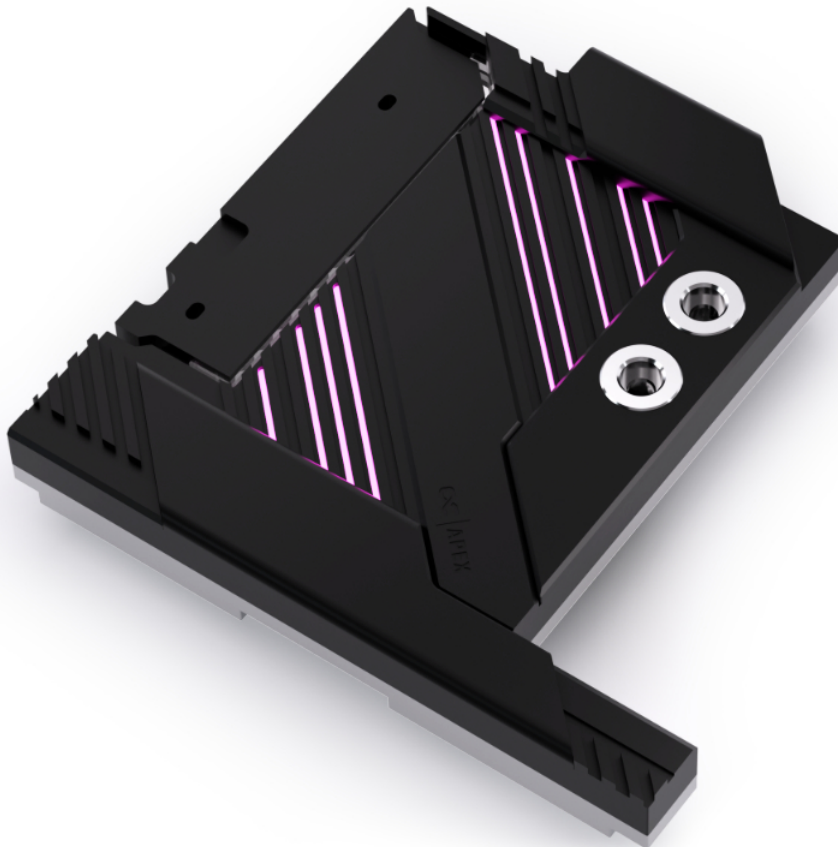
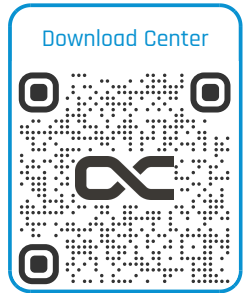


## Alphacool Apex Monoblock ROG STRIX X870E-E Gaming WIFI

Alphacool article number: 14679



### 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 SSDs 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
- Cools three M.2 NVMe slots
- Stunning aRGB illumination

### Compatibility

ASUS ROG STRIX X870E-E Gaming WIFI

## Scope of delivery

1x Alphacool Apex Monoblock ROG STRIX X870E-E Gaming WIFI	1x Thermal Grease
2x M2x20mm Screw	4x AM5 Mounting Nut
4x 85x8x2mm thermal pad	4x Washer
1x 75x22x2mm thermal pad	4x M3x8mm Screw
2x 70x22x2mm thermal pad	1x aRGB Adapter
1x 11x15x2mm thermal pad	

## Technical data

Dimensions (L x W x H) (in mm)	194,25 x 204,50 x 48,30
Material cooler	Chrome-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 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/cm <sup>3</sup> )	3,2 (Test method ASTM D2196)
Viscosity	150~200*10 <sup>3</sup> (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	<a href="#">14679_Alphacool_Apex_Monoblock_ROG_STRIX_X870E-E_Gaming_WIFI_Manual.pdf</a>
Product pictures	<a href="#">14679_Alphacool_Apex_Monoblock_ROG_STRIX_X870E-E_Gaming_WIFI_pics.zip</a>
EU-DoC / CE / RoHS	<a href="#">Alphacool_EuDoc_CE_RoHS_14679.pdf</a>

## Packaging dimensions per unit

L x W x H	290 x 250 x 105 mm
Weight	2740 g

## Other data

Certificates	CE, FC, RoHS
EAN	4250197146791
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 SSDs 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.

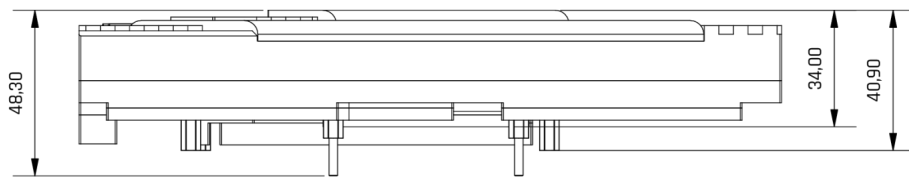
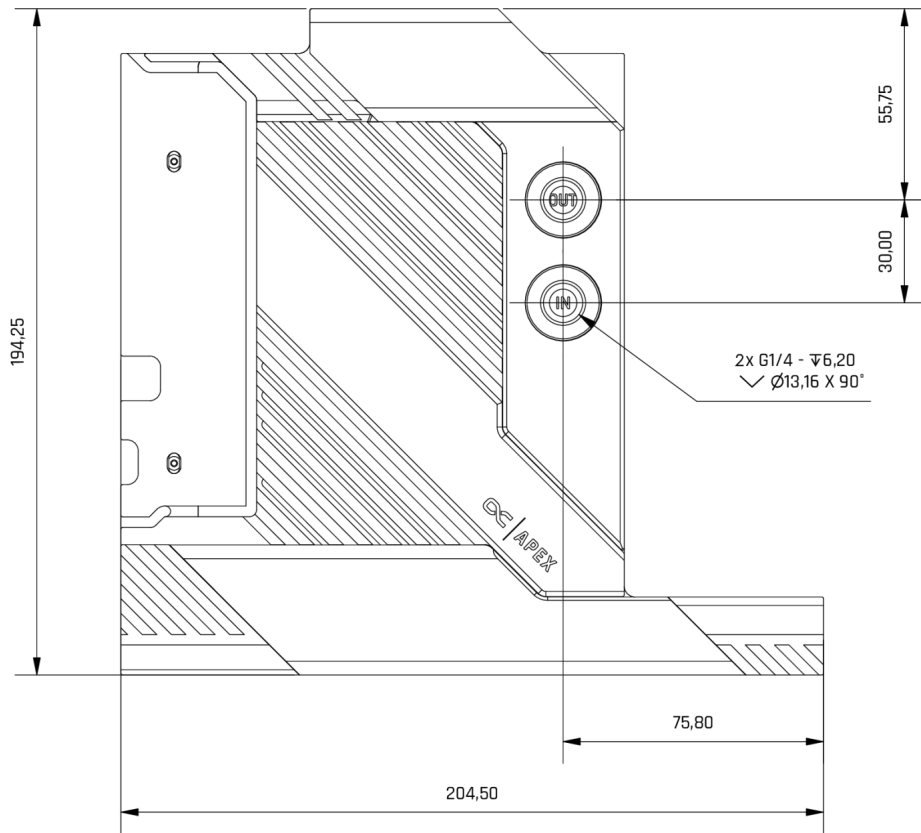
The cooler is milled from a solid block of copper. The G1/4" connection terminal is made of brass and, together with the copper base, ensures long durability as well as excellent thermal conductivity.

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

The original LED I/O cover of the motherboard remains fully intact and is complemented by the subtly integrated Apex-style aRGB lighting of the monoblock.

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

Figure (1)



oRGB Connection



VCC 5V DC  
DATA  
GND

oRGB Socket



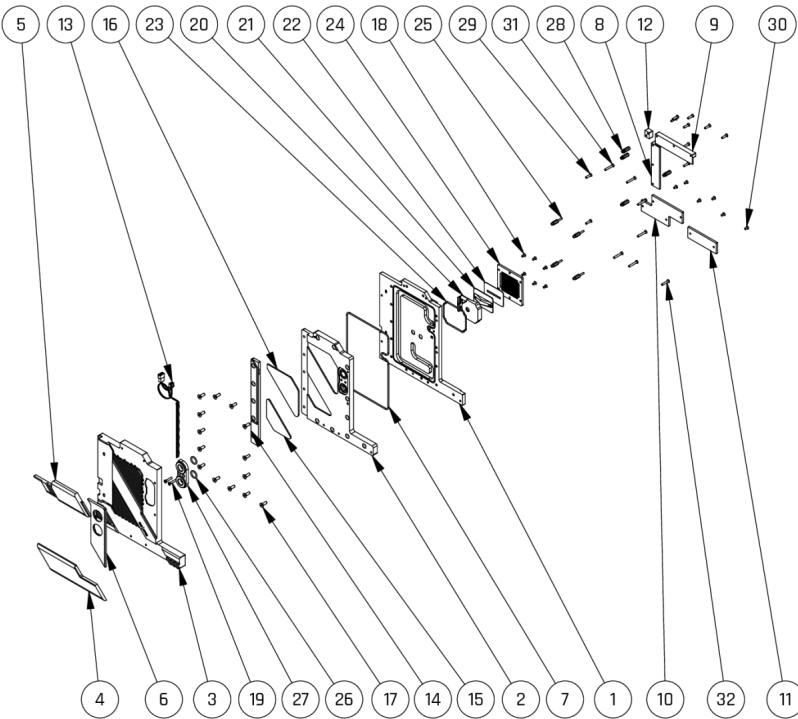
GND  
DATA  
VCC 5V DC

General tolerance:  $\pm$ 0,25mm  
Dimension in millimeter

# Figure (2)

**Mechanical properties:**

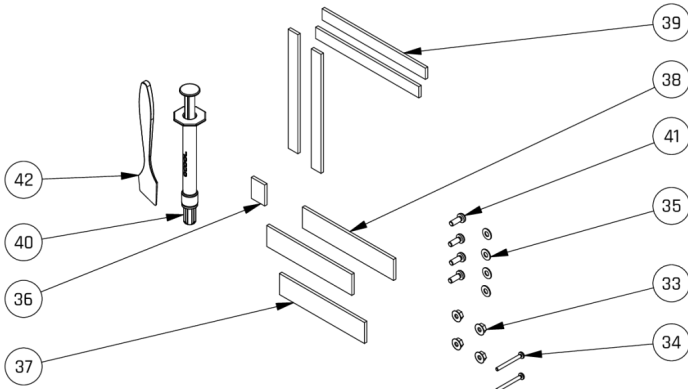
LED quantity and length	7pc. / L =116,2mm	Minimum temperature t min =	-20°C	Maximum torque of G thread M max =	G1/4 = 1,0Nm
LED Voltage V =	5 V	Working temperature t =	20°C	ISO 228-1 Parallel Whitworth pipe thread BSPP (GB)	
LED Ampere A =	0,06 A	Maximum temperature t max =	60°C	Maximum torque of M thread	M max = M2X0,4 = 0,13Nm
LED Power W =	2,1 W	Working pressure p =	0,0 - 1,0Bar	M thread	M2,5X0,45 = 0,27Nm
		Maximum pressure p max =	2,0Bar	DIN 13-1 Metric ISO standard thread	
					M3X0,5 = 0,48Nm
					M4X0,7 = 1,12Nm



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Alphacool Apex Monoblock ROG STRIX X870EE Gaming WIFI v2

Parts List

Number	Quantity	Description	Material
1	1	copper v2	Cu-HCP
2	1	pmma v2	LXN865
3	1	cover v2	AlMg1SiCu
4	1	deco 1 v2	AlMg1SiCu
5	1	deco 2 v2	AlMg1SiCu
6	1	mosTop v2	AlMg1SiCu
7	1	O-Ring 169 x 2 v2	NBR Shore 70
8	1	Extension 89,675 x 7 x 8,76 mm	Cu-HCP
9	1	Extension 91 x 7 x 8,76 mm	Cu-HCP
10	1	Extension 75 x 23,5 x 3,56 mm	Cu-HCP
11	1	Extension 70 x 22,75 x 3,56 mm	Cu-HCP
12	1	Extension 13 x 11 x 8,46 mm	Cu-HCP
13	1	aRGB LED 116,2mm (7 LEDs)	-
14	1	Lightspreader 1	DX001
15	1	Lightspreader 2	DX001
16	1	Lightspreader 3	DX001
17	14	ISO 10642 M4 x 12	X10CrNi18-8
18	6	ISO 70461 M3 x 6 4.8 H	X10CrNi18-8
19	2	ISO 70461 M3 x 16 4.8 H	X10CrNi18-8
20	1	Apex 1 Rubberinlay	VMQ Shore A 70
21	1	Apex 1 Jetplate PPS	PPS-GF30
22	1	Apex 1 Jet sealing	VMQ Shore A 70
23	1	Apex 1 ORing 55 x 2	VMQ Shore A 70
24	1	Apex 1 LGA 1700 Copperplate V4 Rebuild Small	Cu-HCP
25	4	Apex 1 AM5 Spacer 10,3mm SW5 M2,5	CuZn39Pb3
26	2	O-Ring 11 x 2	NBR Shore 70
27	1	Core GPX Terminal TOP Part	CuZn39Pb3
28	4	Distance Bolts 13,80mm M4 x 3 M3 x 7	CuZn39Pb3
29	10	M3 x 12	X10CrNi18-8
30	6	M3 x 6	X10CrNi18-8
31	6	M3 x 20	X10CrNi18-8
32	1	M3 x 16	X10CrNi18-8



Accessories

Number	Quantity	Description	Material
33	4	Apex 1 AM5 Mounting Nuts	X5CrNi18-10
34	2	ISO 7045 - M2 x 20 v2	X5CrNi18-10
35	4	ISO 7089 - 3 - PA66 v2	PA 66,GF25 FR(V-2)
36	1	PAD 11 x 15 x 2 v2	7W/mK - Shore-00 35 - 2.00 mm
37	2	PAD 70 x 15 x 2 v2	7W/mK - Shore-00 35 - 2.00 mm
38	1	PAD 75 x 15 x 2 v2	7W/mK - Shore-00 35 - 2.00 mm
39	4	PAD 85 x 8 x 2 v2	7W/mK - Shore-00 35 - 2.00 mm
40	1	Alphacool Subzero Thermal grease 1g	-
41	4	M3 x 8	X10CrNi18-8
42	1	Putty Tool	-