Thermalright Frozen Prism 240 ARGB

Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler User Manual

Model: Frozen Prism 240 ARGB

Brand: Thermalright

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler. Please read this manual thoroughly before installation and use to ensure proper function and longevity of your product. Keep this manual for future reference.

Image: The Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler, showcasing its radiator with two ARGB fans and the illuminated waterblock.

What's in the Box

The Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler package includes the following components:

- 240mm Radiator with integrated pump and waterblock
- Two 120mm ARGB PWM Fans (TL-E12 series)
- Mounting hardware for AMD (AM4/AM5) and Intel (LGA1700/115X/1200/2011) sockets
- Thermal compound
- Fan hub
- ARGB splitter cable
- User Manual

Image: All components of the Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler, including the radiator, fans, waterblock, mounting hardware, and cables.

Setup and Installation

Follow these steps carefully to install your Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler. Refer to the video for visual guidance.

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Video: Thermalright Frozen Prism CPU Cooler Series Installation Guide. This video demonstrates the step-by-step process for installing the liquid CPU cooler on various motherboard sockets.

1. Motherboard Preparation

For AMD AM5/AM4 Motherboards:

1. Remove the motherboard's plastic CPU retention brackets. Keep the original backplate as it will be reused.
2. Install the four red standoffs into the motherboard's backplate screw holes.
3. Place the two metal AMD brackets onto the red standoffs.
4. Secure the metal brackets using the provided screws with a screwdriver.

For Intel LGA115X/1200 Motherboards:

1. Assemble the Intel backplate by inserting the four backplate screws through the inner mounting holes. Secure them with the blue washers.
2. Install the assembled Intel backplate from the backside of the motherboard, ensuring the screws pass through the motherboard mounting holes.
3. Install the four blue standoffs onto the backplate screws from the front side of the motherboard.
4. Place the two Intel brackets onto the standoffs, aligning the backplate screws through the LGA115X/1200 holes on the brackets.
5. Secure the brackets with the provided nuts.

For Intel LGA1700 Motherboards:

1. Assemble the Intel backplate by inserting the four backplate screws through the outer mounting holes. Secure them with the blue washers.
2. Install the assembled Intel backplate from the backside of the motherboard, ensuring the screws pass through the motherboard mounting holes.
3. Install the four blue standoffs onto the backplate screws from the front side of the motherboard.
4. Place the two Intel brackets onto the standoffs, aligning the backplate screws through the LGA1700 holes on the brackets.
5. Secure the brackets with the provided nuts.

2. Waterblock and Radiator Installation

1. Apply a small amount of the included thermal compound to the center of the CPU's Integrated Heat Spreader (IHS).
2. Carefully remove the protective sticker from the coldplate of the waterblock.
3. Position the waterblock onto the CPU, ensuring the waterblock bracket nuts align with the screws on the installed motherboard brackets.
4. Tighten the nuts in a diagonal pattern until the waterblock is securely mounted. Do not overtighten.
5. Install the radiator into your PC case. Typically, this is done at the top or front of the case. Use the short screws to secure the radiator to the case.

3. Cable Connections

1. Connect the 4-pin PWM headers from both fans to the included fan hub.

2. Connect the fan hub's main 4-pin PWM header to the CPU_FAN socket on your motherboard.
3. Connect the waterblock's 4-pin PWM header to either the CPU_OPT or WATER_PUMP socket on your motherboard to power the pump.
4. Connect the 3-pin ARGB headers from the fans to the ARGB splitter cable to sync lighting effects.
5. Connect the ARGB splitter cable's 3-pin ARGB header to the +5V ARGB lighting socket on your motherboard.

Image: The Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler fully installed inside a computer case, showing the illuminated fans and waterblock.

Operating Instructions

The Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler is designed for efficient and quiet operation with customizable lighting.

PWM Fan Control:

The included TL-E12 series fans feature PWM (Pulse Width Modulation) temperature control. This allows the CPU fan to automatically adjust its speed based on the CPU temperature, optimizing cooling performance and minimizing noise. Ensure the fan hub is connected to the CPU_FAN header on your motherboard for this

functionality.

ARGB Lighting Synchronization:

The ARGB lighting on both the CPU fans and the waterblock can be synchronized with your motherboard's 5V 3-pin ARGB header. This enables control over 16 million colors and various lighting effects through your motherboard's software. Connect the ARGB cables as described in the installation section to utilize this feature.

Waterblock Top Cover Adjustment:

The waterblock features a magnetic removable top cover. This allows for easy adjustment of the waterblock's orientation to ensure the Thermalright logo is correctly aligned after installation, enhancing the aesthetic appeal of your build.

Image: A close-up view of the Thermalright waterblock, highlighting its sleek octagonal design and vibrant addressable RGB lighting.

Maintenance

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

- **Dust 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.
- **Check Tubing:** Inspect the water tubes for any signs of kinks, leaks, or damage. Ensure they are not pressing against other components that could cause wear over time.
- **Fan Operation:** Listen for any unusual noises from the fans or pump. If a fan is making excessive noise or not spinning, check its connections.
- **Thermal Paste:** While not frequently required, if you remove the waterblock for any reason, it is recommended to clean off the old thermal paste and apply a fresh layer before reinstallation.

Troubleshooting

If you encounter issues with your Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler, refer to the following common troubleshooting tips:

Problem	Possible Cause	Solution
High CPU Temperatures	Insufficient thermal paste, improper waterblock contact, dust buildup on radiator, fans not spinning.	Reapply thermal paste, ensure waterblock is securely mounted, clean radiator and fans, check fan connections.
Fans Not Spinning / No ARGB Lighting	Loose cable connections, incorrect motherboard headers, faulty fan/ARGB controller.	Check all 4-pin PWM and 3-pin ARGB connections, ensure they are connected to the correct motherboard headers (+5V ARGB, CPU_FAN, CPU_OPT/WATER_PUMP).
Pump Noise / No Flow	Air bubbles in the loop, pump not receiving power, faulty pump.	Gently shake the case to dislodge air bubbles, check pump's 4-pin PWM connection to CPU_OPT/WATER_PUMP header.

Specifications

Detailed technical specifications for the Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler:

Image: A table detailing the specifications of the Thermalright Frozen Prism 240 Black ARGB Liquid CPU Water Cooler, including dimensions, fan speeds, noise levels, and power requirements.

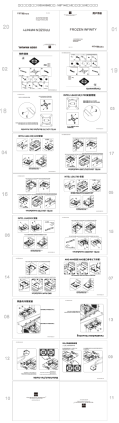
- **Water Block Dimensions:** 61.7mm * 61.7mm * 53mm
- **Radiator Dimensions:** 276mm * 120mm * 27mm
- **Water Pump Noise:** ≤23dBA
- **Water Pump Speed:** 3300RPM ±10%
- **Pump Rated Current:** 0.40 ±10%A

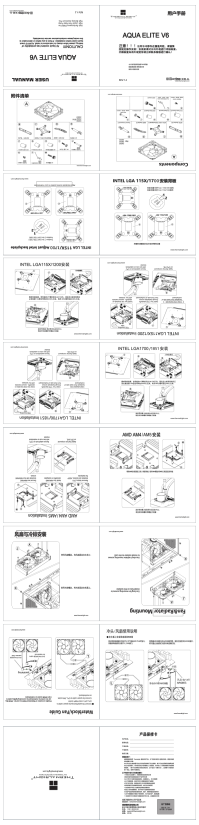
- **Pump Rated Power:** ≤4.8W
- **Pump Bearing:** Ceramic bearing
- **Pump Power:** DC 12V 4PIN
- **Pump Lighting Port:** +5V 3PIN ARGB
- **Pump Life Expectancy:** 40000hrs
- **Fan Model:** TL-E12B-S V2
- **Fan Dimensions:** 120mm * 120mm * 25mm
- **Fan Rated Speed:** 1850RPM ±10%
- **Fan Rated Noise:** ≤27dBA
- **Fan Air Flow:** 70.4CFM (MAX)
- **Fan Static Pressure:** 2.64mm/H2O (MAX)
- **Fan Connector:** 4PIN PWM
- **Fan Rated Voltage:** DC 12V
- **Fan Rated Current:** 0.18A (MAX)
- **Fan Bearing Type:** S-FDB Bearing
- **Fan Lighting Port:** +5V 3PIN ARGB
- **Compatible Devices:** Desktop
- **Cooling Method:** Air, Water
- **Material:** Aluminum, Copper

Warranty and Support

For warranty information and technical support, please refer to the official Thermalright website or contact your retailer. Keep your proof of purchase for warranty claims.

Related Documents - Frozen Prism 240 ARGB

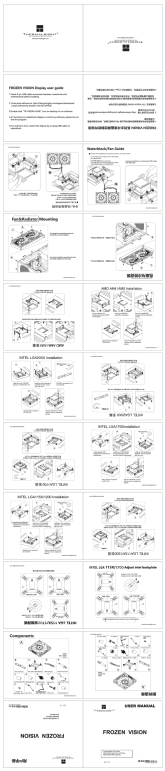
	Thermalright Frozen Infinity AIO CPU Cooler Installation Guide Comprehensive installation guide for the Thermalright Frozen Infinity series of All-In-One (AIO) liquid CPU coolers, covering mounting hardware for Intel and AMD sockets, radiator and fan installation, and thermal paste application.



[Thermalright Aqua Elite V6 CPU Cooler User Manual]

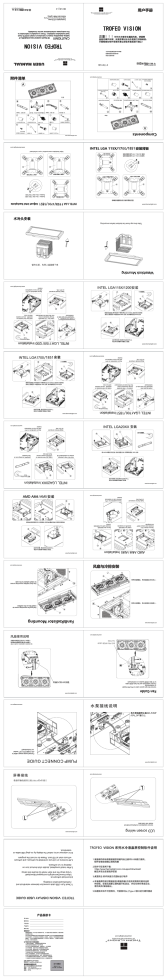
User manual for the Thermalright Aqua Elite V6 CPU cooler, detailing installation instructions for Intel LGA 1700/1851 and LGA 115X/1200, and AMD AM4/AM5 sockets, along with fan and radiator mounting and RGB connection. Includes warranty information.

	Thermalright Grand Vision ARGB Series AIO Liquid Coolers Installation Guide Installation and user guide for the Thermalright Grand Vision ARGB series All-In-One liquid CPU coolers, detailing features, installation steps, specifications, and compatibility for PC builders.



[Thermalright Frozen Vision 240/360 ARGB Liquid CPU Cooler Installation Guide]

Detailed installation guide for Thermalright Frozen Vision 240 and 360 ARGB liquid CPU coolers, covering essential setup, software, and connectivity for PC builders.



[Thermalright Trofeo Vision 360 ARGB CPU Cooler - Installation and User Guide]

Comprehensive guide for the Thermalright Trofeo Vision 360 ARGB CPU cooler, detailing its features, components, and installation process. Available in black and white.

	Thermalright Assassin Spirit 120 EVO CPU Cooler Installation Guide and Specifications Comprehensive guide for installing the Thermalright Assassin Spirit 120 EVO CPU Cooler. Features compatibility with Intel LGA1700/115x and AMD AM4/AM5 sockets, ARGB lighting, and detailed component descriptions.