Immersion Cooling

BENEFITS AND FEATURES

Modular, Scalable, Reliable, and Efficient

Two-Phase Immersion cooling is a type of cooling technology for data centers looking to cool high density computing or to lower PUE. In a Two-Phase immersion cooled system, electronic components are submerged into a bath of dielectric heat transfer liquid, which is a better heat conductor than air, water or oil. With a low boiling point (i.e. 56°C vs. 100°C in water), the fluid boils on the surface of heat generating components, and the rising of the vapor moves it to a condenser, taking care of heat transfer. In contrast to submersion oil cooling, Two-Phase immersion cooling liquids are clean, environmentally friendly and non-flammable. No pumps and jets are required to keep hardware cool. Circulation happens by the natural process of evaporation and without consuming any extra energy. This technique simplifies the cooling of hardware and results in better cooling efficiency. Compared to traditional air, water or oil cooling, this passive process results in the use of less energy.

– Zero-water use application
– Reduced permitting requirements
– More efficient use of physical space
– Reduction in greenhouse emmissions
– Automated Intelligence/Machine Learning enabler
– 90% energy reduction in cooling energy
– 12-15% reduction in IT load due to fan removal
– 10X IT capacity in same foot print
– Sub 1.05 PUE
– 30% reduction in construction schedule
– 40% reduction in installation cost
– 30-50% reduction in utility operating expense
– 70% reduction in communication hardware cost
– Reduction in IT failure rate
– Lower field labor exposure
– 40% faster time to market
– Reduced project risk

Get in touch:
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– High performance IT submerged in nonconductive fluid with superior heat removal capabilities.

– Independent of server technology and OCP compatibility.

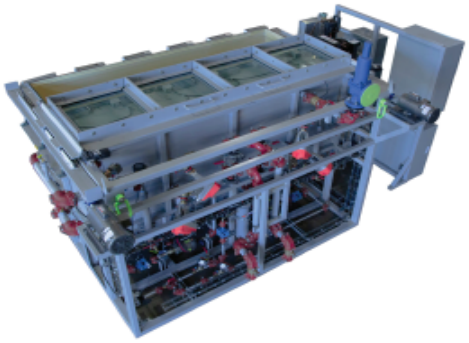
–Non-conducting Thermal Fluid: non-hazardous, non-toxic, non-flammable

– Modular pods can be installed directly on slab or raised floor and utilize existing data center cooling water loop or have the working fluid air cooled

– Able to retrofit into existing facility

– Scalable from Edge to Cloud and blockchain ASIC cards to high density servers

Unmatched IT density (> 10x air)	Turbo/Overclock IT (>up to 30%)	Ultra low PUE (< 1.08)	Can be fully integrated with the facility, Density of 5000+ Watts per RU



15kw-100kW Pods

- High density server application
- 100” x 69” x 58” footprint
- 2000+W/sqft 48U rack for OCP or IT packs.
- On-line maintenance 2 x 100kW cooling redundancy.
- Fluid management, filtration, reclamation.
- 415V AC to 12V DC power distribution.
- Touch-screen HMI for control, override & monitoring.

1 MW Pods

- ASIC Blockchain application.
- 27’ x 21’ x 12’ footprint
- 1800+W/sqft 2 x condenser coils for full cooling redundancy.
- Fluid management, filtration, reclamition.
- Remote, visual IT monitorg.
- PLC based touch-screen HMI for control and monitoring.
- Slab mounted structure, no need for raised floor

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