Cooler Master MLW-D24M-A18PA-R1

Cooler Master MASTERLIQUID 240 Core II Liquid CPU Cooler User Manual

Model: MLW-D24M-A18PA-R1

1. Introduction and Overview

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Cooler Master MASTERLIQUID 240 Core II liquid CPU cooler. This 240mm All-In-One (AIO) liquid cooler is designed to provide efficient thermal management for your CPU, featuring an improved dual-chamber pump, two Addressable RGB (ARGB) fans, and an infinity mirror design on the pump cover.

Image 1.1: The Cooler Master MASTERLIQUID 240 Core II liquid CPU cooler, showcasing the radiator, two ARGB fans, and the pump unit.

2. Package Contents

Verify that all components are present in your package before proceeding with installation:

- MASTERLIQUID 240 Core II Radiator with Integrated Pump
- 2 x 120mm Addressable RGB Fans
- Mounting Hardware Kit (for Intel and AMD sockets)
- Quick Start Guide
- Accessory Kit (includes thermal paste, fan screws, and various mounting brackets)

Image 2.1: An angled view of the cooler, highlighting the radiator, fans, and the pump unit with its tubing.

3. Setup and Installation

Follow these steps carefully to ensure proper installation of your liquid CPU cooler. Refer to your motherboard manual for specific details regarding CPU socket and fan header locations.

3.1. Prepare the Motherboard

1. Ensure your system is powered off and disconnected from the power source.
2. Install the appropriate backplate for your CPU socket (Intel or AMD) onto the rear of the motherboard.
3. Apply a small amount of thermal paste to the center of your CPU's Integrated Heat Spreader (IHS).

3.2. Install the Pump Unit

1. Attach the correct mounting brackets to the pump unit for your CPU socket type.
2. Carefully place the pump unit onto the CPU, aligning the mounting holes.
3. Secure the pump unit with the provided thumb screws or nuts, tightening them in a diagonal pattern until snug.

Do not overtighten.

Image 3.1: A detailed view of the pump unit, showing its infinity mirror design and connection points.

3.3. Mount the Radiator and Fans

1. Attach the two 120mm ARGB fans to the radiator using the long fan screws. Ensure the fan airflow direction is appropriate for your case (typically exhausting air out of the case).
2. Mount the radiator assembly to an available 240mm fan mount location in your PC case (e.g., top, front, or rear). Use the shorter radiator screws to secure it.

3.4. Connect Cables

1. Connect the pump's 3-pin power cable to a dedicated AIO_PUMP or CPU_FAN header on your motherboard.
2. Connect each fan's 4-pin PWM cable to a CPU_FAN or SYS_FAN header on your motherboard. You may use a Y-splitter if necessary.
3. Connect the ARGB cables from the fans and pump to an available 3-pin 5V ARGB header on your motherboard or to a compatible ARGB controller.

Image 3.2: The liquid cooler fully installed within a computer case, demonstrating proper placement and cable routing.

3.5. Compatible Sockets

This cooler supports the following CPU sockets:

- **Intel:** LGA 1851, LGA 1700, LGA 1200, LGA 1156, LGA 1155, LGA 1151, LGA 1150
- **AMD:** AM5, AM4

4. Operating Instructions

Once installed, the Cooler Master MASTERLIQUID 240 Core II operates automatically based on your motherboard's fan control settings. For optimal performance and noise levels, it is recommended to configure fan curves in your motherboard's BIOS/UEFI or through compatible software.

- **Fan Speed Control:** The fans are PWM controlled, allowing for dynamic speed adjustments based on CPU temperature.
- **ARGB Lighting:** The Addressable RGB lighting on the fans and pump can be synchronized with your

motherboard's ARGB software (e.g., ASUS Aura Sync, MSI Mystic Light, Gigabyte RGB Fusion, ASRock Polychrome Sync) or controlled via a separate ARGB controller (if included or purchased separately).

Image 4.1: A close-up view of the pump unit, showcasing the vibrant Addressable RGB lighting and the infinity mirror effect.

5. Maintenance

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

- **Dust Removal:** Periodically clean dust from the radiator fins and fan blades using compressed air. Ensure fans are not spinning during cleaning.
- **Cable Management:** Check all cable connections (power, fan, ARGB) to ensure they are secure and not obstructing airflow.
- **Coolant Check:** This is a closed-loop system and does not require coolant refills. Do not attempt to open the pump or tubing.

Image 5.1: A top-down view of the cooler installed in a PC case, showing the fans mounted to the radiator and the pump connected to the CPU.

6. Troubleshooting

If you encounter issues with your liquid CPU cooler, refer to the following common problems and solutions:

- **High CPU Temperatures:**
  - Ensure the pump is running and connected to a proper power header.
  - Verify fans are spinning and correctly oriented for airflow.
  - Check that the pump cold plate has proper contact with the CPU and thermal paste is applied correctly.
  - Clean any dust buildup on the radiator fins.
- **Fans Not Spinning or ARGB Not Lighting Up:**
  - Check all power and ARGB connections to the motherboard or controller.
  - Ensure ARGB headers are enabled in your motherboard's BIOS/UEFI.

- Verify that your ARGB software is correctly configured.

- **Unusual Noise from Pump or Fans:**
  - A slight gurgling sound during initial startup is normal as air settles. If persistent, gently tilt the PC case to help trapped air move to the radiator.
  - Ensure no cables are interfering with fan blades.
  - Check fan screws for tightness.

For further assistance, please visit the official Cooler Master support website.

7. Specifications

Component	Specification
Radiator Dimensions	277 x 119.2 x 27.2 mm (10.9 x 4.7 x 1.1 inches)
Pump Dimensions	83 x 76.2 x 52.3 mm (3.3 x 3.0 x 2.0 inches)
Tube Length	400 mm (15.7 inches)
Fan Size	120 x 120 x 25 mm (4.7 x 4.7 x 1.0 inches) x 2
Fan Speed	650 - 1750 RPM
Fan Air Flow	Up to 70.5 CFM
Fan Air Pressure	Max 2.0 mm H2O
Pump Speed	3100 ± 300 RPM
Noise Level (Fan)	Max 30 dBA
Noise Level (Pump)	Max 25 dBA
Fan Bearing Type	Sleeve Bearings
MTTF (Fan)	160,000 hours
MTTF (Pump)	50,000 hours
LED Type	Addressable RGB (ARGB)
Compatible Intel Sockets	LGA 1851, 1700, 1200, 1156, 1155, 1151, 1150
Compatible AMD Sockets	AM5, AM4
Power Connector Type	4-Pin (PWM)
Voltage	12 Volts (DC)
Wattage	260 watts

8. Warranty and Support

Cooler Master products are backed by a limited warranty. For detailed warranty information, terms, and conditions, please refer to the warranty card included with your product or visit the official Cooler Master website.

For technical support, troubleshooting guides, and frequently asked questions, please visit the Cooler Master support portal:

Cooler Master Support Website