Thermalright Frozen Infinity 360 Black

Thermalright Frozen Infinity 360 Black CPU Water Cooler User Manual

Model: Frozen Infinity 360 Black

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Thermalright Frozen Infinity 360 Black CPU Water Cooler. Please read this manual thoroughly before installation and use to ensure optimal performance and longevity of your product.



Image 1.1: The Thermalright Frozen Infinity 360 Black CPU Water Cooler, showcasing the radiator with three fans and the water block with its infinity mirror design.

2. Safety Information

Always observe the following safety precautions to prevent injury or damage to the product:

- Ensure all power is disconnected from your computer before installation or maintenance.
- Handle components with care to avoid damage to delicate parts.
- Do not attempt to disassemble the water block or radiator, as this may void the warranty and cause leaks.
- Keep out of reach of children.
- Avoid contact with liquid coolant. In case of contact, rinse immediately with water.

3. Package Contents

Verify that all components are present in the package:

- Thermalright Frozen Infinity 360 Black CPU Liquid Cooler (Radiator, Pump, and Fans pre-installed)
- Mounting hardware for Intel LGA1150/1151/1155/1156/1200/2011/2066/1700/1851 sockets
- Mounting hardware for AMD AM4/AM5 sockets
- Y-type adapter cable
- Conduit pipe snaps
- User Manual (this document)

Note: The pre-installed fans on the cold drain and the included conduit pipe snaps simplify installation and cable management.

4. Setup and Installation

The Thermalright Frozen Infinity 360 Black CPU Water Cooler is designed for broad compatibility with both Intel and AMD platforms. Follow these steps for proper installation.

4.1. Compatibility Check

Ensure your motherboard and CPU socket are compatible with the cooler:

- **Intel:** LGA1150, LGA1151, LGA1155, LGA1156, LGA1200, LGA2011, LGA2066, LGA1700, LGA1851
- **AMD:** AM4, AM5

The cooler's dimensions are: Radiator: 397mm x 120mm x 52mm (including fan), Cold Header: 63mm x 63mm x 60mm, Fan: 124mm x 120mm x 25mm. Ensure your PC case has adequate space for a 360mm radiator.

4.2. Installation Steps

Before beginning, ensure your system is powered off and unplugged. Refer to the included installation video (if available) for visual guidance.

1. **Prepare Motherboard:** Install the appropriate backplate and standoffs for your CPU socket (Intel or AMD).
2. **Apply Thermal Paste:** Apply a small amount of thermal paste to the center of your CPU's integrated heat spreader (IHS).
3. **Mount Water Block:** Carefully place the water block onto the CPU, aligning the mounting holes with the standoffs. Secure it with the provided screws, tightening them in a diagonal pattern until snug.
4. **Mount Radiator:** Install the radiator with the pre-installed fans into your PC case. Common mounting locations include the top or front of the case. Use the appropriate screws to secure the radiator.
5. **Connect Fans and Pump:**
    - Connect the fan PWM cables to your motherboard's fan headers. Use the included Y-type adapter cable if your motherboard has insufficient fan headers.
    - Connect the pump's power cable to a dedicated AIO_PUMP or CPU_FAN header on your motherboard.
    - Connect the RGB cables from the fans and water block to your motherboard's 5V 3-pin ARGB header.
6. **Cable Management:** Use the conduit pipe snaps to organize the water tubes and other cables for a clean build and improved airflow.



Image 4.1: The Thermalright Frozen Infinity 360 Black CPU Water Cooler installed within a computer case, demonstrating its fit and aesthetic.

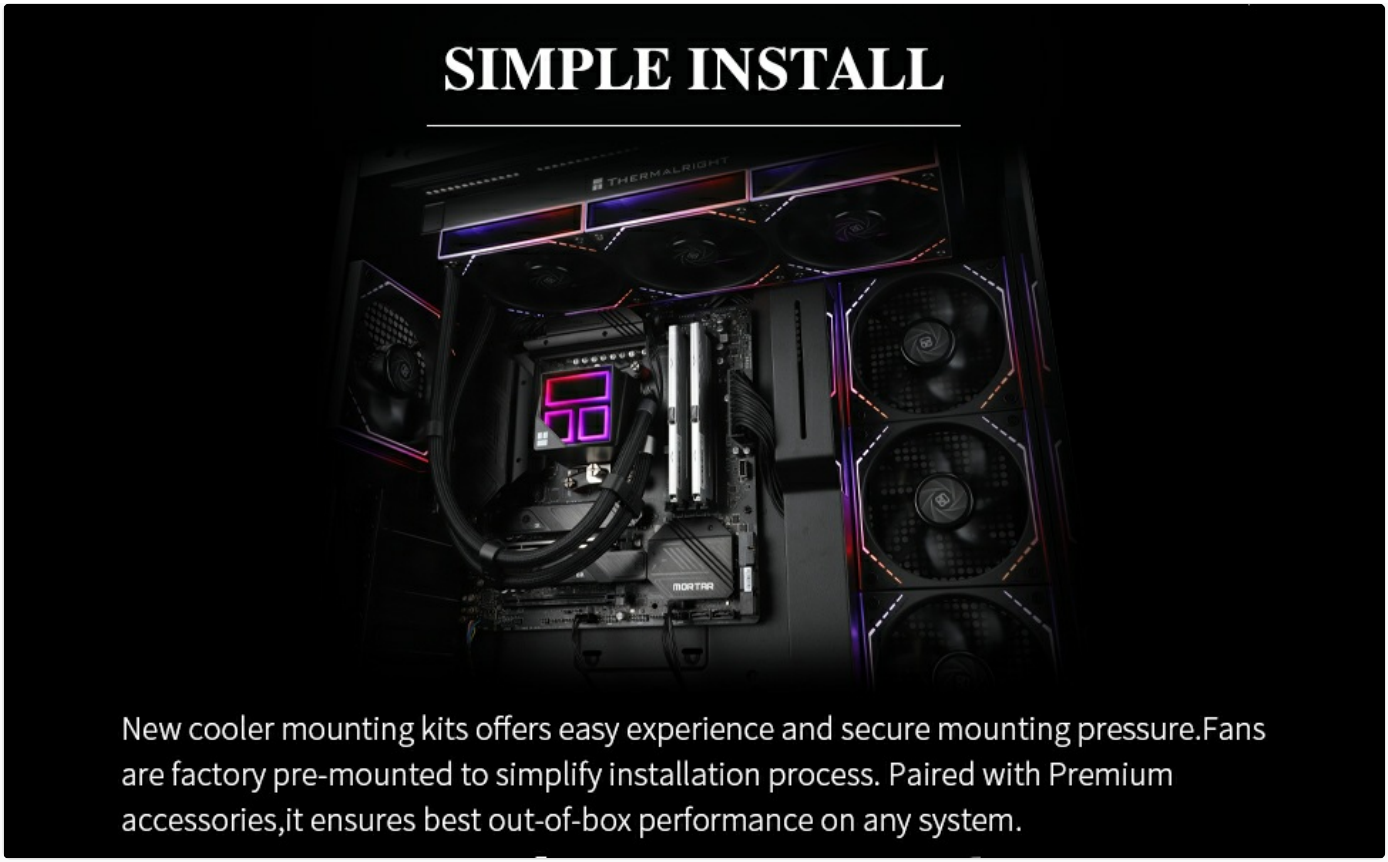


Image 4.2: A visual representation highlighting the simple installation process and pre-mounted fans of the cooler.

5. Operating Instructions

Once installed, the Thermalright Frozen Infinity 360 Black will automatically manage CPU temperatures. Here's how to optimize its operation:

5.1. Fan and Pump Control

The TL-M12 PWM fans and the water pump are designed for high-speed operation to ensure efficient cooling. Their speed is controlled by your motherboard's BIOS/UEFI settings or dedicated fan control software, based on CPU temperature.

- **PWM Control:** The fans utilize PWM (Pulse Width Modulation) for precise speed control, allowing them to adjust automatically according to system load.
- **Noise Level:** At maximum speed, the running noise is ≤28.2 dB(A), ensuring quiet operation under most loads.



Image 5.1: Detailed view of the TL-M12 fan, highlighting features like shock-absorbing silicone pads, PBT+PC material, 68.9CFM airflow, S-FDB bearing, 2000RPM±10% quiet fan operation, and 4PIN PWM connector.

5.2. RGB Lighting Control

Both the water block and fans are equipped with addressable RGB (ARGB) lighting. This can be controlled and synchronized by supported motherboard software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, GIGABYTE RGB Fusion, ASRock Polychrome Sync) via the 5V 3-pin ARGB header connection.



Image 5.2: A close-up view of the water block, showcasing its vibrant infinity mirror RGB lighting effect.



Image 5.3: An image emphasizing the addressable RGB lighting on both the water block and fans, controllable via motherboard software.

6. Maintenance

The Thermalright Frozen Infinity 360 Black is designed for minimal maintenance. However, regular checks can ensure optimal performance:

- **Dust Removal:** Periodically clean dust from the radiator fins and fan blades using compressed air. Ensure fans are not spinning during cleaning.
- **Tube Inspection:** Check the water tubes for any signs of kinks, leaks, or damage. The tubes are protected by polymer sleeves to minimize liquid evaporation and extend lifespan.
- **Connections:** Ensure all power and RGB connections remain secure.

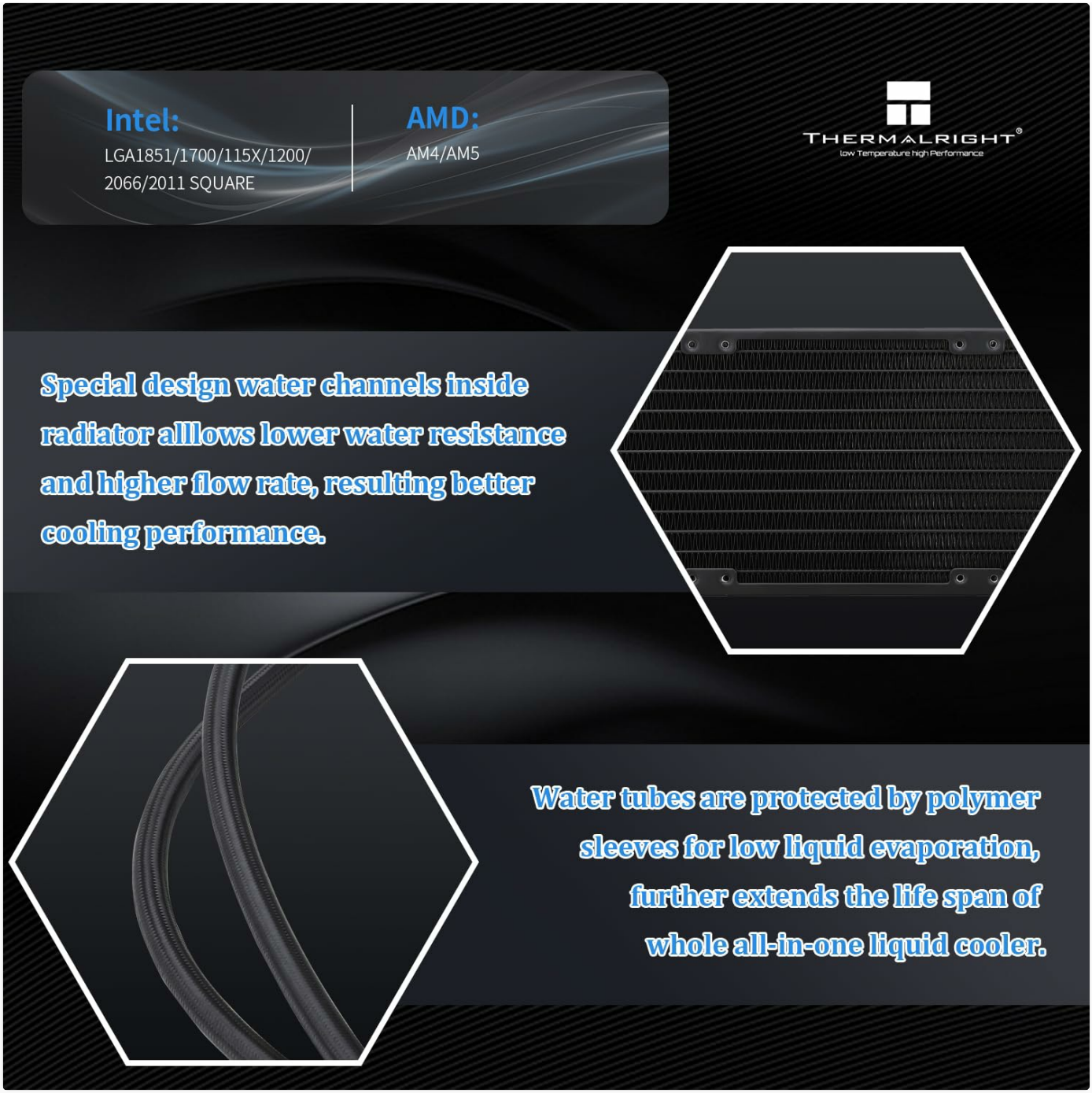


Image 6.1: A diagram illustrating the special design water channels within the radiator for improved flow and the polymer-sleeved water tubes for extended lifespan.

7. Troubleshooting

If you encounter issues with your Thermalright Frozen Infinity 360 Black, refer to the following common problems and solutions:

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
High CPU Temperatures	Insufficient thermal paste Water block not seated properly Fans not spinning or spinning too slow Pump not functioning Dust buildup on radiator	Reapply thermal paste Reseat water block, ensuring even pressure Check fan connections and BIOS settings for fan curves Verify pump connection and check BIOS for pump speed Clean radiator fins with compressed air
Fans or Water Block RGB Not Lighting Up	ARGB cable disconnected Incorrect ARGB header (e.g., 12V RGB instead of 5V ARGB) Software issue	Ensure 5V 3-pin ARGB cable is securely connected Connect to the correct 5V 3-pin ARGB header on your motherboard Restart RGB control software or reinstall motherboard's RGB utility
Unusual Noise from Cooler	Air bubbles in the loop (new installation) Fan bearing noise Pump noise	Tilt the PC case gently to help air bubbles move to the radiator. Run system for a few hours. Check fan mounting screws; ensure no cables are hitting fan blades. If pump noise persists, contact customer support.

If you have any questions or issues not covered here, please contact Thermalright customer service.

8. Specifications

Detailed technical specifications for the Thermalright Frozen Infinity 360 Black CPU Water Cooler:



Image 8.1: A detailed specification table for the Thermalright Frozen Infinity 360 Black, including dimensions, fan, and pump parameters.

Component	Parameter	Value
Heatsink	Water Block Dimensions	63mm * 63mm * 60mm
	Radiator Dimensions	397mm * 120mm * 27mm
	Material	Aluminum (Radiator)
TL-M12 Fan	Fan Dimensions	124mm * 120mm * 25mm
	Fan Rated Speed	2000RPM ±10%
	Fan Rated Noise	≤28.2 dB(A)
	Fan Airflow	68.9 CFM (MAX)
	Fan Static Pressure	2.21mm/H_2O (MAX)
	Fan Bearing Type	S-FDB Bearing
	Fan Connector	4PIN PWM
Pump	Pump Connector	DC 12V 4PIN
	Voltage	DC 12V
	Current	0.17A (MAX)
RGB	RGB Support	+5V 3PIN ARGB
General	Compatible Devices	Desktop

9. Warranty and Support

Thermalright products are manufactured to the highest quality standards. For warranty information and technical support, please refer to the official Thermalright website or contact their customer service directly.

Manufacturer: Thermalright

First Available Date: August 2, 2025

For further assistance, please visit the Thermalright Brand Store on Amazon or contact the seller "Thermalright Direct 2" for purchase-related inquiries.

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