Alphacool 14752

Alphacool Core RX 9070 XT Taichi GPU Water Block with Backplate User Manual

Model: 14752

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Alphacool Core RX 9070 XT Taichi GPU Water Block with Backplate. This product is designed to provide superior cooling performance for the ASRock AMD Radeon RX 9070 XT Taichi graphics card. It features a chrome-plated copper cooler, a precisely machined brass connection terminal with a nylon cover, and an aluminum backplate for a uniform appearance. The integrated aRGB lighting offers customizable illumination.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installation and operation. Failure to follow these instructions may result in product damage, system damage, or personal injury.

- Always disconnect power from your computer before installing or removing any components.
- Handle components with care to avoid damage. Static electricity can harm sensitive electronic parts.
- Ensure all fittings are securely tightened to prevent leaks in your water cooling loop.
- Perform a leak test for at least 24 hours before powering on your system.
- Use only approved coolants for water cooling systems.
- Keep out of reach of children.

3. WHAT'S IN THE BOX

Verify that all components are present and undamaged before proceeding with installation.

- 1x Alphacool Core RX 9070 XT Taichi GPU Water Block
- 1x Backplate
- Mounting screws and accessories
- Thermal pads and thermal paste

4. Setup and Installation

This section outlines the steps required to install the GPU water block onto your graphics card. It is recommended to perform this installation on a clean, static-free surface.

4.1 Preparation

1. Gather necessary tools: Phillips head screwdriver, isopropyl alcohol, lint-free cloth.
2. Carefully remove your graphics card from your computer.
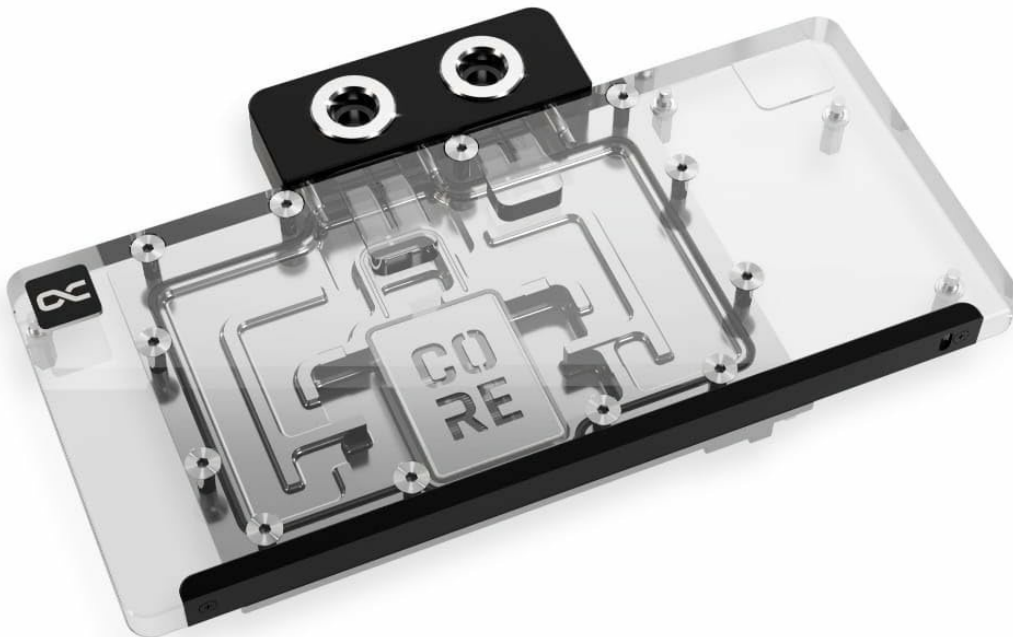3. Place the graphics card on an anti-static mat.

4.2 Removing the Stock Cooler

1. Unscrew all mounting screws securing the stock cooler to the GPU PCB. Pay attention to any hidden screws.
2. Gently detach the stock cooler, being careful of any fan or RGB cables connected to the PCB. Disconnect these cables.
3. Clean the GPU die and memory chips thoroughly with isopropyl alcohol and a lint-free cloth to remove all traces of old thermal paste and pads.

4.3 Applying Thermal Pads and Paste

1. Refer to the included diagram (if provided) for thermal pad placement on the GPU PCB. Apply thermal pads to the VRMs and memory modules as indicated.
2. Apply a small amount of thermal paste to the center of the GPU die. A pea-sized or line method is generally recommended.

4.4 Mounting the Water Block

Figure 4.4.1: Top view of the Alphacool Core RX 9070 XT Taichi GPU Water Block. This image shows the chrome-plated copper cooling plate and the acrylic top with the 'CORE' emblem.

1. Carefully align the water block with the mounting holes on the GPU PCB.
2. Gently lower the water block onto the GPU, ensuring proper contact with the GPU die and thermal pads.
3. Secure the water block using the provided screws. Tighten screws in a diagonal pattern to ensure even pressure, but do not overtighten.

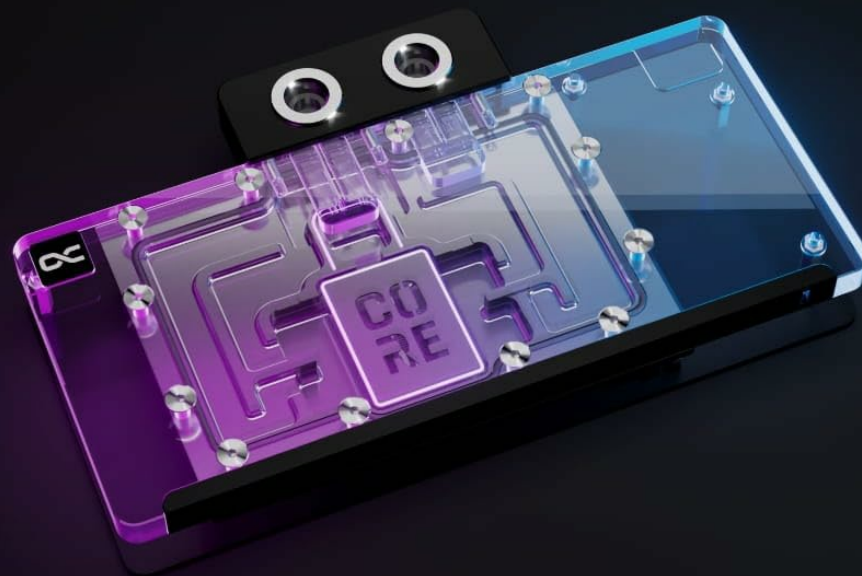## 4.5 Installing the Backplate

Figure 4.5.1: Rear view of the GPU with the Alphacool backplate installed. The backplate covers the entire back of the PCB, providing structural support and a clean aesthetic.

1. Place the aluminum backplate onto the rear of the GPU PCB, aligning it with the mounting holes.
2. Secure the backplate using the designated screws.

4.6 Connecting aRGB Lighting

Figure 4.6.1: The water block illuminated with aRGB lighting. The acrylic top allows for even and impressive illumination.

1. Locate the 3-pin JST connector for the digital aRGB LEDs on the water block.
2. Connect this cable to a compatible 3-pin 5V aRGB header on your motherboard or a dedicated aRGB controller.

4.7 Integrating into the Water Cooling Loop

1. Install appropriate G1/4" fittings (not included) into the four connection ports on the water block.
2. Connect the water block to your existing or new water cooling loop using tubing. Ensure proper flow direction if specified by your loop design.
3. Once the loop is complete, fill it with coolant and perform a leak test for at least 24 hours before powering on your system. Monitor for any drips or moisture.

5. OPERATING INSTRUCTIONS

Once installed and leak-tested, the Alphacool Core RX 9070 XT Taichi GPU Water Block operates as part of your custom water cooling loop.

- **System Power-Up:** After successful leak testing, power on your system.
- **Monitoring Temperatures:** Use monitoring software to observe GPU temperatures under idle and load conditions. Optimal temperatures will vary based on your specific loop configuration and ambient conditions.
- **aRGB Control:** If connected to a motherboard header, use your motherboard's RGB software to customize the lighting effects. If connected to a controller, use the controller's interface.
- **Coolant Flow:** Ensure your pump is operating correctly and maintaining adequate coolant flow through the block.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your water cooling system.

- **Coolant Replacement:** It is recommended to replace the coolant in your loop every 6-12 months, depending on the coolant type and system usage.
- **System Inspection:** Periodically inspect tubing, fittings, and the water block for any signs of leaks, discoloration, or buildup.
- **Cleaning:** If buildup is observed within the water block (visible through the acrylic top), it may be necessary to disassemble the block for cleaning. Use distilled water and a soft brush. Avoid abrasive cleaners.
- **Dust Removal:** Keep the surrounding area of your PC clean to prevent dust accumulation on radiators and fans, which can impact overall cooling efficiency.

7. TROUBLESHOOTING

This section addresses common issues you might encounter.

- **No Coolant Flow / Pump Not Working:**
  - Check power connections to the pump.
  - Ensure the pump is properly primed and not air-locked.
  - Verify pump settings in BIOS or software.

- **High GPU Temperatures:**
  - Ensure the water block is properly mounted with even pressure.
  - Verify thermal paste application and thermal pad contact.
  - Check for obstructions in the loop (e.g., air bubbles, debris).
  - Ensure radiators have adequate airflow and fans are operating correctly.
  - Confirm pump is running at sufficient speed.

- **Leaks Detected:**
  - Immediately power off the system and disconnect power.
  - Identify the source of the leak.
  - Tighten fittings, replace O-rings, or re-seat tubing as necessary.
  - Perform another leak test before powering on.

- **aRGB Lighting Not Working:**
  - Check the 3-pin JST connection to the motherboard or controller.
  - Ensure the aRGB header on the motherboard is enabled in BIOS.
  - Verify that the correct RGB software is installed and configured.
  - Confirm the power supply to the aRGB controller (if used).

8. SPECIFICATIONS

Detailed technical specifications for the Alphacool Core RX 9070 XT Taichi GPU Water Block.

Feature	Detail
Model Number	14752

Feature	Detail
Compatibility	ASRock AMD Radeon RX 9070 XT Taichi 16GB OC
Complete Dimensions (L x W x H)	217.10 x 127.37 x 33.05mm
Radiator Base Material	Chrome-plated Copper
Radiator Top Material	Acrylic (Plexi)
Terminal Material	Nylon
Connection Thread Material	Brass
Backplate Material	Aluminum
Maximum Working Temperature	60°C
Pressure Tested	0.8 bar
Connections	4 x G1/4"
Thickness of Radiator Base	3.25mm
Cooling Fins Thickness	0.4mm
Distance Between Cooling Fins	0.4mm
Lighting	Digital aRGB LEDs
Power Connection Digital aRGB LEDs	3-pin JST
Voltage Digital aRGB LEDs	5V
Number of Digital aRGB LEDs	10
Color	Transparent
Item Weight	4 pounds
Package Dimensions	13.5 x 8 x 2.2 inches

9. WARRANTY INFORMATION

Alphacool products are manufactured to high quality standards. For specific warranty terms and conditions, please refer to the official Alphacool website or contact their customer support. Keep your proof of purchase for warranty claims.

10. SUPPORT

For technical assistance, troubleshooting, or further inquiries, please visit the official Alphacool website or contact their customer support channels.
Alphacool Official Store: Visit the Alphacool Store on Amazon