Zalman CNPS80G REV.1

ZALMAN CNPS80G Rev.1 CPU Cooler User Manual

Model: CNPS80G Rev.1

1. PRODUCT OVERVIEW

The ZALMAN CNPS80G Rev.1 is a compact CPU cooler designed for efficient heat dissipation in various computer systems. It features an 85mm fan and an aluminum heatsink, providing cooling for both Intel and AMD processors. This manual provides detailed instructions for installation, operation, and maintenance.

- **Fan Size:** 85mm
- **Fan Speed:** 1000 - 2000 RPM (PWM controlled)
- **Fan Airflow:** 27.18 CFM
- **Socket Compatibility:**
    - Intel: LGA115X / 775 / LGA1200
    - AMD: AM4 / AM3+ / AM3
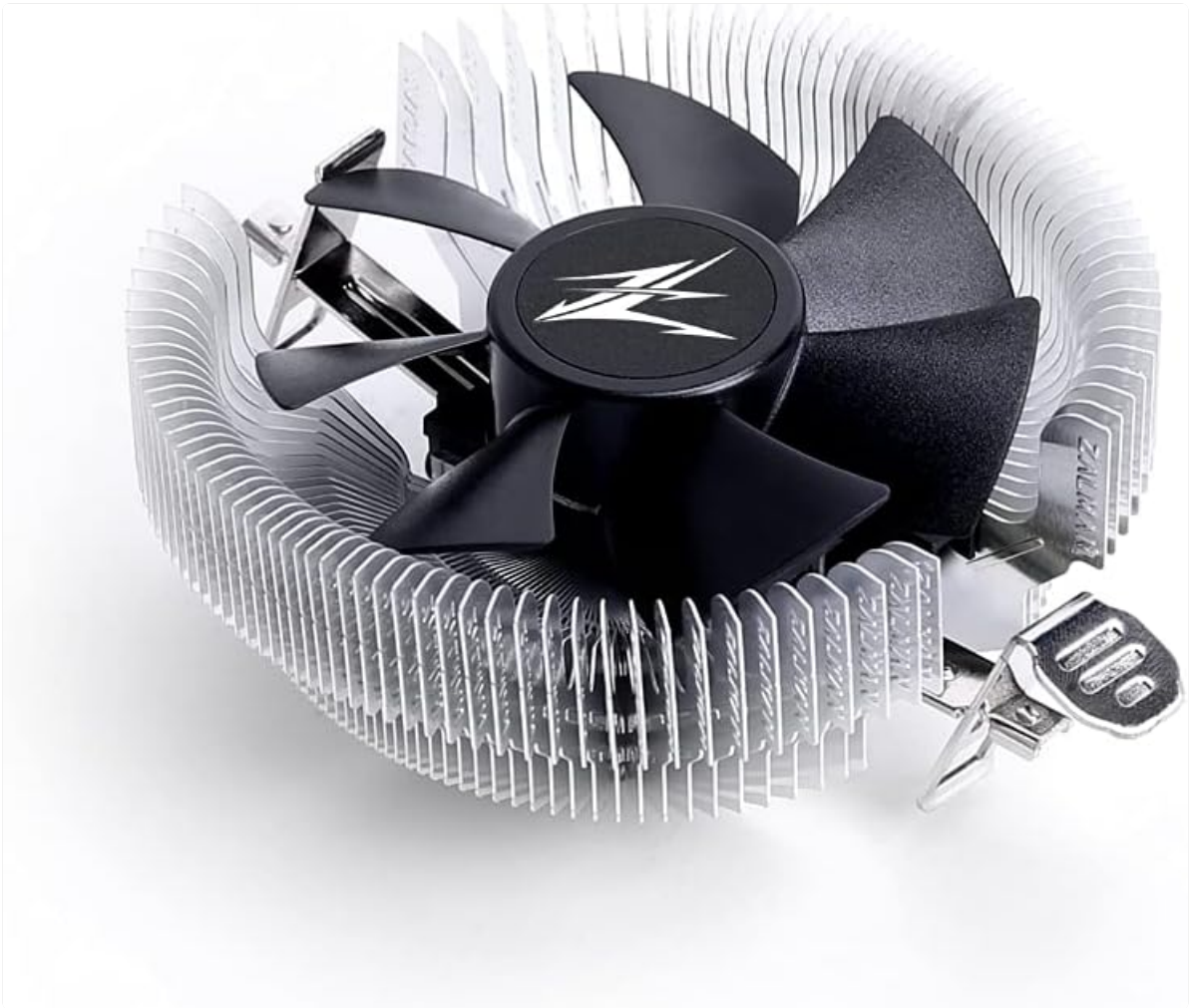- **Material:** Pure Aluminum heatsink

Figure 1: ZALMAN CNPS80G Rev.1 CPU Cooler. This image displays the cooler from a top-down perspective, highlighting its fan and aluminum fin structure.

2. PACKAGE CONTENTS

Before proceeding with installation, verify that all components are present in the package:

- ZALMAN CNPS80G Rev.1 CPU Cooler (with pre-attached fan)
- Intel Clip Support
- Intel Push-Pin Fasteners
- User Manual (this document)
- Thermal Grease (ZM-STG2M)

Figure 2: Included components. This image shows the cooler, its packaging, Intel mounting hardware, thermal grease, and the instruction manual.

3. INSTALLATION GUIDE

This section details the installation process for the ZALMAN CNPS80G Rev.1 CPU Cooler. Ensure your system is powered off and disconnected from the power source before beginning installation.

3.1. Prepare the CPU and Motherboard

1. Ensure your CPU is correctly seated in its socket on the motherboard.
2. Clean the surface of the CPU and the cooler's base plate with isopropyl alcohol to remove any dust or old thermal paste.
3. Apply a small amount of the provided thermal grease (ZM-STG2M) to the center of the CPU's integrated heat spreader (IHS). A pea-sized dot is generally sufficient. Do not spread the paste; the pressure from the cooler will distribute it evenly.

3.2. Mounting the Cooler (Intel Sockets: LGA115X / 775 / LGA1200)

1. Attach the Intel Clip Support to the cooler's base if not already pre-installed.
2. Align the four push-pins on the cooler's mounting bracket with the four mounting holes around the CPU socket on the motherboard.
3. Press down firmly on each push-pin in a diagonal pattern (e.g., top-left, bottom-right, top-right, bottom-left) until you hear a click, indicating they are securely fastened.
4. Gently tug on the cooler to ensure it is securely attached and does not wobble.

3.3. Mounting the Cooler (AMD Sockets: AM4 / AM3+ / AM3)

The ZALMAN CNPS80G Rev.1 utilizes a clip-based mounting system for AMD sockets. Ensure the motherboard's original AMD retention brackets are in place.

1. Hook one side of the cooler's retention clip onto the corresponding tab of the AMD retention bracket on the motherboard.
2. Apply gentle downward pressure on the opposite side of the cooler while pushing the lever down to

secure the second clip onto the other tab of the AMD retention bracket.

3. Ensure the cooler is firmly seated and does not move freely.

Figure 3: Socket Compatibility. This image illustrates the cooler and lists compatible Intel (LGA1200/115X/775) and AMD (AM4/AM3+/AM3) sockets.
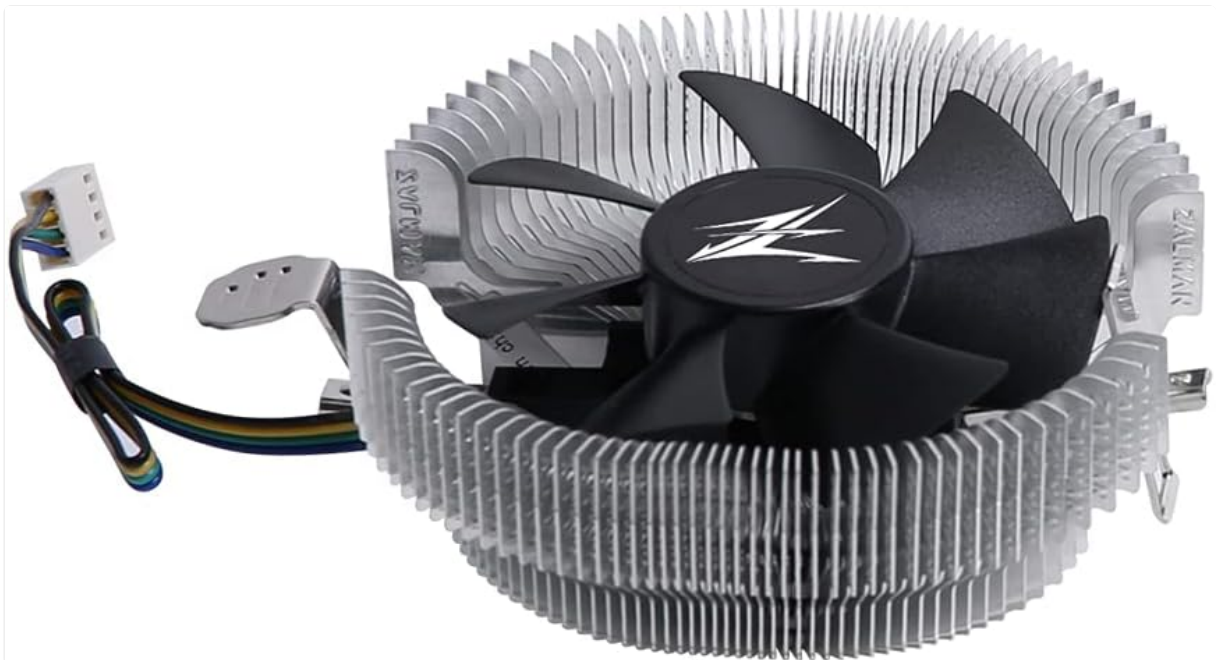

Figure 4: Cooler with 4-pin fan connector. This image shows the cooler with its attached 4-pin PWM fan cable, ready for connection to the motherboard.

3.4. Connect the Fan Cable

Locate the "CPU_FAN" header on your motherboard. Connect the cooler's 4-pin fan cable to this header. Ensure the connector is oriented correctly.

4. OPERATION

The ZALMAN CNPS80G Rev.1 CPU Cooler operates automatically once installed and connected. The 4-pin PWM (Pulse Width Modulation) fan adjusts its speed based on the CPU temperature, as controlled by your motherboard's BIOS/UEFI settings or operating system software.

- **Automatic Speed Control:** The fan speed will increase under higher CPU loads and decrease during idle periods to maintain optimal temperature and minimize noise.
- **Noise Level:** The fan is designed for quiet operation, with a maximum noise level of 25.3 Decibels at full speed.

Figure 5: Optimized Cooling Solution. This image highlights the cooler's design for efficient heat dissipation and the benefits of its ultra-quiet 85mm PWM fan, which adjusts RPM based on CPU temperature for high performance and low noise.
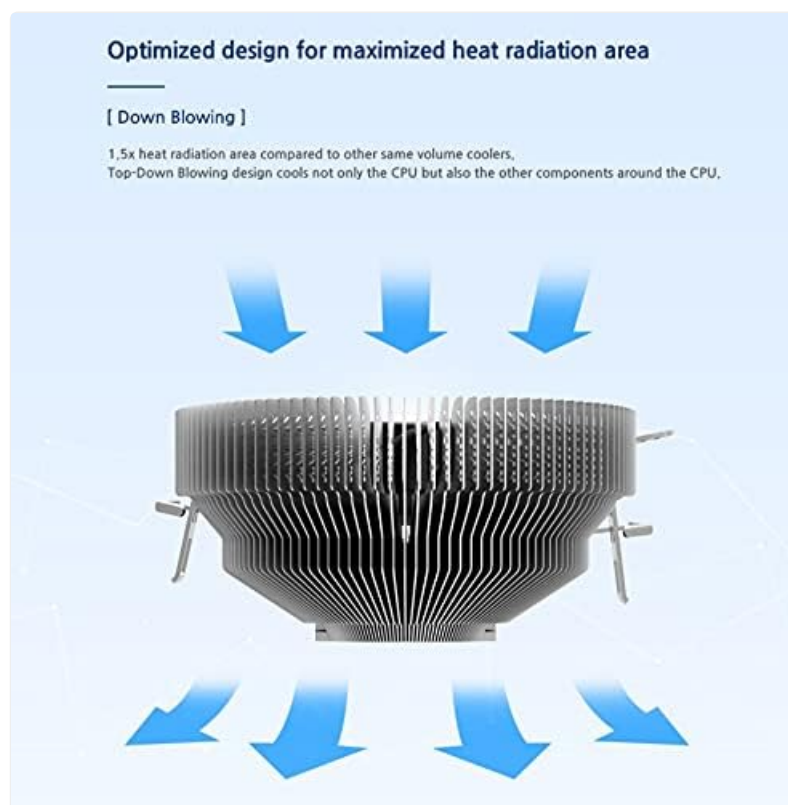

Figure 6: Optimized Heat Radiation. This diagram illustrates the down-blowing design of the cooler, which not only cools

the CPU but also provides airflow to surrounding motherboard components, maximizing heat radiation area.

5. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your CPU cooler.

- **Dust Removal:** Periodically inspect the heatsink fins and fan blades for dust accumulation. Use compressed air or a soft brush to gently remove dust. Ensure the fan is held stationary when using compressed air to prevent over-spinning and potential damage.
- **Thermal Paste Reapplication:** If you remove the cooler for any reason, it is recommended to clean off the old thermal paste from both the CPU and the cooler's base and apply fresh thermal paste before reinstallation.

6. TROUBLESHOOTING

If you encounter issues with your ZALMAN CNPS80G Rev.1 CPU Cooler, refer to the following common problems and solutions:

- **High CPU Temperatures:**
  - Ensure the cooler is securely mounted and making proper contact with the CPU.
  - Verify that thermal paste was applied correctly and evenly.
  - Check if the fan is spinning. If not, ensure the fan cable is properly connected to the "CPU_FAN" header.
  - Clean any dust accumulation from the heatsink fins and fan blades.
  - Confirm that your motherboard's BIOS/UEFI settings are configured to control the CPU fan speed based on temperature.

- **Fan Not Spinning:**
  - Check the 4-pin fan cable connection to the "CPU_FAN" header on the motherboard.
  - Ensure the system is powered on.
  - In some low-load scenarios, PWM fans may spin at very low RPM or temporarily stop if the CPU temperature is extremely low. Monitor CPU temperature to confirm.

- **Excessive Noise:**
  - Check for any cables or obstructions interfering with the fan blades.
  - Ensure the fan is securely mounted and not vibrating against other components.
  - Dust accumulation can cause imbalance and noise; clean the fan.
  - Verify fan speed settings in BIOS/UEFI. If set to run at maximum speed constantly, it will be louder.

7. SPECIFICATIONS

Feature	Specification
Brand	Zalman
Model Number	CNPS80G REV.1
Fan Size	85mm

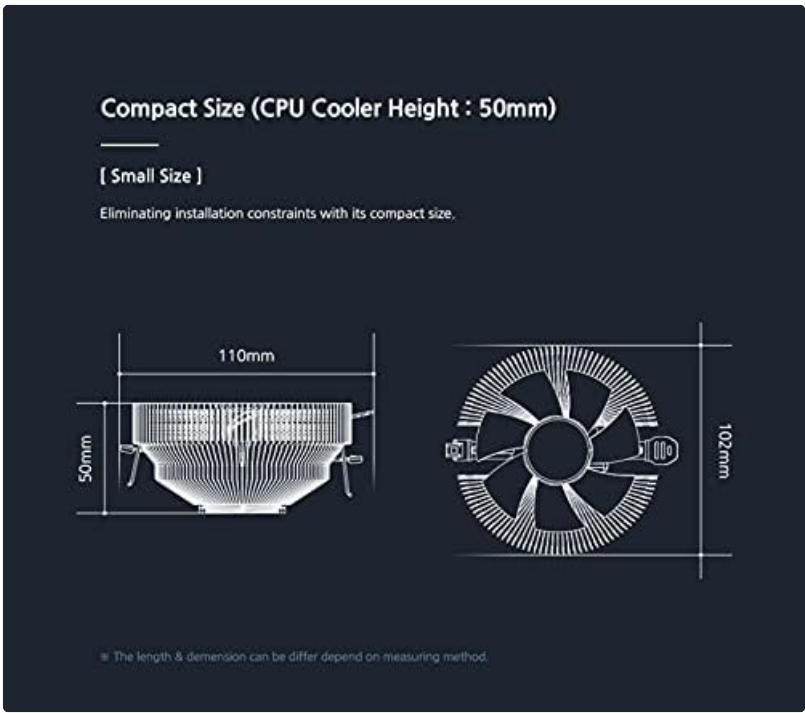| Feature	Specification
Fan Speed	1000 - 2000 RPM (PWM)
Air Flow Capacity	27.18 CFM
Noise Level	25.3 Decibels
Socket Compatibility	Intel: LGA115X / 775 / LGA1200 AMD: AM4 / AM3+ / AM3
Cooling Method	Air
Material	Aluminum
Power Connector Type	4-Pin
Voltage	12 Volts
Wattage	65 watts
Product Dimensions (LxWxH)	4.02 x 4.84 x 2.4 inches (102 x 123 x 61 mm)
Item Weight	0.009 ounces
Compatible Devices	Desktop, Server

Figure 7: Compact Size Diagram. This image provides dimensional specifications, showing the cooler's height of 50mm and overall dimensions, emphasizing its compact design for various system builds.

8. WARRANTY AND SUPPORT

ZALMAN products are manufactured under strict quality control standards. For specific warranty terms and conditions, please refer to the warranty information provided with your purchase or visit the official ZALMAN website.

For technical support, troubleshooting assistance beyond this manual, or inquiries regarding product parts, please contact ZALMAN customer service through their official website or the retailer from whom the

product was purchased.
Official ZALMAN Website: www.zalman.com