

PCCOOLER RT500 TC BK

PCCOOLER RT500 TC BK CPU Air Cooler Instruction Manual

Model: RT500 TC BK

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your PCCOOLER RT500 TC BK CPU Air Cooler. Please read this manual thoroughly before installation and use to ensure proper function and longevity of the product.

The PCCOOLER RT500 TC BK is a high-performance CPU air cooler designed for efficient heat dissipation. It features 5x6mm heat pipes, a 120mm ARGB fan with a hydraulic bearing, and a design optimized for wide CPU compatibility.

2. PACKAGE CONTENTS

Verify that all components are present before proceeding with installation.

- CPU Cooler (Heatsink and 120mm ARGB Fan)
- Intel Backplate
- AMD Bracket
- Intel Bracket
- Universal Bolts for Intel & AMD
- Fan Clips
- Thermal Paste

Triangle Design

Triangular elements are integrated into every detail resulting in an exceptionally refined and elegant aesthetic.



Image: Included mounting hardware and accessories for the PCCOOLER RT500 TC BK CPU Air Cooler, showing Intel backplate, AMD and Intel brackets, universal bolts, fan clips, and thermal paste.

3. SETUP AND INSTALLATION

This section outlines the general steps for installing the CPU air cooler. Specific steps may vary slightly depending on your motherboard and CPU socket type. Refer to your motherboard manual for additional guidance.

3.1 Prepare the CPU and Motherboard

1. Ensure your system is powered off and disconnected from the power source.
2. Remove any existing CPU cooler and clean off old thermal paste from the CPU surface using an appropriate cleaner.
3. For Intel platforms, install the provided backplate onto the motherboard from the rear. For AMD platforms, use the existing motherboard backplate if available, or the provided AMD backplate if necessary.

3.2 Install Mounting Brackets

1. Attach the appropriate Intel or AMD mounting brackets to the cooler's base using the universal bolts. Ensure they are securely fastened.

2. Apply a small amount of thermal paste (included) to the center of the CPU's integrated heat spreader (IHS). Spread it evenly into a thin layer.

Heatpipe Composite Base

Upgraded integrated heat pipe base ensures precise coverage of the CPU's heat source enabling rapid thermal transfer directly to the heatsink tower for immediate and powerful performance release.

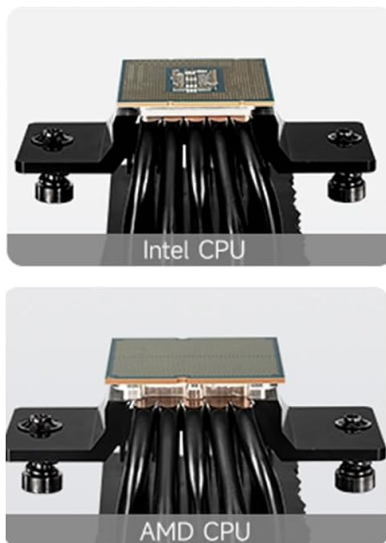


Image: Close-up view of the heatpipe composite base, demonstrating its direct contact with both Intel and AMD CPUs for efficient heat transfer.

3.3 Mount the Cooler

1. Carefully place the heatsink assembly onto the CPU, aligning the mounting screws with the holes on the backplate/standoffs.
2. Tighten the screws in a diagonal pattern (e.g., top-left, bottom-right, top-right, bottom-left) until snug. Do not overtighten.
3. Attach the 120mm ARGB fan to the heatsink using the provided fan clips. Ensure the fan is oriented to blow air through the heatsink towards the rear or top of your PC case.

Next-gen Heatpipe



Image: The PCCOOLER RT500 TC BK CPU Air Cooler mounted on a motherboard, showcasing its compact design and heatpipe configuration.

3.4 Connect Fan Cables

1. Connect the 4-pin PWM fan cable to the CPU_FAN header on your motherboard.
2. If your fan has ARGB lighting, connect the ARGB cable to a compatible 3-pin 5V ARGB header on your motherboard. Refer to your motherboard manual for ARGB header locations.

4. OPERATING INSTRUCTIONS

Once installed, the PCCOOLER RT500 TC BK operates automatically to cool your CPU. The 120mm ARGB fan's speed is controlled by the motherboard's PWM signal, adjusting based on CPU temperature to maintain optimal cooling and noise levels.

- **Fan Speed:** The fan operates within a speed range of 500-2200 RPM ($\pm 10\%$), dynamically adjusting to CPU load.
- **Airflow:** The 7-blade pressure-boosting design delivers up to 73.32 CFM of airflow for effective heat dissipation.
- **Noise Level:** The hydraulic bearing fan is designed for quiet operation, with a maximum noise level of 34.9 dBA.

- **ARGB Lighting:** If connected to an ARGB header, the fan's lighting can be customized via your motherboard's software or a dedicated ARGB controller (not included).

High Performance Fan

7-blade pressure-boosting blade design further enhances air pressure, delivering a more powerful and focused airflow significantly improving overall cooling performance.

500~2200±10%RPM
Speed

3.28mmH₂O
Static Pressure

73.32CFM
Airflow of 7-blade



Image: The 120mm ARGB fan of the PCCOOLER RT500 TC BK, highlighting its 7-blade design for high performance and quiet operation.

5. MAINTENANCE

Regular maintenance helps ensure optimal cooling performance and extends the lifespan of your CPU cooler.

- **Dust Removal:** Periodically clean dust from the heatsink fins and fan blades using compressed air or a soft brush. Ensure the system is powered off before cleaning.
- **Thermal Paste:** Over time, thermal paste can dry out and lose effectiveness. Consider reapplying thermal paste every 2-3 years, or if you notice a significant increase in CPU temperatures. This requires removing the cooler, cleaning old paste, and applying new paste.
- **Fan Inspection:** Check the fan for any obstructions or unusual noises. Ensure fan cables are securely connected.

6. TROUBLESHOOTING

If you encounter issues with your PCCOOLER RT500 TC BK, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
High CPU Temperatures	<ul style="list-style-type: none"> Insufficient thermal paste application. Poor contact between cooler base and CPU. Dust buildup on heatsink/fan. Incorrect fan orientation. Fan not spinning or spinning too slowly. 	<ul style="list-style-type: none"> Reapply thermal paste, ensuring even coverage. Check mounting screws for proper tightness and even pressure. Clean heatsink and fan. Ensure fan blows air through the heatsink. Verify fan cable connection to CPU_FAN header and check BIOS settings.
Fan Not Spinning / ARGB Not Lighting Up	<ul style="list-style-type: none"> Loose or incorrect cable connection. Motherboard header issue. 	<ul style="list-style-type: none"> Ensure 4-pin PWM fan cable is connected to CPU_FAN. Ensure ARGB cable is connected to a 3-pin 5V ARGB header. Check motherboard BIOS/software for fan control and ARGB settings.
Excessive Noise	<ul style="list-style-type: none"> Dust buildup. Fan bearing issue. Fan hitting cables or other components. 	<ul style="list-style-type: none"> Clean the fan and heatsink. Ensure no cables are obstructing the fan blades. If noise persists, contact customer support.

7. SPECIFICATIONS

Feature	Detail
Model	RT500 TC BK
Product Dimensions (L x W x H)	4.92" x 5.31" x 6.1" (125mm x 135mm x 155mm approx.)
Heat Pipes	5 x Φ 6mm
Fan Size	120mm
Fan Type	ARGB, Hydraulic Bearing
Fan Speed	500-2200 RPM (\pm 10%)
Air Flow Capacity	73.32 CFM
Noise Level	Max 34.9 dBA

Feature	Detail
Power Connector	4-Pin PWM
Voltage	12 Volts
Wattage	265 watts (TDP rating)
Cooling Method	Air
Material	Aluminum
Compatible CPU Sockets	Intel LGA115X/1200/1700/1851, AMD AM4/AM5
Item Weight	2 Pounds

Dimension



Image: Dimensional drawing of the PCCOOLER RT500 TC BK CPU Air Cooler, showing its height (152mm), width (120mm), and depth (70mm).

8. WARRANTY AND SUPPORT

PCCOOLER products are backed by a manufacturer's warranty to ensure customer satisfaction and product reliability.

- **Warranty Period:** This product comes with a 2-year manufacturer warranty.
- **Contact Support:** For technical assistance, warranty claims, or any product-related inquiries, please visit the official PCCOOLER website or contact your retailer.