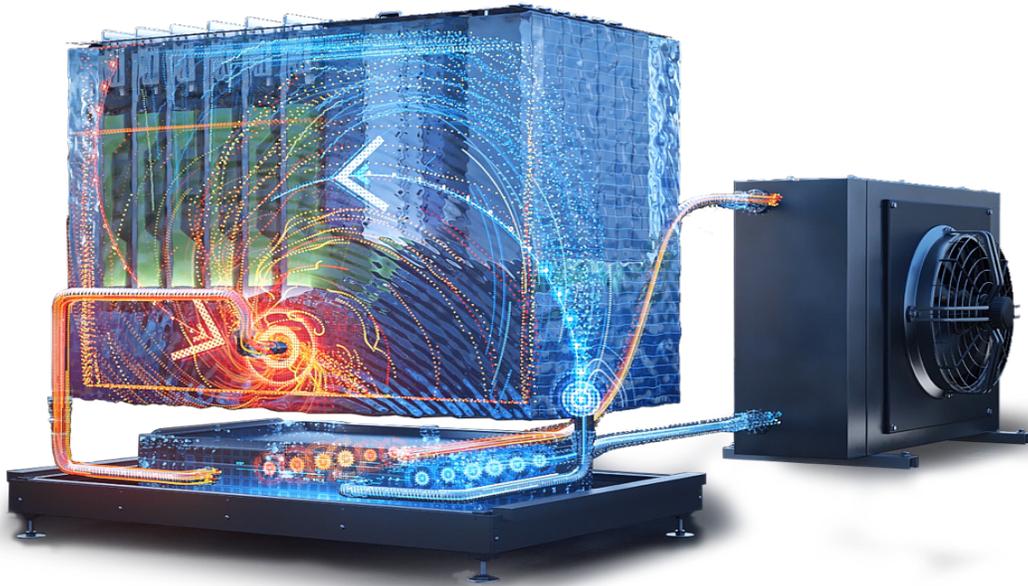


Immersion Liquid Cooling System LTI-T12\LTI-T24



Immersion liquid cooling transfers heat from CPUs, GPUs, and other components into a dielectric fluid while keeping the coolant fully contained inside the immersion tank. Unlike conventional systems that pump coolant out of the tank into external loops, this design eliminates any external fluid path from the tank, removing the possibility of coolant leakage or external water contact with immersed servers. Heat is removed from the sealed tank via a secondary heat rejection stage through integrated CDU that never mixes with the tank fluid, delivering ultra-low PUE, high density, and enhanced operational safety.

Safety Notes

- **Site planning:** Verify floor loading and provide standard electrical and secondary loop connections; no tank fluid plumbing is required.
- **Commissioning:** Confirm sealed tank integrity, internal pump operation, and thermal coupling to the secondary heat rejection system.
- **Maintenance:** Routine service focuses on external loop; internal tank maintenance follows vendor procedures for sealed systems.
- **Emergency procedures:** With tank fluid fully contained, emergency response focuses on secondary loop isolation and electrical safety rather than fluid containment.

Direct heat capture:

Components are submerged or thermally coupled so heat transfers directly into the dielectric fluid inside a sealed immersion tank.

Sealed internal circulation:

Internal pumps and manifolds circulate the tank fluid within the sealed enclosure only; no tank fluid leaves the tank at any time.

External heat rejection without fluid transfer:

Heat is transferred out of the sealed tank thermally via a heat exchanger to a secondary water loop managed by an integrated CDU. The secondary loop never contacts the tank fluid.

Warranty Information

Our standard warranty is three years parts and labor. Extension of the warranty is available.



Key Advantages

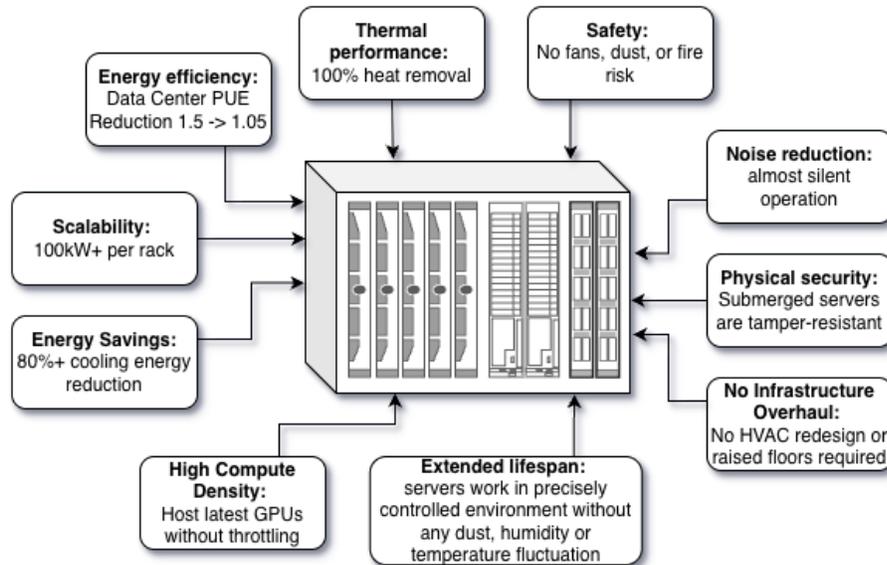
Immersion cooling represents a breakthrough in data center thermal management, combining efficiency, safety, and sustainability in one solution. By keeping the dielectric coolant fully contained within the immersion tank, the system eliminates leakage risks and prevents any external water contact with servers, while delivering ultra-low PUE, high GPU density, and the ability to reuse expelled heat. This innovative design not only simplifies site requirements but also ensures reliable, resilient performance across edge, hyperscale, HPC, crypto, and industrial IoT environments making it a strategic enabler for next-generation infrastructure.

Closed repeatable cycle:

The tank fluid remains contained and recirculates internally while the secondary loop carries away heat to be expelled or reused; the process repeats continuously.

<i>Zero leakage risk</i>	No tank fluid leaves the immersion enclosure, eliminating leakage pathways and protecting IT hardware.
<i>No external water contact</i>	Immersed servers are never exposed to external water or secondary loop fluids, reducing corrosion and contamination risk.
<i>Simplified site requirements</i>	Reduced need for spill containment and complex plumbing at the rack level.
<i>Operational safety and compliance</i>	Easier to meet site safety and environmental regulations because dielectric fluid is fully contained.
<i>Preserved heat reuse capability</i>	Internal CDU enables heat recovery without exposing servers to the secondary loop
<i>Reliability</i>	Sealed-tank architecture removes leakage as a failure mode and triple pumps and double CDUs provide full redundancy for uninterrupted work for many years
<i>Maintainability</i>	Service tasks are limited to external secondary loop components; immersed servers remain isolated and, in most cases, do not require any maintenance works
<i>Sustainability</i>	Enables heat reuse and secondary-loop water reuse strategies without compromising server safety

The adoption of Immersion Cooling Technology offers a compelling business case by combining immediate operational savings with long-term infrastructure stability. Beyond the radical improvement in power efficiency, the deployment of immersion tanks provides a rapid Return on Investment (ROI) by drastically lowering utility costs and eliminating the need for complex HVAC maintenance. The submerged environment acts as a protective barrier enhancing physical security, providing inherent fire suppression, and shielding expensive high-end servers



from environmental wear. This precisely controlled atmosphere significantly extends hardware lifespan, ensuring that mission-critical assets remain performant for longer.

Ordering Information

SKUs	
LTI-T12	12 OU Immersive Cooling System, 12 Open Rack units for submerged equipment, OCP ready
LTI-T24	24 OU Immersive Cooling System, 24 Open Rack units for submerged equipment, OCP ready
LTI-HLB	Heat Load Balancer for external coolant
LTI-OPS18	OCP Power Shelf, 18 kW, N+1, 2x Power Inputs

Specifications

Physical Data	LTI-T12	LTI-T24
Product Specs		
Number of Open Rack Units	12	24
Dimensions, mm	990 x 800 x 1300	1500 x 920 x 1400
Weight (empty), kg	250	440
Weight (with coolant), kg	603	1096
Footprint, m ²	0.792	1.38
Max floor load, kg/m ²	1350	1350
Cooling Performance		
Total Cooling Capacity with Chilled Water (@12 °C), kW	50	100
Total Cooling Capacity with Warm Water (@35 °C), kW	35	70
System PUE	1.08	1.08
Coolant Circuit		
Fluid Type	Thermal Conductive Dielectric Fluid	
Filtration	100 micrometer mesh	100 micrometer mesh
Max Coolant Flowrate, Tank internal flow, m ³ /h	~10	~20
Max Coolant Volume, L	430	800
Power		
Power Supply	380-415V / 3ph 50-60Hz+N+PE	380-415V / 3ph 50-60Hz+N+PE
Max Power Consumption, kW	0.75	1
Operating Conditions		
Ambient Temperature, °C	5 to 40	5 to 40
Ambient Humidity, RH	20% to 80%	20% to 80%
Water Supply Inlet Water, °C	12 to 35	12 to 35
Water Flowrate, m ³ /h	~8	~16
Water Supply connection	DN32	DN32
Altitude, m	2000	2000
Storage Conditions		
Ambient Temperature, °C	0 to 50	0 to 50
Ambient Humidity, RH (@ 30°C)	up to 95%	up to 95%
Ingress Protection Rating (IP Rating)	IP44	IP44