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Corsair CX650

CORSAIR CX650 80 Plus Bronze Non Modular ATX 650 Watt Power Supply User Manual

MODEL: CX650 | BRAND: CORSAIR

Product Overview

The CORSAIR CX650 Power Supply is an 80 PLUS Bronze Certified unit, engineered to provide up to 88% operational efficiency. This efficiency helps reduce heat generation and lower energy costs for your system. It delivers full continuous power, ensuring consistent and reliable performance for your PC components. A 120mm thermally controlled low-noise cooling fan operates quietly, spinning at higher speeds only when the power supply is under heavy load. Its compact 125mm length allows for easy installation in most modern PC cases. The CX Series features black sleeved cables and a black powder-coated casing for a clean aesthetic. This power supply is backed by a three-year warranty and supported by CORSAIR's global technical team.



Image: The CORSAIR CX650 ATX Power Supply unit, showcasing its compact design and black finish.

Safety Precautions

- Always disconnect the power cord from the wall outlet before installing or servicing the power supply.
- Do not open the power supply casing. High voltages are present inside, and opening it will void the warranty.
- Ensure proper grounding to prevent electrical shock.
- Install the power supply in a well-ventilated area to prevent overheating.
- Use only the cables provided with your CORSAIR CX650 power supply. Using incompatible cables may damage the unit or connected components.

What's in the Box

Your CORSAIR CX650 package should contain the following items:

- CORSAIR CX650 Power Supply Unit
- AC Power Cord
- Mounting Screws

- Cable Ties
- User Manual / Warranty Guide



Image: The CORSAIR CX650 Power Supply unit shown with its retail packaging.

SPACE-SAVING SIZE

Makes for an easy fit in almost all modern PC cases.



Image: A diagram detailing the various types of non-modular cables included with the CORSAIR CX650, such as ATX 24-pin, ATX 12V/EPS12V (4+4-pin), PCIe (6+2-pin), SATA, and PATA (4-pin) cables.

Unboxing and Installation Overview (Similar Product)

Your browser does not support the video tag.

Video: This video provides an unboxing and installation overview for a similar 650W non-modular power supply from a different brand (Segotep). While not the exact CORSAIR CX650, it demonstrates general procedures for handling and installing a non-modular PSU.

Installation Instructions

Follow these steps to properly install your CORSAIR CX650 Power Supply:

- 1. Prepare Your PC Case:** Ensure your PC case is powered off and unplugged from the wall. Remove the side panel(s) to access the power supply mounting area.
- 2. Mount the Power Supply:** Carefully slide the CORSAIR CX650 into the designated power supply bay in your PC case. Align the screw holes on the power supply with those on the case. Secure the power supply using the provided mounting screws.
- 3. Connect Motherboard Power:** Connect the 24-pin ATX power cable from the power supply to the

corresponding port on your motherboard. Ensure it clicks securely into place.

4. **Connect CPU Power:** Connect the 4+4-pin EPS12V CPU power cable to the CPU power connector on your motherboard. This is typically located near the CPU socket.
5. **Connect GPU Power (if applicable):** If your graphics card requires additional power, connect the 6+2-pin PCIe power cable(s) from the power supply to your graphics card.
6. **Connect SATA and Peripheral Devices:** Connect the SATA power cables to your storage drives (HDDs, SSDs) and optical drives. Use the PATA (Molex) connectors for any other peripherals that require them.
7. **Cable Management:** Route all cables neatly to ensure optimal airflow within your case. Use cable ties to secure them.
8. **Final Checks:** Double-check all connections to ensure they are firm and correctly seated. Replace the PC case side panel(s).
9. **Connect AC Power:** Plug the AC power cord into the power supply and then into a wall outlet. Flip the power switch on the back of the power supply to the 'ON' position.

CABLES

1x ATX (24-pin)
Cable



1x ATX 12V/EPS12V (4+4-pin)
Cable



1x PCIe (6+2-pin, dual)
Cable



1x 3 SATA
Cable



1x 2 PATA (4-pin)
Cable



Image: The CORSAIR CX650 Power Supply correctly installed in a PC case, demonstrating typical cable routing for a non-modular unit.



Image: A close-up view of the power switch and AC power input on the rear of the CORSAIR CX650, indicating the 'ON' position.

Operating Your Power Supply

Once installed, the CORSAIR CX650 operates automatically to provide stable power to your system. The 120mm cooling fan is thermally controlled, meaning it adjusts its speed based on the internal temperature of the power supply. This ensures quiet operation during low loads and efficient cooling when your system demands more power.

- **Power On:** After connecting all necessary cables and the AC power cord, ensure the power switch on the back of the PSU is in the 'ON' position. You can then power on your computer using the case's power button.
- **Power Off:** To shut down your system, use the operating system's shutdown procedure. For a complete power cut, switch the PSU's power switch to the 'OFF' position and unplug the AC cord.

120mm LOW-NOISE FAN

Only spins at high speed during heavy loads, slowing down automatically for quieter operation at lower loads.



Image: A view of the CORSAIR CX650's 120mm thermally controlled fan, designed for low-noise operation.

Maintenance

To ensure the longevity and optimal performance of your CORSAIR CX650 power supply, periodic maintenance is recommended:

- **Dust Removal:** Regularly clean dust from the power supply's fan grille and vents using compressed air. Ensure the PC is powered off and unplugged before cleaning.
- **Airflow:** Ensure that the PC case has adequate airflow and that the power supply's intake and exhaust vents are not obstructed.
- **Cable Check:** Periodically check all cable connections to ensure they remain secure.

Troubleshooting

If you encounter issues with your CORSAIR CX650, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
System does not power on	Power switch off, loose power cable, faulty component	Ensure PSU switch is ON. Check all power connections (24-pin, CPU, GPU). Test with minimal components.
System powers on but no display	Loose GPU power, faulty GPU, RAM issues	Verify GPU power connections. Reseat RAM modules. Test GPU in another slot or system if possible.
System crashes or restarts randomly	Overheating, unstable power, faulty components	Ensure adequate cooling and clean dust. Check for loose power connections. Monitor system temperatures.
Loud fan noise	Dust buildup, high system load	Clean fan and vents. Fan speed increases with load; this is normal. If excessive, contact support.

Technical Specifications

Feature	Specification
Model Name	CX650
Item Model Number	CP-9020278-NA
Wattage	650 Watts
80 PLUS Certification	Bronze
Form Factor	ATX
Cooling Method	Air (120mm Thermally Controlled Fan)
Dimensions (LxWxH)	4.92 x 5.91 x 3.39 inches (125mm length)
Item Weight	4.19 pounds
Color	Black
Connector Type	ATX

80 PLUS BRONZE POWER

Delivers consistent power to your PC with up to 88% operational efficiency, generating less heat and lowering your energy costs.



Image: The rear panel of the CORSAIR CX650, clearly showing the 80 PLUS Bronze certification logo.

Warranty and Support

The CORSAIR CX650 Power Supply comes with a **three-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. For technical assistance, troubleshooting, or warranty claims, please contact CORSAIR's global technical support team. You can find contact information and support resources on the official Corsair website.

For the most up-to-date support information, please visit: www.corsair.com/support