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YXHGeeek GPU Water Cooling Block for MSI RTX4070Ti Ventus Series

Instruction Manual: Copper GPU Water Cooling Block

Model: MSI GeForce RTX4070Ti Ventus 3X 12G OC Compatible Water Block

Introduction

This instruction manual provides detailed information for the installation, operation, and maintenance of your YXHGeeek Copper GPU Water Cooling Block. This product is designed to provide efficient liquid cooling for compatible graphics cards, enhancing thermal performance and stability.
For optimal performance and longevity, please read this manual thoroughly before installation and operation.

Product Features

- **Second generation three-layer structure design:** Increases water flow coverage area, making water flow more scientific and improving heat dissipation efficiency.
- **High-precision CNC processed copper plate:** Integrated design with large water flow coverage area. The chamber undergoes rigorous fluid analysis to ensure no dead angle of water flow, providing effective heat dissipation for GPU, MOS, and VRAM.
- **10MM thick copper plate design:** Sufficient material with surface electroplating treatment for anti-oxidation and corrosion resistance. The thick copper plate allows for a single-layer sealing ring, reducing the risk of leakage compared to multi-seal thin copper plates.
- **Lightweight design:** Copper plate adopts large area hollowing out to reduce weight, protecting the PCB from deformation.
- **Optimized positioning columns:** The height of several positioning columns in the grooves is optimized to ensure precise fit with required heat dissipation components, covering the GPU core, VRAM, and power supply MOS.

Compatibility

This GPU water cooling block is compatible with the following MSI GeForce RTX4070 series graphics cards:

- MSI GeForce RTX4070Ti Ventus 3X 12G OC
- MSI GeForce RTX4070Ti Super 16G Gaming X Slim
- MSI GeForce RTX4070Ti Super Ventus 3X OC
- MSI GeForce RTX4070 Ventus 3X 12G OC
- MSI GeForce RTX4070 Gaming X Trio
- MSI GeForce RTX4070 Ventus 2X 12G
- MSI GeForce RTX4070 Super 12G Gaming X Slim White
- MSI Gaming RTX 4070 Super 12G Ventus 2X OC (NVIDIA RTX 4070 Super, 192-Bit, Boost Clock: 2520 MHz, 12GB GDRR6X 21 Gbps, HDMI/DP, Ada Lovelace Architecture)

Important Tip:

Please double check your graphics card's detailed model to ensure compatibility. Refer to the third product image in the description to compare your graphics card's PCB layout with the provided image to avoid purchasing errors. If you are unsure, please contact the seller for assistance.

What's in the Box

- GPU LED WaterBlock x 1
- Plated compression fittings x 2 (G1/4" 14mm OD Rigid Tubings Compression Fittings)
- Thermal pads x 1 set
- LED light control line x 1
- Water caps x 2
- Screws (for installation)

Note: The included fittings are G1/4" 14mm OD Rigid Tubings Compression Fittings, which may differ from those shown in some product pictures.

Setup and Installation

Installing a graphics card water block requires a certain level of skill and experience. It is recommended that this procedure be performed by individuals familiar with PC component assembly and liquid cooling systems.

General Installation Steps:

1. **Preparation:** Ensure your workspace is clean and static-free. Gather all necessary tools, including a small Phillips head screwdriver, thermal paste, and a clean cloth.
2. **Disassemble GPU Cooler:** Carefully remove the existing air cooler from your graphics card. Refer to your graphics card's specific instructions for this step.
3. **Clean GPU PCB:** Thoroughly clean the GPU die and memory modules of any old thermal paste or thermal pads using isopropyl alcohol and a lint-free cloth.
4. **Apply Thermal Material:** Apply a thin, even layer of high-quality thermal paste to the GPU die. Place the provided thermal pads on the VRAM and VRM components as indicated by the water block's design.

5. **Mount Water Block:** Carefully align the water block with the GPU PCB and gently lower it into place. Ensure all mounting holes are aligned.
6. **Secure Water Block:** Use the provided screws to secure the water block to the graphics card. Tighten screws in a diagonal pattern to ensure even pressure, but do not overtighten.
7. **Install Backplate:** Attach the metal backplate to the rear of the graphics card using the appropriate screws.
8. **Connect Fittings:** Install the G1/4" compression fittings into the water block's ports. Ensure they are securely tightened to prevent leaks.
9. **Integrate into Loop:** Connect the water block into your existing or new custom liquid cooling loop.
10. **Leak Testing:** Before powering on your system, perform a thorough leak test of your entire liquid cooling loop. This is a critical step to prevent damage to components.
11. **Connect LED:** If applicable, connect the LED light control line to a compatible RGB header on your motherboard or controller.

Important Considerations:

- Graphics card manufacturing tolerances may impact block installation. While we can assist with such issues, this cannot be the sole basis for returns.
- Prohibit the use of alcohol-containing coolant, as it may degrade the acrylic and sealing components over time.

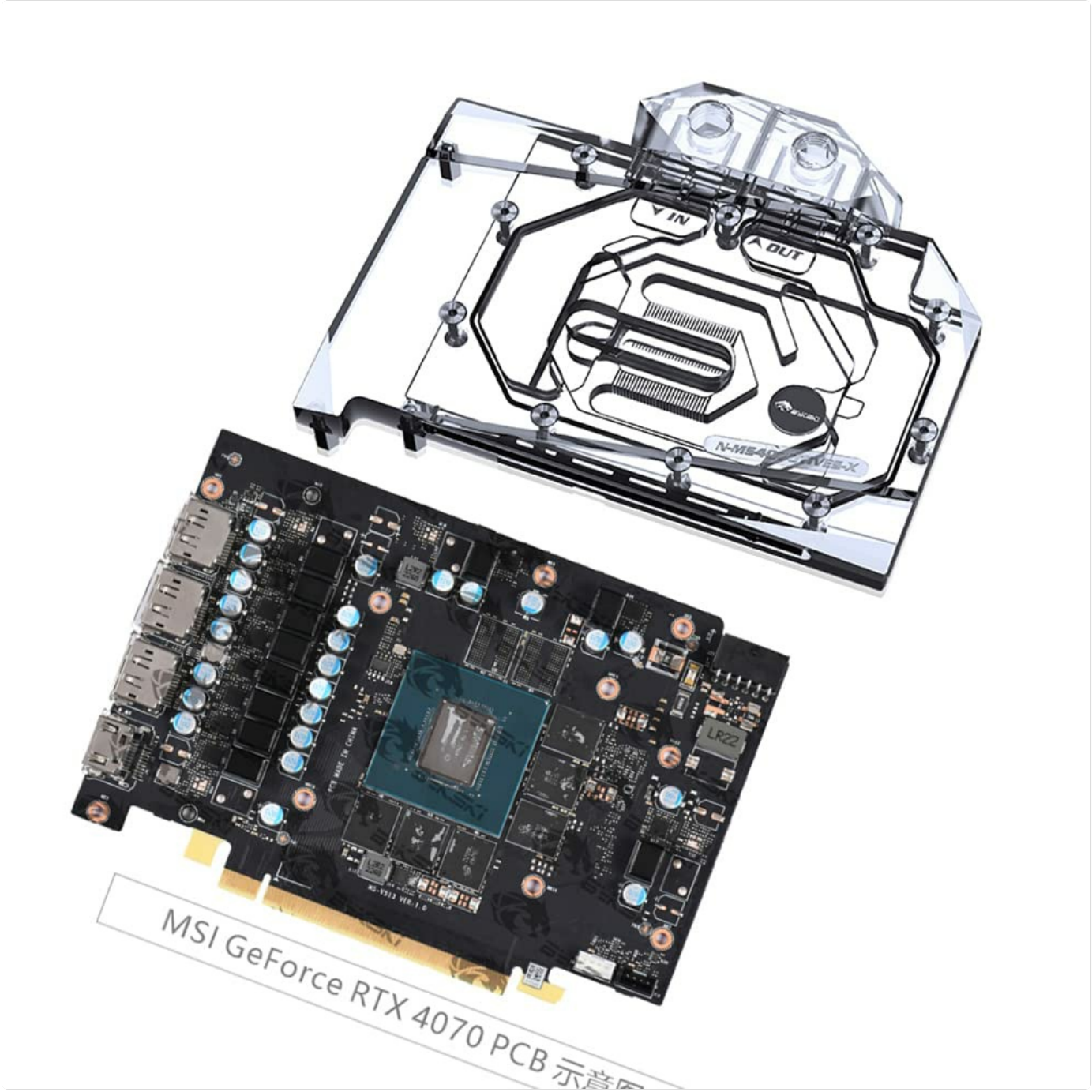


Image: The water block shown alongside a compatible MSI GeForce RTX 4070 PCB, illustrating the components before assembly.

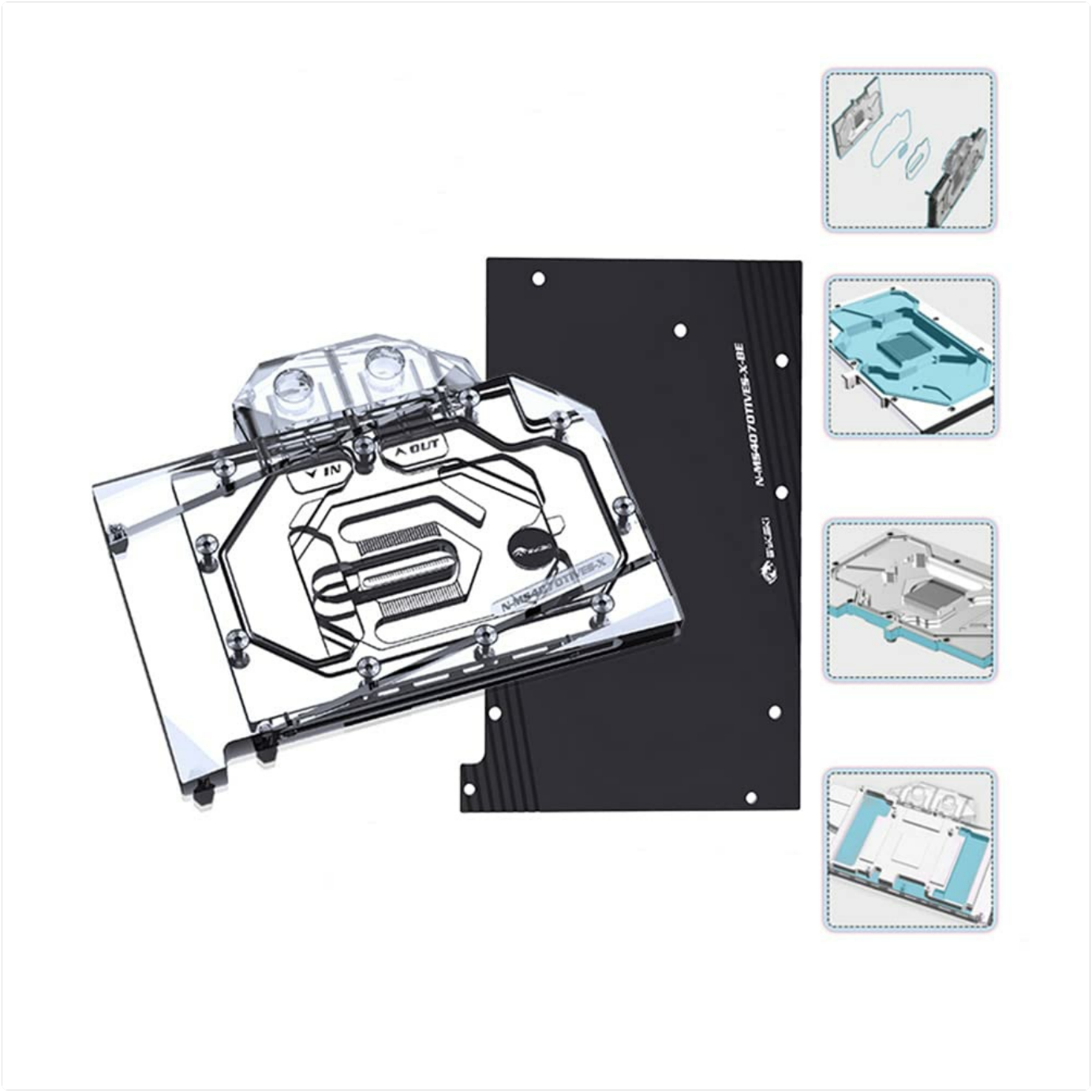


Image: An exploded diagram of the water block, highlighting its internal structure and the path of the coolant flow across the GPU, VRAM, and MOS components.

Operating Principles

The YXHGeeek Copper GPU Water Cooling Block operates by transferring heat from the graphics card's critical components (GPU core, VRAM, and power delivery modules) to a circulating liquid coolant. This coolant then carries the heat away to a radiator, where it is dissipated into the ambient air.

The block features a second-generation three-layer structure and a high-purity copper base with micro-fins, maximizing the contact surface area for efficient heat absorption. The internal flow channels are designed for optimal liquid flow, ensuring comprehensive cooling across the entire surface of the components.

Your browser does not support the video tag.

Video: An official product video demonstrating the features and internal design of the Copper GPU Water Cooling Block for MSI RTX4070Ti Ventus.

Maintenance

Regular maintenance is crucial for the longevity and optimal performance of your liquid cooling system and water block.

- **Coolant Replacement:** It is recommended to replace the coolant in your loop every 6-12 months, depending on the coolant type and usage.
- **System Flush:** Periodically flush your entire liquid cooling system to remove any accumulated debris or residue. Use distilled water or a dedicated flushing solution.
- **Block Cleaning:** If you notice a significant drop in cooling performance or visible buildup within the water block, it may need to be disassembled and cleaned. Use a soft brush and distilled water to gently clean the micro-fins and channels. Avoid abrasive materials.
- **Fittings Check:** Regularly inspect all fittings for any signs of leaks or loose connections. Tighten as necessary.
- **Avoid Alcohol-Based Coolants:** As stated previously, do not use coolants containing alcohol, as this can degrade the acrylic and sealing components over time.

Troubleshooting

Common Issues and Solutions:

- **Issue: Poor Cooling Performance.**
  Possible Causes: Insufficient coolant flow, air bubbles in the loop, clogged fins in the water block, improper thermal paste application, or inadequate radiator capacity.
  Solutions: Ensure pump is operating correctly, bleed air from the loop, clean the water block and radiator, reapply thermal paste, or consider a larger radiator.
- **Issue: Leaks in the System.**
  Possible Causes: Loose fittings, damaged O-rings, or cracks in components.
  Solutions: Inspect all connections and tighten fittings. Replace any damaged O-rings or components immediately. Ensure proper installation of the water block and backplate.
- **Issue: Water Block Does Not Fit Graphics Card.**
  Possible Causes: Incorrect GPU model or PCB revision, or manufacturing tolerances.
  Solutions: Double-check your graphics card's exact model and PCB layout against the compatibility list and provided images. Contact seller support if you believe there is a discrepancy or require assistance with minor tolerance adjustments.
- **Issue: LED Lights Not Functioning.**
  Possible Causes: Loose connection, incorrect header on motherboard, or software issue.
  Solutions: Verify the LED control line is securely connected to the correct RGB header. Check motherboard manual for proper header type (e.g., 3-pin ARGB vs. 4-pin RGB). Ensure any necessary software is installed and configured correctly.

SPECIFICATIONS

Attribute	Detail
Brand	YXHGeeek
Product Dimensions	6.9 x 5.7 x 1 inches; 2.73 Pounds
Material	Copper, Acrylic
Screw Thread	G1/4"
Cooling Method	Water-cooled liquid
Compatible Devices	Desktop, Video card (MSI GeForce RTX4070 series)
Power Connector Type	3-Pin (for LED)
Voltage	5 Volts (DC) (for LED)
UPC	743623844889

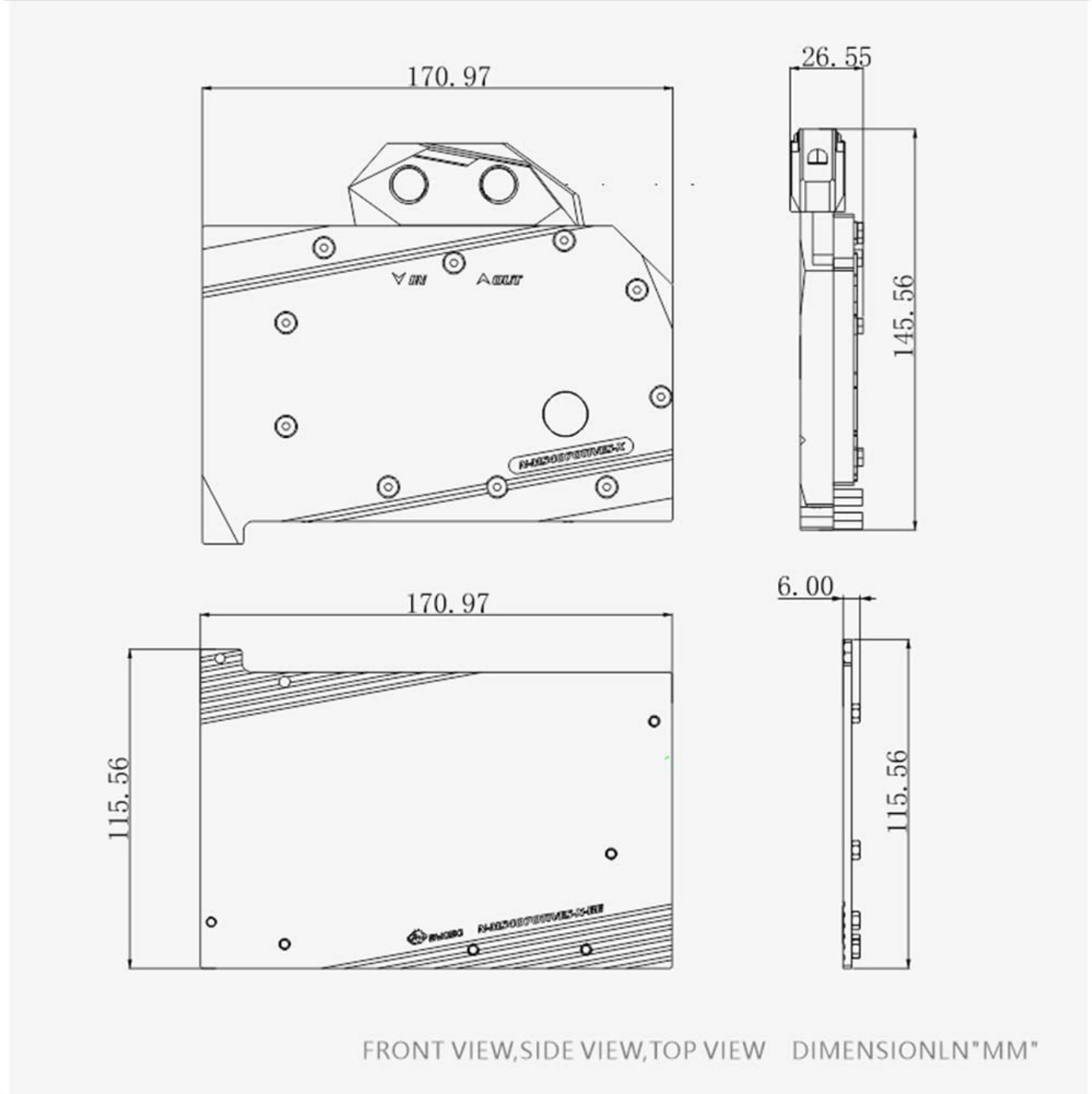


Image: Detailed dimensions of the water block and backplate, showing front, side, and top views in millimeters.

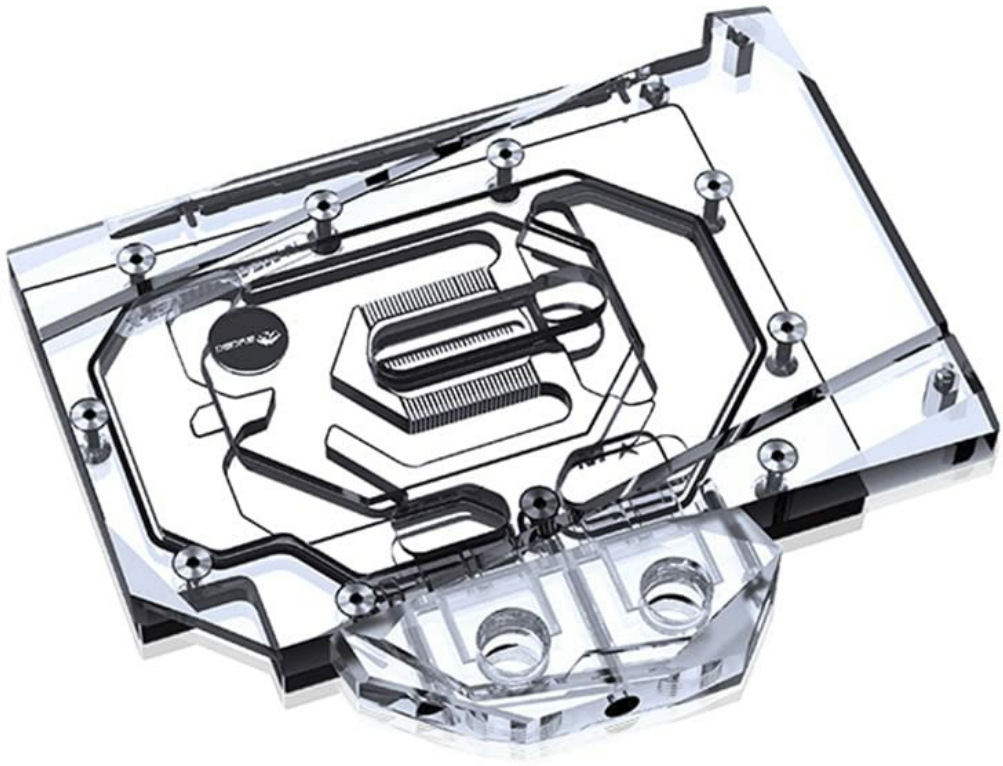


Image: A clear top-down view of the water block, showcasing its transparent acrylic cover and internal copper fin structure.

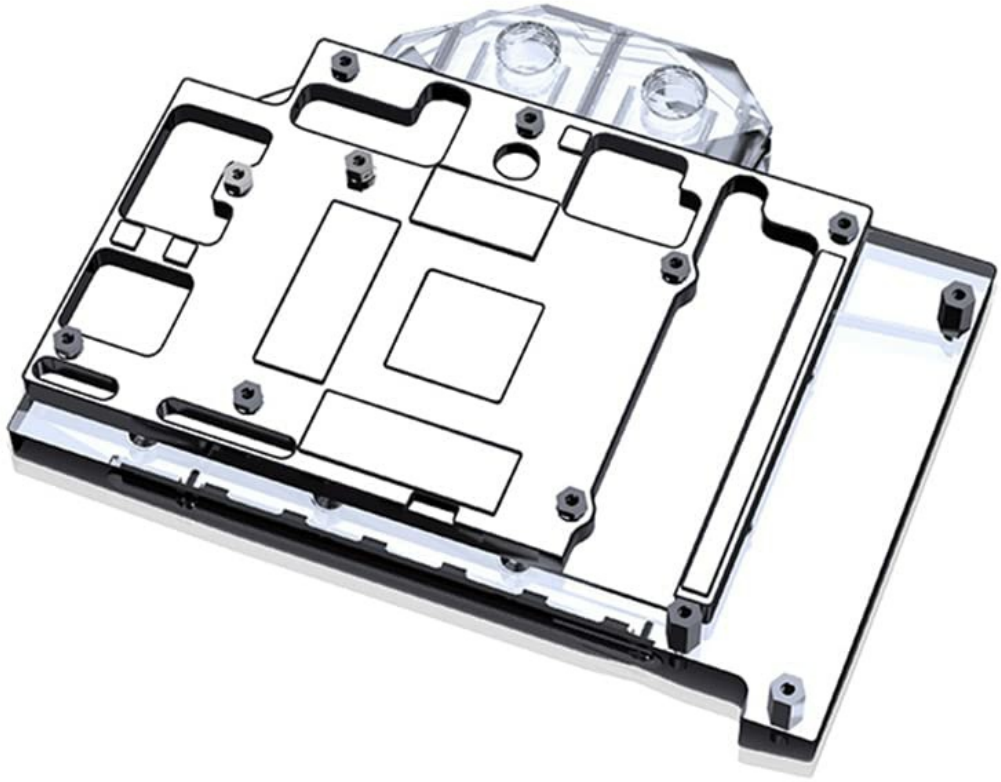


Image: The underside of the water block, revealing the precision-machined copper contact plate designed to interface with the GPU and other components.

Warranty and Support

For warranty information and technical support, please refer to the manufacturer's official website or contact the seller directly through your purchase platform.
Please retain your proof of purchase for any warranty claims.

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