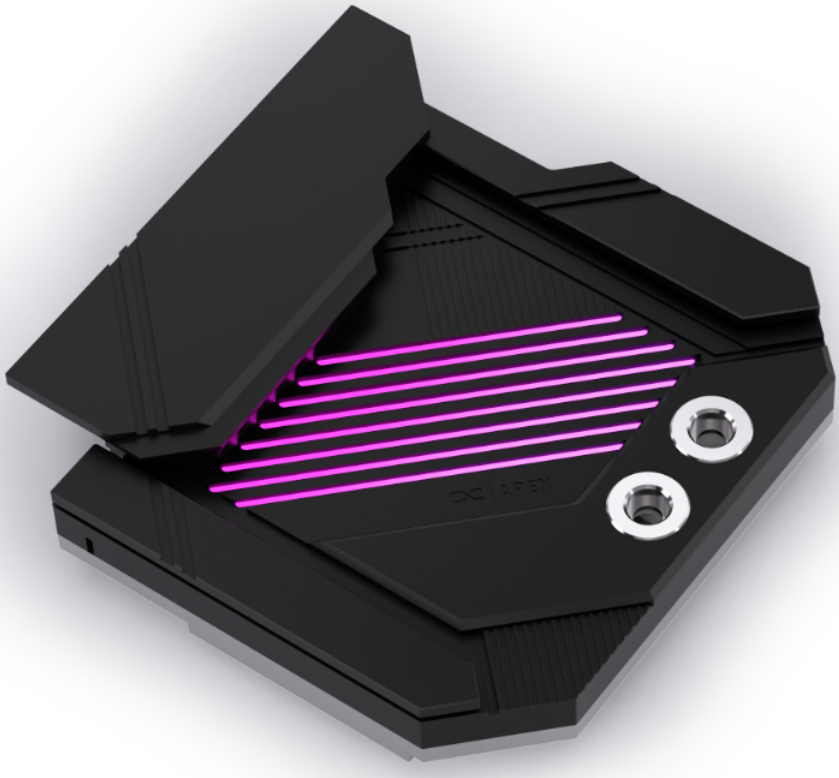
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Alphacool Apex Monoblock X870E AORUS ELITE WIFI7 (AM5)

Alphacool article number: 14718



Quick Info

The Apex Monoblock is the ideal cooling solution for maximum performance, combined with an elegant design that is perfectly matched to the motherboard. Developed specifically for the motherboard, the monoblock cools the CPU, the voltage regulators (VRMs), as well as the M.2 NVMe SSD located below the CPU socket. All key motherboard components are actively cooled through the monoblock's water block.

- Processors hotspot optimized
- Fullcover M.2, VRM and CPU Cooler
- Stunning aRGB illumination

Compatibility

GIGABYTE X870E AORUS ELITE WIFI7 (Rev. 1.0/1.1)

Scope of delivery

1x Alphacool Apex Monoblock X870E AORUS ELITE WIFI7 (AM5)
1x 72x22x2mm thermal pad
2x 86x8x2mm thermal pad
2x 69,5x8x2mm thermal pad
1x 14x15x2mm thermal pad
1x Thermal grease
1x Putty tool
4x AM5 Mounting Nut
4x M3x8mm Screw
4x Washer
1x ARGB Adapter

Technical data

Dimensions (L x W x H) (in mm)	176,97 x 175,00 x 54,70
Material cooler	Chome-plated copper (Cu-HCP)
Material cover	Aluminium (AlMg0,7Si)
Material cooler top	Plexi (LXN865)
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 M2,5 thread (in Nm)	0,27
Maximum torque M3 thread (in Nm)	0,48
Maximum torque M4 thread (in Nm)	1,12
Maximum operating temperature (in °C)	60
Recommended working temperature (in °C)	20
Minimum operating temperature (in °C)	-20
Maximum tested pressure (in bar)	2,00
Recommended working pressure (in bar)	0,00 - 1,00
Thickness of cooling fins (in mm)	0,40
Distance between cooling fins (in mm)	0,40
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 thermalpaste

Evaporation rate	Less than 0,5
Density (g/cm3)	3,2 (Test method ASTM D2196)
Viscosity	150~200*10³ (Test method ASTM D2196)
Operating 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)
Maximum operating pressure (psi)	40
Quantity (in gramm)	1g
Color	Grey

Download links

Manual	14718_Alphacool_Apex_Monoblock_X870E_AORUS_ELITE_WIFI7_(AM5)_Manual.pdf
Product pictures	14718_Alphacool_Apex_Monoblock_X870E_AORUS_ELITE_WIFI7_(AM5)_pics.zip
EU-DoC / CE / RoHS	Alphacool_EuDoc_CE_RoHS_14718.pdf

Packaging dimensions per unit

L x W x H	290 x 250 x 105 mm
Weight	2000 g

Other data

Certificates	CE, FC, RoHS
EAN	4250197147187
Customs code	84195080900
Guarantee	5 years

Article text

The Apex Monoblock is the ideal cooling solution for maximum performance, combined with an elegant design that is perfectly matched to the motherboard. Developed specifically for the motherboard, the monoblock cools the CPU, the voltage regulators (VRMs), as well as the M.2 NVMe SSD located below the CPU socket. All key motherboard components are actively cooled through the monoblock's water block.

Like the Apex 1 CPU cooler, the Apex Monoblock uses an offset cold plate. This allows the coolant flow to hit the thermal hotspot of the AM5 CPU directly. In combination with the proven cross-slot structure and the 3D Jetplate 2.0, this design generates high water pressure, enabling particularly efficient heat dissipation. Ideal for overclocking or continuous operation.

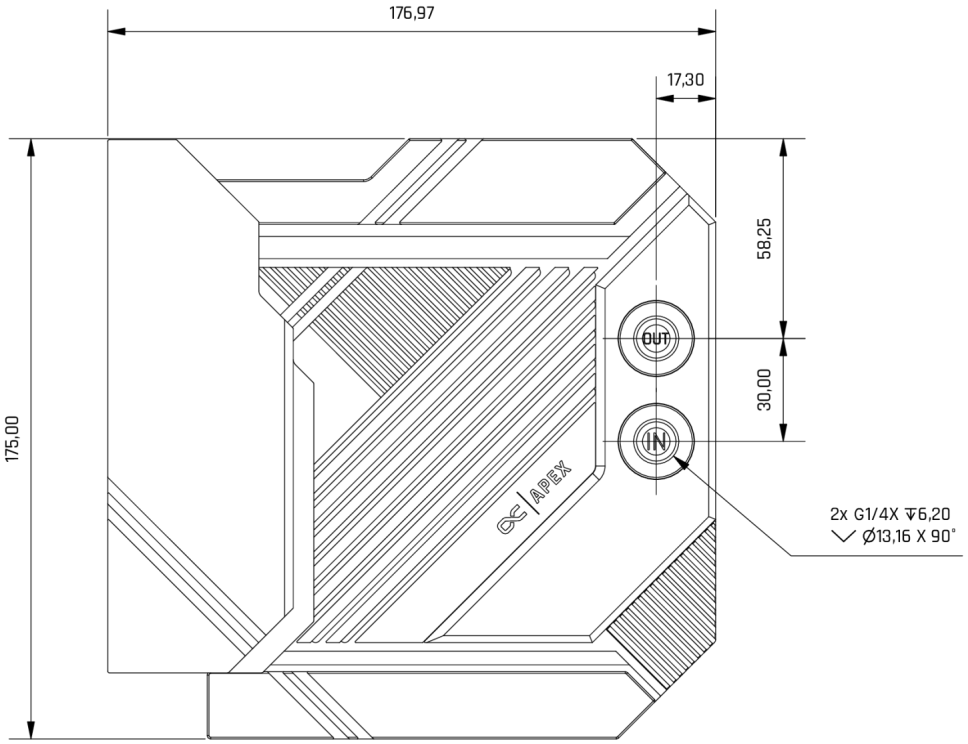
The cooler is milled from a solid block of copper. The G1/4" connection terminal is made of brass and, together with the copper base, ensures long durability as well as excellent thermal conductivity.

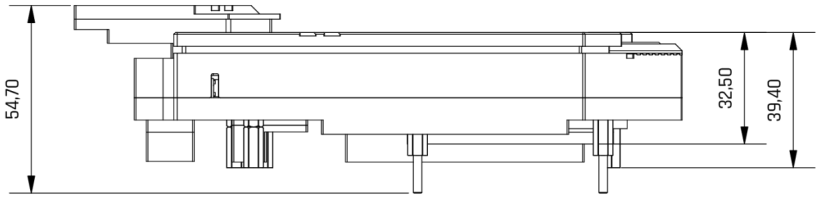
The Apex Monoblock design, tailored to the respective motherboard, not only delivers optimal cooling performance but also integrates seamlessly into the motherboard's appearance.

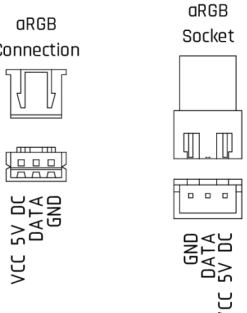
It features an integrated I/O cover, creating a clean and cohesive look that blends perfectly with the motherboard's design.

The monoblock combines performance, design, and functionality, making it a highlight of any custom water-cooling setup.

Figure (1)



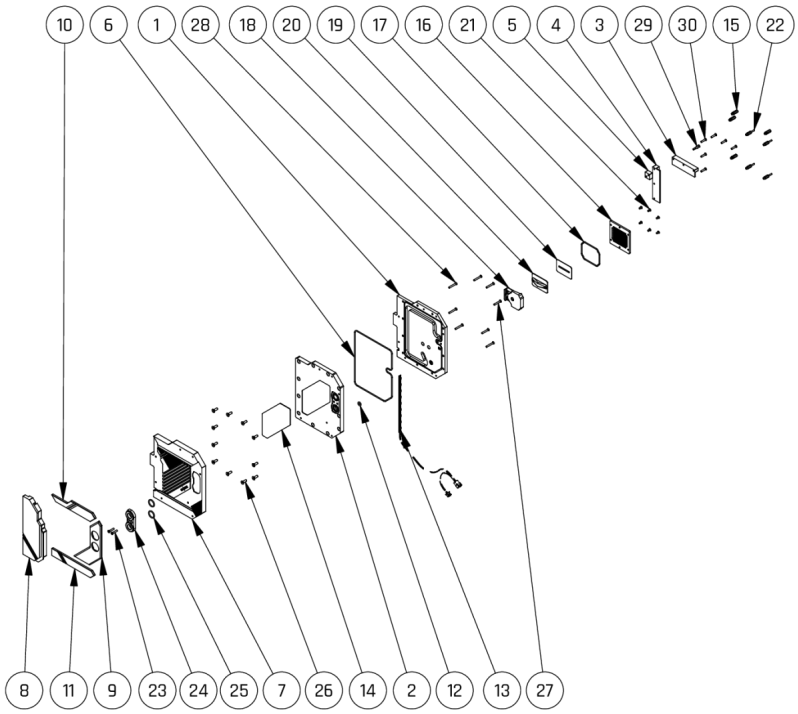




General tolerance: ±0,25mm
Dimension in millimeter

Figure (2)

Mechanical properties:					
LED quantity and length	9pc. / L =149,4 mm	Minimum temperature t min =	-20°C	Maximum torque of G thread M max = G1/4 = 1,0Nm ISO 228-1 Parallel Whitworth pipe thread BSPP (GB)	
LED Voltage V =	5 V	Working temperature t =	20°C		
LED Ampere A =	0,06 A	Maximum temperature t max =	60°C	Maximum torque of M thread DIN 13-1 Metric ISO standard thread	M max = M2X0,4 = 0,13Nm M2,5X0,45 = 0,27Nm M3X0,5 = 0,48Nm M4X0,7 = 1,12Nm
LED Power W =	2,7 W	Working pressure p =	0,0 - 1,0Bar		
		Maximum pressure p max =	2,0Bar		

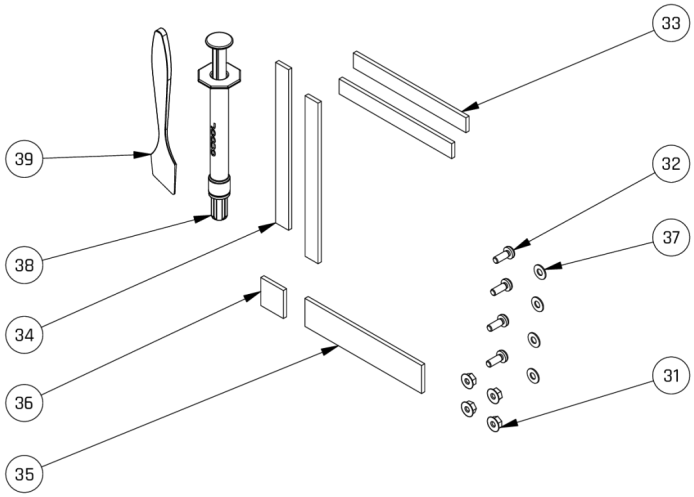


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Apex Monoblock X870E Aorus Elite WiFi7

Parts List

Number	Quantity	Description	Material
1	1	Coolingplate	Cu-HCP
2	1	PMMA part	LXN865
3	1	Extension 69,5 x 7 x 10,76 mm	Cu-HCP
4	1	Extension 86 x 10 x 10,76 mm	Cu-HCP
5	1	Extension 14 x 14 x 8,56 mm	Cu-HCP
6	1	O-Ring 500 x 2	NBR Shore 70
7	1	Cover1	AlMg0,7Si
8	1	IO Cover	AlMg0,7Si
9	1	Terminal Cover	AlMg0,7Si
10	1	Cover Top	AlMg0,7Si
11	1	Cover Bottom	AlMg0,7Si
12	1	O-Ring 6,35 x 2	NBR Shore 70
13	1	LED Strip	-
14	1	Lightspreader	DX001
15	4	Distance Bolts 13,80mm M4 x 3 M3 x 7	CuZn39Pb3
16	1	Apex 1 LGA 1700 Copperplate V4 Rebuild Small	Cu-HCP
17	1	Apex 1 ORing 55 x 2 NBR 70	VMQ Shore A 70
18	1	Apex 1 Rubberinlay	VMQ Shore A 70
19	1	Apex 1 Jet sealing	VMQ Shore A 70
20	1	Apex 1 Jetplate PPS	PPS-GF30
21	6	ISO 70461 M3 x 6 4.8 H	X10CrNi18-8
22	4	Apex 1 AM5 Spacer 10,3mm SW5 M2,5	CuZn39Pb3
23	2	ISO 70461 M3 x 16 4.8 H	X10CrNi18-8
24	1	Core GPX Terminal TOP Part	CuZn39Pb3
25	2	O-Ring 12,5 x 2	NBR Shore 70
26	11	ISO 10642 M4 x 12	X10CrNi18-8
27	2	M3 x 20	X10CrNi18-8
28	6	M3 x 22	X10CrNi18-8
29	2	M3 x 12	X10CrNi18-8
30	6	M3 x 14	X10CrNi18-8



Accessories

Number	Quantity	Description	Material
31	4	Apex 1 AM5 Mounting Nuts	X5CrNi18-10
32	4	ISO 7045 M3 x 8 4.8 H	X10CrNi18-8
33	2	Pad top	7W/mK - Shore-00 35 - 2.00 mm
34	2	Pad side	7W/mK - Shore-00 35 - 2.00 mm
35	1	Pad SSD	7W/mK - Shore-00 35 - 2.00 mm
36	1	Pad WiFi	7W/mK - Shore-00 35 - 2.00 mm
37	4	ISO 7089 - 3 - PA66	PA 66,GF25 FR(V-2)
38	1	Alphacool Subzero Thermal grease 1g	-
39	1	Putty Tool	-

We assume no responsibility for any typing errors. Alphacool International GmbH, Marienberger Strasse 1, 38122 Braunschweig Tel: (+49)0531 288 7400 Supportmail: info@alphacool.com