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Cooler Master MLX-D24M-A20PC-R1

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Brand: Cooler Master | Model: MLX-D24M-A20PC-R1

PRODUCT OVERVIEW

The Cooler Master MasterLiquid ML240R ARGB is an all-in-one liquid CPU cooler designed for efficient heat dissipation and customizable aesthetics. It features a low-profile dual-chamber pump and two 240mm Addressable RGB (ARGB) fans, providing effective cooling while maintaining quiet operation. The integrated ARGB lighting on both the pump and fans allows for extensive color customization, controllable via the included wired controller or compatible software.

Key Features

- **240mm Radiator:** Low-profile dual-chamber ARGB pump with dual ARGB fans for push-pull airflow.
- **Addressable RGB Lighting:** Customizable colors on fans and pump, controllable via Cooler Master software or included wired controller.
- **Removable Pump Cap:** Allows for easy orientation adjustment without reinstalling the pump.
- **Sleeved FEP Tubing:** Durable, kink-free FEP tubing with sleek black outer sleeves for a premium look.
- **Broad CPU Socket Support:** Compatible with Intel LGA2066, LGA2011 v3, LGA2011, LGA1151, LGA1150, LGA1156, LGA1155, LGA1366, and AMD AM4, AM3+, AM3, AM2+, AM2, FM2+, FM2, FM1 sockets.
- **Included ARGB Splitter Cable:** A 1-to-3 ARGB splitter cable is provided for connecting multiple ARGB fans.



Figure 1: The Cooler Master MasterLiquid ML240R ARGB liquid cooler showcasing its vibrant Addressable RGB lighting on the pump and fans.

PACKAGE CONTENTS

Verify that all components are present before beginning installation. If any parts are missing or damaged, please contact Cooler Master support.

- 1x 240mm Radiator with Integrated Pump and Water Block
- 2x 120mm Addressable RGB Fans (MF120 PWM)
- 1x Wired Addressable RGB Controller
- 1x 1-to-3 Addressable RGB Splitter Cable
- Mounting Hardware Kit (for Intel and AMD sockets)
- Thermal Paste
- User Manual (this document)



Figure 2: Top view of the radiator and fans, showing the Cooler Master logo.



Figure 3: Underside of the pump, revealing the copper cold plate designed for optimal heat transfer from the CPU.



Figure 4: Exploded diagram illustrating the internal components of the dual-chamber pump, including the impeller and cold plate.

INSTALLATION GUIDE

This section provides general steps for installing your Cooler Master MasterLiquid ML240R ARGB. Specific steps may vary slightly depending on your motherboard and PC case. Always refer to your motherboard and case manuals for detailed compatibility and mounting instructions.

- 1. Prepare CPU Socket:** Install the appropriate backplate and mounting standoffs for your CPU socket (Intel or AMD) onto the motherboard.
- 2. Apply Thermal Paste:** Apply a small amount of thermal paste (included) to the center of your CPU's integrated heat spreader (IHS).
- 3. Mount Pump/Water Block:** Carefully place the pump/water block assembly onto the CPU, aligning it with the mounting standoffs. Secure it with the provided thumb screws or nuts. Ensure even pressure.
- 4. Install Radiator and Fans:** Attach the two 120mm ARGB fans to the radiator using the long screws. Determine the optimal mounting location in your PC case (e.g., top, front, or rear) and secure the radiator assembly. Ensure proper airflow direction (intake or exhaust).
- 5. Connect Cables:**
 - Connect the pump's 3-pin power cable to a dedicated AIO_PUMP or CPU_FAN header on your motherboard.
 - Connect the fan PWM cables to CPU_FAN and/or SYS_FAN headers on your motherboard.
 - Connect the ARGB cables from the pump and fans to the included wired ARGB controller. If your motherboard has a 3-pin 5V ARGB header, you can connect them directly to the motherboard using the 1-to-3 ARGB splitter cable for

software control.

- Connect the ARGB controller's SATA power connector to your power supply.

6. **Cable Management:** Route all cables neatly to ensure proper airflow and a clean build.

7. **Power On and Test:** Before closing your PC case, power on your system to verify that the pump and fans are operating correctly and the ARGB lighting is functioning. Monitor CPU temperatures during initial use.

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Video 1: An official Cooler Master video demonstrating the installation process and features of a MasterLiquid AIO cooler. This video provides a visual guide to the steps outlined above.

OPERATION

Once installed, the MasterLiquid ML240R ARGB operates automatically to cool your CPU. The pump circulates coolant through the system, and the fans dissipate heat from the radiator.

ARGB Lighting Control

- **Wired ARGB Controller:** Use the included wired controller to cycle through various lighting modes, colors, and effects. Refer to the controller's specific instructions for button functions.
- **Motherboard Software Control:** If connected to a compatible 3-pin 5V ARGB header on your motherboard, you can control the lighting using your motherboard's RGB software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, Gigabyte RGB Fusion, ASRock Polychrome Sync). This allows for synchronization with other ARGB components in your system.

Fan Speed Control

The MF120 PWM fans are designed to adjust their speed based on CPU temperature, providing optimal cooling performance while minimizing noise. This is typically managed by your motherboard's BIOS/UEFI settings or fan control software.

MAINTENANCE

The MasterLiquid ML240R ARGB is a closed-loop system and requires minimal maintenance. It does not require refilling or regular fluid checks.

- **Dust Cleaning:** Periodically inspect the radiator fins and fan blades for dust accumulation. Use compressed air or a soft brush to gently remove dust, ensuring optimal airflow and cooling efficiency.
- **Tubing Inspection:** Occasionally check the FEP tubing for any signs of kinks, damage, or leaks. While designed to be kink-free and durable, visual inspection is recommended.
- **Pump Noise:** A slight hum from the pump is normal. If you notice unusual grinding or loud noises, refer to the troubleshooting section.

TROUBLESHOOTING

If you encounter issues with your MasterLiquid ML240R ARGB, try the following steps:

- **High CPU Temperatures:**
 - Ensure the pump is securely mounted to the CPU and making good contact.
 - Verify that the pump's power cable is properly connected to the motherboard and receiving power.
 - Check that the fans are spinning and installed in the correct orientation for airflow.
 - Clean any dust from the radiator fins.
 - Confirm that thermal paste was applied correctly and evenly.
- **Fans Not Spinning / No RGB:**

- Check all power connections (SATA for controller, fan headers on motherboard).
- Verify ARGB cable connections to the controller or motherboard header.
- If using motherboard software, ensure it is up-to-date and configured correctly.

- **Unusual Pump Noise:**

- Ensure the pump is mounted vertically if possible, or at least not at the highest point in the loop, to prevent air bubbles from accumulating in the pump.
- Allow some time for air bubbles to settle in the radiator.
- If noise persists and performance is affected, contact Cooler Master support.

TECHNICAL SPECIFICATIONS

Feature	Specification
Model Number	MLX-D24M-A20PC-R1
Product Dimensions	12.99 x 11.02 x 5.63 inches
Item Weight	4.16 Pounds
Cooling Method	Water Cooling
Radiator Size	240mm
Fan Type	MF120 PWM Addressable RGB
Fan Air Flow	66.7 CFM (Cubic Feet Per Minute)
Fan Noise Level	30.0 dB (Manufacturer stated) / 32 dB (Amazon spec)
Maximum Fan Rotational Speed	1200 RPM
Pump Type	Dual Chamber Pump
Pump Voltage	12 Volts
Power Connector Type	3-Pin (Pump)
Compatible Devices	Desktop PCs
CPU Socket Support	Intel: LGA2066, LGA2011 v3, LGA2011, LGA1151, LGA1150, LGA1156, LGA1155, LGA1366 AMD: AM4, AM3+, AM3, AM2+, AM2, FM2+, FM2, FM1

WARRANTY AND SUPPORT

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

For technical support, troubleshooting assistance, or to inquire about replacement parts, please visit the Cooler Master official support website:

Cooler Master Support

When contacting support, please have your product model number (MLX-D24M-A20PC-R1) and proof of purchase readily available.

