Thermalright ASF BLACK V2

Thermalright ASF Black V2 AM5 CPU Holder Instruction Manual

Model: ASF BLACK V2

1. PRODUCT OVERVIEW

The Thermalright ASF Black V2 AM5 CPU Holder is an all-aluminum alloy frame designed to replace the standard Integrated Loading Mechanism (ILM) on AMD AM5 motherboards. Its primary function is to provide even mounting pressure across the CPU, which helps prevent bending of the CPU substrate and ensures optimal contact with the CPU cooler. This can contribute to improved thermal performance and longevity of your CPU.

Image 1.1: The Thermalright ASF Black V2 AM5 CPU Holder, shown with the included T20 screwdriver.
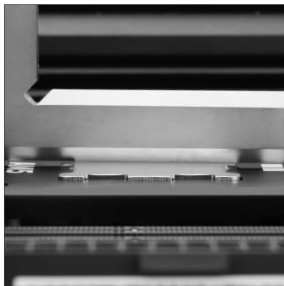
2. KEY FEATURES

- **Anti-Bending Design:** Precision-machined aluminum alloy frame supports the CPU, preventing potential bending caused by uneven cooler mounting pressure.

- **Even Pressure Distribution:** Ensures uniform contact between the CPU and the cooler, which can enhance thermal transfer efficiency.

- **Reduced Thermal Paste Overflow:** The design helps contain thermal paste, minimizing overflow onto the motherboard or CPU pins.

- **Premium Construction:** Made from all-aluminum alloy with a surface oxidation treatment for durability and a refined finish.

- **Insulated Foot Pads:** Features insulated protective feet to reduce capacitance issues that can arise from thermal paste contact with the CPU.

- **Easy Installation:** Designed for straightforward installation with the included T20 screwdriver.
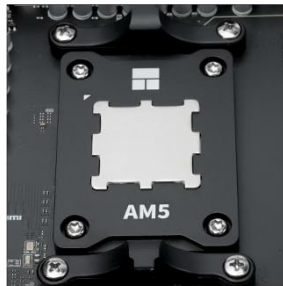
ASF AMD AM5 Secure Frame V2 BLACK

Reduce Thermal Paste Overflow	Seamless Fit Installation	Premium Aluminium Anodized

* Design for AMD AM5 CPU only.

Image 2.1: Visual representation of key features including reduced thermal paste overflow, seamless fit, and premium aluminum construction.

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low Temperature high Performance

AMD-ASF-BLACK

Image 2.2: Illustrates how the ASF frame balances pressure across the CPU compared to the standard ILM.

ALL-ALUMINUM ALLOY ANODE PROCESS
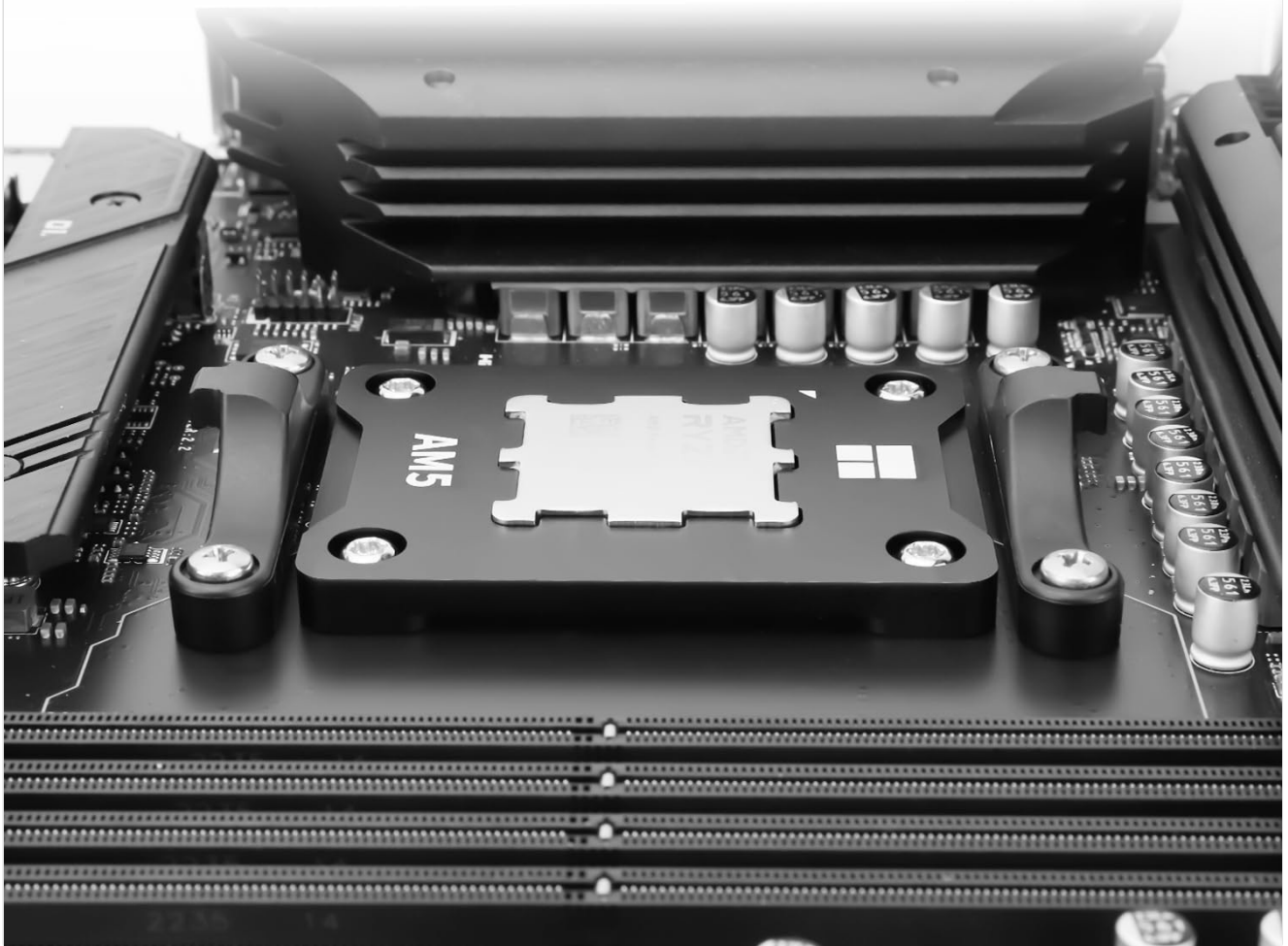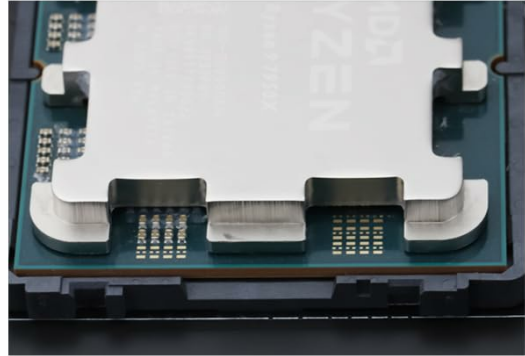# AVOID CONTACTING CPU CAPACITORS
▼

Image 2.3: Close-up view of the all-aluminum alloy anode process, designed to avoid contact with CPU capacitors.

EQUALLY CPU MOUNTING PRESSURE

▼

Factory motherboard ILM contacts two small dots at middle of CPU, giving uneven stress to CPU.

ASF gives even mounting pressure to CPU, not leaving install marks on CPU IHS.

Image 2.4: Demonstrates how the ASF frame provides equal CPU mounting pressure, preventing marks on the CPU IHS.

3. PACKAGE CONTENTS

Verify that all components are present in the package:

- 1x Thermalright ASF Black V2 AM5 CPU Holder
- 4x T20 Screws
- 1x T20 Screwdriver (L-shaped)
- 1x Thermalright TF7 Thermal Paste (syringe)
- Documentation (Warranty Card, etc.)

PACKING DETAILS

AMD-ASF BLACK V2

Image 3.1: All items included in the product packaging.

4. INSTALLATION GUIDE

This section provides step-by-step instructions for installing the Thermalright ASF Black V2 AM5 CPU Holder. Ensure your system is powered off and disconnected from the power source before proceeding.

4.1. Preparation

1. Place your motherboard on a stable, level, and anti-static surface.

2. Ensure the CPU is already installed in the AM5 socket.

3. Locate the existing Integrated Loading Mechanism (ILM) on your motherboard.

4.2. Removing the Original ILM

4. Using the included T20 screwdriver, carefully unscrew the four screws securing the original ILM. The CPU should remain seated in the socket.

5. Once all screws are removed, gently lift and remove the original ILM. The backplate behind the motherboard

should remain in place.

6. Store the original ILM and its screws in a safe place for future use, if needed.

Your browser does not support the video tag.

Video 4.1: Official Thermalright installation guide for the AM5 Secure Frame. This video demonstrates the process of removing the original ILM and installing the new frame.

4.3. Installing the ASF Black V2 Frame

7. Carefully place the Thermalright ASF Black V2 frame over the CPU, aligning the screw holes with the motherboard's mounting points. Ensure the frame sits flush around the CPU.

8. Insert the four new T20 screws (provided with the ASF frame) into the corresponding holes.

9. Using the T20 screwdriver, tighten the screws in a diagonal pattern (e.g., top-left, bottom-right, top-right, bottom-left) to ensure even pressure. Tighten until snug, but do not overtighten. Excessive force is not required and can damage components.
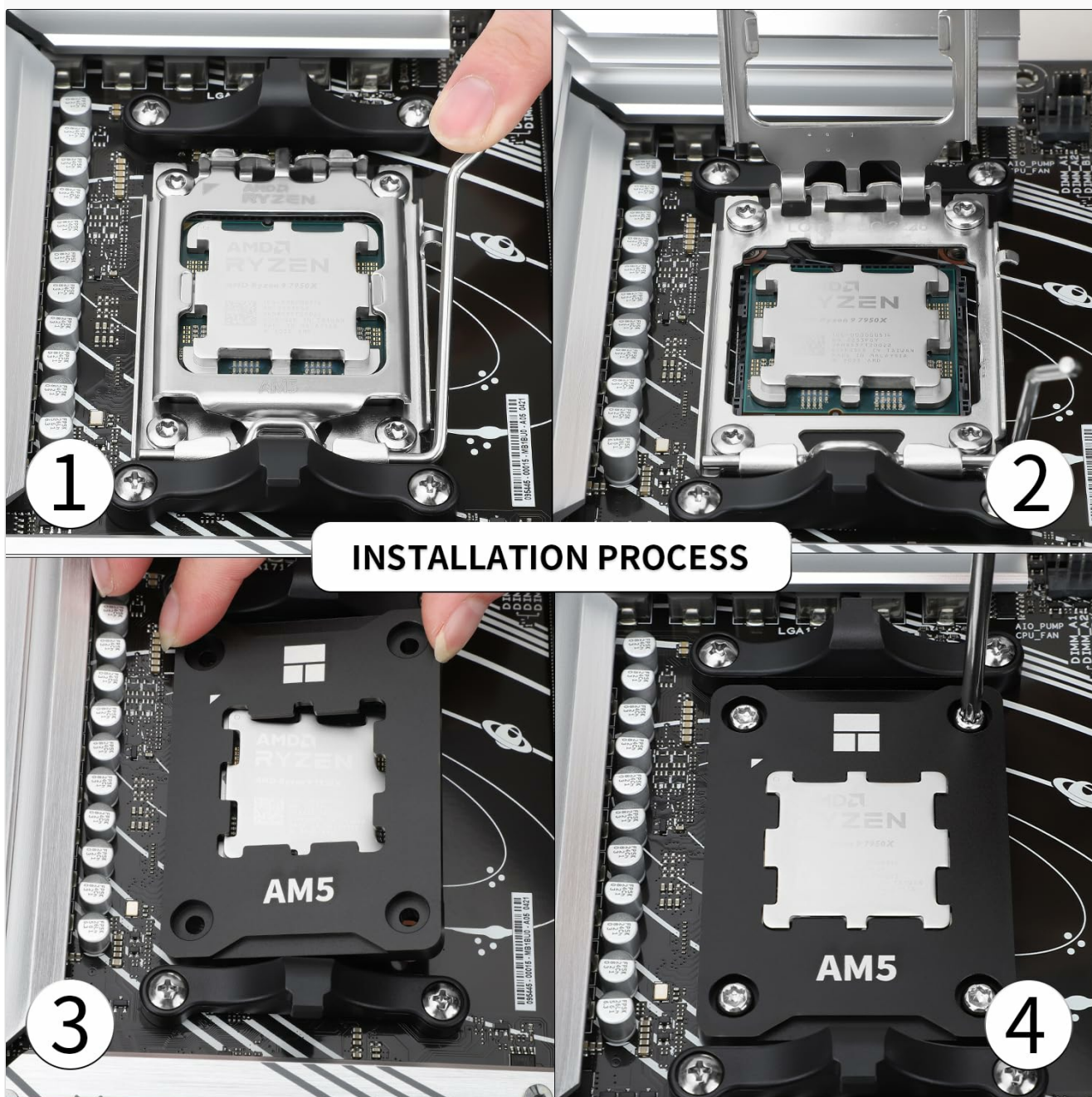

Image 4.2: A visual guide detailing the four main steps of the installation process.

After installation, you can proceed with applying thermal paste and installing your CPU cooler as usual.

5. OPERATING PRINCIPLES

The Thermalright ASF Black V2 AM5 CPU Holder is a passive component that enhances the CPU mounting mechanism. It replaces the stock ILM, which can sometimes apply uneven pressure to the CPU, potentially leading to slight bending of the CPU substrate over time. By distributing pressure more evenly across the CPU's Integrated Heat Spreader (IHS), the ASF frame aims to:

- **Prevent CPU Bending:** Reduces stress on the CPU package, mitigating the risk of long-term deformation.
- **Improve Thermal Contact:** A flatter CPU surface ensures better contact with the CPU cooler's cold plate, potentially leading to more consistent and slightly lower temperatures.
- **Enhance System Stability:** A securely mounted CPU with optimal thermal contact contributes to overall system stability and performance.

6. MAINTENANCE

The Thermalright ASF Black V2 AM5 CPU Holder requires minimal maintenance. However, periodic checks and cleaning can ensure its continued effectiveness:

- **Dust Removal:** Like all internal PC components, dust can accumulate on the frame. Use compressed air or a soft brush to gently remove dust during routine PC cleaning.
- **Screw Tightness:** Periodically check the tightness of the four mounting screws. They should be snug but not overtightened. Avoid loosening them unless you intend to remove the frame.
- **Thermal Paste:** If you remove your CPU cooler for any reason, inspect the thermal paste application. The ASF frame helps prevent overflow, but ensure proper application when reapplying thermal paste.

7. TROUBLESHOOTING

If you encounter issues during or after installation, consider the following:

- **Frame Does Not Fit:**

  - Ensure your motherboard uses an AMD AM5 socket. This frame is specifically designed for AM5 CPUs and motherboards (chipsets like X670, B650 series).
  - Verify that the CPU is correctly seated in the socket before attempting to install the frame.

- **Screws Not Tightening:**

  - Ensure you are using the correct T20 screwdriver provided.
  - Do not force the screws. They should thread smoothly. If resistance is met, re-align the frame and try again.
  - Confirm that the original ILM screws were fully removed and the backplate is correctly positioned behind the motherboard.

- **High CPU Temperatures After Installation:**

  - Re-check that the ASF frame is installed correctly and securely.
  - Ensure thermal paste was applied correctly and adequately between the CPU IHS and the CPU cooler cold plate.
  - Verify that your CPU cooler is properly mounted and making good contact with the ASF frame/CPU.
  - Confirm that your CPU cooler fans are spinning and functioning correctly.

For further assistance, please refer to the official Thermalright support channels.

8. SPECIFICATIONS

Feature	Detail
Model Number	ASF BLACK V2
Product Dimensions (L x W x H)	70mm x 54mm x 6mm (2.76" x 2.13" x 0.24")
Material	Aluminum Alloy
Compatibility	AMD AM5 CPUs, Motherboard slots for AM5 (X670, B650 series chipsets)
Weight (Body)	20g
Weight (Overall)	55g
UPC	765026042976

ASF AMD AM5 Secure Frame V2 BLACK DIMENSION
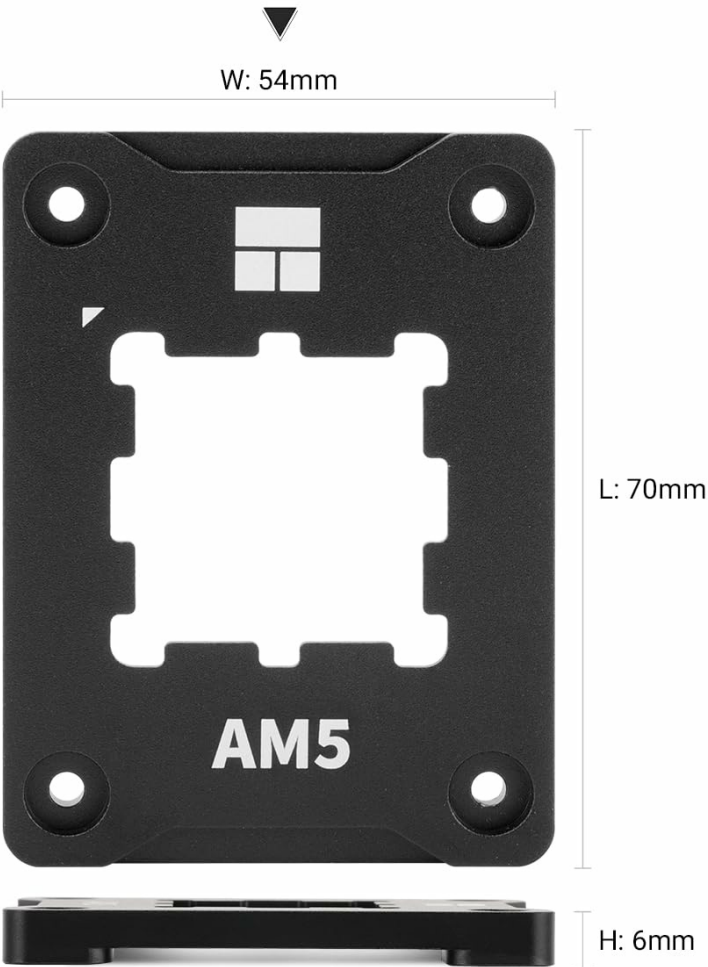
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W: 54mm

AM5

L: 70mm

H: 6mm

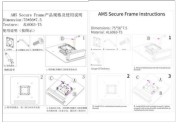Image 8.1: Detailed dimensions of the ASF Black V2 frame.
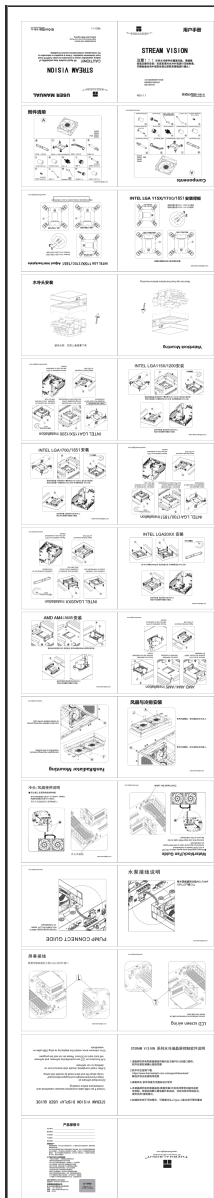
9. WARRANTY AND SUPPORT

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 additional resources and product information, visit:www.thermalright.com

Related Documents - ASF BLACK V2

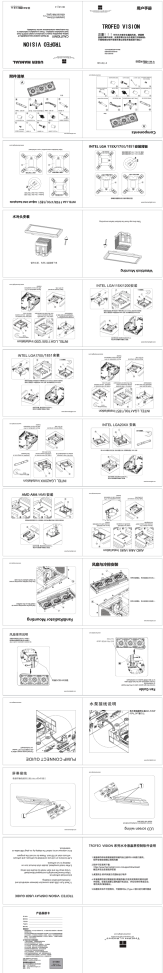|	
	Thermalright AM5 Secure Frame Installation Guide and Specifications Detailed instructions and specifications for the Thermalright AM5 Secure Frame, designed for AMD AM5 sockets. Includes installation steps and material details.
	Thermalright Phantom Spirit 120 Series Installation Guide Comprehensive installation guide for the Thermalright Phantom Spirit 120 Series CPU cooler, detailing parts, assembly steps for Intel and AMD platforms, and fan wiring.

[Thermalright Stream Vision LCD Water Cooler User Manual](#)

User manual for the Thermalright Stream Vision LCD water cooler, detailing installation, software setup, and component connections for AMD and Intel platforms. Includes warranty information.

[Thermalright Trofeo Vision 360 ARGB CPU Cooler - Installation and User Guide](#)

Comprehensive guide for the Thermalright Trofeo Vision 360 ARGB CPU cooler, detailing its features, components, and installation process. Available in black and white.

[Thermalright Assassin X 120 Refined SE CPU Cooler Installation Guide](#)

Comprehensive installation guide for the Thermalright Assassin X 120 Refined SE CPU cooler, covering AMD AM4 and Intel LGA 115x, 1200, and 1700 socket compatibility. Includes parts list and fan wiring instructions.

| | [Thermalright Assassin Spirit 120 EVO CPU Cooler Installation Guide and Specifications](#)
 Comprehensive guide for installing the Thermalright Assassin Spirit 120 EVO CPU Cooler. Features compatibility with Intel LGA1700/115x and AMD AM4/AM5 sockets, ARGB lighting, and detailed component descriptions. |