

Enermax ELC-LMF420T-ARGB

# ENERMAX LIQMAXFLO 420mm A-RGB AIO CPU Liquid Cooler

## INSTRUCTION MANUAL

Model: ELC-LMF420T-ARGB

### 1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your ENERMAX LIQMAXFLO 420mm A-RGB AIO CPU Liquid Cooler. This all-in-one liquid cooling system is designed to provide efficient thermal management for your CPU, featuring a high-performance pump, a thick radiator, and pressure-optimized fans with addressable RGB lighting. Please read this manual thoroughly before installation and use to ensure proper function and longevity of your product.

### 2. Package Contents

Verify that all components listed below are present in your package:

- LIQMAXFLO 420mm A-RGB AIO Cooler (Radiator, Pump/Water Block, Tubes, Fans pre-installed)
- Mounting Hardware for Intel LGA 1700/1200/115X/2066/2011-3/1366 sockets
- Mounting Hardware for AMD AM5/AM4/AM3+/FM2+/FM1 sockets
- 100ml Coolant Bottle for Refill
- Thermal Grease (Pre-applied Dow Corning TC-5888 and an extra tube)
- 3x Tube Clips
- User Manual

### 3. Specifications

Feature	Specification
Model Number	ELC-LMF420T-ARGB
Radiator Size	420mm

Feature	Specification
Radiator Thickness	38mm
Pump Speed	Up to 3000 RPM
VRM Fan Size	60mm
Fan Size	140mm FDB PWM Fan
Noise Level	25.47 Decibels (Max)
Power Connector Type	8-Pin + 3-Pin
Voltage	12 Volts
Wattage	6.1 watts
Cooling Method	Fan, Water
Compatible Devices	Desktops, Servers
Material	Metal
Item Weight	11.92 pounds

## 4. Installation

Before beginning installation, ensure your system is powered off and disconnected from the power source. Refer to your motherboard manual for specific CPU socket information.

### 4.1. Prepare the CPU Socket

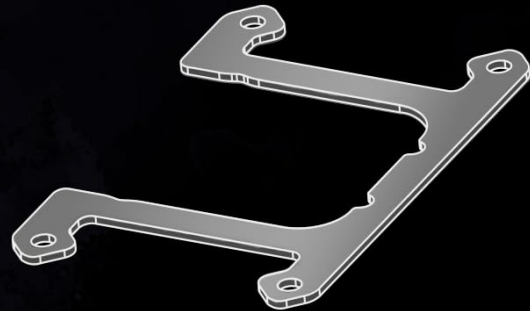
Identify your CPU socket type (Intel or AMD) and select the appropriate mounting brackets from the package. Attach the chosen backplate to the motherboard if required by your socket type.

# EXTENSIVE COMPATIBILITY

Quick and easy installation with latest Intel and AMD sockets.



Intel



AMD

## CPU & Socket Compatibility

Intel Socket: LGA

1700/1200/115x/2066/2011/2011-3/1366

AMD Socket: AM5/AM4/AM3+/FM2+/FM1

Image: Intel and AMD CPU mounting brackets for various socket types. Ensure you select the correct set for your motherboard.

## 4.2. Mount the Radiator and Fans

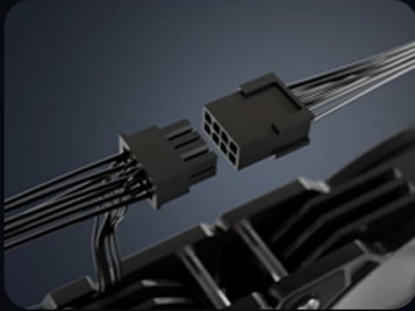
Determine the optimal mounting location for the 420mm radiator within your PC case. Common locations include the top or front of the case. Secure the radiator using the provided screws. The three 140mm fans are pre-installed on the radiator and feature a daisy-chain cable design for simplified wiring.

## 4.3. Install the Water Block/Pump

The water block comes with premium Dow Corning TC-5888 thermal grease pre-applied. Carefully align the water block with the CPU and secure it using the appropriate mounting hardware for your socket. Ensure even pressure for optimal thermal contact. The pump cover is magnetic and can be rotated 90 degrees to align the Enermax logo correctly after installation.

# Ease of Installation.

## Daisy-Chain Cables



## 3x Tube Clips



## Pre-Applied Thermal Paste

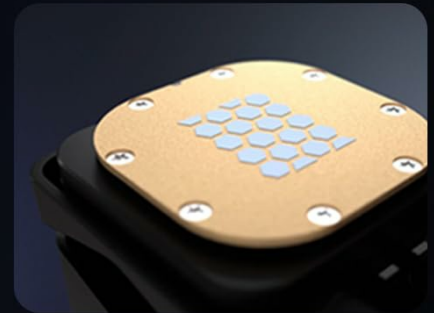


Image: Demonstrates the daisy-chain cable design for fans, pre-applied thermal paste on the cold plate, and the included tube clips for cable management.

## 4.4. Connect Cables

Connect the pump's 3-pin power connector to an available fan header on your motherboard (typically labeled 'AIO\_PUMP' or 'CPU\_FAN'). Connect the fan's PWM connector to a CPU fan header. Connect the A-RGB cables from the fans and pump to your motherboard's 5V A-RGB header or a compatible RGB controller. Use the included tube clips to manage the tubing and cables for a tidy build.

## 5. Operation

### 5.1. PWM Control

The LIQMAXFLO cooler features a fully PWM-controlled design, allowing automatic adjustment of the pump, VRM fan, and radiator fans based on CPU temperature. This ensures optimal balance between cooling performance and noise levels. Configure fan curves in your motherboard's BIOS/UEFI settings or through compatible software for personalized control.

## 5.2. VRM Fan Function

The integrated 60mm VRM fan on the water block actively cools the Voltage Regulator Modules (VRMs) and surrounding components on your motherboard. This helps maintain system stability and extends the lifespan of critical components, especially during heavy workloads.

### Ultra Cooling with More Airflow.

With fan speed up  
to 3,000rpm, the  
VRM fan reduces  
temp of nearby  
components

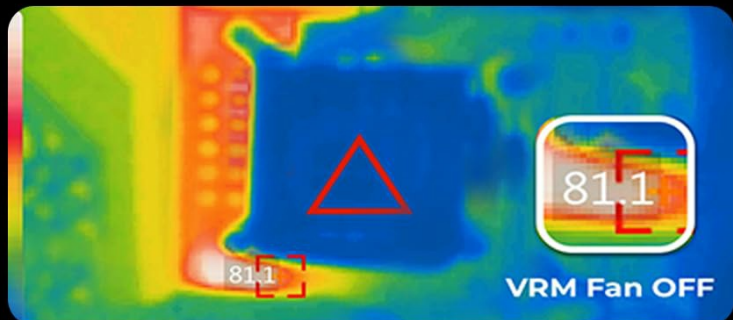
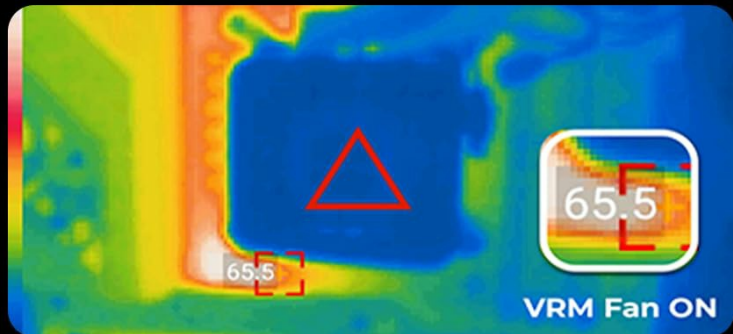
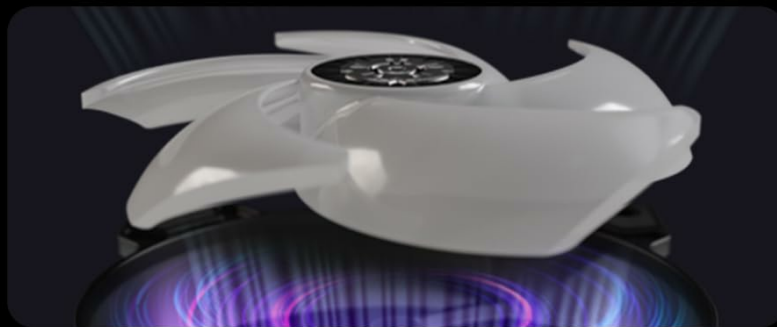


Image: Illustrates how the VRM fan on the water block directs airflow to cool the motherboard's VRM area, reducing component temperatures.

## 5.3. A-RGB Lighting Synchronization

The A-RGB lighting on the fans and pump can be synchronized with compatible motherboard software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, GIGABYTE RGB Fusion, ASRock Polychrome Sync) or an external A-RGB controller. Connect the A-RGB cables to the appropriate 5V 3-pin header on your motherboard to control lighting effects.





## Silent, Pressure Optimized.

5 blades scoop-design focuses airflow and generates high static pressure

Image: Close-up view of the pressure-optimized fan blades, designed to focus airflow and generate high static pressure for effective cooling through the radiator.

## 6. Maintenance

### 6.1. Radiator Refill

The LIQMAXFLO radiator features a refillable design, allowing for easy coolant top-off as needed over time. A 100ml bottle of coolant is included for this purpose. To refill, carefully unscrew the refill port on the radiator, add coolant, and securely close the port. Refer to the specific instructions provided with the coolant for best practices.

# Thick, Refillable Radiator.

# Better performance compare to standard 27mm-thick radiator

# 38mm



Refillable design for easy top-off as needed



\*100 ml bottle of coolant is included

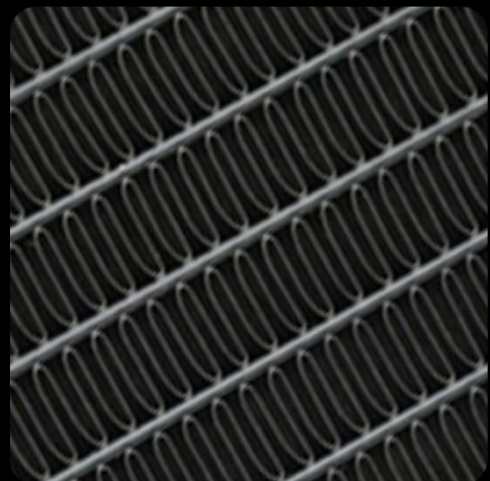


Image: Shows the 38mm thick radiator, highlighting its robust construction and the accessible refill port for coolant maintenance.

## 6.2. Cleaning

Periodically clean the radiator fins and fan blades to prevent dust buildup, which can impede airflow and reduce cooling efficiency. Use compressed air or a soft brush to gently remove dust. Ensure the system is powered off before cleaning.

## 7. Troubleshooting

- **No Power/Fans Not Spinning:** Check all power connections to the pump and fans. Ensure they are securely plugged into the motherboard headers. Verify power supply functionality.
- **High CPU Temperatures:** Confirm the water block is properly seated on the CPU with adequate thermal paste application. Check if the pump is operating (listen for a faint hum or feel for vibrations). Ensure radiator fans are spinning and not obstructed. Verify correct fan curve settings in BIOS.
- **RGB Not Working:** Ensure A-RGB cables are correctly connected to a 5V 3-pin header. Check motherboard software or external controller settings for proper configuration.
- **Unusual Noises:** A slight hum from the pump is normal. If you hear gurgling, it may indicate air in the loop;

tilting the case gently while the system runs can help circulate air out. Excessive fan noise may require adjusting fan curves or checking for obstructions.

## 8. Warranty and Support

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For warranty information, technical support, or further assistance, please visit the official Enermax website or contact their customer service. Keep your proof of purchase for warranty claims.

## 9. Product Overview Video

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Watch the official product video for a visual guide to the ENERMAX LIQMAXFLO Series CPU Cooler's features and design.

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Video: An official overview of the ENERMAX LIQMAXFLO Series CPU Cooler, showcasing its advanced features, including the dual-chamber pump, VRM fan, and ARGB lighting.