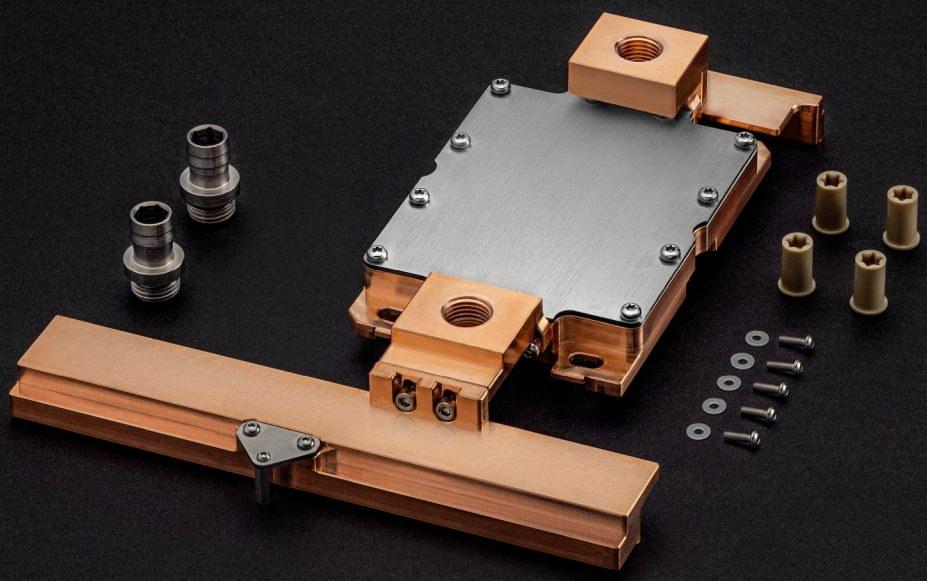
DATASHEET

COMINO



COMINO MOBO (4TH GENERATION INTEL® XEON®) WCB SET for ASUS PRO WS W790E-SAGE SE with VRM coldplate, Cu-Steel

KEY ADVANTAGES

High quality liquid cooling of the CPU and the VRM modules on the motherboard

Designed for 4th Generation Intel® Xeon® and ASUS PRO WS W790E-SAGE SE

High efficient deformational cutting technology for micro-fins (0.25mm x 2.7mm) manufacturing

Thermally-tested and quality guaranteed. Low ΔT° between the chip and inlet coolant temperatures is assured

X10

Heat dissipation increased up to 10 times as compared to the air-cooling

Only non-corrosive materials (Copper, Stainless Steel, Plastic)

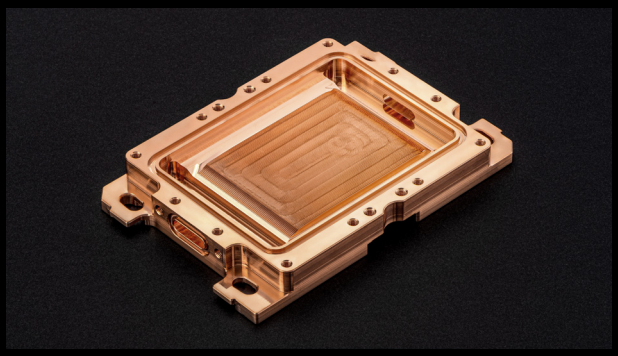
COMINO WATERBLOCKS TECHNOLOGY

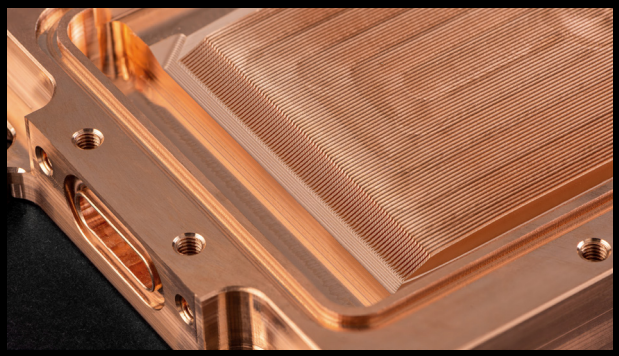
The Comino liquid-cooling system is based on the deformational cutting technology that allows to transfer more heat from the source than you would normally expect with direct liquid cooling.

This unique technology allows to create a copper fin as thin as 0.1mm with 0.1mm channel and 3mm height. In Comino solution microfins are optimized for low pressure drop with the thickness of 0.25mm, channel - 0.25 mm and 2.7 mm height.

Large increase (up to 12 times) of the waterblock surface area that contacts with the coolant allows faster heat dissipation. It prevents thermal throttling of CPU and GPU keeping temperatures within a safe range even at 24/7 operation in harsh environment.

This advantage makes our waterblocks extremely efficient (low ΔT°) and cost-effective.



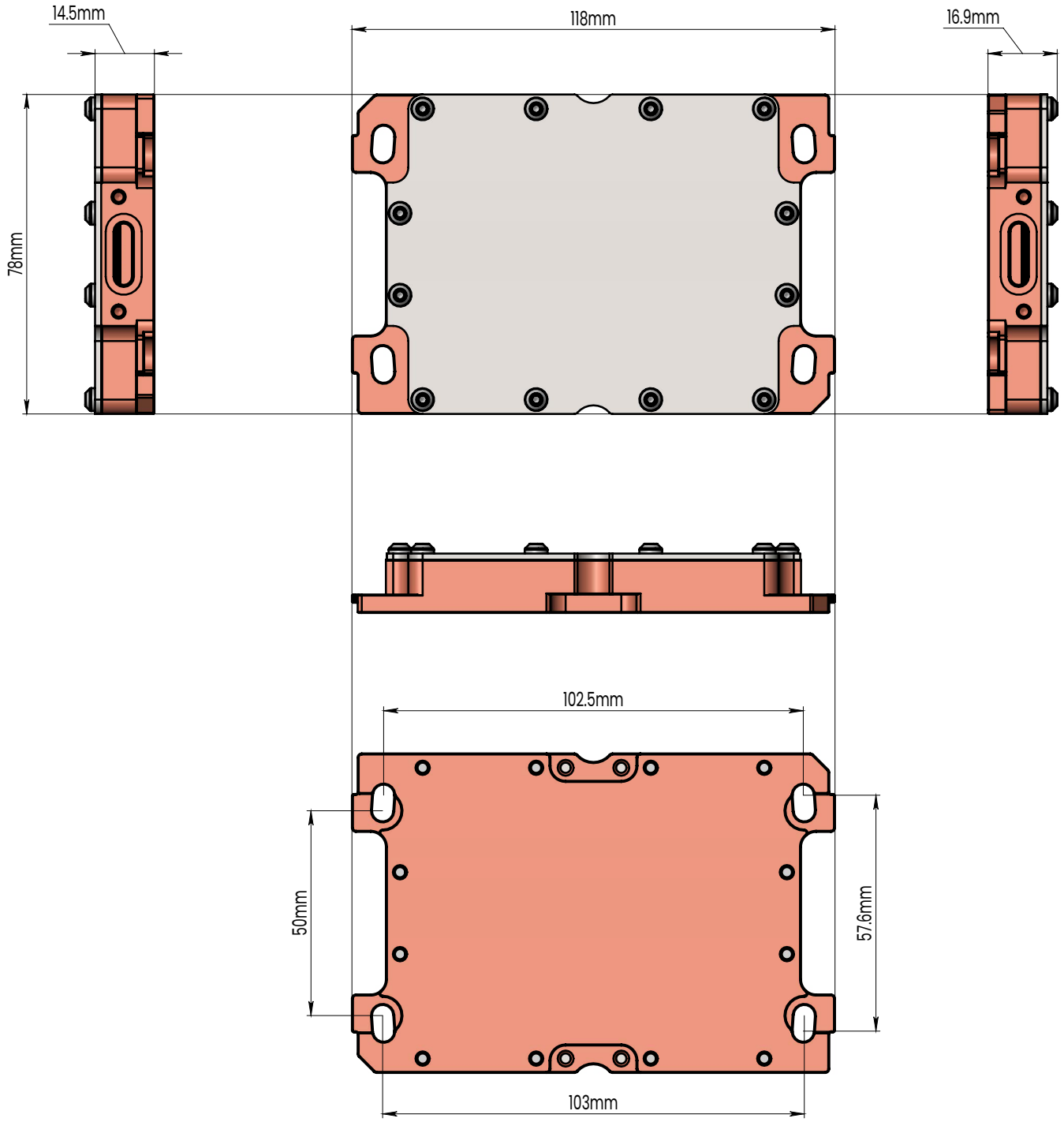


- Use the same CPU waterblock with different motherboards.
- Unique design for the CPU waterblocks with inter-changeable VRM cold-plates.
- Ultimate cooling for each and every CPU.
- Level-varied VRM coldplates to achieve perfect contact patch and heat transfer.
- Slim waterblock design can be used in 1U servers.

OVERALL DIMENSIONS

Core Block

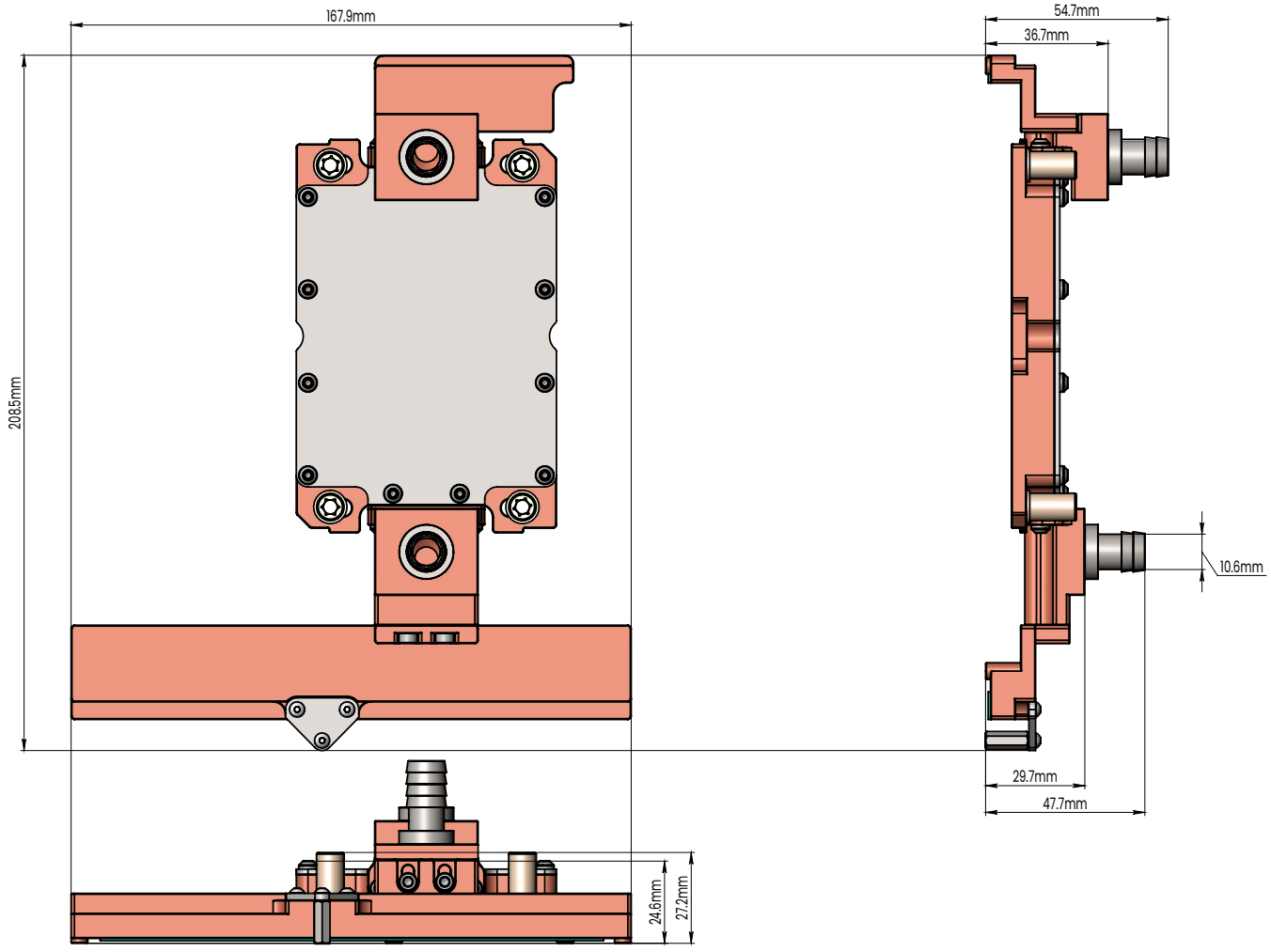
ID	Name	Release date
7219	WCB CPU (LGA4677-6096) Core Kit	May, 2023



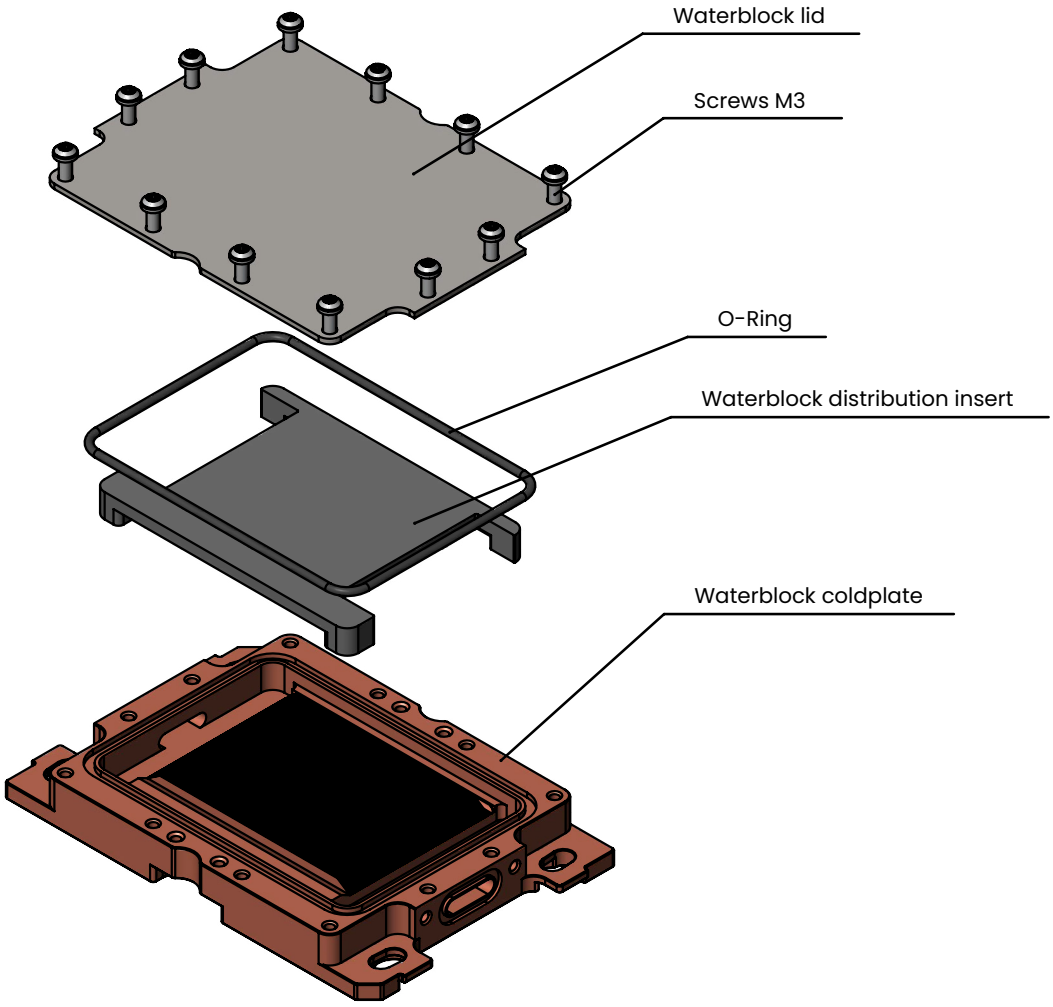
OVERALL DIMENSIONS

MoBo Water Cooling Block Set

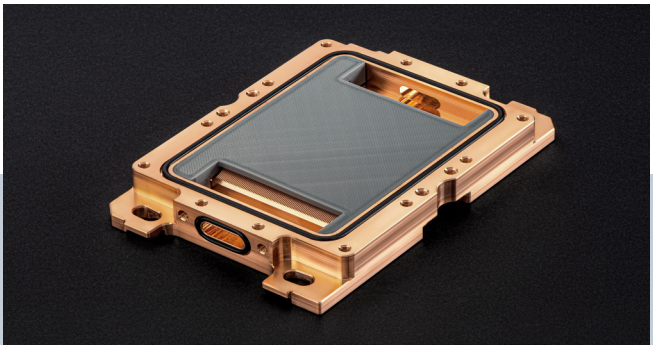
ID		Name	Release date
7000		Comino MoBo (4th Generation Intel® Xeon®) WCB Set for ASUS PRO WS W790E-SAGE SE with VRM coldplate, Cu-Steel	May, 2023
	7219	WCB CPU (LGA4677-6096) Core Kit	May, 2023
	7209	WCB MB (ASUS Pro WS W790-SAGE SE) MoBo Kit	Jun, 2022



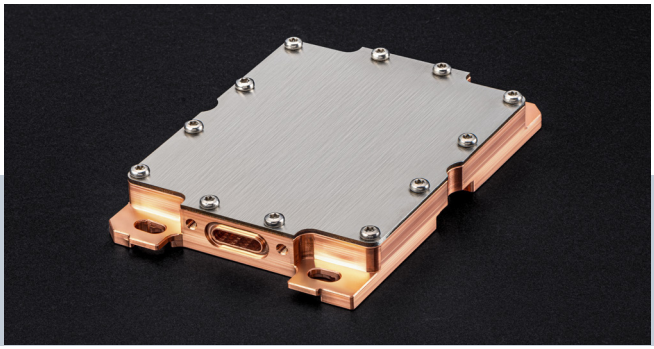
CORE BLOCK ASSEMBLY



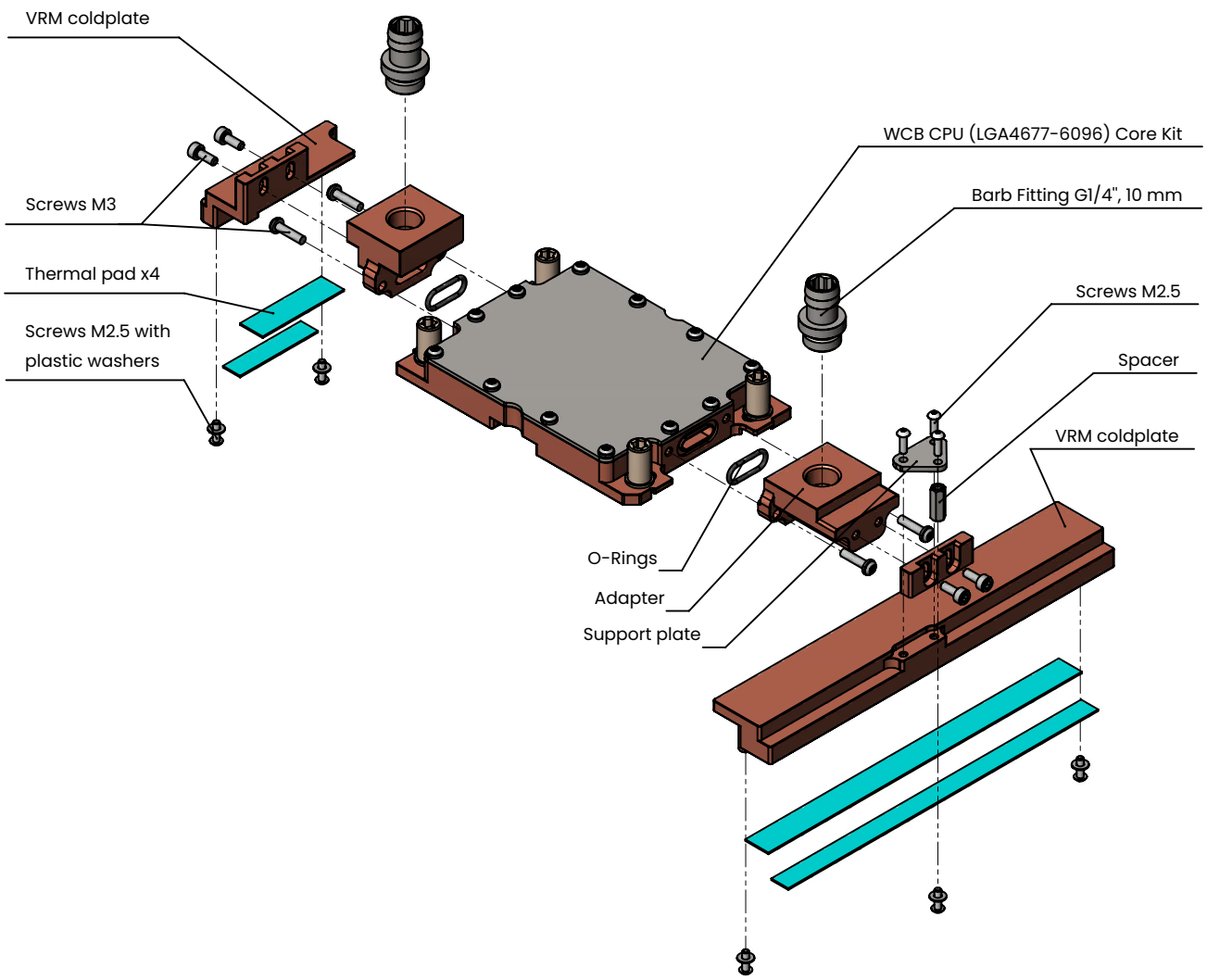
Open View



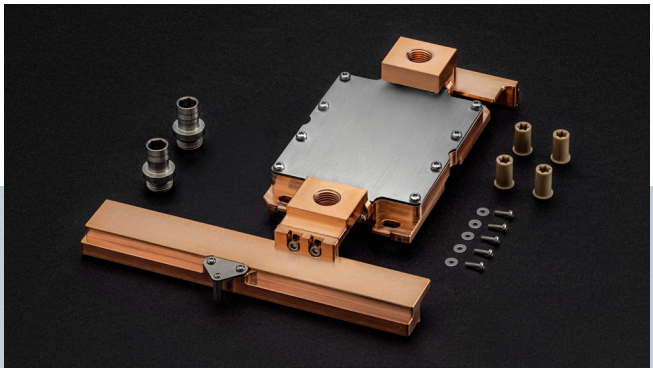
Assembled View



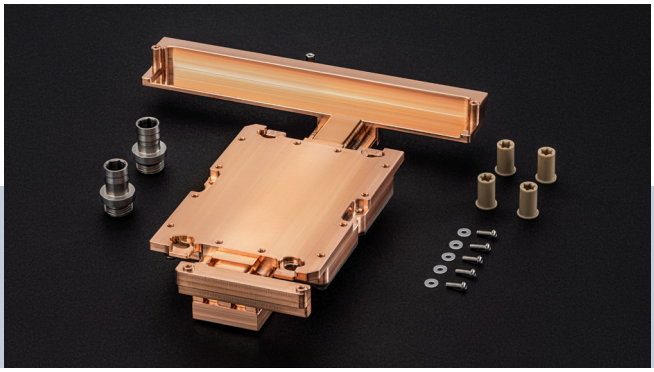
WATERBLOCK ASSEMBLY



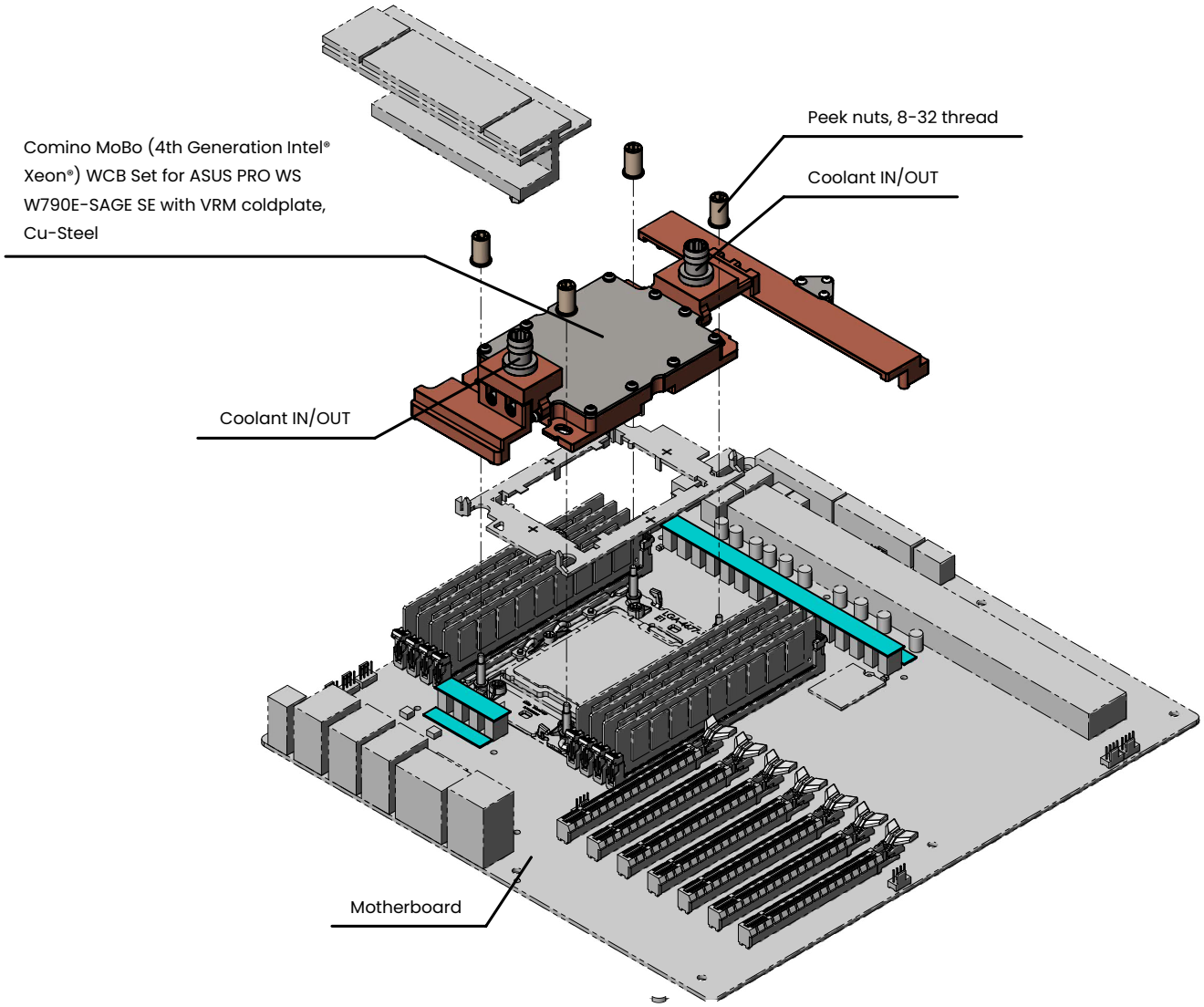
Top View

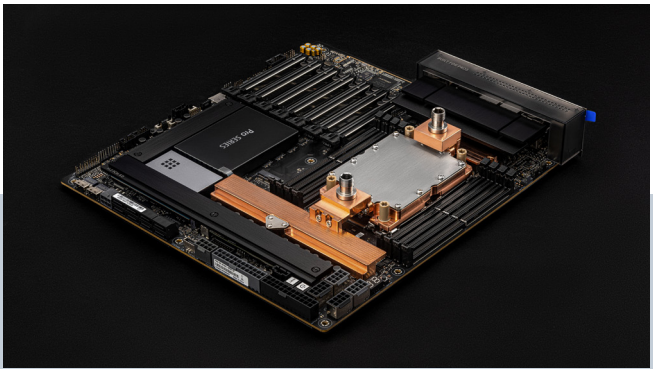


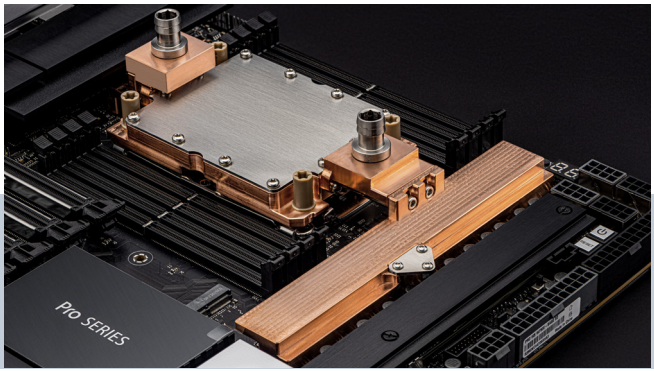
Bottom View



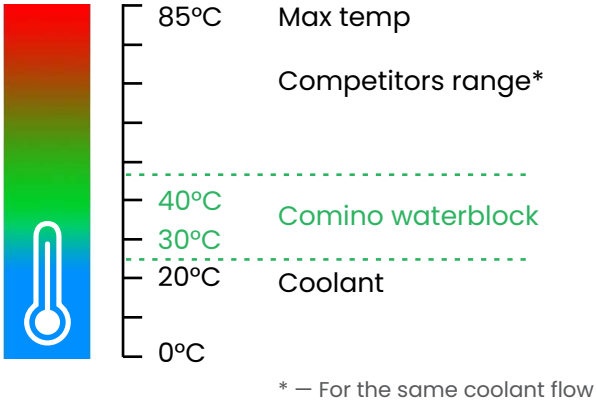
WATERBLOCK ASSEMBLY







THERMAL PERFORMANCE – BEST IN CLASS

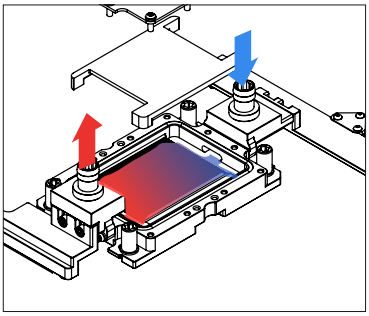


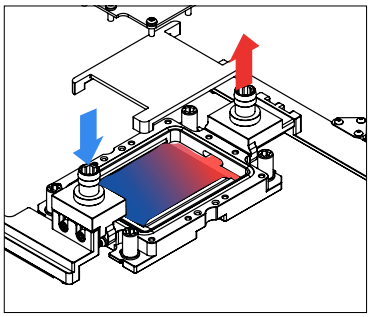
* — For the same coolant flow

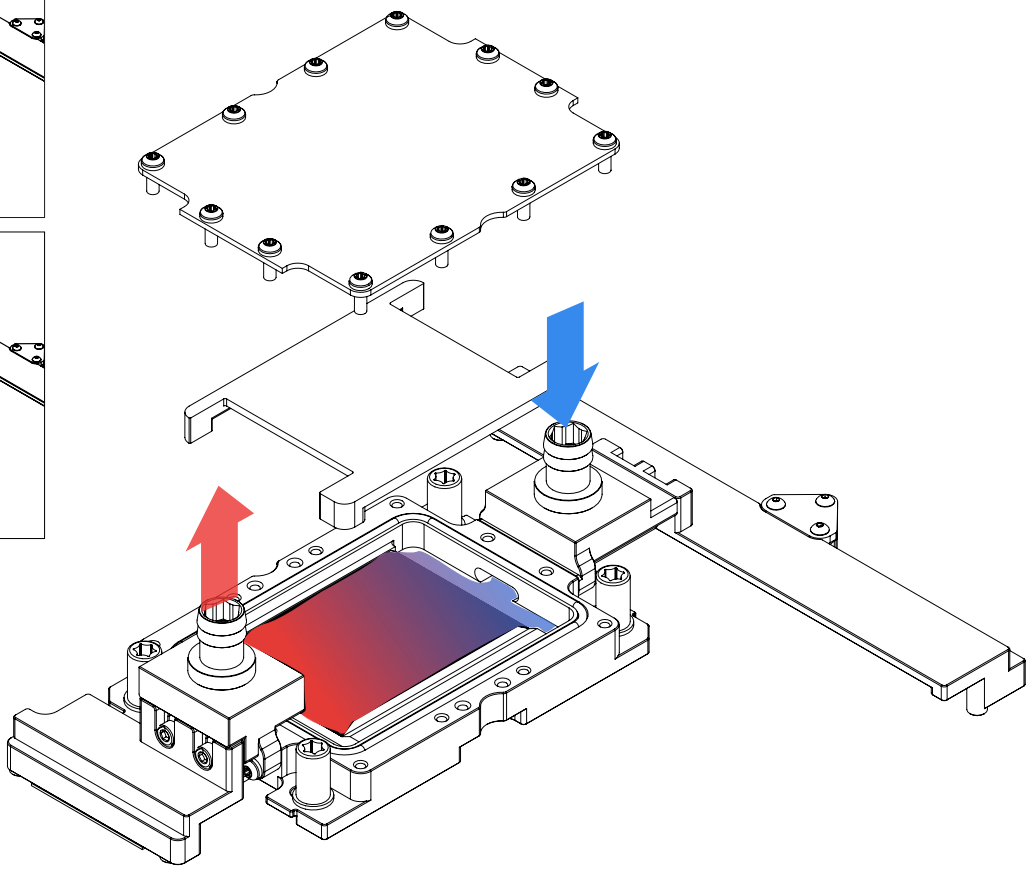
Comino waterblock technology ensures low ΔT° between the chip and inlet coolant temperatures.

- At coolant temperature of 20°C, the temperature of the chips with Comino waterblocks will be **30°–40°C**.
- The temperature of the chips with competitors waterblocks for the same coolant flow might rise up to 85°C.

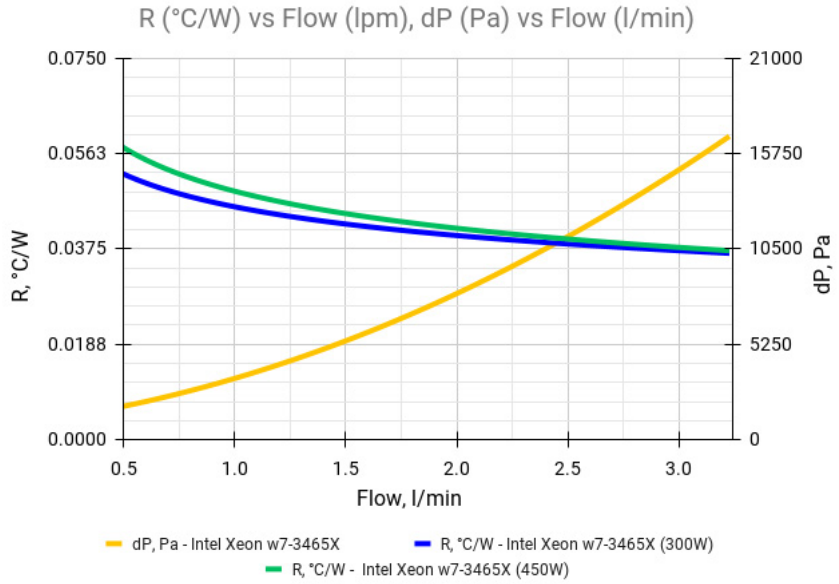
Any way of connection is possible



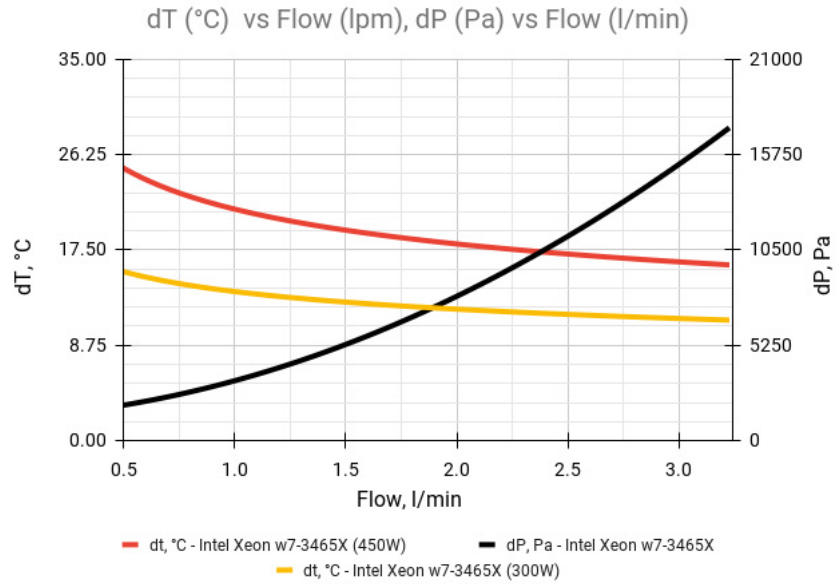




THERMAL RESISTANCE (CPU-WATER INLET), TEMPERATURE RISE AND PRESSURE DROP VS FLOW RATE



Waterblock thermal resistance (°C/W) and coolant pressure drop (Pa) between inlet and outlet of water-block vs coolant flow rate (l/min).

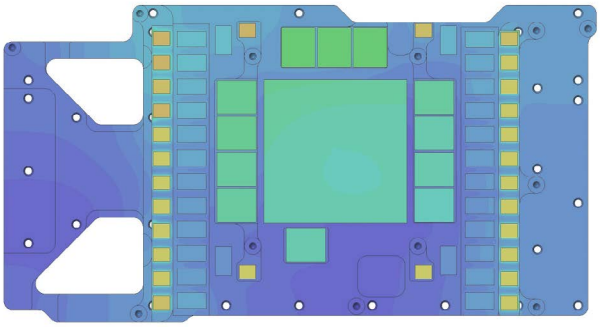


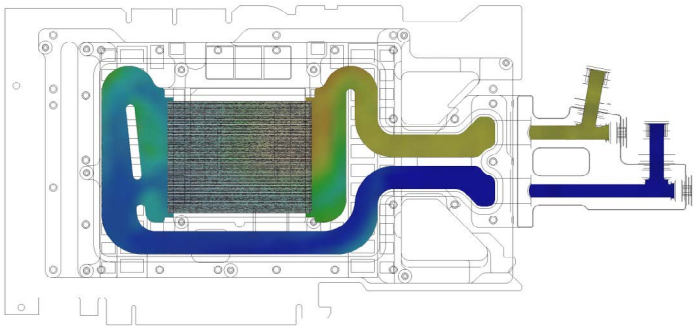
Temperature rise of CPU processor p-n junction relatively to coolant inlet temperature and cool-ant pressure drop (Pa) between inlet and outlet of waterblock vs coolant flow rate (l/min)

WE KNOW HOW TO BEAT THE HEAT

Comino provides RnD upon request, including product design with a series of complex thermodynamic calculations and a variety of stress tests supported by thermal analysis.

- Tailored liquid-cooling system and solution for your needs.
- OEM & ODM cooperation. Thermal design, prototyping, PoC, manufacturing, QA, supply.
- Creating a unique customization of hardware components and liquid-cooling systems.
- Design & Manufacturing of devices and cooling components for range of industry applications from scratch.





ADDITIONAL INFORMATION

Check the compatibility and find the composition of the kit on the waterblock product page:

https://faq.comino.com/en/waterblocks/main

CONTACTS

For more product information visit: www.comino.com
Email us info@comino.com

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