

## NZXT RL-KR280-W1

# NZXT Kraken 280 RGB AIO CPU Liquid Cooler User Manual

Model: RL-KR280-W1

## 1. INTRODUCTION

The NZXT Kraken 280 RGB is a high-performance All-in-One (AIO) CPU liquid cooler designed to provide efficient cooling for your processor while offering extensive customization options. Featuring a vibrant 1.54" square LCD display, users can personalize their system with custom images, animated GIFs, or real-time performance metrics. This cooler integrates a powerful Asetek pump and two F140 RGB Core Fans to ensure optimal thermal management and stunning visual effects.



Image: The NZXT Kraken 280 RGB liquid cooler, showcasing the radiator, two F140 RGB fans, and the pump head with its customizable LCD display.

## 2. PACKAGE CONTENTS

---

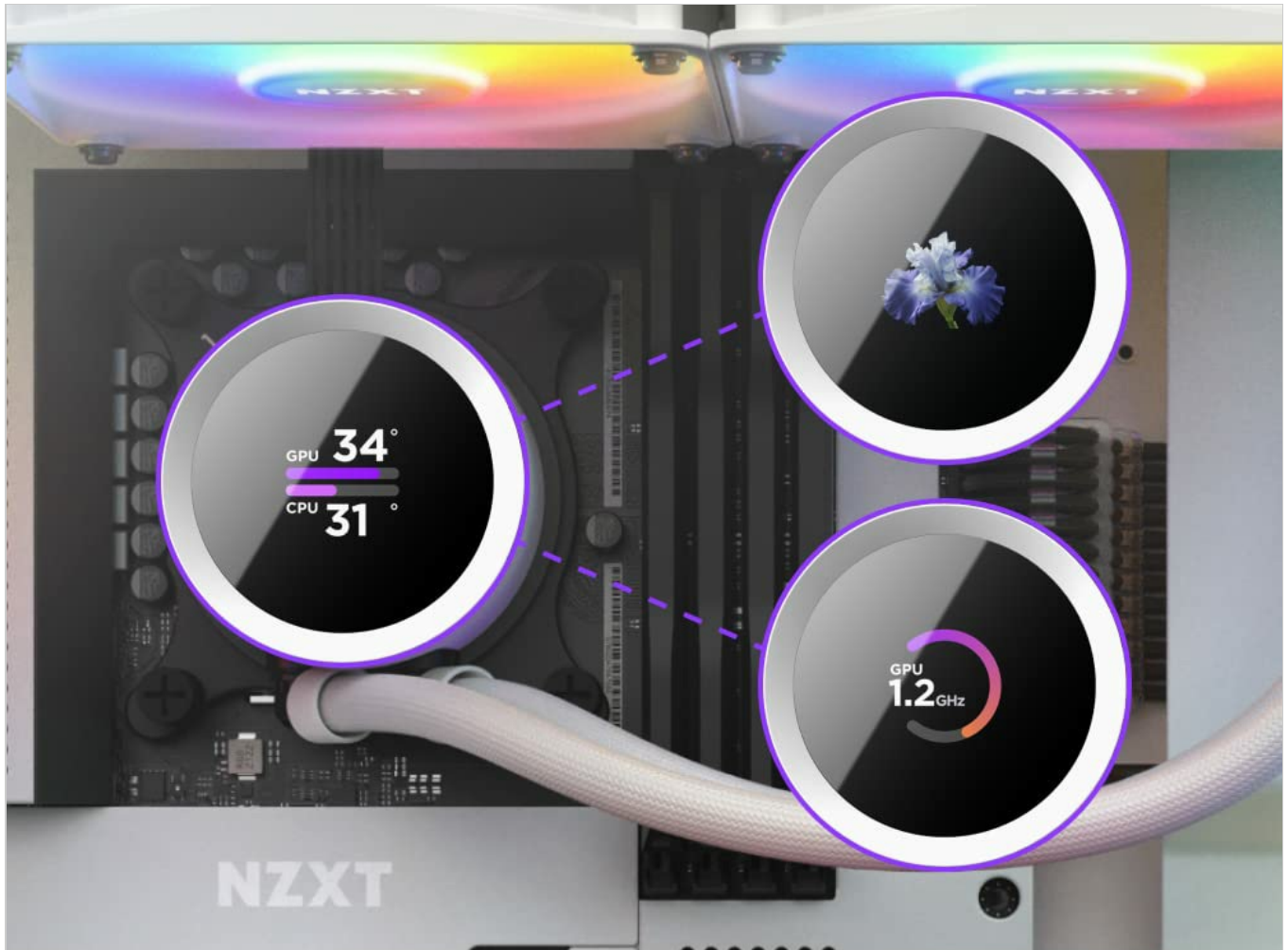
Please verify that all components are present before beginning installation:

- NZXT Kraken 280 RGB AIO CPU Liquid Cooler (includes pump and radiator)
- 2 x F140 RGB Core Fans
- Mounting hardware for Intel and AMD CPU sockets
- Breakout cable for pump connection
- Documentation (this user manual)

## 3. KEY FEATURES

---

- **Personalization That Pops:** Display a favorite animated GIF or static image, monitor real-time PC performance metrics, see music that's currently playing, integrate web content and more with NZXT CAM software.
- **LCD Display:** 1.54" square LCD display with 240x240 resolution, 30 Hz refresh rate, and bright 300 cd/m<sup>2</sup> backlight brings on-screen content to life.
- **High-Performance Pump:** The powerful Asetek pump operates at up to 2,800 RPM to ensure efficient and quiet coolant circulation.
- **Colorful Cooling:** RGB Core Fans with fluid dynamic bearings provide an optimal balance of static pressure and airflow for powerful cooling plus vivid RGB lighting.
- **Simple Setup:** A single breakout cable from pump to motherboard makes for easy installation.
- **Reinforced Tubing:** Nylon-braided sleeves protect the rubber tubing from leaks and ensure worry-free handling.
- **CPU Compatibility:** Includes all necessary mounting hardware for both Intel and AMD CPU sockets.



## PERSONALIZATION THAT POPS

Display images, real-time PC performance metrics, web integrations and more with NZXT CAM software.

Image: The Kraken's LCD display showing real-time CPU and GPU temperature metrics.



1.54" LCD



240x240  
Resolution



30 Hz



## LCD DISPLAY

1.54" square LCD display with 240x240 resolution, 30 Hz refresh rate, and high brightness.

Image: Detailed view of the 1.54" LCD display, highlighting its 240x240 resolution and 30 Hz refresh rate.

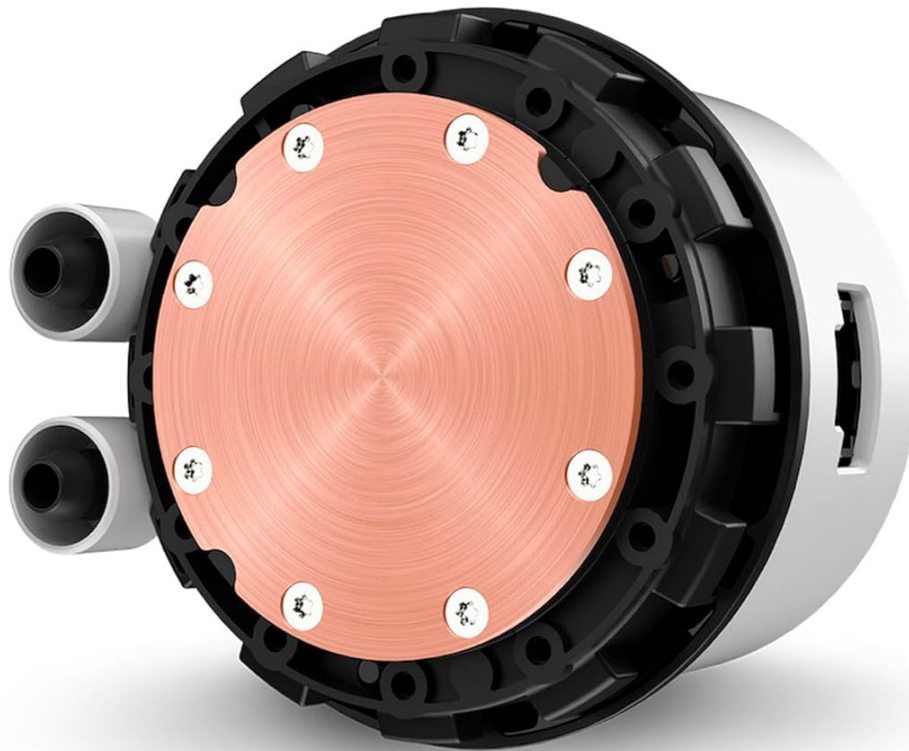


Image: The copper cold plate at the base of the pump, designed for efficient heat transfer from the CPU.



# COLORFUL COOLING

RGB Core Fans with fluid dynamic bearings provide powerful cooling and vivid RGB lighting.

Image: The F140 RGB Core Fans illustrating airflow direction through the radiator for effective cooling.

## 4. SPECIFICATIONS

Attribute	Value
Product Dimensions	5.63"L x 12.4"W x 1.18"H (Radiator)
Item Model Number	RL-KR280-W1
Brand	NZXT
Power Connector Type	4-Pin
Voltage	12 Volts
Wattage	2.76 watts

Attribute	Value
Cooling Method	Water
Compatible Devices	Desktop (Intel and AMD CPU sockets)
Noise Level	34.48 dB
Maximum Rotational Speed	2800 RPM (Pump)
Air Flow Capacity	90.79 Cubic Feet Per Minute (Fans)

## 5. SETUP AND INSTALLATION

Installing your NZXT Kraken 280 RGB AIO liquid cooler is a straightforward process. Ensure your system is powered off and unplugged before beginning. Refer to your motherboard's manual for specific CPU socket preparation.

### 5.1. Prepare the CPU Socket

Depending on your CPU (Intel or AMD), attach the appropriate mounting brackets to the pump head. The cooler comes with pre-applied thermal paste, so no additional application is typically needed unless you prefer to use your own.

### 5.2. Mount the Radiator and Fans

Determine the optimal mounting location for the 280mm radiator within your PC case. Common locations include the top or front of the case. Secure the two F140 RGB Core Fans to the radiator, ensuring proper airflow direction (intake or exhaust) for your system's cooling configuration. Then, mount the radiator assembly to your chosen location in the case.

### 5.3. Install the Pump Head

Carefully place the pump head onto your CPU, aligning the mounting brackets with the CPU socket's retention mechanism. Secure the pump head using the provided thumb screws, tightening them evenly in a cross pattern until snug. Avoid overtightening.





## SIMPLE SETUP

A single breakout cable from pump to motherboard makes for easy installation.

Image: The pump head showing the single breakout cable connection point, simplifying wiring.





## CPU COMPATIBILITY

Includes all necessary mounting hardware for both Intel and AMD CPU sockets.

Image: The NZXT Kraken AIO cooler installed within a PC case, demonstrating its fit and aesthetic.

### 5.4. Cable Management

Connect the single breakout cable from the pump to the appropriate headers on your motherboard. This typically includes a CPU fan header, a USB 2.0 header for CAM software control, and an RGB header if applicable. Ensure all connections are secure.

Your browser does not support the video tag.

Video: An official NZXT video demonstrating the features and installation process for Kraken and Kraken Elite liquid coolers. This video provides a visual guide to the setup steps.

## 6. OPERATING THE NZXT KRAKEN 280 RGB

The NZXT Kraken 280 RGB is controlled and customized through the NZXT CAM software. After physical installation, download and install the latest version of NZXT CAM from the official NZXT website ([nzxt.com/cam](https://nzxt.com/cam)).

### 6.1. NZXT CAM Software

NZXT CAM allows you to:

- Monitor CPU and GPU temperatures, fan speeds, and pump performance in real-time.
- Customize the LCD display with static images, animated GIFs, system metrics, or web content.
- Control RGB lighting effects on the F140 RGB Core Fans and the pump head.
- Adjust fan curves and pump speeds for optimal cooling performance and noise levels.
- Set up alerts for temperature thresholds.

Explore the various tabs within the CAM software to fully utilize the customization and monitoring capabilities of your Kraken cooler.

## 7. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your NZXT Kraken 280 RGB AIO liquid cooler.

- **Dust Removal:** 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.
- **Tubing Inspection:** Visually inspect the nylon-braided tubing for any signs of kinks, damage, or leaks. While the tubing is reinforced, regular checks are recommended.
- **Software Updates:** Keep your NZXT CAM software updated to the latest version to benefit from performance improvements, new features, and bug fixes.
- **Thermal Paste:** The cooler comes with pre-applied thermal paste. If you ever need to remove and re-install the pump head, it is recommended to clean off the old thermal paste and apply a fresh layer.

## 8. TROUBLESHOOTING

If you encounter issues with your NZXT Kraken 280 RGB, try the following troubleshooting steps:

Problem	Possible Cause / Solution
High CPU Temperatures	<ul style="list-style-type: none"><li>◦ Ensure pump and fan cables are securely connected to the motherboard.</li><li>◦ Check NZXT CAM for pump and fan speeds; adjust fan curves if necessary.</li><li>◦ Verify proper contact between the pump cold plate and CPU (re-seat if needed, re-apply thermal paste).</li><li>◦ Clean dust from radiator fins and fans.</li><li>◦ Ensure adequate airflow within your PC case.</li></ul>
LCD Display Not Working / Blank	<ul style="list-style-type: none"><li>◦ Check the USB 2.0 header connection from the pump to the motherboard.</li><li>◦ Ensure NZXT CAM software is installed and running.</li><li>◦ Try restarting NZXT CAM or your computer.</li><li>◦ Verify the display settings within NZXT CAM.</li></ul>

Problem	Possible Cause / Solution
Fans Not Spinning / RGB Not Lighting Up	<ul style="list-style-type: none"><li>◦ Check fan power and RGB connections from the breakout cable to the fans.</li><li>◦ Verify fan and RGB settings in NZXT CAM.</li><li>◦ Ensure the breakout cable is properly connected to the motherboard.</li></ul>
Unusual Noise from Pump/Fans	<ul style="list-style-type: none"><li>◦ Check for any cables or obstructions hitting fan blades.</li><li>◦ Adjust fan speeds in NZXT CAM to reduce noise if acceptable for temperatures.</li><li>◦ If pump noise is excessive, ensure the pump is mounted correctly and there are no air bubbles trapped (orient radiator higher than pump if possible).</li></ul>

If these steps do not resolve the issue, please contact NZXT customer support for further assistance.

## 9. WARRANTY AND SUPPORT

NZXT products are backed by a manufacturer's warranty. For detailed warranty information, including terms, conditions, and duration, please visit the official NZXT website or refer to the warranty card included with your product.

For technical support, troubleshooting assistance, or to submit a warranty claim, please visit the NZXT Support page: [NZXT Support Website](#)

You may also find helpful resources, FAQs, and community forums on their website.

