

Cooler Master RR-212L-16PR-R1

Cooler Master Hyper 212 LED CPU Cooler (RR-212L-16PR-R1) User Manual

Model: RR-212L-16PR-R1 | Brand: Cooler Master

INTRODUCTION

The Cooler Master Hyper 212 LED is a high-performance CPU cooler designed to efficiently dissipate heat from your processor. It features a PWM (Pulse Width Modulation) Red LED fan, four direct contact heat pipes, and funnel-shaped aluminum fins for optimized cooling. The universal bracket design ensures compatibility with various CPU platforms, providing a straightforward installation process.

PACKAGE CONTENTS

Before beginning installation, ensure all components are present:

- Hyper 212 LED CPU Cooler (Heatsink and Fan Assembly)
- Universal Mounting Brackets (for Intel and AMD sockets)
- Mounting Hardware (screws, standoffs, backplate)
- Thermal Paste
- Additional fan clips (for optional second fan)



Image: The Cooler Master Hyper 212 LED CPU Cooler, showing the heatsink, fan, and copper heat pipes.

SETUP AND INSTALLATION

Proper installation is crucial for optimal performance. Please follow these steps carefully. Refer to the official installation video for visual guidance.

1. **Prepare Motherboard:** Depending on your CPU socket (Intel or AMD), select the appropriate backplate and mounting studs. Secure the backplate to the rear of your motherboard.
2. **Apply Thermal Paste:** Clean the surface of your CPU and the cooler's base. Apply a small, pea-sized amount of the included thermal paste to the center of your CPU's integrated heat spreader (IHS). Do not spread it manually; the pressure from the cooler will distribute it evenly.
3. **Mount the Cooler:** Carefully align the cooler with the mounting studs on the motherboard. Place the cooler onto the CPU, ensuring the heat pipes make direct contact. Secure the cooler using the provided screws, tightening them in a diagonal pattern until snug. Avoid over-tightening.
4. **Connect Fan Cable:** Connect the 4-pin PWM fan cable to the CPU_FAN header on your motherboard.
5. **Check RAM Clearance:** Due to the cooler's size, verify that it does not obstruct your RAM modules. If necessary, adjust RAM placement or consider low-profile RAM.

Your browser does not support the video tag.

Video: Official Cooler Master installation guide for the Hyper 212 LED CPU Cooler. This video demonstrates the step-by-step process of mounting the cooler onto a motherboard, including backplate installation, thermal paste application, and securing the heatsink.



Image: An alternative view of the Cooler Master Hyper 212 LED CPU Cooler, highlighting its dimensions and fan design.

OPERATING INSTRUCTIONS

The Hyper 212 LED operates automatically once installed and connected to the CPU_FAN header. The PWM function allows the motherboard to control the fan speed based on CPU temperature, ensuring efficient cooling and reduced noise levels during lighter loads.

- **PWM Fan Control:** The fan speed adjusts dynamically to maintain optimal CPU temperatures.
- **Red LED Illumination:** The fan features integrated red LEDs that illuminate when the fan is operational. These LEDs are always on when the fan is running and cannot be independently controlled or disabled.

without modification.

- **Airflow Direction:** Ensure the fan is oriented to draw cool air through the heatsink and exhaust warm air towards your case's rear or top exhaust fans for effective system cooling.

MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your CPU cooler.

- **Dust Cleaning:** 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 not spinning during cleaning to prevent damage.
- **Thermal Paste:** 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 base and apply fresh thermal paste before reinstallation.

TROUBLESHOOTING

If you encounter issues with your Hyper 212 LED CPU Cooler, consider the following:

- **High CPU Temperatures:**
 - Verify that the cooler is securely mounted and making proper contact with the CPU.
 - Ensure thermal paste was applied correctly and evenly.
 - Check that the fan cable is securely connected to the CPU_FAN header on the motherboard.
 - Confirm fan is spinning. If not, check connections or consider fan replacement.
 - Ensure proper airflow within your PC case.
- **Fan Noise:**
 - Check for any cables or obstructions hitting the fan blades.
 - Ensure the fan is securely attached to the heatsink.
 - Dust accumulation can cause increased noise; clean the fan and heatsink.
- **Installation Difficulties:**
 - Refer to the detailed installation video and diagrams. Pay close attention to backplate orientation and screw placement.
 - Ensure correct mounting hardware is used for your specific CPU socket.

SPECIFICATIONS

Model Number	RR-212L-16PR-R1
Product Dimensions (L x W x H)	0.9"L x 4.7"W x 4.7"H
Material	Aluminum (Heatsink), Copper (Heat Pipes)
Cooling Method	Fan, Heat Pipes
Fan Type	PWM Red LED Fan
Maximum Rotational Speed	1800 RPM

Air Flow Capacity	66.3 Cubic Feet Per Minute (CFM)
Noise Level	31 Decibels (dB)
Power Connector Type	4-Pin
Voltage	12 Volts
Wattage	2.28 watts
Compatible Devices	Desktop CPUs (Universal Socket Support)
Item Weight	1.7 Pounds

WARRANTY INFORMATION

This Cooler Master Hyper 212 LED CPU Cooler comes with a **1 Year Warranty**. For warranty claims or detailed terms and conditions, please refer to the official Cooler Master website or contact their customer support.

SUPPORT

For further assistance, technical support, or to download the latest drivers and manuals, please visit the official Cooler Master website:

www.coolermaster.com

You may also contact Cooler Master customer service directly for product-specific inquiries.