650M power supply, try the following 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' (I) position.
 - Verify that the wall outlet is functional by plugging in another device.
 - Confirm all internal power cables (24-pin ATX, CPU, GPU) are firmly seated in their respective connectors.
- **System Instability/Crashes:**
 - Ensure your system's power requirements do not exceed the 650W capacity of the PSU.
 - Check for loose cable connections, especially to the motherboard and graphics card.
 - Monitor system temperatures to ensure components are not overheating, which can lead to instability.
 - If possible, test the PSU with a different set of components or in another system to isolate the issue.
- **Loud Fan Noise:**
 - Ensure the PSU fan grille is free from dust and obstructions.
 - Verify that the PSU is securely mounted and not vibrating against the case.
 - Excessive fan noise under normal load might indicate an issue; contact support if persistent.

If these steps do not resolve the issue, please refer to the Warranty and Support section for further assistance.

7. SPECIFICATIONS

Feature	Detail
Brand	Corsair
Model Name	CX650M
Item Model Number	CP-9020221-NA
Form Factor	ATX
Output Wattage	650 Watts
Efficiency Certification	80 PLUS Bronze
Cabling Type	Semi-Modular
Capacitors	Japanese 105°C-rated
Cooling Method	Air (Rifle Bearing Fan)
Product Dimensions (L x W x H)	5.91 x 5.51 x 3.39 inches
Item Weight	5.01 pounds
Compatible Devices	Personal Computer
Connector Type	PCI Express, ATX, EPS12V, SATA, Molex

8. WARRANTY AND SUPPORT

The Corsair CX-M Series CX650M Power Supply is backed by a **five-year warranty**, ensuring long-term reliability and peace of mind.

For technical support, warranty claims, or additional product information, please visit the official Corsair support website or contact their customer service:

[Visit Corsair Support](#)