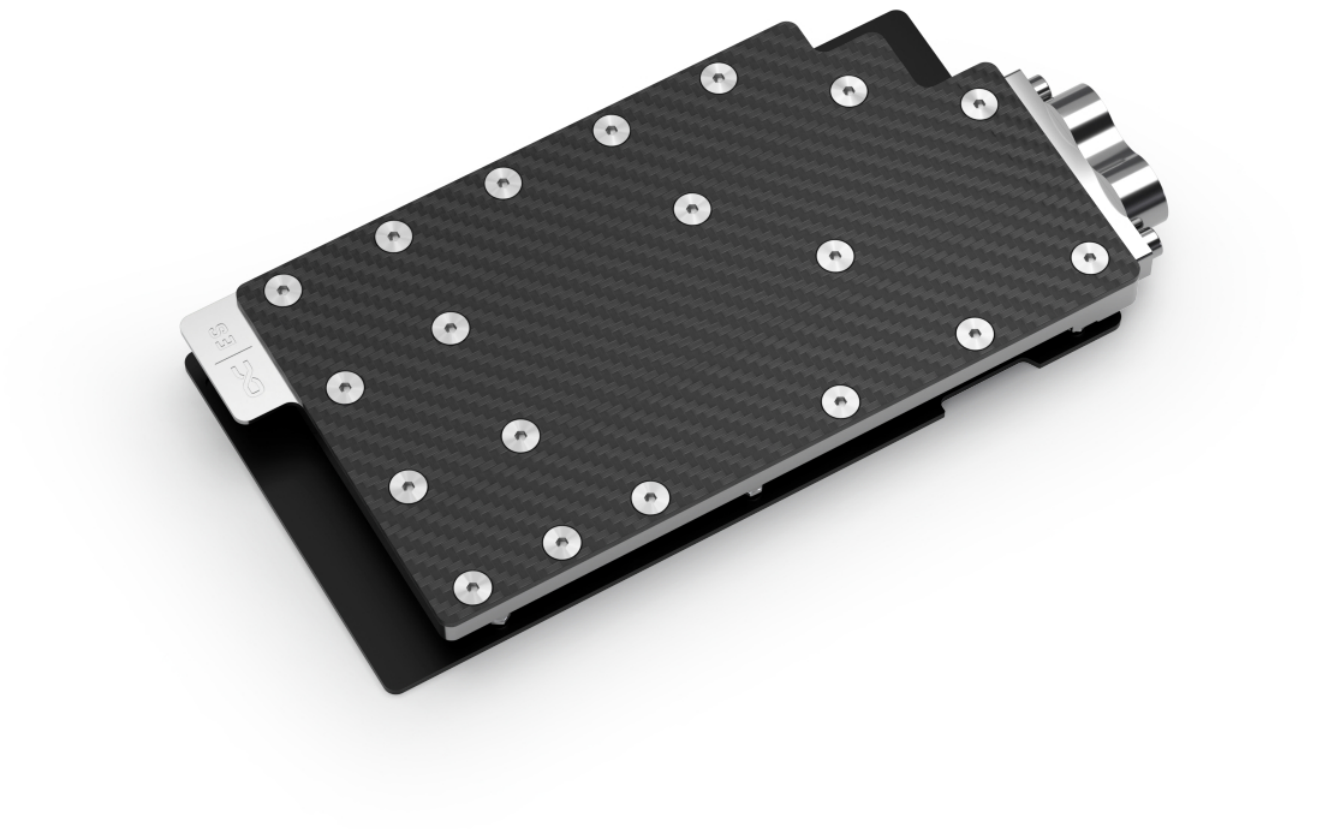
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# Alphacool ES AI PRO R9700 1-Slot-Design

Alphacool article number: 5100335



## Quick Info

The Alphacool ES 1-Slot GPU water block for the AMD Radeon AI PRO R9700 has been specially developed for professional use in performance-optimized server and workstation environments.

- 1-Slot Design Cooler
- Fullcover water cooler
- Chrome-plated copper bottom
- For high performance in server and workstation systems

## Compatibility

- ASRock AMD Radeon™ AI PRO R9700 Creator 32GB
- Asus Turbo Radeon™ AI Pro R9700
- PowerColor Radeon™ AI PRO R9700
- Sapphire AMD RADEON™ AI PRO R9700 32GB

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## Scope of delivery

| | |
|---|---|
| 1x Alphacool ES AI PRO R9700 1-Slot-Design GPU Cooler | 1x Thermal Grease |
| 1x Backplate | 1x Putty tool |
| 14x M2x10mm Screw | 1x PCI Bracket |
| 4x 39.5x15x1mm Pad | 1x M3 Nut |
| 2x 31x15x1mm Pad | 1x M3x4mm Screw |
| 1x 55x8x1mm Pad | 1x M2 Nut |
| 1x 63.5x8x1mm Pad | 1x M2x4mm Screw |
| 2x 8x8x1mm Pad | 1x 30x30x2mm Pad |

## Technical data

| | |
|---|---|
| Dimensions (L x W x H) (in mm) | 203.78 x 96.00 x 21.10 |
| Slot size | 1 |
| Material cooler | Chrome-plated copper (Cu-HCP) |
| Material Backplate | Aluminium (AlMg0,7Si) |
| Material terminal | Brass (CuZn39Pb3) |
| Threads | 2x G 1/4 |
| Material connection thread | Brass (CuZn39Pb3) |
| Maximum torque G1/4 thread (in Nm) | 1.00 |
| Maximum torque M2 thread (in Nm) | 0.13 |
| Maximum torque M3 thread (in Nm) | 0.48 |
| Maximum torque M4 thread (in Nm) | 1.12 |
| Maximum operating temperature (in °C) | 60 |
| Minimum operating temperature (in °C) | -20 |
| Maximum tested pressure (in bar) | 4.00 |
| Recommended working pressure (in bar) | 0.00 - 2.00 |
| Cooling technology | Jet engine |

## Technical data thermalpads

| | |
|---|---|
| Thermal conductivity of thermal pads (in W/mK) | 7 |
| Thermal pads Hardness ASTM 2240 | 35 Shore 00 |

## Technical data Thermal paste

| | |
|---|---|
| Volatilization Rate (24H@200°C)% | less than 0.5 |
| Density (g/cc) | 3.2 (Test method ASTM D792) |
| Viscosity (mPa.s) | 150~200*10³ (Test method ASTM D2196) |
| Continuous Using Temperature (°C) | -40°C to 120°C |
| Breakdown Voltage (V/mil) | 250 (Test method ASTM D149) |
| Thermal Impedance (°C in 2/W) | 0.1 +/- 0.01 (Test method ASTM D5470) |
| Max. working pressure (psi) | 40 |
| Quantity | 1g |
| Color | gray |

## Download links

| | |
|---|---|
| Manual | 5100335_Alphacool_ES_AI_PRO_R9700_1-Slot-Design_Manual.pdf |
| Product pictures | 5100335_Alphacool_ES_AI_PRO_R9700_1-Slot-Design_pics.zip |
| EU-DoC / CE / RoHS | Alphacool_EuDoc_CE_RoHS_5100335.pdf |

## Packaging dimensions per unit

| | |
|---|---|
| L x W x H | 355 x 175 x 45 mm |
| Weight | 1142 g |

## Other data

| | |
|---|---|
| Certificates | CE, FC, RoHS |
| EAN | 4070201003359 |
| Customs code | 84195080900 |
| Guarantee | 3 years |

## Article text

The Alphacool ES 1-Slot GPU water block for the AMD Radeon AI PRO R9700 has been specially developed for professional use in performance-optimized server and workstation environments. With its compact 1-slot design and well-planned port positioning, it meets the highest requirements for cooling performance, reliability, and ease of installation, especially where space is limited.

The top of the cooler is made of lightweight, durable carbon. This significantly reduces the weight of the cooler compared to conventional solutions. At the same time, the matte carbon finish provides a subtle, high-quality look that is both functional and elegant. The cooling block itself is made entirely of chrome-plated copper. The chrome plating is significantly harder and more resistant than conventional nickel plating and provides reliable protection against corrosion, scratches, and mechanical impact, making it ideal for long-term 24/7 operation.

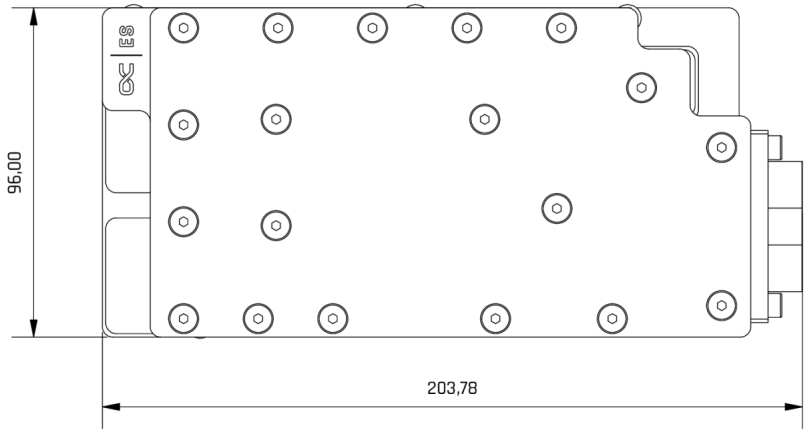
The inlet and outlet ports are positioned on the rear side of the cooler to save space. This port layout makes tubing and integration into existing cooling loops easier, even in very compact server or workstation cases. Thanks to an optimized cooling channel structure, heat is dissipated particularly efficiently from the GPU, VRAM, and voltage regulators. Targeted channel routing inside the cooler ensures an even flow of water across all relevant components.

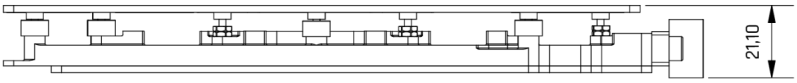
The solid copper base ensures optimal heat absorption and transfer. The robust chrome plating prevents peeling or damage under thermal stress.

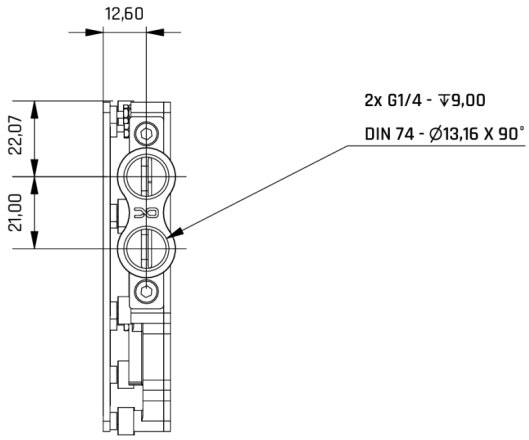
The Alphacool ES 1-Slot GPU Water Block for the AMD Radeon AI PRO R9700 is the ideal solution for workstation and enterprise applications where performance, reliability, and efficient use of space are key priorities.

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# Figure (1)



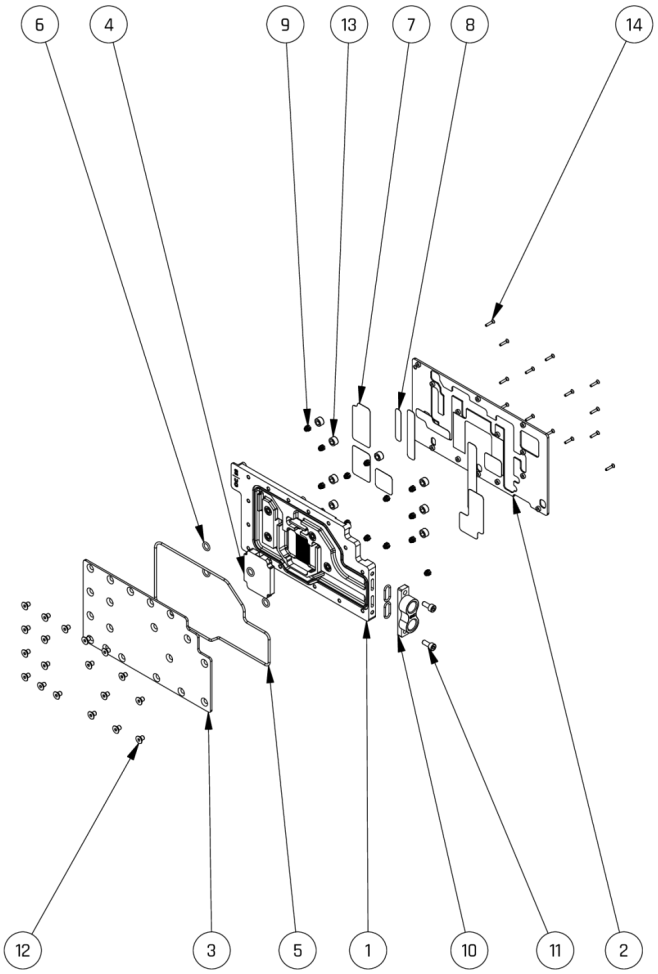



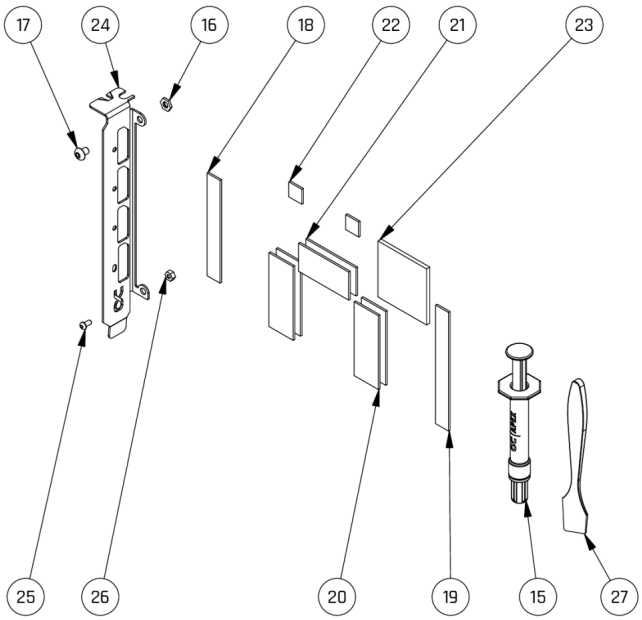

General tolerance: ±0,25mm
Dimension in millimeter

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# Figure (2)

| Mechanical properties: | | | | | |
|---|---|---|---|---|---|
| Minimum temperature t min = | -20°C | Working pressure p = | 0,0 - 2,0Bar | Maximum torque of M thread | M max = M2X0,4 = 0,13Nm |
| Working temperature t = | 20°C | Maximum pressure p max = | 4,0Bar | DIN 13-1 Metric ISO standard thread | M3X0,5 = 0,48Nm |
| Maximum temperature t max = | 60°C | Maximum torque of G thread M max = G1/4 = 1,0Nm | | | M4X0,7 = 1,12Nm |
| | | ISO 228-1 Parallel Whitworth pipe thread BSPP (GB) | | | |




5100335
Alphacool ES AI PRO R9700 1-Slot-Design

Parts List

| Number | Quantity | Description | Material |
|---|---|---|---|
| 1 | 1 | Cooling plate | Cu-HCP |
| 2 | 1 | Backplate | AlMg0,7Si |
| 3 | 1 | Top | CFRP_ |
| 4 | 1 | Jet | POM-C 4520 |
| 5 | 1 | O-Ring 137 x 2 | NBR Shore 70 |
| 6 | 4 | O-Ring 6 x 1,5 | NBR Shore 70 |
| 7 | 1 | Iso Tape | PI Tape |
| 8 | 1 | Iso Tape2 | PI Tape |
| 9 | 14 | GPX Spacer SW5 M4X0,7-M2X0,4 x 3 | CuZn39Pb3 |
| 10 | 1 | ES Terminal | - |
| 11 | 2 | ISO 4762 - M4 x 10 | X5CrNi18-10 |
| 12 | 19 | M4 x 6 Countersunk screw | X10CrNi18-8 |
| 13 | 8 | PCB Spacer | PA 66,GF25 FR(V-2) |
| 14 | 14 | ISO 7046-1 - M2 x 10 | X10CrNi18-8 |

Accessories

| Number | Quantity | Description | Material |
|---|---|---|---|
| 15 | 1 | Alphacool Apex Thermal grease 1g | - |
| 16 | 1 | M3 1mm | X5CrNi18-10 |
| 17 | 1 | M3 x 4 Pan head screw | X10CrNi18-8 |
| 18 | 1 | Pad 55 x 8 x 1 | 7W/mK - Shore-00 35 - 1.00 mm |
| 19 | 1 | Pad 63,5 x 8 x 1 | 7W/mK - Shore-00 35 - 1.00 mm |
| 20 | 4 | Pad 39,5 x 15 x 1 | 7W/mK - Shore-00 35 - 1.00 mm |
| 21 | 2 | Pad 31 x 15 x 1 | 7W/mK - Shore-00 35 - 1.00 mm |
| 22 | 2 | Pad 8 x 8 x 1 | 7W/mK - Shore-00 35 - 1.00 mm |
| 23 | 1 | Pad 30 x 30 x 2 | 7W/mK - Shore-00 35 - 2.00 mm |
| 24 | 1 | Slotbracket | Cr01 |
| 25 | 1 | M2 x 4 Pan head screw | X10CrNi18-8 |
| 26 | 1 | ISO 4036 - M2 2mm | X10CrNi18-8 |
| 27 | 1 | Putty Tool | - |