## ELUTENG UA-ELT-M2-HDISP-SET

# ELUTENG M.2 Heatsink User Manual

Model: UA-ELT-M2-HDISP-SET

## 1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your ELUTENG M.2 Heatsink sets. These heatsinks are designed to improve the thermal performance of M.2 2280 SSDs, including NVMe and SATA variants, by dissipating heat efficiently and maintaining optimal operating temperatures.

Proper installation and care will ensure the longevity and effectiveness of your SSD and the heatsink. Please read this manual thoroughly before proceeding with installation.

## 2. Safety Information

- Always disconnect power from your computer before installing or removing any components.
- Handle SSDs and heatsinks with care to avoid damage to sensitive electronic components.
- Ensure proper grounding to prevent electrostatic discharge (ESD) which can damage electronic parts.
- Keep small parts, such as screws and thermal pads, out of reach of children.
- Do not modify the heatsink or use it for purposes other than its intended design.

## 3. Package Contents

Your ELUTENG M.2 Heatsink package includes the following components:

- 1 x Screw-fixing M.2 Heatsink Set (top and bottom plates)
- 1 x Rubber-band-fixing M.2 Heatsink Set (top plate)
- 4 x Silicone Thermal Pads (various thicknesses for different applications)
- 1 x Small Screwdriver
- Mounting Screws for screw-fixing heatsink
- Rubber Rings for rubber-band-fixing heatsink
- Cleaning Wipes (wet and dry)


Image: Overview of the ELUTENG M.2 Heatsink 2 Sets, including the screw-fixing heatsink, the rubber-band-fixing heatsink, and a small screwdriver.


Image: Detailed view of the components included in the package, showing the two types of heatsinks, thermal pads, rubber rings, and screwdriver.

## 4. Setup and Installation

The ELUTENG M.2 Heatsink offers two installation methods: screw-fixing and rubber-band-fixing. Choose the method that best suits your M.2 SSD and system configuration.

### 4.1. Preparation

1. Power off your computer and disconnect all power cables.
2. Open your computer case to access the motherboard and M.2 slot.
3. Carefully remove your M.2 SSD from its slot if it is already installed.
4. Use the provided cleaning wipes (wet then dry) to clean the surface of your M.2 SSD's controller and NAND chips where the thermal pad will make contact. Ensure the heatsink surfaces are also clean.

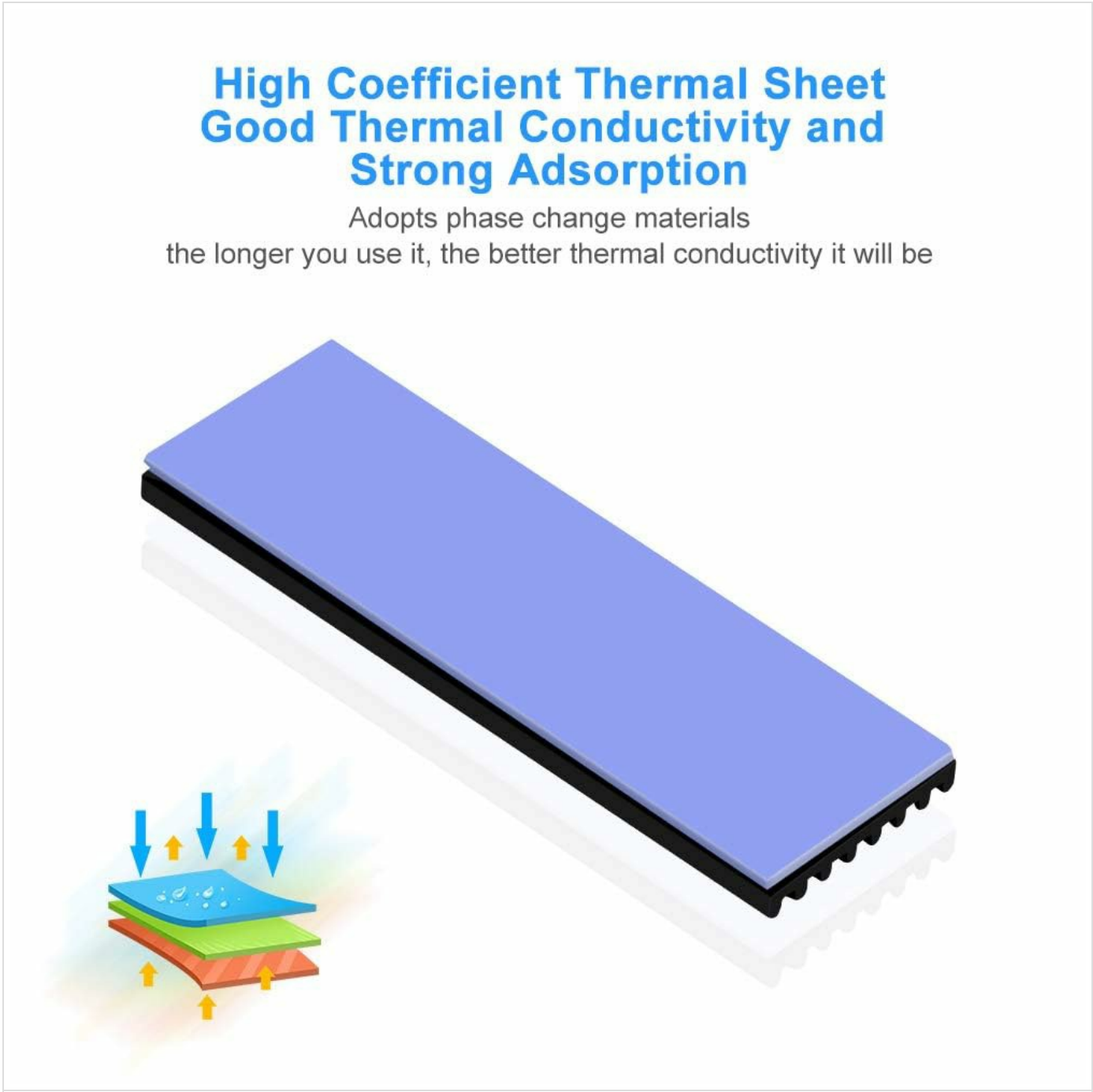


Image: Illustration of the high-coefficient thermal pad, highlighting its role in transferring heat from the SSD to the heatsink.

### 4.2. Installation Method 1: Screw Fixing

This method provides a secure and robust attachment for optimal heat transfer, especially for double-sided M.2 SSDs.

1. Select the appropriate thermal pads. For the screw-fixing heatsink, you will typically use one thicker pad for the top of the SSD and a thinner pad for the bottom plate if your SSD is double-sided. If your SSD is single-sided, you may only need the top pad.
2. Peel off the protective film from one side of the thermal pad and carefully place it onto the top surface of your M.2 SSD, covering the controller and memory chips.
3. If using the bottom plate, peel off the protective film from another thermal pad and place it onto the inside surface of the bottom heatsink plate.
4. Align the top heatsink piece over the SSD with the thermal pad.
5. Place the SSD with the top heatsink piece onto the bottom heatsink plate, ensuring the thermal pads are correctly positioned and the SSD is centered.

6. Carefully align the screw holes on the top and bottom heatsink pieces. Insert and tighten the provided screws using the screwdriver. Do not overtighten.
7. Once assembled, insert the M.2 SSD with the attached heatsink into the M.2 slot on your motherboard. Secure it with the motherboard's M.2 standoff screw.


Image: Step-by-step illustration of assembling the screw-fixing heatsink onto an M.2 SSD, showing the thermal pads and the two heatsink components.

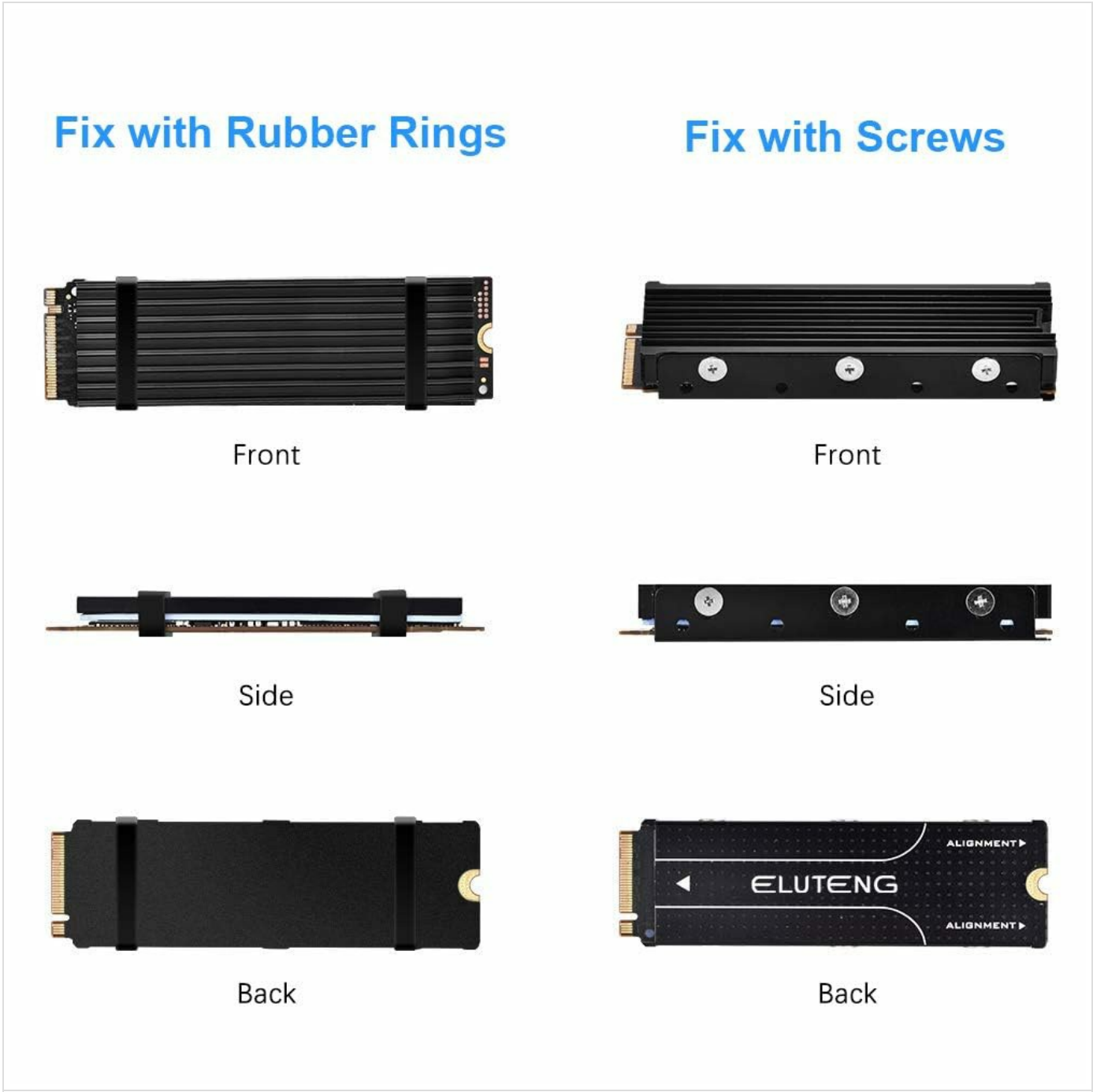


Image: Various angles (front, side, back) of an M.2 SSD with the screw-fixed heatsink installed, demonstrating its compact profile.

### 4.3. Installation Method 2: Rubber Band Fixing

This method is simpler and suitable for single-sided M.2 SSDs or where space is limited.

1. Select a thermal pad. Peel off the protective film from one side of the thermal pad and carefully place it onto the top surface of your M.2 SSD, covering the controller and memory chips.
2. Place the rubber-band-fixing heatsink (the grooved aluminum block) directly on top of the thermal pad, ensuring it is centered over the SSD.
3. Use the provided rubber rings to secure the heatsink to the M.2 SSD. Loop the rubber rings around both ends of the heatsink and the SSD, ensuring a snug fit that applies gentle pressure.
4. Once assembled, insert the M.2 SSD with the attached heatsink into the M.2 slot on your motherboard. Secure it with the motherboard's M.2 standoff screw.


Image: Step-by-step illustration of assembling the rubber-band-fixing heatsink onto an M.2 SSD, showing the thermal pad and the use of rubber bands.


Image: Various angles (front, side, back) of an M.2 SSD with the rubber-fixed heatsink installed, showing the rubber bands securing the heatsink.

## 5. Operating Principles

The ELUTENG M.2 Heatsink functions by transferring heat generated by the M.2 SSD's controller and NAND flash memory to the aluminum heatsink via the thermal pads. The aluminum heatsink, with its grooved design, increases the surface area exposed to airflow, allowing for efficient heat dissipation into the surrounding environment.

This process helps to maintain the SSD at a lower operating temperature, which is crucial for preventing thermal throttling and ensuring consistent performance and extended lifespan of the drive. The high-coefficient thermal pads are designed to improve thermal conductivity over time with continued use.

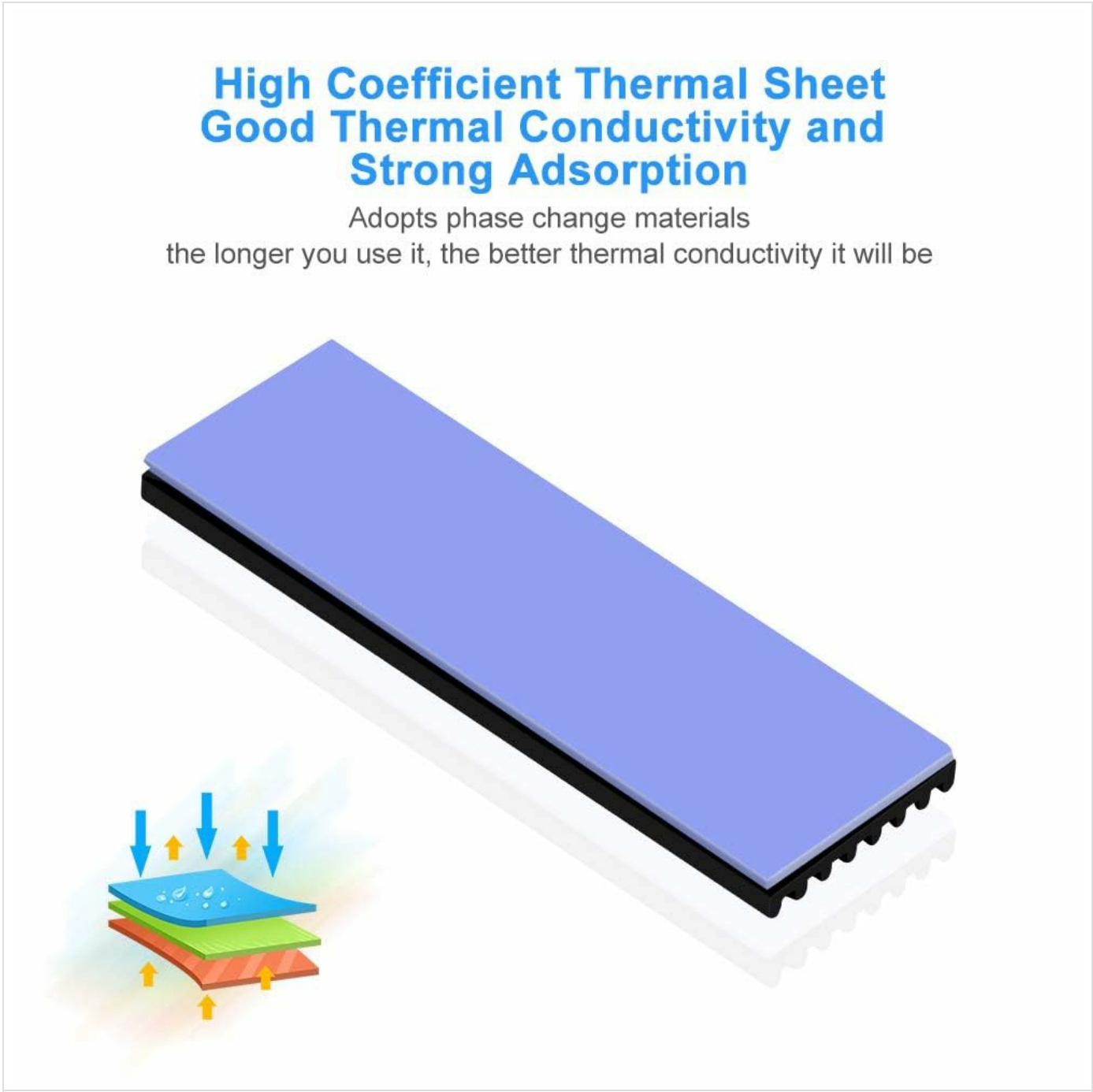


Image: Diagram illustrating the heat transfer process through the thermal pad and into the heatsink, emphasizing the high thermal conductivity.


Image: Visual representation of the heatsink's cooling capability, indicating a potential temperature reduction of 10-25°C.

## 6. Maintenance

The ELUTENG M.2 Heatsink requires minimal maintenance. Follow these guidelines to ensure its continued effectiveness:

- **Dust Removal:** Periodically inspect the heatsink for dust accumulation. Use compressed air or a soft brush to gently remove any dust from the fins of the heatsink. Excessive dust can impede airflow and reduce cooling efficiency.
- **Thermal Pad Integrity:** The thermal pads are designed for long-term use. However, if you frequently remove and re-install the heatsink, or if you notice a significant increase in SSD temperatures, inspect the thermal pads for wear or damage. Replace them if necessary.
- **Physical Inspection:** Ensure the heatsink remains securely attached to the SSD. For screw-fixed heatsinks, check that screws are snug. For rubber-band-fixed heatsinks, ensure the rubber bands are not degraded or loose.

## 7. Troubleshooting

| Problem | Possible Cause | Solution |
| --- | --- | --- |
| SSD temperature is still high after heatsink installation. | ◦ Improper thermal pad contact.<br>◦ Insufficient airflow in the computer case.<br>◦ Incorrect heatsink installation.<br>◦ Thermal pad not fully adhered or damaged. | ◦ Re-install the heatsink, ensuring the thermal pad is correctly positioned and makes full contact with the SSD and heatsink.<br>◦ Improve case airflow by adding or repositioning case fans.<br>◦ Verify that the heatsink is securely fastened (screws tightened or rubber bands snug).<br>◦ Replace thermal pads if they appear damaged or worn. |
| Heatsink feels loose on the SSD. | ◦ Screws are loose (screw-fixing).<br>◦ Rubber bands are stretched or broken (rubber-band-fixing).<br>◦ Incorrect thermal pad thickness used. | ◦ Tighten screws gently.<br>◦ Replace rubber bands with new ones if stretched or broken.<br>◦ Ensure the correct thermal pad thickness is used to provide adequate pressure. |
| SSD not detected after heatsink installation. | ◦ SSD not fully seated in the M.2 slot.<br>◦ Damage to the M.2 slot or SSD during installation. | ◦ Carefully remove the SSD with heatsink and re-insert it, ensuring it clicks firmly into place.<br>◦ Inspect the M.2 slot and SSD connector for any visible damage. If damage is suspected, consult a professional. |

## 8. Specifications

| Feature | Detail |
| --- | --- |
| Product Name | ELUTENG M.2 Heatsink 2 Sets |
| Model Number | UA-ELT-M2-HDISP-SET |
| Compatibility | M.2 2280 NVMe and SATA SSDs (e.g., Samsung 850 EVO, 860 EVO, 960 EVO, 970 EVO, 950 PRO, 960 PRO, 970 PRO) |
| Material | Aluminum Alloy |
| Cooling Effect | Typically 10°C - 25°C reduction (varies by environment) |
| Dimensions (Screw-fixing) | Approx. 7.7L x 2.2W x 0.6H cm |
| Dimensions (Rubber-band-fixing) | Approx. 7.0L x 2.0W x 0.6H cm |
| Item Weight | 50 Grams (total package) |
| Mounting Type | Panel Mount (via M.2 slot) |


Image: Detailed dimensions for both the rubber-fixed and screw-fixed heatsinks, showing length and width measurements.

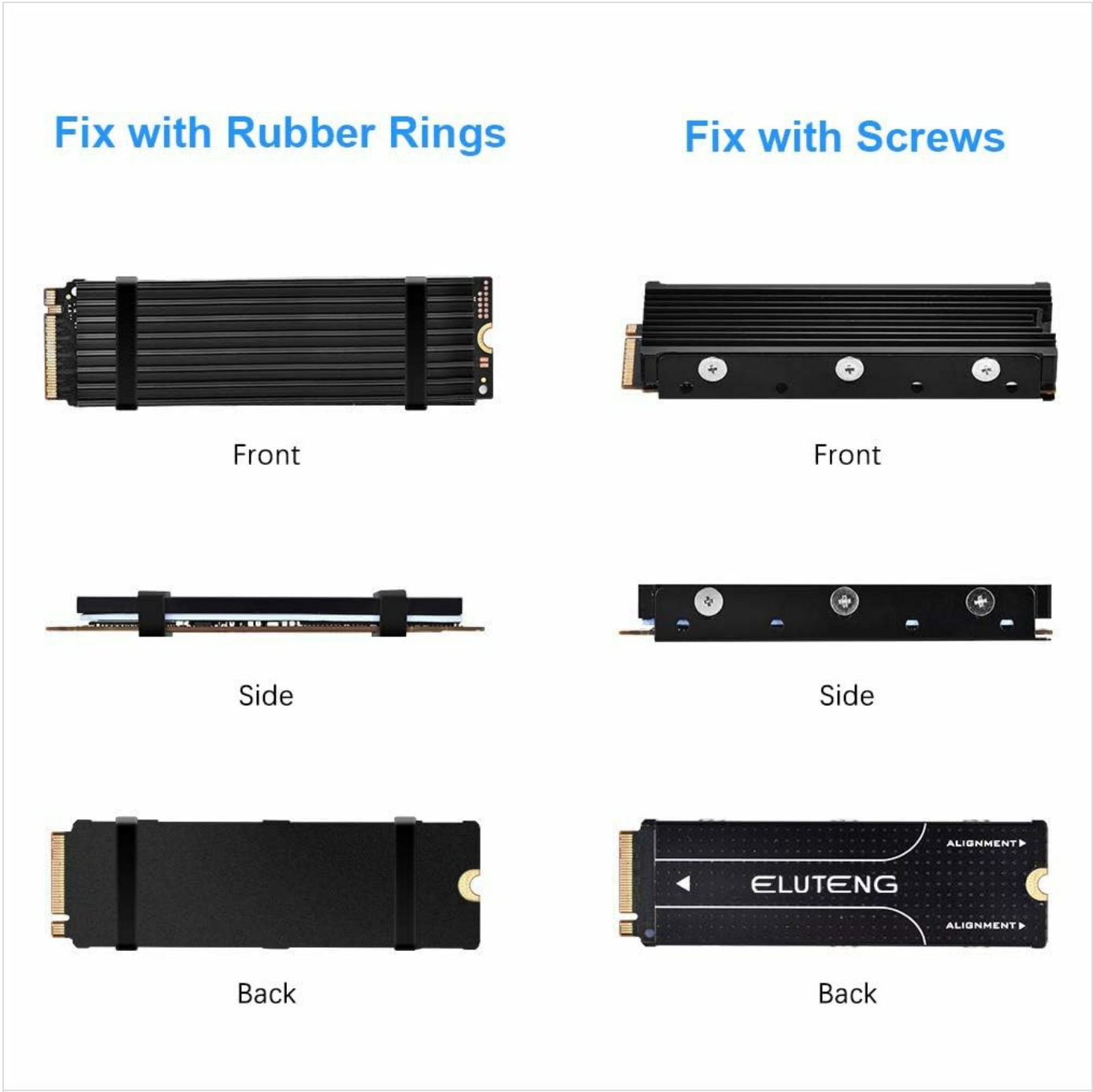


Image: Illustration highlighting the properties of the aluminum alloy material used for the heatsink, including corrosion resistance, hardness, and heat resistance.

## 9. Warranty and Support

ELUTENG products are manufactured to high quality standards. For specific warranty information and support, please refer to the official ELUTENG website or contact their customer service directly.

For further assistance or technical inquiries, please visit theELUTENG Store on Amazon or contact their support channels.

## Related Documents - UA-ELT-M2-HDISP-SET

| | |
|---|---|
|  | Vassoio per SSD M.2 NVMe Sostituibile a Caldo StarTech.com TR-M2-REMOVABLE-PCIE<br>Scopri il vassoio per unità SSD M.2 NVMe sostituibile a caldo StarTech.com TR-M2-REMOVABLE-PCIE. Offre installazione senza attrezzi, dissipazione del calore avanzata e compatibilità PCIe 4.0 per prestazioni ottimali. |
|  | StarTech.com USB-C 10Gbps M.2 NVMe/SATA SSD Enclosure \| M2-USB-C-NVME-SATA<br>Convert your M.2 NVMe or SATA SSD into a portable, high-speed external drive with the StarTech.com M2-USB-C-NVME-SATA enclosure. Features USB 3.2 Gen 2 (10Gbps), tool-free installation, and durable aluminum design. |
|  | StarTech.com M.2 NVMe SSD to PCIe x4 Mobile Rack/Backplane (M2-REMOVABLE-PCIE-N1)<br>Enhance your system with the StarTech.com M.2 NVMe SSD to PCIe x4 Mobile Rack/Backplane (M2-REMOVABLE-PCIE-N1). This adapter allows tool-less installation of M.2 NVMe SSDs into a PCIe x4 slot, offering hot-swap capability, PCIe 4.0/3.0 support, and robust thermal management for optimal performance and data security. |
|  | PiBOX NVMe M.2 Enclosure M2-322-NE User Guide and Specifications<br>A comprehensive guide to the PiBOX NVMe M.2 Enclosure M2-322-NE, covering installation, specifications, troubleshooting, and warranty information. Learn how to set up and use your M.2 NVMe SSD enclosure. |
|  | UTHAI M.2 SSD Enclosure Installation Guide and FAQ<br>Step-by-step installation instructions, troubleshooting tips, and FAQ for the UTHAI M.2 SSD Enclosure (Model M2-301-NF), including overheating protection information. |
|  | CUSU SSD Installation Guide and Warranty Statement<br>Comprehensive guide for installing and understanding the warranty for CUSU Solid State Drives (SSDs). Includes product information, installation steps, and hazardous substance details. |