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## Thermalright PA120 SE

# Thermalright Peerless Assassin 120 SE CPU Cooler User Manual

Model: PA120 SE  
Brand: Thermalright

## INTRODUCTION

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The Thermalright Peerless Assassin 120 SE CPU Cooler is designed to provide efficient cooling for various CPU sockets, including Intel 115X/1200/1700/17XX and AMD AM4/AM5. Featuring 6x6mm heat pipes with AGHP technology and dual 120mm PWM fans, this cooler aims for extreme CPU cooling performance while maintaining a low noise level. Its double tower design and aluminum heat sink material contribute to robust heat dissipation.



Figure 1: Thermalright Peerless Assassin 120 SE CPU Cooler

## SETUP AND INSTALLATION

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Proper installation is crucial for optimal performance. Please follow the steps below carefully. An official installation video is provided for visual guidance.

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Video 1: Thermalright PA120 SE Air Cooler Installation Tutorial

This video provides a comprehensive guide for installing the PA120 SE Air Cooler, demonstrating each step from preparing the motherboard to mounting the heatsink and fans.

### Installation Steps:

#### 1. Prepare Motherboard:

For AMD AM4/AM5 platforms, remove the existing plastic brackets around the CPU socket. Ensure the original AM4 backplate remains in place on the back of the motherboard.



## CPU Compatibility:

INTEL: LGA1150/1151/1155/1156/1200/1700

AMD: AM4/AM5

Figure 2: CPU Compatibility and Socket Preparation

### 2. Install Standoffs and Brackets:

Install the four plastic standoffs into the motherboard's CPU mounting holes. Then, place the two metal AM4 brackets on top of these standoffs and secure them with the provided four screws.



Figure 3: Heatsink Mounting Brackets

### 3. Apply Thermal Compound:

Apply a small amount of thermal compound (thermal paste) onto the center of the CPU's Integrated Heat Spreader (IHS). This ensures efficient heat transfer from the CPU to the cooler.

### 4. Mount Heatsink:

Carefully remove the protective plastic sticker from the heatsink's base. Align the heatsink with the mounting nuts on the metal brackets and gently place it onto the CPU. Tighten both nuts evenly with a screwdriver until the heatsink is securely fastened to the motherboard.

# PERFECT MATCH, FAST HEAT DISSIPATION

elaborate collocation, 6 heat pipes+dual tower+dual fans, superb cooling performance.



Double tower aluminum fin



With TL-C12C fan ×2



With TF7 thermal paste

Figure 4: Heatsink Mounted on GPU

## 5. Install Fans:

Attach the fan clips to both 120mm PWM fans. Then, carefully clip both fans onto the heatsink, ensuring they are oriented to push air through the heatsink fins for optimal airflow.

# TL-C12C

Pair with 120mm high performance fan



Figure 5: TL-C12C 120mm PWM Fan

## 6. Connect Fan Cables:

Connect both fan cables to the provided fan Y-cable. Then, plug the Y-cable into the CPU\_FAN socket on your motherboard. This allows the motherboard to control both fans simultaneously.

## OPERATING INSTRUCTIONS

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The Thermalright Peerless Assassin 120 SE operates with dual 120mm PWM fans (TL-C12C) designed for efficient cooling. The fans automatically adjust their speed based on CPU temperature, ensuring optimal performance and noise levels.

- **Fan Speed:** The fans operate at a maximum speed of 1550 RPM ( $\pm 10\%$ ).
- **Air Flow:** Provides up to 66.17 CFM (Cubic Feet per Minute) of airflow.
- **Noise Level:** Designed to operate quietly, with a noise level of  $\leq 25.6$  dB(A).
- **Power:** Connects via a 4-pin power port, operating at 12V.

The AGHP technique employed by the 6x6mm heat pipes helps solve the inverse gravity effect, ensuring consistent cooling performance regardless of the cooler's orientation (vertical/horizontal).

## MAINTENANCE

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To ensure the longevity and optimal performance of your CPU cooler, regular maintenance is recommended. The primary maintenance task is to keep the heatsink and fans free from dust buildup.

- **Dust Cleaning:** Periodically (e.g., every 3-6 months, or more frequently in dusty environments) use compressed air to blow dust out of the heatsink fins and fan blades. Ensure the fans are not spinning rapidly during cleaning to prevent damage to the bearings.
- **Thermal Paste:** While the included thermal paste is high quality, if you ever remove the heatsink for any reason, it is recommended to clean off the old thermal paste from both the CPU and the heatsink base and apply a fresh layer before reinstallation.

## TROUBLESHOOTING

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Here are some common issues and potential solutions:

- **Cooler Does Not Fit / RAM Clearance Issues:**

The Peerless Assassin 120 SE is a large cooler. Before purchase and installation, verify that your PC case has sufficient clearance for the cooler's dimensions (125mm L x 135mm W x 155mm H). Some users have reported that one of the fans might not fully clear tall RAM modules. The fan clips allow for some vertical adjustment of the fans on the heatsink, which may help with RAM clearance. If issues persist, consider using low-profile RAM.

# Peerless Assassin 120SE DIMENSION



Figure 6: Peerless Assassin 120 SE Dimensions

- **Fans Not Spinning / RGB Not Working:**

Ensure all fan cables are securely connected to the fan Y-cable, and the Y-cable is correctly plugged into the CPU\_FAN header on your motherboard. If you have an ARGB version, ensure the ARGB cable is connected to the appropriate ARGB header on your motherboard and that your motherboard's software is configured to control the lighting.

- **High CPU Temperatures:**

Double-check that the heatsink is securely mounted and making proper contact with the CPU. Ensure thermal paste was applied correctly and evenly. Verify that the fans are spinning and oriented to pull air through the heatsink. Check your PC case's overall airflow and fan configuration.

## SPECIFICATIONS

Feature	Detail
Product Dimensions	6.1 x 5.31 x 4.92 inches; 2 Pounds

Feature	Detail
Item Model Number	PA120 SE
Brand	Thermalright
Power Connector Type	4-Pin
Voltage	12 Volts
Wattage	265 watts
Cooling Method	Air
Compatible Devices	Desktop
Noise Level	25.6 dB
Material	Aluminium, Aluminum, Metal, Silicone
Maximum Rotational Speed	1550 RPM

## WARRANTY AND SUPPORT

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

