

July 24, 2023

Sumitomo Precision Products Co., Ltd.

Successful development of new CPU/GPU air-cooler – removal of 1000W level heat!

Sumitomo Precision Products Co., Ltd. has developed very compact and high performance GPU/CPU cooler for hyper scale data center and edge computing application. Heat management of such extreme and most advanced chipset is getting critical. We have observed that this new product is able to remove the heat of 1000W.

Data transfer speed is increasing, thanks to innovation in communication technologies like 5G and beyond, to contribute autonomous driving, telemedicine and electronic communication network. CPU/GPU and server are more and more sophisticated, meanwhile generated heat (heat loss) of those devices and each component is dramatically increasing. Protecting crucial data from such heat is very critical.

We have very unique, two-phase thermo-siphon air cooler, SIPHOREX®, which has been widely used in the market for decades. We have been improving this technology to cool such electronic devices, and finally succeeded in product development of the new air cooler.

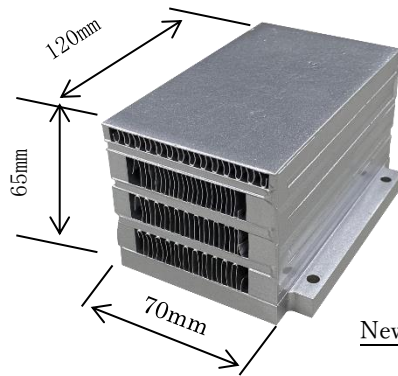
It is believed in the electronics market that the performance limit of air cooling for CPU is 400W (TDP or Thermal Design Power). Water cooling used to be the only solution to remove the heat of 400W beyond.

We tested and validated the new SIPHOREX® is capable to manage the extreme high heat of 1000W. This product is self-contained, without complicated piping and ancillary components. Regular maintenance is not necessary. There is no thermal runaway concern.

Features of new SIPHOREX®

- ✚ Cooling medium encapsulated in this cooler removes the heat from CPU/GPU.
- ✚ Cooling medium gets boiled, goes up into the condenser, and then condensed by air cooling.
- ✚ The system is self-circulatory. Power is used only to drive the fan.
- ✚ New SIPHOREX® can be built into 2U rack-mount server. It can be customized in accordance with customers' electronics layout in the server.
- ✚ Customization of new SIPHOREX® is able to uniformly cool multiple electronic components on the circuit board, such as regulators and memory in case of GPU. (Full-surface cooling)

We continue to upgrade SIPHOREX® to contribute the innovating digital world.



New SIPHOREX® appearance

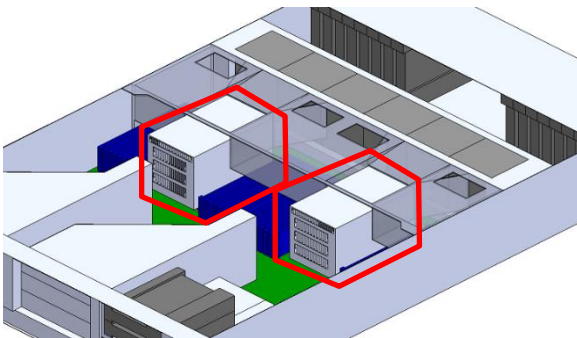
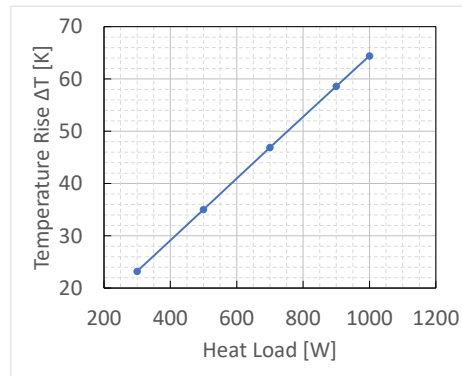


Image of server equipped with SIPHOREX®



Performance test result