

AI Chip Liquid Cooling Server



Overview

Today, Microsoft announced that it has successfully developed an in-chip microfluidic cooling system that can effectively cool a server running core services for a simulated Teams meeting. Advanced AI chips are generating more heat in data centers, necessitating improved cooling solutions. Liquid cooling is becoming a viable alternative to traditional fan-based systems. Proposed techniques include circulating water through cold plates, circulating boiling liquid through cold plates. NVIDIA's latest AI servers can run on coolant warmer than a hot tub — and that counterintuitive choice is one of the biggest efficiency leaps in data center history. Hot tubs sit at about 38 to 40 degrees Celsius, warm enough that most people can only soak for about 15 minutes. This is the approach favored by NVIDIA for its GB200 NVL72 racks and by Google for its TPU v6 pods. Immersion Cooling Entire servers submerged in dielectric fluid. It offers up to 15% better energy efficiency and reduces cooling costs compared to traditional air-cooling systems The technology also enables higher server. High-density computing workloads like AI training and inference run too hot for traditional air cooling.



Article Content

Nvidia's new PC chips are CEO's bid to "own" every part of AI stack

Nvidia's announced entry into the PC chip market sent shares of AMD, Intel and Qualcomm lower as Wall Street recognized the threat.

AI data center 2025: GPU density, power and cooling

Datacenter intelligence artificielle is reshaping power, density, and cooling in 2025.If you're planning or upgrading AI data centers, this guide

Data Center Liquid Cooling: The AI Heat Solution

Advanced AI chips are generating more heat in data centers, necessitating improved cooling solutions. Liquid cooling is becoming a viable alternative to traditional fan-based systems.

Data Center Liquid Cooling for AI Workloads (2026) · KAD

An engineering-focused overview of cold plate and immersion liquid cooling in 2026, driven by 1,000W+ AI accelerators like NVIDIA Blackwell and

Liquid cooling best practices for AI data centers

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

Liquid and Immersion Cooling Options for Data Centers

Data center operators are evaluating liquid cooling options, as processing-intensive computing applications grow. The market for liquid cooling is slated to reach \$3

Direct-to-Chip Liquid Cooling Technology | JetCool

Explore JetCool's direct-to-chip liquid cooling systems, engineered to boost efficiency and performance for data centers, HPC, and AI infrastructure.

Samsung starts mass production of PM1763 PCIe 6.0 enterprise SSD ...

Additional features: •Optimized for liquid-cooled servers with direct-to-chip (D2C) cooling for sustained peak performance. •Power efficiency improved by more than 1.8x versus predecessor,

Designed for AI Reasoning Performance & Efficiency

The NVIDIA GB300 NVL72 features a fully liquid-cooled, rack-scale architecture that integrates 72 NVIDIA Blackwell Ultra GPUs and 36 Arm®-based NVIDIA

Data Centers and Water Consumption | Article | EESI

The difference between direct server liquid cooling and air cooling through evaporation can be compared to the difference between drip irrigation

AI data center growth: Meeting the demand | McKinsey

A small group of graphics processing unit (GPU) cloud providers is also emerging to meet the demand for AI-ready data center capacity. As the

AI chips are getting hotter. A microfluidics breakthrough goes straight ...

Today, Microsoft announced that it has successfully developed an in-chip microfluidic cooling system that can effectively cool a server

Liquid Cooling Is Now Mandatory: How AI Data Centers

Traditional air cooling — even with advanced hot/cold aisle containment — simply cannot dissipate enough heat for modern AI workloads.

Infrastructure for Scalable AI Reasoning | NVIDIA Vera

Compatible with liquid-cooled NVIDIA MGX servers, it delivers up to 4x performance for scientific simulations, 6x for AI-for-Science training, and 8x for inference

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 cooling becoming essential as AI servers proliferate

High-density computing workloads like AI training and inference run too hot for traditional air cooling. Companies are increasingly adopting liquid cooling

Closed-loop cooling in Oracle AI data centers

Oracle data centers' direct-to-chip, closed-loop, non-evaporative liquid cooling system reuses water and only needs to be filled once.

Building the Thermal Backbone of AI: Tracking the

As rack densities surge and grid headroom tightens, liquid cooling is becoming the backbone of AI data centers. Here we unpack the strategic moves—Trane's

Data Center Power, Infrastructure, and Cooling

Direct-to-chip liquid cooling Support AI and high-performance compute environments. Vertically integrated system rack manufacturing services Bring

Motivair by Schneider Electric | AI Liquid Cooling & Data

Motivair by Schneider Electric is a leading global provider of advanced liquid cooling solutions designed to meet the greatest thermal challenges of modern computing

Hotter Than a Hot Tub: The 45°C Breakthrough to Cool AI's Biggest ...

NVIDIA's newest AI servers can run their cooling liquid even hotter — up to 45 degrees Celsius, or 113 degrees Fahrenheit. That higher temperature limit is precisely what makes them more energy efficient.

Navigating Liquid Cooling Architectures for Data Centers with AI

There are two main categories of liquid cooling for AI servers – direct-to-chip and immersion³. There are slight differences in the heat rejection ecosystem that we will cover.

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

Efficient two-phase liquid cooling and optimization technology on the ...

This paper reviews the latest research progress and optimization technologies of four two-phase liquid cooling methods for data center chip cooling, including direct liquid cooling technologies

Qualcomm announces AI chips to compete with AMD

The AI200, expected in 2026, and the AI250, planned for 2027, both can come in a system that fills up a full, liquid-cooled server rack, Qualcomm said.

7 Best Data Center Stocks, ETFs and REITs

Demand for AI is driving a data center boom. These stocks, ETFs and REITs are positioned to benefit from it.

Contact Us

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