Thermalright AX120 SE V2

Thermalright Assassin X 120R SE V2 CPU Cooler Instruction Manual

Model: AX120 SE V2

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1. INTRODUCTION

The Thermalright Assassin X 120R SE V2 is a high-performance CPU air cooler designed to provide efficient cooling for a wide range of Intel and AMD processors. Featuring a single-tower design with four 6mm copper heat pipes and a 120mm RGB PWM fan, this cooler ensures optimal thermal management while maintaining low noise levels. Its compact 148mm height offers broad compatibility with various PC cases and memory modules.

This manual provides detailed instructions for the proper installation, operation, and maintenance of your Thermalright Assassin X 120R SE V2 CPU Cooler.

2. PRODUCT SPECIFICATIONS

Feature	Specification
Model	AX120R SE V2
CPU Cooler Dimensions (L x W x H)	120mm x 71mm x 148mm (4.92" x 2.8" x 5.83")
Heat Sink Material	Aluminum fins, Pure Copper base, 4x6mm Heat Pipes
Fan Model	TL-C12C-L V2
Fan Dimensions	120mm x 120mm x 25mm (4.72" x 4.72" x 0.98")

Fan Speed	1550 RPM ±10%
Air Flow	66.17 CFM (MAX)
Noise Level	≤25.6 dB(A)
Power Connector	4-Pin PWM
Voltage	12V
Wattage	15W
Bearing Type	S-FDB Bearing
Compatibility	Intel: LGA1150/1151/1155/1156/1200/1700/17XX/1851 AMD: AM4/AM5
Item Weight	1.74 pounds
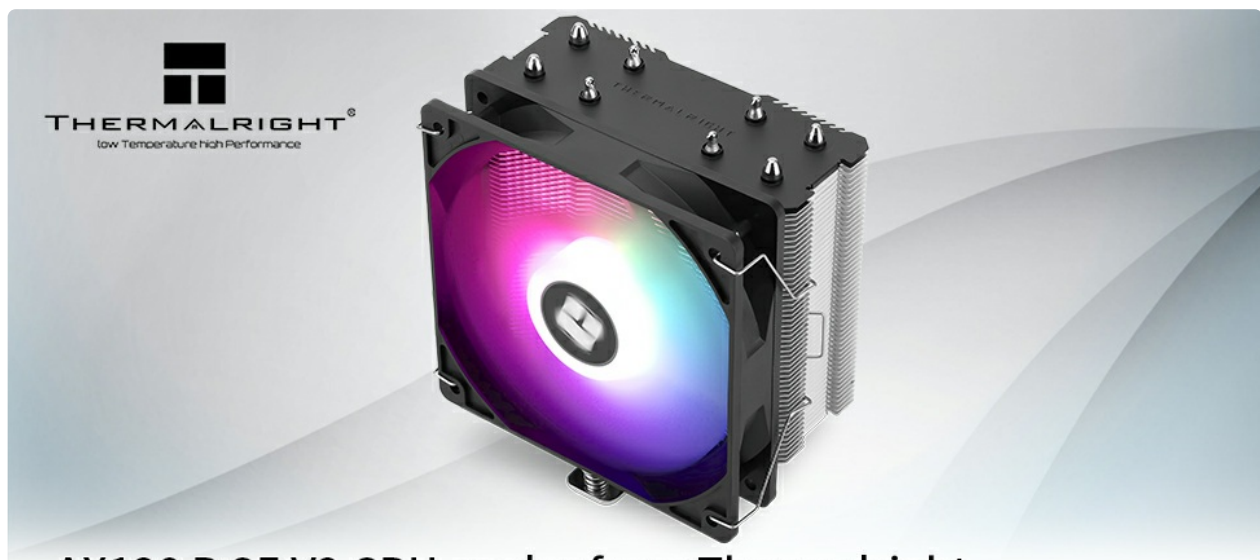
AX120 R SE V2 CPU cooler from Thermalright

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: Detailed dimensions of the Assassin X 120R SE V2 CPU Cooler, showing length, width, and height for both the heatsink and the fan.
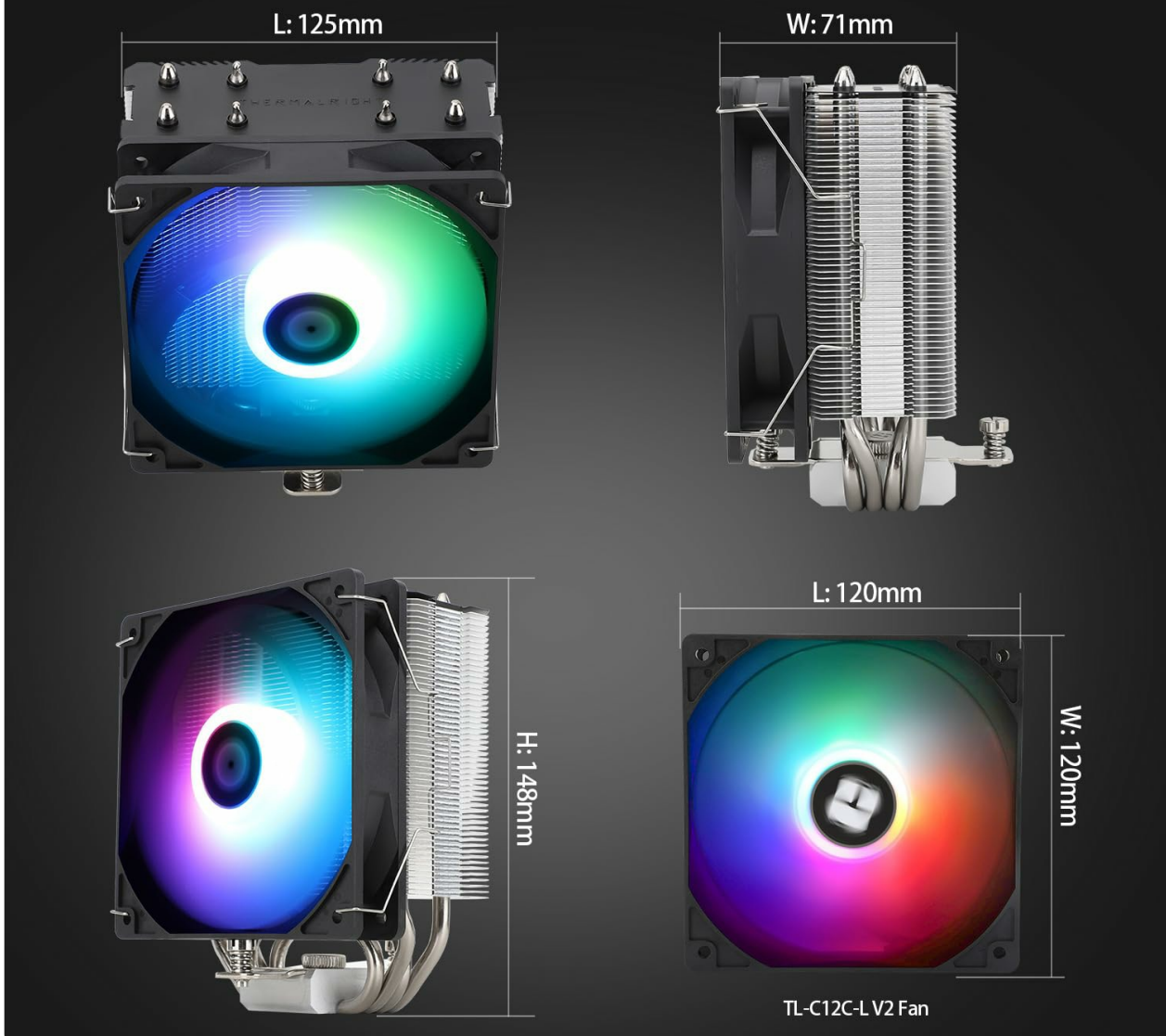
3. PACKAGE CONTENTS

Please verify that all components are present before beginning installation.

- Thermalright Assassin X 120R SE V2 CPU Heatsink
- TL-C12C-L V2 120mm RGB PWM Fan
- Fan Clips (2 sets)
- Intel Mounting Bracket Kit (LGA115X/1200/1700/1851)

- AMD Mounting Bracket Kit (AM4/AM5)
- Thermal Compound
- Screws and Standoffs for various sockets
- User Manual (this document)

Image: An overview of the Thermalright Assassin X 120R SE V2 CPU Cooler and its included accessories, such as the heatsink, fan, mounting hardware, and thermal paste.

4. INSTALLATION GUIDE

Before starting, ensure your system is powered off and unplugged. Refer to your motherboard manual for specific details on CPU socket preparation.

4.1. General Preparation

1. Carefully remove your existing CPU cooler.
2. Clean any old thermal paste from the CPU IHS (Integrated Heat Spreader) and the cooler's base using

isopropyl alcohol and a lint-free cloth.

3. Remove the protective sticker from the base of the new heatsink.

120mm Balance Performance Fan

Based on TL-C12 mirror image manufacturing
New clockwise exit fan blade structure

Image: Close-up view of the heatsink's base, highlighting the four copper heat pipes and AGHP (Anti-Gravity Heat Pipe) Technology, which ensures consistent performance in various mounting orientations.

4.2. AMD AM4/AM5 Installation

1. Remove the plastic retention brackets from the motherboard, but **keep the original motherboard backplate**.
2. Install the four red plastic standoffs onto the motherboard's CPU socket screw holes.
3. Place the two metal mounting brackets onto the plastic standoffs, aligning the holes.
4. Secure the metal brackets with the four AM4 screws. Tighten them in a diagonal pattern until snug.
5. Apply a small amount of thermal compound to the center of the CPU IHS.
6. Carefully place the heatsink onto the CPU, aligning the mounting nuts with the screws on the brackets.
7. Tighten both nuts on the heatsink with a screwdriver in an alternating fashion until secure.

QUALITY INSTALL KITS

AMD:
AM4/AM5

INTEL:
LGA115X/1200/1700

Thermalright SS2 Universal Mounting System
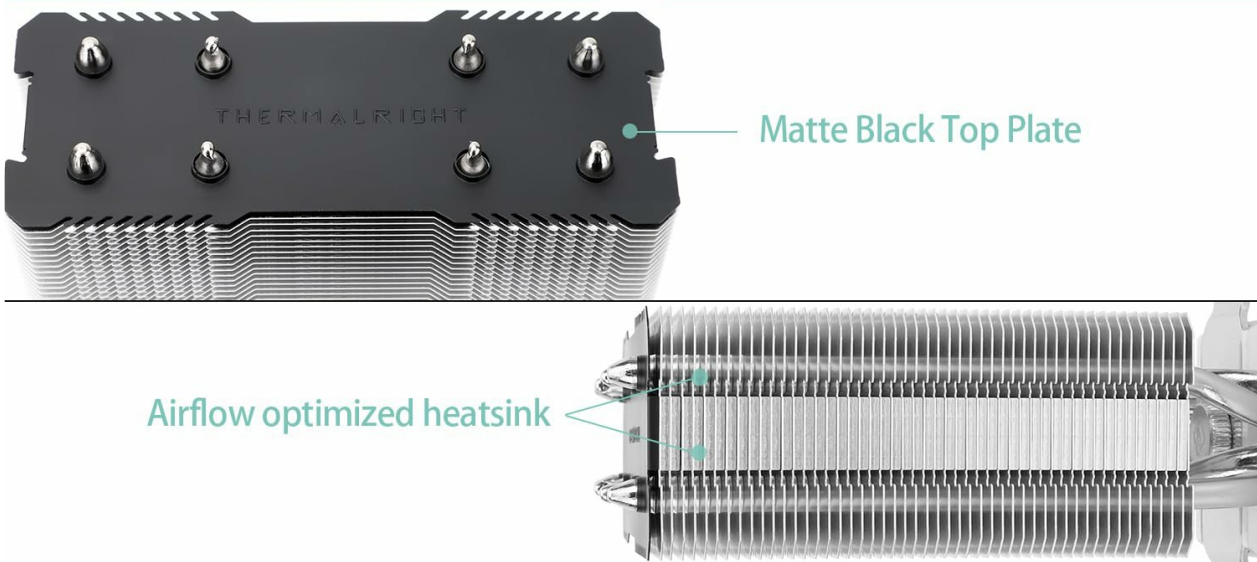
Matte Black Top Plate

Airflow optimized heatsink

Image: Comparison of AMD AM4/AM5 and Intel LGA115X/1200/1700 mounting kits, showing the different brackets and standoffs for each platform. Also shows the heatsink's matte black top plate and airflow optimized fins.

4.3. Intel LGA1700/1200/115X/1851 Installation

1. Adjust the mounting hole position on the universal backplate to match your specific Intel socket (e.g., LGA1700 or LGA115X).

2. Install the backplate from the back side of the motherboard, ensuring the holes align with the CPU socket.

3. Install the four blue plastic standoffs onto the motherboard's CPU socket screw holes.

4. Place the two metal mounting brackets onto the plastic standoffs, aligning the holes.

5. Secure the metal brackets with the four appropriate screws (1700 screws for LGA1700, 115X screws for LGA115X/1200/1851). Tighten them in a diagonal pattern until snug.

6. Apply a small amount of thermal compound to the center of the CPU IHS.

7. Carefully place the heatsink onto the CPU, aligning the mounting nuts with the screws on the brackets.

8. Tighten both nuts on the heatsink with a screwdriver in an alternating fashion until secure.
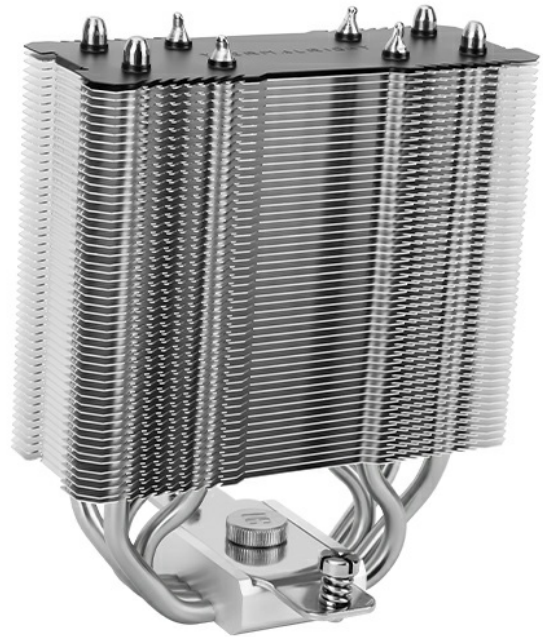
4.4. Fan Installation

1. Attach the fan clips to the TL-C12C-L V2 fan.

2. Carefully clip the fan onto the heatsink, ensuring it is securely attached and facing the correct direction for optimal airflow (typically blowing towards the rear of the case).

3. Connect the 4-pin PWM power cable from the fan to the CPU_FAN header on your motherboard.

Refined User Experience

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

Image: The Thermalright Assassin X 120R SE V2 CPU Cooler installed on a motherboard, demonstrating its compact design and compatibility with RAM modules.

4.5. Installation Video Guide

For a visual step-by-step installation guide, please refer to the official video below:

Your browser does not support the video tag.

Video: Official installation guide for the Thermalright Assassin X 120R SE V2 CPU Cooler, demonstrating the process for both AMD and Intel platforms.

5. OPERATING INSTRUCTIONS

The Thermalright Assassin X 120R SE V2 CPU Cooler operates automatically once installed and connected to the motherboard's CPU_FAN header.

- **PWM Control:** The 4-pin PWM fan automatically adjusts its speed based on CPU temperature, as controlled by your motherboard's BIOS/UEFI settings or operating system software. This ensures efficient cooling when needed and quiet operation during lighter loads.

- **RGB Lighting:** The fan features self-luminous RGB lighting. The lighting is powered through the same 4-pin fan connector and illuminates automatically upon system power-on. Note that this model typically features a fixed RGB lighting pattern and does not offer software-controlled addressable RGB (ARGB) customization unless specified by your motherboard's capabilities and additional connections (which are not standard for this fan).

6. MAINTENANCE

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

- **Dust Cleaning:** Periodically (every 3-6 months, depending on environment), power off your system and use compressed air to gently blow dust out of the heatsink fins and fan blades. Hold the fan blades to prevent them from spinning rapidly during cleaning, which can damage the bearings.
- **Thermal Paste:** Thermal paste typically lasts for several years. If you notice a significant increase in CPU temperatures, consider reapplying fresh thermal paste. This requires carefully removing the heatsink, cleaning old paste, and applying new paste as per installation instructions.
- **Fan Inspection:** Check the fan for any signs of wear, damage, or excessive noise. The S-FDB bearings are designed for durability, but extreme conditions can affect performance.

7. TROUBLESHOOTING

If you encounter issues with your CPU cooler, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
CPU Overheating	- Improper thermal paste application - Heatsink not seated correctly - Fan not spinning or spinning too slowly - Excessive dust buildup	- Reapply thermal paste. - Ensure heatsink is securely mounted and screws are tightened evenly. - Check fan connection to CPU_FAN header. Verify fan operation in BIOS. - Clean heatsink and fan thoroughly.
Fan Not Spinning	- Loose or incorrect fan connection - Fan failure - BIOS fan control settings	- Ensure 4-pin PWM cable is securely connected to CPU_FAN header. - Test fan on another fan header if available. Replace fan if faulty. - Check BIOS/UEFI settings for fan speed control (e.g., ensure it's not set to 0 RPM at low temperatures).

Excessive Fan Noise	- Dust buildup - Loose fan clips - Fan bearing issue	- Clean fan blades and heatsink. - Ensure fan clips are properly secured to the heatsink. - If noise persists, the fan bearing may be worn. Consider replacing the fan.
RGB Lighting Not Working	- Incorrect fan connection - Fan lighting failure	- Ensure the 4-pin PWM cable is correctly connected. The RGB is integrated with the fan power. - If the fan spins but RGB does not light up, the integrated lighting may be faulty.

8. 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.
Please retain your proof of purchase for warranty claims.