

## Thermalright AX120R SE PLUS

# Thermalright Assassin X 120R SE PLUS CPU Cooler User Manual

## INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Thermalright Assassin X 120R SE PLUS CPU Cooler. This high-performance air cooler is designed to efficiently dissipate heat from your CPU, ensuring stable operation under various workloads. It features a single tower design, four pure copper heat pipes, and dual 120mm PWM fans for optimal cooling and quiet performance. Please read this manual thoroughly before installation and use.

## SAFETY INFORMATION

- Always disconnect power from your computer before installing or performing maintenance on the CPU cooler.
- Handle components with care to avoid damage to the CPU, motherboard, or cooler.
- Keep thermal paste away from skin and eyes. In case of contact, rinse thoroughly with water.
- Ensure proper ventilation in your computer case to maximize cooling efficiency.
- Do not attempt to modify the cooler or its components, as this may void the warranty and pose a safety risk.

## PACKAGE CONTENTS


Verify that all items are present in your package:

- Thermalright Assassin X 120R SE PLUS CPU Cooler (Heatsink with pre-installed mounting hardware)
- TL-C12C 120mm PWM Fan
- TL-C12RB V2 120mm Reverse Airflow PWM Fan
- Fan Clips (for two fans)
- Thermal Compound
- Intel Mounting Kit (LGA1700/115X/1200/1851)
- AMD Mounting Kit (AM4/AM5)

## SPECIFICATIONS

| Feature               | Specification   |
|-----------------------|---|
| CPU Cooler Dimensions | 125(L)x96(W)x148(H)mm (4.92x3.78x5.83 inch)                     |
| Heat Sink Material    | Aluminum  |
| Heat Pipes            | 4x6mm Copper Heat Pipes (AGHP Technology)                       |
| Fan Dimensions        | 120x120x25mm (4.72x4.72x0.98 inches)                            |
| Fan Speed (RPM)       | 1550rpm±10% / 1500rpm±10%                                       |
| Power Connector Type  | 4-Pin PWM   |
| Voltage               | 12V   |
| Air Flow              | 66.17/58 CFM (MAX)  |
| Noise Level           | ≤25.6 dB(A)   |
| Compatible Sockets    | Intel: LGA1150/1151/1155/1156/1200/1700/17XX/1851, AMD: AM4/AM5 |
| Weight                | 2.07 pounds   |

The cooler features AGHP (Anti-Gravity Heat Pipe) Technology, ensuring consistent performance regardless of mounting orientation. The frosted black top cover provides a sleek aesthetic.





### AX120R SE PLUS CPU cooler from Thermalright

This CPU cooler uses Single-tower design, With dark top plate. Four pure Copper heat pipes and optimized airflow and static-pressure output 120mm fan for excellent performance. Supports both AMD and Intel mainstream platforms. Keeping CPU cool and stable under gaming and heavy workloads.

Image: Close-up of the cooler's heat pipes, illustrating the AGHP Technology for consistent performance in various orientations.

## Broader Compatibility

Only 148mm in Height, Assassin X120 Refined SE PLUS fits in most ATX cases, With unobstruct RAM modules compatibility.



Image: Dimensional diagram of the Assassin X 120R SE PLUS CPU Cooler and its TL-C12C fan, showing length, width, and height measurements.

## INSTALLATION GUIDE

Follow these steps carefully to install your Thermalright Assassin X 120R SE PLUS CPU Cooler. The installation process varies slightly depending on your CPU socket type (AMD or Intel).

### 1. AMD AM4/AM5 Installation

1. **Prepare Motherboard:** For AMD AM4/AM5, remove the existing plastic brackets around the CPU socket. Keep the motherboard backplate in place.
2. **Install Standoffs:** Place the four red plastic standoffs onto the motherboard's CPU cooler mounting holes.
3. **Install Metal Brackets:** Position the two metal brackets over the plastic standoffs and secure them with the provided AM4 screws. Tighten them evenly.

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Video: AMD AM4/AM5 Motherboard Preparation and Bracket Installation (0:06 - 1:25).

### 2. Intel LGA1700/115X/1200/1851 Installation

1. **Prepare Backplate:** Adjust the mounting hole position on the universal backplate to match your Intel socket (e.g., 115X or 1700).
2. **Install Backplate:** Place the adjusted backplate on the backside of your motherboard, aligning the holes with the CPU socket.
3. **Install Standoffs:** From the front side of the motherboard, install the four blue Intel plastic standoffs into the backplate.
4. **Install Metal Brackets:** Position the two metal brackets over the plastic standoffs and secure them with the provided Intel screws. Tighten them evenly.

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Video: Intel LGA1700/115X Backplate and Bracket Installation (1:26 - 2:40).

### 3. Common Procedures (All Sockets)

1. **Apply Thermal Compound:** Apply a small amount of thermal compound (pea-sized dot or line method) to the center of your CPU's IHS (Integrated Heat Spreader).
2. **Remove Heatsink Sticker:** Ensure you remove the protective sticker from the heatsink's base before mounting.
3. **Mount Heatsink:** Carefully place the heatsink onto the CPU, aligning the mounting nuts with the screws on the installed brackets. Tighten both nuts evenly with a screwdriver until snug. Do not overtighten.
4. **Install Fans:** Attach the fan clips to the 120mm PWM fans. Then, clip the fans onto the heatsink, ensuring proper airflow direction (typically pushing air through the heatsink towards the rear of the case).
5. **Connect Fan Cables:** Connect the 4-pin PWM power cables from the fans to the CPU\_FAN header(s) on your motherboard.

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Video: Applying Thermal Compound, Mounting Heatsink, and Fan Installation (2:41 - 3:50).

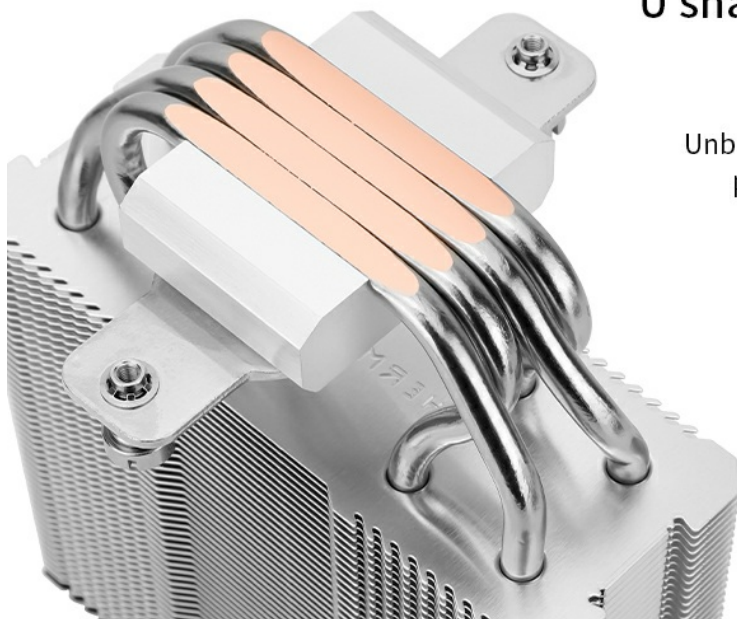
## Refined User Experience

New designed Thermalright SS2 cooler mounting system offers easy installation process. Premium thermal compound is included for optimal out-of-box performance.



Image: Quality installation kits for both AMD and Intel platforms, showcasing the universal mounting system and heatsink design.





## U shape nickel-plated pure copper heatpipes

Unbounded by gravity affecting heat pipe performance, Four AGHP Technology heatpipes offer great CPU cooling in any install directions.

Image: Optimized installation experience, highlighting the large heatsink surface area, high airflow fan, and intelligent PWM fan speed control.

## Universal Compatibility

Assassin X120 Refined SE PLUS Series Cooler are designed for mainstream Intel and AMD CPUs, Including the following models:

Intel LGA1700/1200/115X  
AMD AM4/AM5



Image: The Assassin X 120R SE PLUS CPU cooler, featuring its single tower design, dark top plate, and four pure copper heat pipes.

## OPERATING INSTRUCTIONS

Once installed, the Thermalright Assassin X 120R SE PLUS CPU Cooler operates automatically. The PWM (Pulse Width Modulation) fans adjust their speed based on CPU temperature, providing efficient cooling while minimizing noise. Ensure your motherboard's BIOS/UEFI settings are configured to allow PWM control for the CPU fan header.

- **Initial Boot:** After installation, power on your computer. Monitor CPU temperatures using system

monitoring software to confirm proper cooler function.

- **BIOS/UEFI Settings:** Access your motherboard's BIOS/UEFI to verify that the CPU fan is detected and operating in PWM mode. You can often customize fan curves here to suit your preference for noise and cooling performance.
- **Airflow:** Ensure that the fans are oriented correctly to draw cool air through the heatsink and exhaust warm air out of the case. The dual fan configuration (one intake, one exhaust reverse airflow fan) creates strong airflow.

## MAINTENANCE

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

- **Dust Removal:** Periodically clean dust from the heatsink fins and fan blades using compressed air or a soft brush. Accumulation of dust can reduce cooling efficiency.
- **Fan Inspection:** Check the fans for any signs of wear, damage, or unusual noise. Ensure fan clips are securely attached.
- **Thermal Paste:** While not frequently required, if you remove the heatsink for any reason, it is recommended to clean off the old thermal paste from both the CPU and heatsink base and apply a fresh layer before reinstallation.

## TROUBLESHOOTING

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

- **High CPU Temperatures:**
  - Verify that the heatsink is securely mounted and making good contact with the CPU.
  - Check if thermal paste was applied correctly and evenly.
  - Ensure fans are spinning and oriented for proper airflow.
  - Clean any dust accumulation from the heatsink and fans.
  - Check case airflow and fan configuration.
- **Fans Not Spinning:**
  - Ensure fan cables are securely connected to the CPU\_FAN header(s) on the motherboard.
  - Check BIOS/UEFI settings to ensure fan control is enabled and not set to a very low RPM.
  - Test fans by connecting them to a different fan header if available.
- **Unusual Fan Noise:**
  - Inspect fan blades for any obstructions or damage.
  - Ensure fan clips are properly seated and not vibrating against the heatsink.
  - Check fan bearings for wear; consider replacing the fan if noise persists.

## WARRANTY AND SUPPORT

Thermalright products are manufactured to high-quality standards. For warranty information, technical support, or service inquiries, please refer to the official Thermalright website or contact your local retailer. Keep your proof of purchase for warranty claims.