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Cooler Master RR-212S-20PK-R2

Cooler Master Hyper 212 Black Edition CPU Air Cooler Instruction Manual

Model: RR-212S-20PK-R2

1. PRODUCT OVERVIEW

The Cooler Master Hyper 212 Black Edition is a high-performance CPU air cooler designed to provide efficient heat dissipation for your computer's processor. It features an anodized gun-metal black top cover, nickel-plated jet black fins, and direct contact heat pipe technology for optimal cooling performance.



Figure 1.1: Overall view of the Cooler Master Hyper 212 Black Edition CPU cooler.

2. PACKAGE CONTENTS

Verify that all components are present in the package:

- Hyper 212 Black Edition CPU Cooler (Heatsink and Fan Assembly)
- Installation Kit (Mounting Brackets, Screws, Backplate)
- Thermal Paste
- Instruction Manual

3. SETUP AND INSTALLATION

This section provides general guidelines for installing the Cooler Master Hyper 212 Black Edition. For detailed, step-by-step instructions, please refer to the included physical manual or the official Cooler Master website.

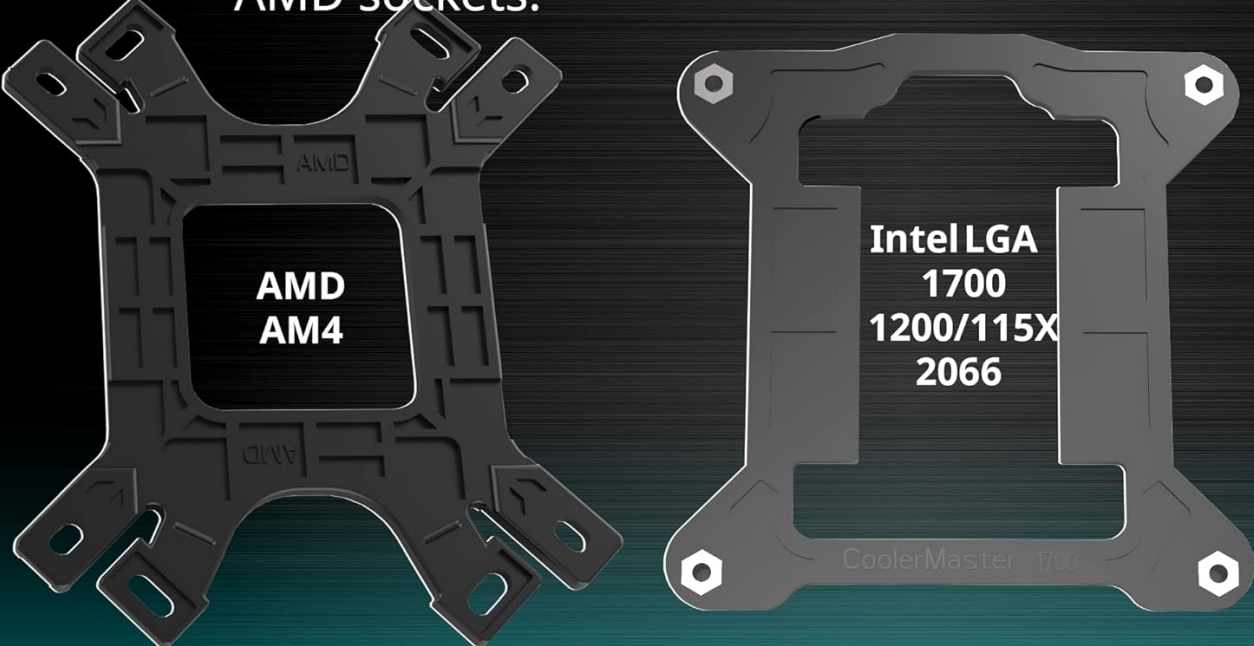
3.1. Compatibility

The Hyper 212 Black Edition supports a wide range of CPU sockets:

- **Intel:** LGA1700, LGA1200, LGA1151, LGA1156, LGA1155, LGA1366, LGA2066, LGA2011 v3, LGA2011
- **AMD:** AM4, AM3+, AM3, AM2+, AM2, FM2+, FM2

COMPATIBILITY

Tool-Free mounting brackets for quick and painless installation on all Intel and AMD sockets.



AMD AM4

Intel LGA 1700 1200/115X 2066

CoolerMaster 1700

CPU & Socket Compatibility:
Intel LGA 1700/1200/ 115X / 1366 / 2066 / 2011-v3 / 2011
AMD AM4 / AM3+ / AM3 / AM2+ / AM2 / FM2+ / FM2 / FM1

Figure 3.1: Intel (LGA 1700, 1200/115X, 2066) and AMD (AM4) mounting brackets for CPU socket compatibility.

3.2. Pre-Installation Checks

- Ensure your PC case has adequate clearance for the cooler. The Hyper 212 Black Edition has a height of 158.8mm and requires a minimum chassis clearance of 160mm.
- Gather necessary tools (e.g., screwdriver).
- Remove any existing CPU cooler and clean the CPU surface thoroughly.

CHASSIS CLEARANCE

Support cases with 160mm clearance to ensure high compatibility air cooling systems.

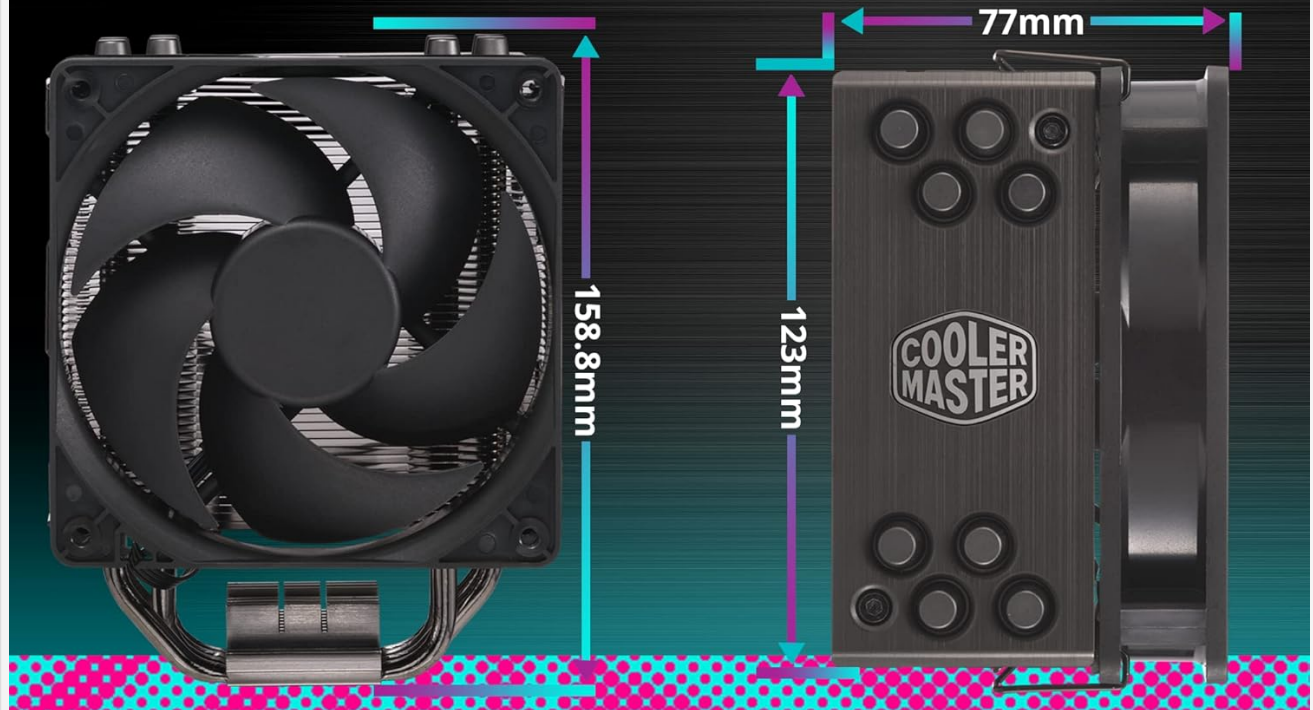


Figure 3.2: Diagram showing the dimensions of the cooler (158.8mm height, 77mm width) and the required chassis clearance (160mm).

3.3. Installation Steps (General)

1. Install the appropriate backplate and mounting brackets onto your motherboard according to your CPU socket type.
2. Apply a small amount of thermal paste to the center of your CPU's integrated heat spreader (IHS).
3. Carefully place the heatsink onto the CPU, aligning it with the mounting screws.
4. Secure the heatsink to the mounting brackets using the provided screws, tightening them in a cross pattern until snug.
5. Attach the fan to the heatsink using the intuitive fan bracket design. This 'snap and play' feature simplifies fan installation and removal.
6. Connect the fan's 4-pin PWM connector to the CPU_FAN header on your motherboard.



Figure 3.3: Exploded view of the cooler components, including the heatsink, fan, and mounting hardware, illustrating assembly.

4. OPERATING INSTRUCTIONS

Once installed, the Cooler Master Hyper 212 Black Edition operates automatically, regulating fan speed based on CPU temperature via the motherboard's PWM control. Ensure proper airflow within your PC case for optimal cooling performance.

SILENT FP120 FAN

The fan blade design, packs more force into the space in front of the fan. The exclusive Silent Driver IC technology reduces the noise and power output.

AIR FLOW

42
CFM

AIR PRESSURE

2.9
mmH2O

NOISE LEVEL

26
dBA(MAX)

Fan Speed

650~2000
RPM \pm 10%

Dimension

120 x 120 x 25 mm
4.7 x 4.7 x 1 inch

Figure 4.1: Detail of the Silent FP120 fan, highlighting its design, airflow (42 CFM), air pressure (2.9 mmH2O), noise level (26 dBA max), and fan speed range (650-2000 RPM).

5. MAINTENANCE

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

- **Dust Removal:** Periodically clean dust from the heatsink fins and fan blades using compressed air or a soft brush. Ensure the fan is not spinning during cleaning.
- **Fan Inspection:** Check the fan for any obstructions or unusual noises. If the fan is removable, detach it for thorough cleaning.
- **Thermal Paste:** While not frequently required, if CPU temperatures rise significantly over time, consider reapplying thermal paste after carefully cleaning the CPU and cooler base.

- **Excessive Fan Noise:**

- Inspect for any cables or obstructions hitting the fan blades.
- Clean dust from the fan blades.
- Ensure the fan is securely mounted and not vibrating.

7. SPECIFICATIONS

Feature	Specification
Model Number	RR-212S-20PK-R2
Product Dimensions (L x W x H)	4.84" x 3.03" x 6.25" (123mm x 77mm x 158.8mm)
Weight	1.85 Pounds (0.84 kg)
Material	Aluminum, Copper, Nickel
Heat Pipes	4 Direct Contact Heat Pipes
Fan Type	Silent FP120 PWM Fan
Fan Speed	650 - 2000 RPM \pm 10%
Air Flow Capacity	42 CFM (Cubic Feet Per Minute)
Air Pressure	2.9 mmH ₂ O
Noise Level	26 dBA (Maximum)
Power Connector	4-Pin PWM
Compatible Devices	Desktop Computers

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Cooler Master website or contact their customer service. Warranty terms and conditions may vary by region and retailer.

Cooler Master Official Website: www.coolermaster.com