

High-density integrated container racks with immersion liquid cooling are available in stock



Summary of Content

High-density liquid-cooled racks, including immersion cooling solutions, are commercially available and designed for AI, HPC, and high-density data center deployments.

Overview of Immersion and Liquid-Cooled Racks

High-density integrated racks with immersion liquid cooling submerge servers in thermally conductive dielectric fluids, maximizing heat transfer and energy efficiency while eliminating the need for traditional air cooling . These systems are ideal for workloads with extreme power density, such as GPU-intensive AI clusters, where a single rack can consume up to 80 kW or more . Immersion cooling is the most energy-efficient form of liquid cooling, reducing reliance on fans and improving space utilization .

Key Features and Benefits

- **Direct-to-Chip Cooling:** Cold plates or two-phase evaporators are mounted directly on CPUs, GPUs, and DIMMs, removing 70–75% of heat at the component level .
- **High Rack Density:** Supports multiple GPUs or processors per rack, significantly increasing compute capacity within the same footprint .
- **Energy Efficiency:** Reduces power usage effectiveness (PUE) and operational costs by up to 40% compared to air-cooled systems .

Article Content

Liquid Cooling for High-Density Racks: A Guide | DataSpan

Immersion cooling is the most advanced and effective cooling technique available for high-density servers. It involves

Immersion cooling systems: Advantages and

Immersion cooling absorbs 100% of rack heat — but room cooling remains essential for air

Liquid-cooled rack solutions | Flex

Our liquid-cooled rack solutions are designed to support demanding AI and high-performance computing workloads

Stulz: Integrated Liquid Cooling System

Our solution, equipped with integrated Direct Chip Liquid Cooling (DCLC), is a standardized, row-style

Liquid cooling solutions for AI and high-density data centers ...

Next-gen cooling for high-density workloads Schneider Electric's data center liquid cooling solutions are purpose-built for AI

From server racks to battery racks: Why immersion cooling is the

Greater hardware density: Enables deployment of server racks exceeding 100 kW without throttling. These

LCS ZPServer | Immersion-Cooled Rack Server for Data Centers & AI

DATA CENTER & AI LIQUID COOLING High density computing with Immersion-cooled rack servers for data centers & AI As

Server Immersion Cooling Systems

Supports ultrahigh rack power densities required for AI and HPC workloads. Controlled dielectric environment isolates components

Vertiv High Density Cooling Solutions

Vertiv™ Liebert® DCD The Vertiv Liebert® DCW chilled water-based cooling family was designed specifically for high heat density

Immersion Cooling Data Centers | Hyperscale Builds 2025

Learn why immersion cooling is moving mainstream in hyperscale data centers. Explore benefits, adoption trends, and

Liquid Cooling Integrated Container Data Center High-Density Racks ...

Liquid Cooling Integrated Container Data Center High-Density Racks Stable in Extreme Environments No reviews yet Complies with

Liquid Cooling Solutions for AI, HPC & Hyperscale | LiquidStack

Liquid Cooling the Next Generation of Computing High performance computing (HPC) and data-intensive technology applications -

LCS ZPServer | Immersion-Cooled Rack Server for Data Centers & AI

Designed for data centers and AI, the zero-pressure ZPServer offers maximum scalability with up to 4kW per standard rack unit. It's

Liquid & Immersion Cooling in Colocation | Datacenters

Discover how colocation sites are adapting to liquid and immersion cooling in 2025. Learn why these technologies

Immersion cooling systems: Advantages and

Data center infrastructure is rapidly expanding, fueled by the ongoing rise of artificial

Rack-Scale Liquid Cooling Solutions | Supermicro

Unlock the full potential of multi-rack AI and HPC clusters with Supermicro's in-row liquid cooling solutions for high-density

Immersion Cooling: Top 5 Design and Deployment Considerations

Today, high-density, modular single-phase immersion cooling solutions have all the necessary compute, network, and

Immersion Cooling solutions for 19" racks for any data center

Immersion cooling solutions for all data centers As data centers and cloud providers face growing demands for higher density and

Schneider Electric Announces Industry's First Integrated Rack with ...

Schneider Electric, the leader in digital transformation of energy management and automation, with Avnet and

Two Phase Immersion Cooling Solution | LiquidStack

Two Phase Immersion Cooling LiquidStack's 2 phase immersion cooling tanks provide the most efficient cooling solutions on the

Liquid Cooling Steps Up for High-Density Racks and AI

The Liquid Cooling Market Is Heating Up Liquid cooling technology isn't new, but it's quickly becoming a go

Immersion Cooling for Data Centres: The Sustainable Way

Average density per rack is rising – Uptime For more than 50 years the standard approach to cooling data processing equipment has

LiquidCool Solutions: Immersion-Cooled Rack Servers

AI. HPC. Quantum. The demand is soaring for higher density compute and powerful, energy consuming GPUs and CPUs. Your

Computational study of single-phase immersion cooling for high

This study narrows that gap through the computational analysis of the cooling systems for the server rack. Considering

Flex: Liquid-Cooled Racks for Data Centers with JetCool

Discover Flex and JetCool's integrated cooling infrastructure for AI, HPC, and hyperscale data centers. Built for power, performance,

Immersion cooling cabinet for GPU, ASIC and HPC | VOLTANEUM®

Immersion cooling cabinet for GPU, ASIC and HPC. Reserve a VOLTANEUM immersion cabinet with dielectric fluid, tenant isolation,

Integrated Immersion Liquid Cooling Edge Data Center Container

The 40-foot container integrates pre-configured subsystems including immersion cooling racks, power distribution, HVAC, structured

Beating the heat in the data center: The industry's first integrated ...

Today at Schneider Electric, we made an exciting announcement: we introduced our industry's first commercially

Liquid and Immersion Cooling Options for Data Centers

As a result, data center operators are investigating their liquid cooling options. Liquid cooling leverages the higher thermal transfer

Single Phase Immersion Cooling Solution | LiquidStack

Single Phase Immersion Cooling LiquidStack advanced flow technology optimizes heat transfer and

Immersion Cooling Solutions | High Performance And Sustainability

Unparalleled energy efficiency and performance with immersion servers, purpose-built for optimal cooling and sustainability in

High-density racks are straining data centers; liquid cooling may offer ...

In the future, organizations looking to efficiently deploy extremely high-density racks (> 30 kW) in their data centers

A review of the immersion liquid cooling technology for high ...

In the context of global digital transformation, the rapid expansion of data centers has intensified the challenge of high

Immersion Cooling Is Ready for its Big Moment in the Data Center

Immersion Cooling Upside and Advantages The number one disadvantage most often cited for immersion cooling

Data Center Cooling Infrastructure Explained: Air, Liquid, and ...

Data Center Cooling Infrastructure Explained: Air, Liquid, and Immersion Systems for High-Density Racks Coase Data

Liquid-cooled rack solutions to address power, heat, and scale ...

Liquid-cooled rack solutions to address power, heat, and scale challenges in the AI era Flex OCP ORv3-inspired liquid-cooled

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Air cooling systems have continually evolved to address higher densities with greater efficiency, but there is a point at which air

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