

ARCTIC ACFRE00180A

ARCTIC Liquid Freezer III Pro 360 - AIO CPU Cooler Instruction Manual

Model: ACFRE00180A

INTRODUCTION

The ARCTIC Liquid Freezer III Pro 360 is an all-in-one (AIO) liquid CPU cooler designed to provide efficient and quiet cooling for high-performance processors. It features a 360mm radiator, three 120mm PWM fans, a PWM-controlled pump, and an integrated VRM fan to ensure optimal thermal performance for your system. This manual provides detailed instructions for installation, operation, maintenance, and troubleshooting.

SETUP AND INSTALLATION

Before beginning the installation, please ensure your PC case has adequate space for a 360mm radiator and its fans. Refer to your case's specifications for compatibility.

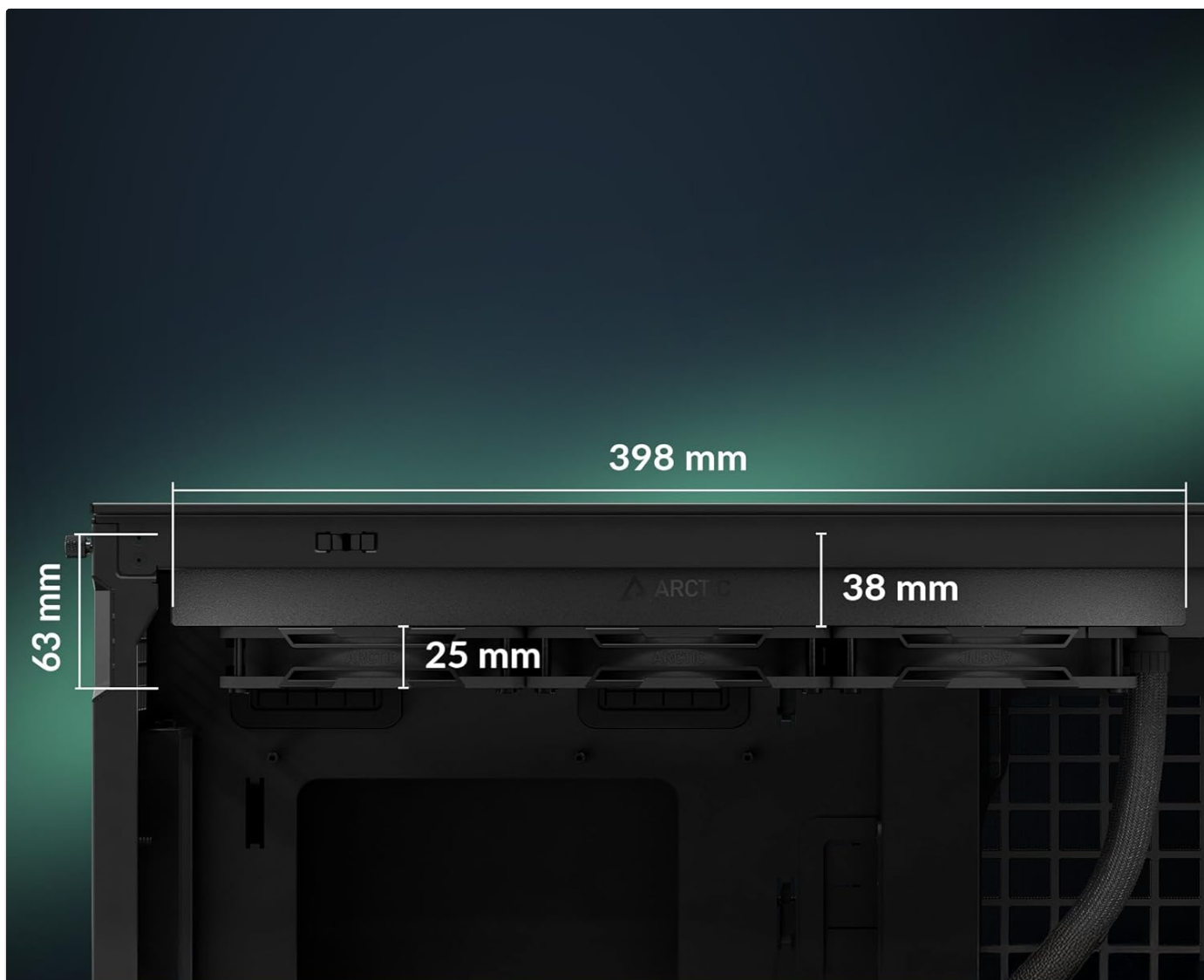
Component Overview



Image: The complete ARCTIC Liquid Freezer III Pro 360 AIO CPU Cooler, showcasing the radiator, three fans, pump, and tubing.

Pre-Installation Checks

- Verify your motherboard socket type (AMD AM5/AM4 or Intel LGA1851/1700).
- Confirm your PC case has sufficient clearance for the radiator and fans.

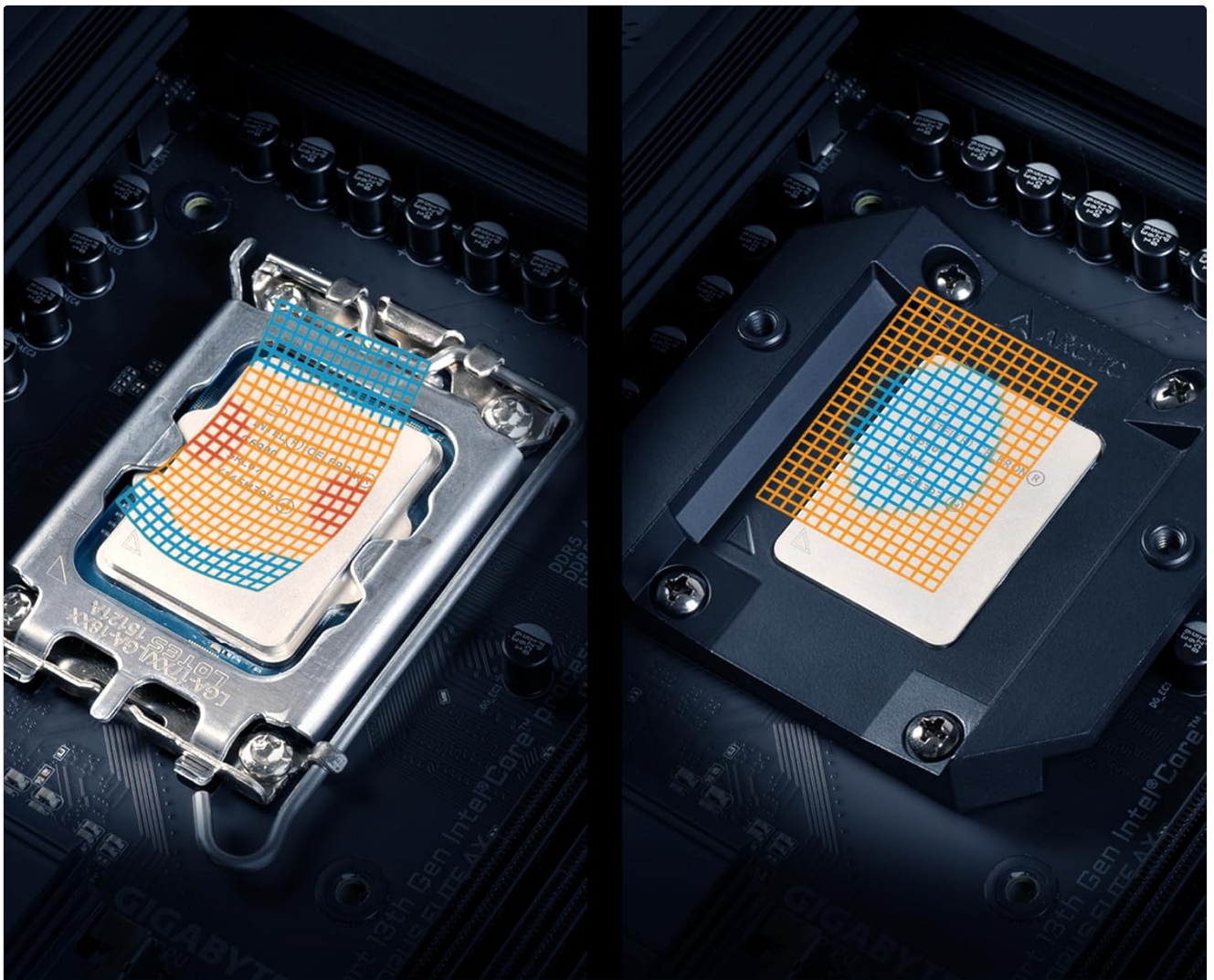


**Veillez vérifier la compatibilité
du boîtier**

Image: Radiator dimensions: 398 mm length, 63 mm height (including fans), 38 mm radiator thickness, 25 mm fan thickness. Ensure case compatibility before installation.

Installation Steps

1. **Prepare the CPU Socket:** For Intel LGA1851/1700, install the included contact frame to optimize pressure distribution.



LGA1851 | LGA1700 Cadre de contact

Image: LGA1851 | LGA1700 Contact Frame: Image showing the optimized contact frame for Intel LGA1851 and LGA1700 sockets, designed for better pressure distribution and heat dissipation.

2. **Apply Thermal Paste:** The cooler comes with pre-applied thermal paste. If reapplying, ensure the CPU surface is clean before applying a thin, even layer.
3. **Mount the Cold Plate:** Position the cold plate onto the CPU. The cooler features native offset mounting for both AMD and Intel, shifting the cold plate center towards the CPU hotspot for more efficient heat transfer. Secure it with the appropriate mounting hardware for your socket.

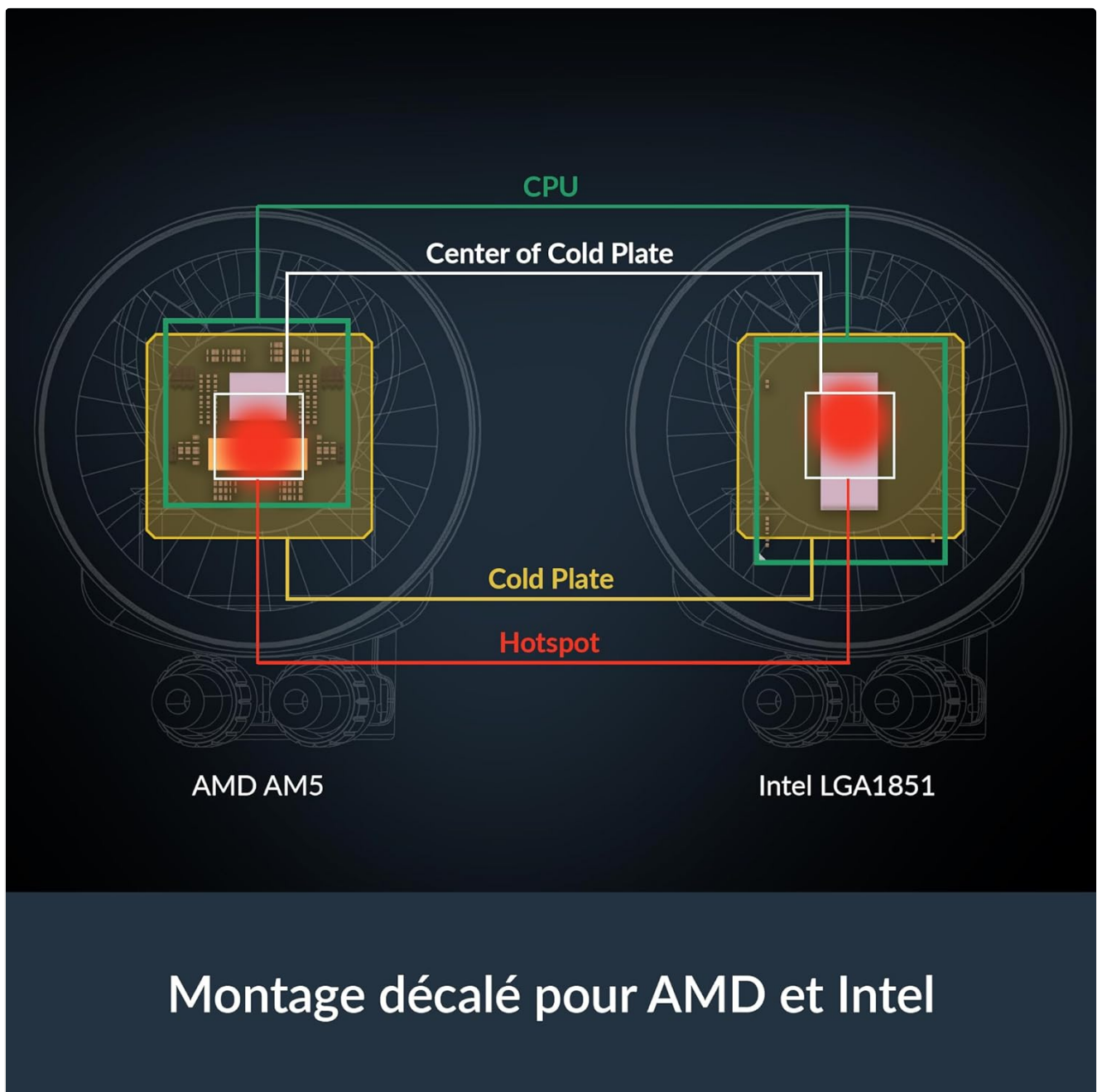


Image: Native Offset Mounting for AMD and Intel: Diagram illustrating the shifted cold plate center towards the CPU hotspot for improved heat transfer on AMD AM5 and Intel LGA1851/1700 sockets.

4. **Install the Radiator:** Mount the 360mm radiator to an available fan mount in your PC case. Ensure proper airflow direction (intake or exhaust) based on your case's cooling design.
5. **Connect Cables:** The PWM cables of the radiator fans are integrated into the sleeve of the tubes for simplified cable management. Connect the main All-In-One cable to your motherboard's CPU_FAN header. The integrated VRM fan also connects via PWM.



Ventilateurs préinstallés et gestion intégrée des câbles

Image: Pre-installed Fans and Integrated Cable Management: An illustration of the cooler installed in a PC case, highlighting the pre-installed fans and the integrated cable management system where PWM cables are routed within the tubing sleeves.



Image: Wiring Options: Diagram showing two wiring configurations: 'Full Control' with separate connections for VRM Fan, Radiator Fan, and Pump, and 'Simple Control' with a single All-In-One connection to the motherboard.

OPERATION

The ARCTIC Liquid Freezer III Pro 360 operates automatically based on your motherboard's fan control settings. The PWM (Pulse Width Modulation) control allows for precise adjustment of fan and pump speeds according to CPU temperature, ensuring optimal cooling performance and noise levels.

Fan and Pump Control

- The ARCTIC P12 Pro fans offer high performance across various speeds, providing excellent airflow and static pressure.



Vitesse du ventilateur
400–3000 tr/min



Pression statique
6,9 mm H₂O



Débit d'air
77 cfm | 131 m³/h



Ventilateur ARCTIC P12 Pro

Image: ARCTIC P12 Pro Fan Specifications: Fan Speed: 400-3000 RPM, Static Pressure: 6.9 mm H₂O, Airflow: 77 CFM (131 m³/h).

- The integrated VRM fan actively cools the voltage regulator modules on your motherboard, contributing to overall system stability and longevity.

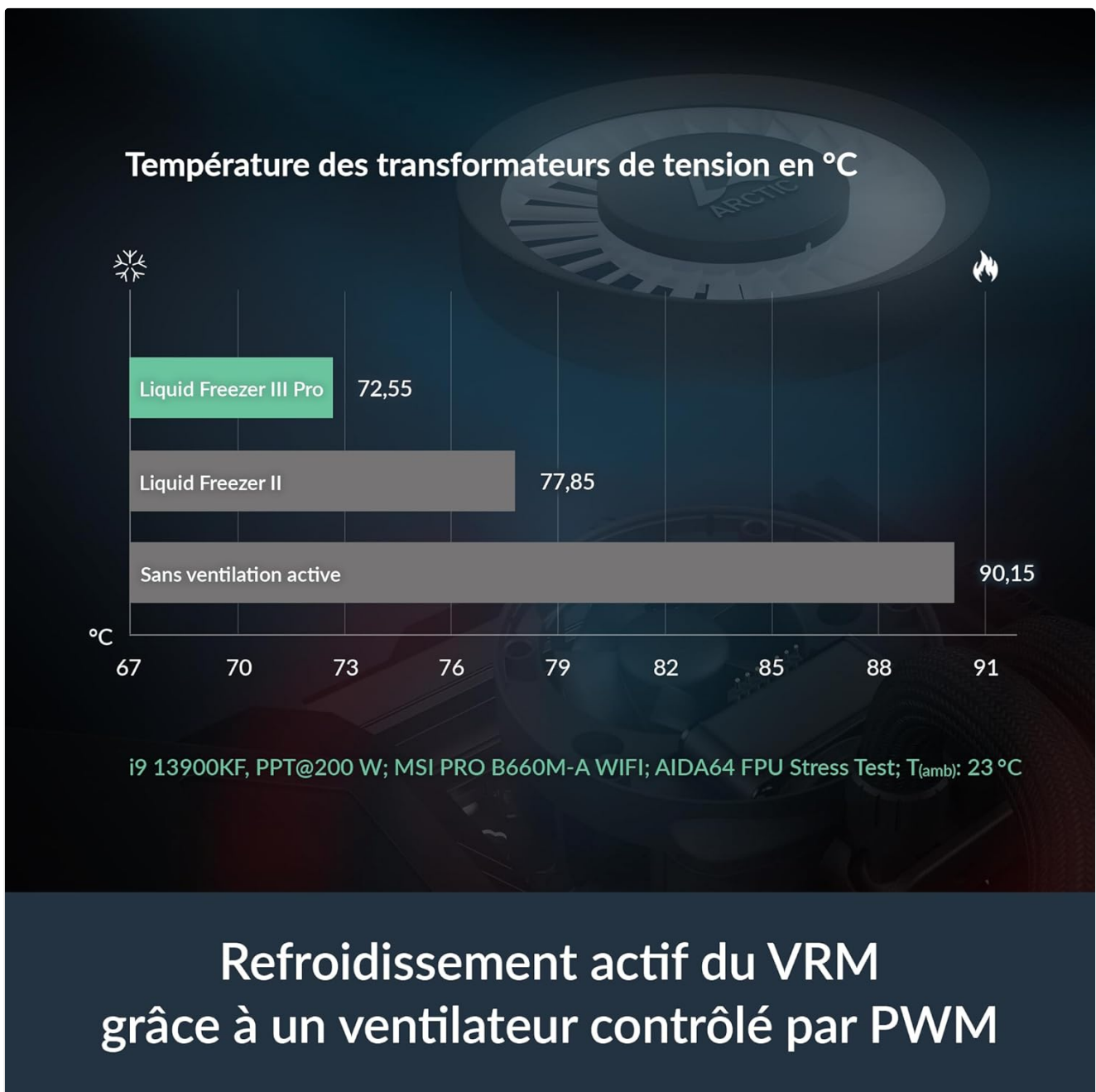


Image: Integrated VRM Fan Performance: A bar chart comparing Voltage Regulator Module (VRM) temperatures in Celsius. The Liquid Freezer III Pro shows significantly lower temperatures (72.55°C) compared to Liquid Freezer II (77.85°C) and without active ventilation (90.15°C), demonstrating the effectiveness of the PWM-controlled VRM fan.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your ARCTIC Liquid Freezer III Pro 360.

- **Dust Cleaning:** Periodically clean the radiator fins and fan blades to prevent dust buildup, which can impede airflow and cooling efficiency. Use compressed air or a soft brush.
- **Check Connections:** Ensure all fan and pump cables are securely connected to the motherboard.
- **Inspect Tubing:** Occasionally check the tubing for any signs of kinks or damage.
- **Thermal Paste:** While the pre-applied thermal paste is durable, consider reapplying high-quality thermal paste every few years for sustained performance.

TROUBLESHOOTING

If you encounter issues with your cooler, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
High CPU Temperatures	Improper cold plate contact; Insufficient thermal paste; Dust buildup on radiator; Incorrect fan orientation; Pump malfunction.	Re-seat cold plate, ensure even pressure; Reapply thermal paste; Clean radiator and fans; Correct fan direction for optimal airflow; Check pump connection and function.
Excessive Fan Noise	High fan speed settings; Obstruction in fan blades; Loose fan screws.	Adjust fan curve in BIOS/UEFI; Clear any obstructions; Tighten fan screws.
Pump Noise/Gurgling	Air bubbles in the loop; Pump running at low RPM.	Orient radiator with tubes at the bottom if possible; Run pump at 100% for a few minutes to clear bubbles; Adjust pump speed in BIOS/UEFI.
No Fan/Pump Operation	Loose power connection; Incorrect motherboard header connection; Faulty component.	Check all power and signal connections; Ensure connection to CPU_FAN or AIO_PUMP header; Contact support if components are unresponsive.

TECHNICAL SPECIFICATIONS

Feature	Specification
Model Number	ACFRE00180A
Product Dimensions	15.7"L x 4.7"W x 2.9"H (398mm x 119mm x 74mm)
Cooling Method	Liquid
Compatible Devices	CPU (AMD AM5/AM4, Intel LGA1851/1700)
Radiator Size	360mm (38mm thick)
Fan Type	3 x ARCTIC P12 Pro 120mm Fans
Fan Speed	400-3000 RPM (Max Rotational Speed)
Air Flow Capacity	77 Cubic Feet Per Minute (CFM)
Pump Type	PWM Controlled
VRM Fan	Integrated, PWM Controlled
Power Connector Type	4-Pin
Voltage	12 Volts
Wattage	3.96 watts
UPC	840033402927

WARRANTY AND SUPPORT

ARCTIC products are manufactured to the highest quality standards. For detailed warranty information, please refer to the official ARCTIC website or the warranty card included with your product.

For further assistance, technical support, or warranty claims, please contact ARCTIC customer service through their official website. You can also find the comprehensive user manual in PDF format [here](#).

