

## Thermalright Frozen Notte 240 ARGB V2

# Thermalright Frozen Notte 240 WHITE ARGB V2 CPU Liquid Cooler Instruction Manual

Model: Frozen Notte 240 ARGB V2

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of your Thermalright Frozen Notte 240 WHITE ARGB V2 CPU Liquid Cooler. Please read this manual thoroughly before installation to ensure proper setup and optimal performance. This All-in-One (AIO) liquid cooler is designed to provide efficient cooling for your CPU while offering customizable ARGB lighting effects.

## 2. PRODUCT OVERVIEW

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The Thermalright Frozen Notte 240 WHITE ARGB V2 is a high-performance liquid cooling system featuring a 240mm radiator, two 120mm PWM ARGB fans, and a high-efficiency pump. Its design focuses on low resistance, high cooling capacity, and long-term reliability.

### 2.1 Key Features

- **Efficient Cooling System:** 240mm copper mirror base and black aluminum fin cooling plate with polymer-protected tubing.
- **Addressable RGB (ARGB) Lighting:** Standard 120mm fans and pump head with ARGB LEDs, synchronized with motherboard via 3-pin 5V header. Offers delicate colorful light effects.
- **High-Performance Pump:** High-quality copper base with 0.1mm micro-channels, aluminum alloy cover, and high-strength acrylic mirror-effect top. Pump speed up to 5300 RPM  $\pm$  10%, with a lifespan of up to 40,000 hours.
- **Optimized Fans:** Two TL-E12W-S V2 120x120x25mm fans with speeds up to 2000 RPM  $\pm$  10%, noise level  $\leq$  27.7 dBA. Features 4-pin PWM interface, S-FDB V2 bearings, and air pressure of 2.87 mmH<sub>2</sub>O (MAX) and airflow of 72.37 CFM (MAX).
- **Broad Compatibility:** Supports Intel LGA 1150/1151/1155/1156/1200/1700/2011/2066 and AMD AM4/AM5/AM2/AM2+/AM3+/FM1/FM2/FM2+.

### 2.2 Components Included

The package includes the liquid CPU radiator and all necessary mounting hardware for various CPU sockets.

- 240mm Radiator with Integrated Pump/Waterblock
- 2 x TL-E12W-S V2 120mm ARGB PWM Fans
- Mounting Brackets for Intel and AMD Sockets
- Backplates (if required for specific sockets)
- Screws and Fasteners
- Thermal Paste (pre-applied or in a tube)
- ARGB and PWM Splitter Cables (if applicable)



*Image: Overview of the Thermalright Frozen Notte 240 WHITE ARGB V2 All-in-One CPU Liquid Cooler, showing the radiator, fans, and pump/waterblock.*

# FROZEN NOTTE 240 WHITE ARGB V2

ALL-in-One CPU-Flüssigkeitskühler



*Image: Thermalright Frozen Notte 240 WHITE ARGB V2 CPU Liquid Cooler installed in a PC case, showcasing its white design and ARGB lighting.*

## 3. SETUP AND INSTALLATION

Before beginning installation, ensure your system is powered off and unplugged. Refer to your motherboard manual for specific CPU socket information and clearance requirements.

### 3.1 CPU Socket Compatibility

## LEISTUNG RUND UMS DESIGN



Die hocheffiziente Wasserpumpe befindet sich auf Gummischläuchen für eine optimale Vibrationskontrolle und einen besseren Kühlmitteldurchfluss. Mit zusätzlichen Mikroflossen auf Vollkupferkühlplatten und einem großflächigen Kühler, der TL-E12W-S V2-Lüfter mit hohem statischen Druck kombiniert. Thermalright FROZEN NOTTE AIO Flüssigkeitskühler ist mit fortschrittlichen Methoden zum Abkühlen von CPUs ausgestattet

*Image: Diagram showing compatible Intel (LGA1851/1700/1200/115X/2011 Square/2066) and AMD (AM4/AM5/FM1/FM2/FM2+/AM2/AM2+/AM3/AM3+)*

This cooler supports a wide range of Intel and AMD sockets. Ensure you use the correct mounting hardware for your specific CPU socket.

## 3.2 General Installation Steps

1. **Prepare CPU:** Clean the CPU surface of any old thermal paste. If thermal paste is not pre-applied to the cooler's cold plate, apply a small amount (pea-sized) to the center of your CPU.
2. **Install Backplate (if required):** For Intel sockets, install the appropriate backplate behind the motherboard. For AMD sockets, the stock backplate is often used.
3. **Attach Mounting Brackets to Pump:** Secure the correct Intel or AMD mounting brackets to the pump head.
4. **Mount Radiator and Fans:** Install the two 120mm fans onto the radiator. Mount the radiator assembly to an available 240mm fan mount in your PC case (e.g., top, front, or rear). Ensure proper airflow direction.
5. **Secure Pump Head:** Carefully place the pump head onto the CPU, aligning the mounting holes. Secure it with the provided screws, tightening them in a cross pattern until snug. Do not overtighten.
6. **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's 4-pin PWM cables to the CPU\_FAN or SYS\_FAN headers on your motherboard, or use the provided splitter cable to connect both fans to a single header.
  - Connect the ARGB cables from the pump and fans to a 3-pin 5V ARGB header on your motherboard.  
**Note: This cooler supports 5V 3-pin ARGB only. Do NOT connect to a 12V 4-pin RGB header, as this may cause damage.**
7. **Cable Management:** Route cables neatly to avoid interference with other components or airflow.



Supporta solo 5V 3Pin ARGB, NON supporta 12V 4Pin RGB

*Image: A view of the Thermalright Frozen Notte 240 WHITE ARGB V2 CPU Liquid Cooler installed inside a computer case.*

## 4. OPERATING INSTRUCTIONS

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Once installed, the Thermalright Frozen Notte 240 WHITE ARGB V2 operates automatically based on your motherboard's settings and CPU temperature.

### 4.1 Fan and Pump Control (PWM)

The fans and pump utilize Pulse Width Modulation (PWM) technology. This allows your motherboard to automatically adjust their speed based on the CPU temperature, optimizing for both cooling performance and noise levels. You can typically configure fan curves in your motherboard's BIOS/UEFI settings or through compatible software.

### 4.2 ARGB Lighting Control

The Addressable RGB (ARGB) lighting on the fans and pump head can be controlled and synchronized with your motherboard's ARGB software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, Gigabyte RGB Fusion, ASRock Polychrome Sync). Connect the 3-pin 5V ARGB cable to the appropriate header on your motherboard. This allows for a wide range of customizable lighting effects.

## GLÄNZEN SIE IHR SETUP



Jeder Wasserblock wird mit einem fein bearbeiteten und lackierten Aluminiumgehäuse geliefert, das einen besseren Schutz und eine bessere Haptik bietet als Kunststoff. Sowohl der Wasserblock als auch die Lüfter sind mit adressierbarer RGB-Beleuchtung ausgestattet, die von unterstützter Motherboard-Software gesteuert und synchronisiert werden kann.

*Image: Close-up of the waterblock showcasing its mirror effect and ARGB lighting, with details on pump speed (5300 RPM  $\pm$  10%) and ARGB support (5V 3-pin).*

## EINFACHE INSTALLATION



Neue Kühlermontages-Kits bieten einfache Erfahrung und sicheren Montagedruck. Die Lüfter sind werkseitig vormontiert, um den Installationsprozess zu vereinfachen. Gepaart mit Premium-Zubehör sorgt es für beste Out-of-Box-Leistung auf jedem System.

*Image: Detailed view of the TL-E12W-S V2 fan, highlighting its ARGB lighting, S-FDB bearing, 72.37 CFM airflow, and 2000 RPM speed.*

## 5. MAINTENANCE

The Thermalright Frozen Notte 240 WHITE ARGB V2 is a closed-loop liquid cooler and requires minimal maintenance. However, periodic checks can help ensure its longevity and optimal performance.

- **Dust Cleaning:** Regularly clean dust from the radiator fins and fan blades using compressed air. Dust

accumulation can impede heat dissipation.

- **Inspect Tubing:** Periodically check the tubing for any signs of kinks, leaks, or damage. While the polymer protection reduces evaporation, ensure the tubes remain in good condition.
- **Fan Operation:** Ensure both fans are spinning freely and quietly. If a fan becomes excessively noisy or stops spinning, it may need replacement.
- **Pump Operation:** Listen for any unusual noises from the pump. A constant, low hum is normal, but grinding or gurgling sounds could indicate an issue.

## 6. TROUBLESHOOTING

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If you encounter issues with your liquid cooler, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
<b>High CPU Temperatures</b>	Insufficient thermal paste or improper application. Pump not functioning (no flow). Fans not spinning or spinning too slowly. Radiator fins clogged with dust. Incorrect mounting pressure on CPU.	Reapply thermal paste. Check pump power connection and ensure it's running. Verify fan connections and BIOS settings for fan curves. Clean radiator. Ensure mounting screws are tightened evenly.
<b>Fans Not Spinning / ARGB Not Lighting Up</b>	Incorrect cable connection. Motherboard ARGB/PWM header issue. Software control issue.	Check all 4-pin PWM and 3-pin 5V ARGB connections. Ensure 5V ARGB is connected, not 12V RGB. Verify BIOS settings and ARGB software.
<b>Unusual Noises (Grinding, Gurgling)</b>	Air bubbles in the loop (gurgling). Pump malfunction (grinding). Fan bearing issue (rattling/grinding).	Orient the radiator higher than the pump to allow air to collect in the radiator. Gently tilt the PC case. If pump noise persists, contact support. Inspect fans for obstructions or damage.

## 7. SPECIFICATIONS

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Below are the technical specifications for the Thermalright Frozen Notte 240 WHITE ARGB V2 CPU Liquid Cooler:



## FROZEN NOTTE 240 WHITE ARGB V2 SPEZIFIKATION

KÜHLKÖRPER	SPEZIFIKATION	TL-E12W-S V2	SPEZIFIKATION
Wasserblock Abmessungen	72mm * 72mm * 54mm	Lüfterabmessungen	120mm*120mm*25mm
Abmessungen des Heizkörpers	277mm * 120mm * 27mm	Lüfter-Nenndrehzahl	2000RPM±10%
Pumpenleistung	DC 12V 3PIN	Nenngeräusch des Lüfters	≤27.7dBA
RGB-Unterstützung	+5V 3PIN ARGB	Ventilator-Luftstrom	72.37CFM(MAX)
		Statischer Druck des Ventilators	2.87mm/H <sub>2</sub> O(MAX)
		Lüfteranschluss	4PIN PWM
		Nennspannung des Lüfters	DC 12V
		Lüfter-Nennstrom	0.18A(MAX)
		Lüfterlagertyp	S-FDB Bearing
		Beleuchtungs-Hafen	+5V 3PIN ARGB

Image: Detailed specifications table for the Frozen Notte 240 WHITE ARGB V2, including dimensions, fan, and pump parameters.

Component	Specification
<b>Waterblock Dimensions</b>	72L x 72W x 54H mm
<b>Radiator Dimensions</b>	277L x 120W x 27H mm
<b>Pump Speed</b>	5300 RPM ± 10%
<b>Pump Voltage</b>	DC 12V
<b>Pump Connector</b>	3-pin
<b>Fan Model</b>	TL-E12W-S V2
<b>Fan Dimensions</b>	120L x 120W x 25H mm
<b>Fan Speed</b>	2000 RPM ± 10%
<b>Fan Noise Level</b>	≤ 27.7 dBA
<b>Fan Airflow</b>	72.37 CFM (MAX)
<b>Fan Air Pressure</b>	2.87 mmH <sub>2</sub> O (MAX)
<b>Fan Connector</b>	4-pin PWM
<b>Fan Bearing Type</b>	S-FDB V2 Bearing
<b>ARGB Support</b>	+5V 3-pin ARGB
<b>Material</b>	Aluminum (Radiator), Copper (Cold Plate)
<b>Compatible Devices</b>	Desktop Computers

Component	Specification
UPC	760329014071

## 8. WARRANTY AND SUPPORT

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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.

**Manufacturer:** Thermalright

**Model Number:** Frozen Notte 240 ARGB V2