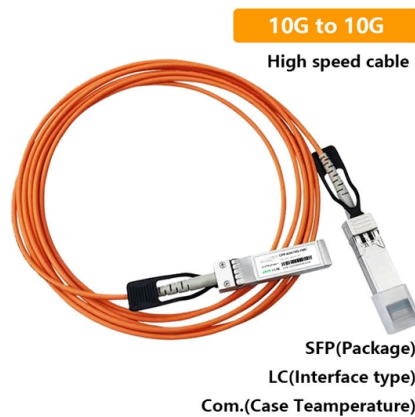


High-density AI server liquid cooling



Overview

Beyond enabling higher densities, liquid cooling improves thermal efficiency, lowers operational costs, and enhances energy efficiency. As AI workloads drive higher heat densities, the liquid cooling market is projected to expand rapidly – with forecasts projecting 30 percent. Liquid cooling has become a critical enabler for modern AI data centers as facilities scale to handle high-density workloads, such as artificial intelligence (AI) and machine learning. Scaling up is a real challenge. It offers up to 15% better energy efficiency and reduces cooling costs compared to traditional air-cooling systems. The technology also enables higher server. Traditional air cooling is being pushed to its limits by high-performance, high-density racks, and to unlock AI's full potential, data centres must move beyond the status quo and embrace advanced, sustainable liquid cooling. AI workloads are breaking the mold and pushing rack power densities to new.



Article Content

Engineering Liquid Cooling: A Guide to Direct-to-Chip

Practical guide to direct-to-chip liquid cooling in AI data centers—cold plate cooling, CDUs, hydraulics, water chemistry management, leak prevention,

Liquid Cooling: The 2026 Mandate for 100kW AI Racks

Strategic Partnerships Accelerate Mandatory Liquid Cooling Adoption for 2026 AI Data Centers Major technology and infrastructure players are forming critical alliances, moving liquid cooling from a niche

AI Data Center Cooling Requirements 2026: Complete GPU Thermal

Comprehensive 2026 guide to AI data center cooling. GPU TDP specs (H100-B300, MI300X-MI355X), ASHRAE guidelines, liquid cooling, immersion cooling, PUE optimization. From 700W to 1,400W

2025 OCP Summit Highlights Data Center Efficiency

2025 OCP Summit—AI Infrastructure Buildout Consisted of Three Pillars: AI Servers Rack, Power & Cooling, and Networking The Event – Major

Liquid-Cooled AI Infrastructure: Powering Scalable Enterprise ...

Beyond reliability, liquid cooling enables the scaling of high-density workloads. By supporting greater computational density, it allows enterprises and research initiatives to accelerate

Liquid Cooling Steps Up for High-Density Racks and AI

Liquid cooling is the go-to technology for efficiently managing heat in data centers. Learn about options and what's best for your deployment.

Building Sustainable Liquid-Cooled AI Data Centres

Traditional air cooling is being pushed to its limits by high-performance, high-density racks, and to unlock AI's full potential, data centres

Why liquid cooling will dominate AI data centres in 2026

Liquid cooling is essential for AI-driven data centres, efficiently managing the extreme heat generated by high-density AI server racks. It offers

Top 10: Liquid Cooling Companies | Data Centre Magazine

Discover the leading liquid cooling companies transforming data centre infrastructure with sustainable, high-performance thermal management solutions As rack densities soar and AI

NVIDIA Blackwell Platform Boosts Water Efficiency by

By reducing dependence on chillers and enabling more efficient heat rejection, liquid cooling is driving the next generation of high-performance,

Liquid Cooling for AI Data Centres India | CDU

Schneider Electric's data centre liquid cooling solutions are purpose-built for AI workloads, GPU servers, and high-density IT environments. With over a decade

Best practices for deploying liquid-cooled servers in AI

Discover liquid cooling best practices for AI data centers, including design, deployment, maintenance, and sustainability benefits.

AI-driven cooling technologies for high-performance data centres:

This study presents a comprehensive, system-wide review of next-generation cooling technologies, including direct liquid cooling, immersion cooling, two-phase systems, spray and jet

Liquid to Air Cooling for High Heat Density Liquid

Today, data centers across the world are turning to liquid-based cooling solutions to keep up with the increased cooling demand for high power

Dell expands PowerEdge and storage portfolio for AI-driven data centres

Among the key launches are liquid-cooled PowerEdge M9825 systems for high-density AI deployments, PCIe-based AI servers such as XE5845 and XE7845, and new AMD EPYC-powered

Data Center Liquid Cooling Market | Industry Report, 2033

Data Center Liquid Cooling Market Summary The global data center liquid cooling market size was estimated at USD 6.65 billion in 2025 and is projected to reach

Iceotope Raises \$26M for AI Liquid Cooling Growth

Iceotope secures \$26 million to expand precision liquid cooling solutions for AI data centers and high-density GPU infrastructure worldwide.

AI Data Center Liquid Cooling Market Size & Strategic Intelligence ...

The AI Data Center Liquid Cooling Market is segmented across cooling technology, cooling fluid chemistry, component type, data center class, and end-use vertical. Each segment carries a distinct

Best practices for deploying liquid-cooled servers in AI data centers

By approaching liquid cooling as an integrated system and focusing on thoughtful design, coordinated deployment, and proactive maintenance, data center operators can unlock higher

From air to AI data center liquid cooling in 2026 -coolnetsystem

As CoreSite notes in a 2025 operator-focused overview, hybrid air + liquid cooling is common during transition, with RDHx and DTC often deployed alongside existing air infrastructure

2025 OCP Summit Highlights Data Center Efficiency

Together with its 480 VDC and immersion-cooling extensions, the platform sets a new benchmark for energy-efficient, high-density AI factories,

Cooling Solutions for HPC, AI & Data Centers | CoolIT

Engineered for tomorrow's workloads, CoolIT liquid cooling powers HPC, AI, and enterprise systems with efficient CDUs, cold plates and heat exchangers.

Addressing the Data Center Cooling Challenge | Analog Devices

Existing sites are adopting hybrid approaches, liquid for high-density racks with air cooling elsewhere. Liquid cooling is essential not only for today's heat loads but also for sustaining AI-driven

Navigating Liquid Cooling Architectures for Data Centers with AI

There are six common heat rejection architectures for liquid cooling where we provide guidance on selecting the best one for your AI servers or cluster. AI training and inference servers use

Dell Targets AI-Era Data Centers with Liquid Cooling, Agentic ...

- PowerStore Elite targets high-density enterprise storage with support for E3 flash, modular upgrades, and a 6:1 data reduction guarantee
- New PowerEdge systems span liquid-cooled AI

Contact Us

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