Thermalright RP130

Thermalright Royal Pretor 130 CPU Air Cooler Instruction Manual

1. Product Overview

The Thermalright Royal Pretor 130 is a high-performance CPU air cooler designed to provide efficient heat dissipation for your computer's central processing unit. It features a double-tower radiator design, dual PWM fans, and six heat pipes to ensure stable cooling performance under various workloads.
Key features include:

- **Double-Tower and Dual-Fan Design:** Utilizes two radiator towers and two high-performance fans (12cm and 13cm) for enhanced cooling capacity.
- **Six Heat Pipes:** Equipped with six fully electroplated heat pipes and a reflow process for optimal heat transfer.
- **158mm Height:** Designed to fit within the CPU height limits of most PC cases.
- **Memory Avoidance Design:** Provides clearance for memory modules up to 44mm in height. For taller memory, the fan may need to be adjusted upwards.
- **Wide Compatibility:** Supports a broad range of AMD (AM4/AM5) and Intel (LGA1851/1700/1150/1151/1155/1156/1200/2011/2066) platforms.

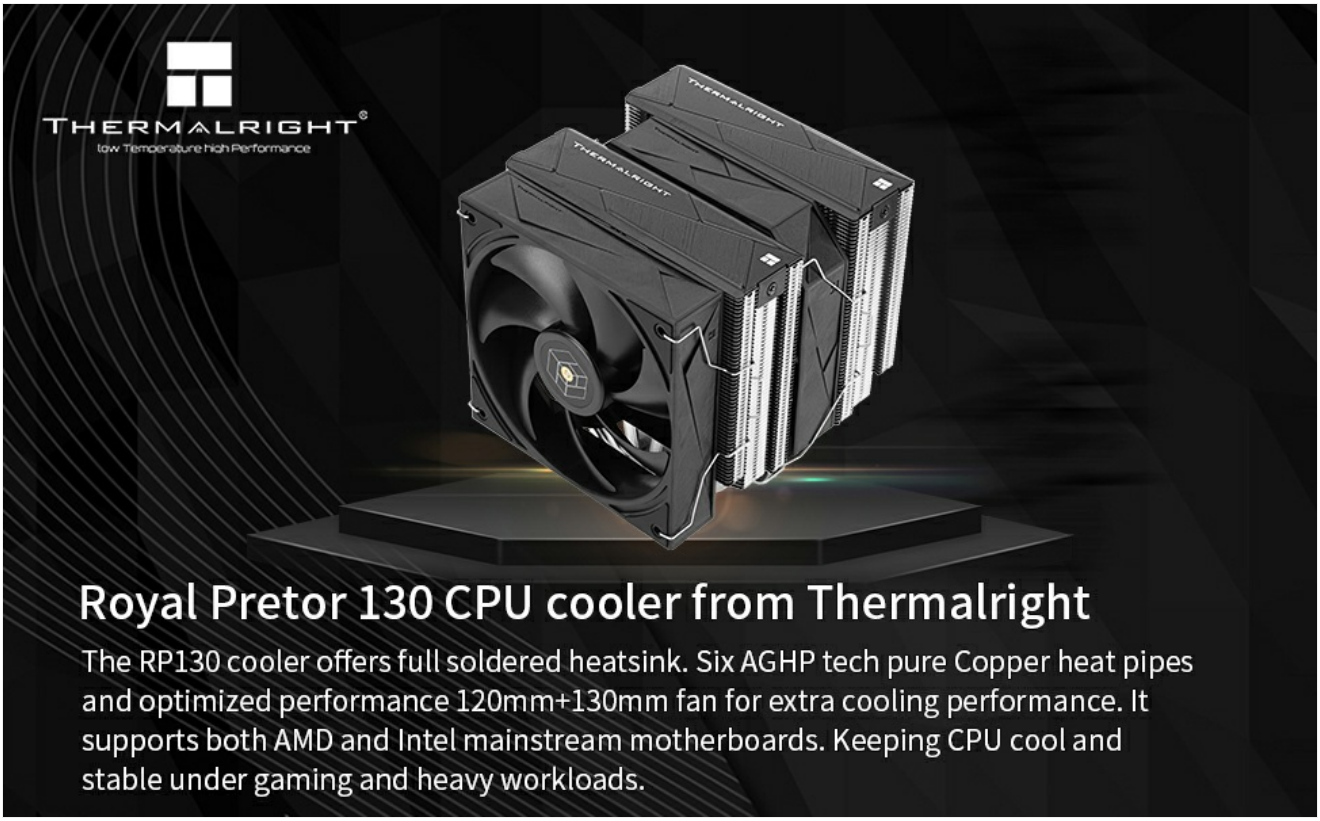

Image: The Thermalright Royal Pretor 130 CPU cooler, highlighting its full soldered heatsink, six AGHP tech pure copper heat pipes, and optimized 120mm+130mm fan for extra cooling performance. It supports both AMD and Intel mainstream motherboards, keeping the CPU cool and stable under gaming and heavy workloads.

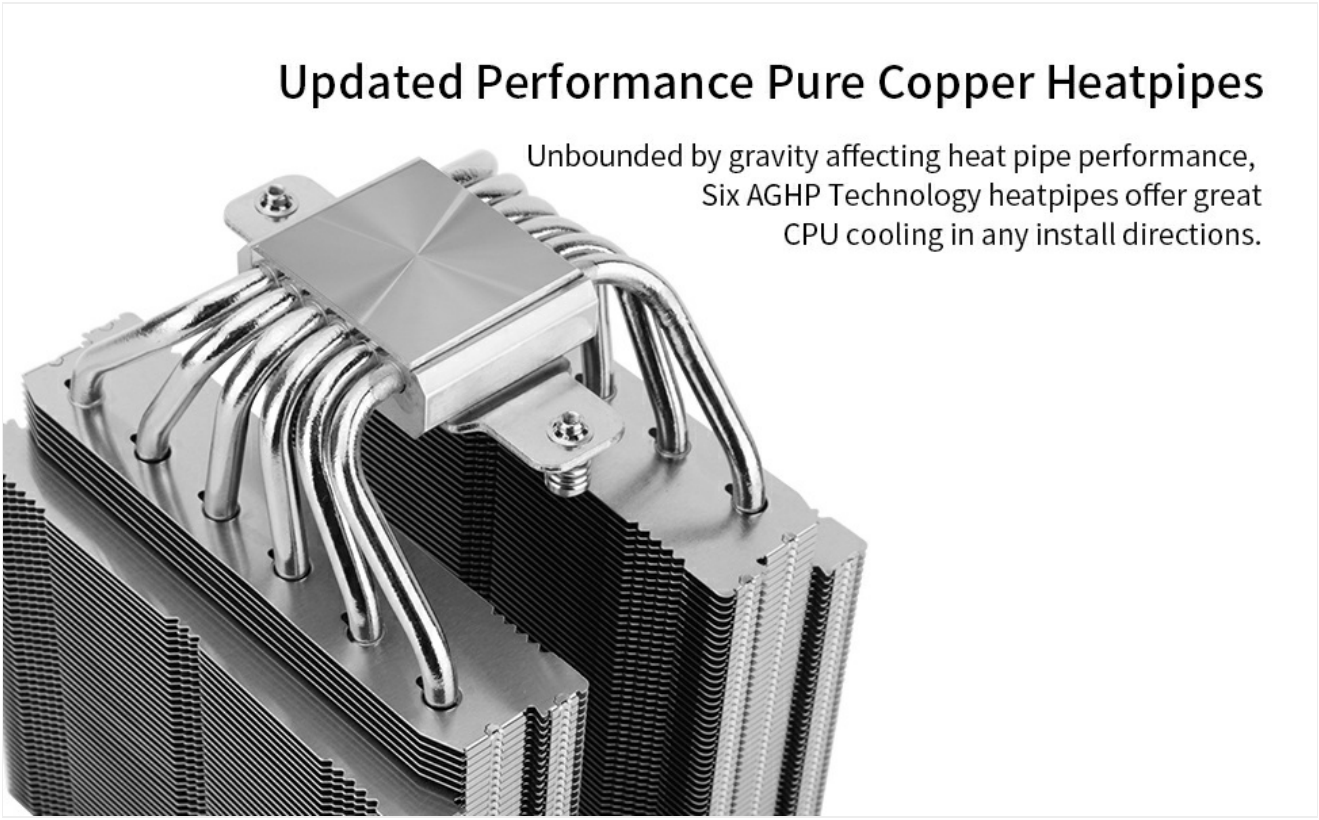

Image: Close-up view of the cooler's heatpipes, illustrating AGHP (Anti-Gravity Heatpipes) Technology. This technology ensures consistent performance regardless of the heatsink's orientation (horizontal or vertical).

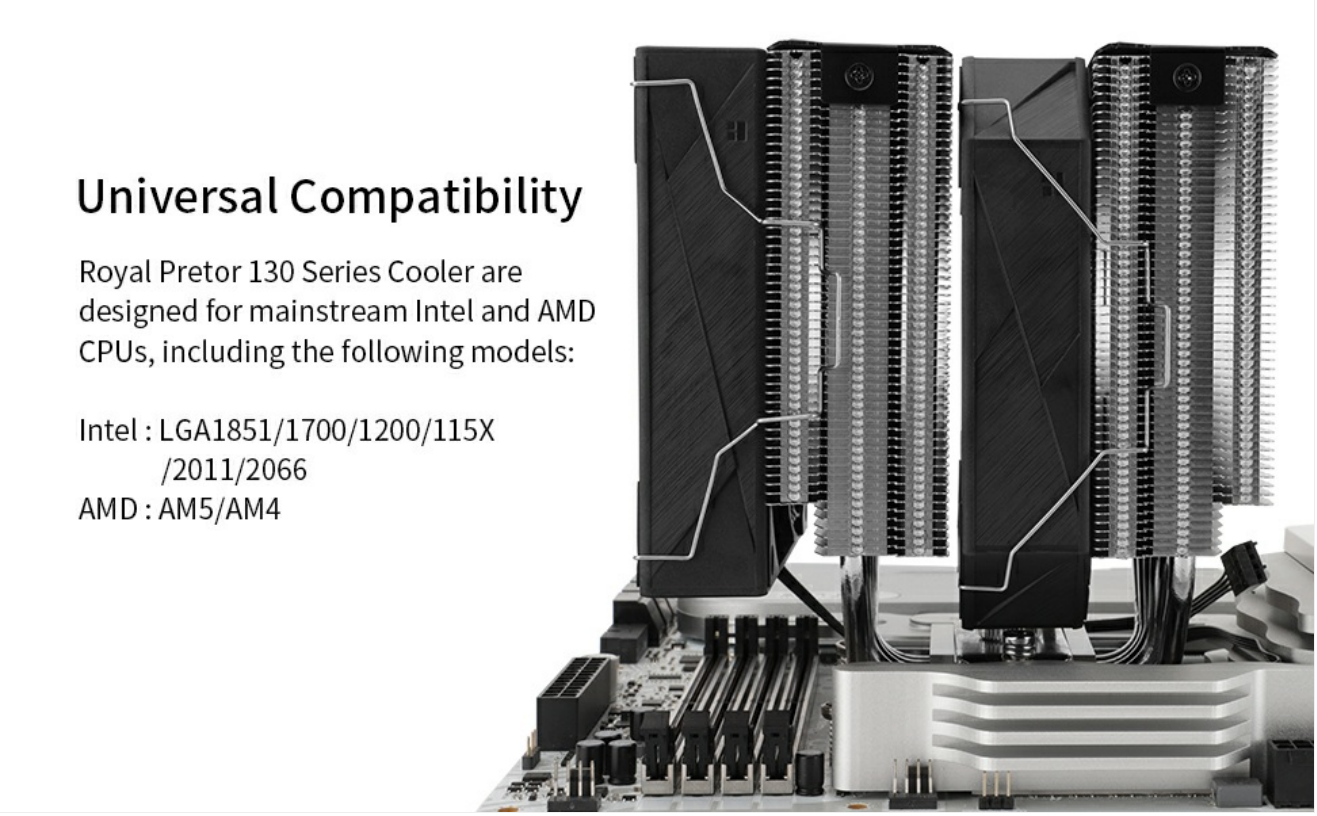

Image: Diagram showing the universal compatibility of the Royal Pretor 130 Series Cooler with mainstream Intel and AMD CPUs, including Intel LGA1851/1700/1200/115X/2011/2066 and AMD AM5/AM4.

2. Setup and Installation

This section provides detailed instructions for installing your Thermalright Royal Pretor 130 CPU Air Cooler. Please follow these steps carefully to ensure proper installation and optimal performance.

2.1. Included Components

Before starting, verify that all components are present:

- CPU Cooler Heatsink
- 12cm and 13cm High-Performance PWM Fans
- Thermal Compound
- Intel Mounting Brackets (LGA1851/1700/115x/1200/2011/2066)
- AMD Mounting Brackets (AM4/AM5)
- Backplate (for Intel LGA115x/1200/1700/1851)
- Metal Standoffs (LGA115x/1200, LGA1700/1851)
- Screws (Intel, AMD)
- Red Spacers (for AMD)
- Fan Clips (for 12cm and 13cm fans)
- Fan Y-Cable

2.2. Installation Video Guide

For a visual guide, please refer to the official installation tutorial video:

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Video: Official installation tutorial for the Thermalright RP130 series heat sink, demonstrating step-by-step assembly for both AMD and Intel platforms.

2.3. AMD AM4/AM5 Installation Steps

1. **Remove Motherboard Plastic Brackets:** For AMD AM5 and AM4 motherboards, carefully remove the existing plastic retention brackets around the CPU socket. Keep the original backplate installed.
2. **Install Red Spacers:** Place the four red spacers onto the motherboard's CPU mounting holes.
3. **Install Metal Brackets:** Position the two AMD metal brackets over the red spacers, aligning the holes. Secure them with the provided screws using a screwdriver. Ensure they are tightened evenly.

2.4. Intel LGA1700/1851 Installation Steps

1. **Adjust Backplate:** For Intel LGA1700/1851 motherboards, adjust the backplate mounting hole position to 1700/1851.
2. **Install Backplate:** Install the backplate from the back side of the motherboard, aligning the screws through the mounting holes.
3. **Install Metal Standoffs:** On the front side of the motherboard, install four 1700/1851 metal standoffs onto the backplate screws. Ensure the insulation side of the standoffs faces towards the motherboard.
4. **Install Intel Brackets:** Place the two Intel metal brackets onto the metal standoffs. Secure the brackets with the provided Intel screws, tightening them evenly with a screwdriver.

2.5. Common Installation Procedures (All Platforms)

1. **Apply Thermal Compound:** Apply a small amount of thermal compound (pea-sized dot or thin line) to the center of the CPU's Integrated Heat Spreader (IHS).
2. **Remove Heatsink Protective Sticker:** Before placing the heatsink, ensure you remove any protective film or sticker from the heatsink's contact plate.
3. **Mount Heatsink:** Carefully place the heatsink onto the CPU, aligning the heatsink bracket nuts with the screws on the installed mounting brackets.
4. **Secure Heatsink:** Using a screwdriver, tighten both nuts on the heatsink bracket alternately and gradually to apply even mounting pressure. Do not overtighten.
5. **Install Fan Clips:** Attach the fan clips to the fans.
6. **Install Fans:** Secure the fans to the heatsink using the installed fan clips. Ensure the fans are oriented to push air through the heatsink towards the rear or top of your PC case.
7. **Connect Fan Y-Cable:** Connect the 4-pin connectors from both fans to the included fan Y-cable.
8. **Connect to Motherboard:** Connect the Y-cable to the motherboard's CPU_FAN header. This allows the motherboard to control both fan speeds synchronously.

3. Operating Instructions

Once installed, the Thermalright Royal Pretor 130 CPU Air Cooler operates automatically based on your motherboard's fan control settings. Most modern motherboards use PWM (Pulse Width Modulation) to adjust fan speed according to CPU temperature, ensuring optimal cooling and noise levels.

- **BIOS/UEFI Settings:** You can typically adjust fan curves and control modes (e.g., Standard, Silent, Performance, Manual) within your motherboard's BIOS/UEFI settings. Refer to your motherboard manual for specific instructions.
- **Monitoring:** Use system monitoring software to keep an eye on your CPU temperatures and fan speeds to ensure everything is functioning correctly.

4. Maintenance

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

- **Dust Cleaning:** Periodically clean dust from the heatsink fins and fan blades using compressed air or a soft brush. Ensure the fans are not spinning during cleaning to prevent damage.
- **Thermal Paste:** The thermal paste typically lasts for several years. If you notice a significant increase in CPU temperatures, consider reapplying fresh thermal paste. This involves carefully removing the heatsink, cleaning off old thermal paste from both the CPU and heatsink, and applying new thermal paste.

5. Troubleshooting

If you encounter issues with your CPU cooler, consider the following troubleshooting steps:

- **High CPU Temperatures:**
  - Check if the heatsink is securely mounted and making proper contact with the CPU.
  - Verify that thermal paste was applied correctly and is not dried out.
  - Ensure fans are spinning and oriented correctly (pushing air through the heatsink).
  - Check fan cables are securely connected to the CPU_FAN header.
  - Clean any dust buildup from the heatsink and fans.
- **Fan Noise:**
  - Check for any cables obstructing the fan blades.
  - Ensure fans are securely attached and not vibrating.
  - Adjust fan speed settings in your motherboard's BIOS/UEFI to a quieter profile if temperatures allow.
- **No Fan Spin:**
  - Verify the fan Y-cable is correctly connected to both fans and the motherboard's CPU_FAN header.
  - Check BIOS/UEFI settings to ensure fan control is enabled and not set to a mode that keeps fans off at low temperatures.

6. Specifications

Feature	Specification
Brand	Thermalright
Model	Royal Pretor 130
Cooling Method	Air
Heat Dissipation Material	Aluminum, Copper
Heat Pipes	6
Fan Dimensions	120mm and 130mm (28mm thick)
Maximum Rotational Speed	1750 RPM (for 130mm fan), 2150 RPM (for 120mm fan)
Air Flow Capacity	162 Cubic Feet Per Minute (CFM)
Noise Level	29.4 Decibels

Power Connector Type	4-Pin PWM
Voltage	12 Volts (DC)
Overall Height	158mm
Compatible Devices	Desktop
CPU Socket Compatibility	AMD: AM4/AM5; Intel: LGA1851/1700/1150/1151/1155/1156/1200/2011/2066

7. Warranty and Support

For warranty information, technical support, or further assistance, please refer to the official Thermalright website or contact their customer service directly. Keep your proof of purchase for warranty claims.