

Accelsius Unveils NeuCool With Unrivaled Thermal Performance for AI Data Centers

- Patented two-phase direct-to-chip system cools beyond 1,500 watts per server chip, providing generational performance headroom driven by AI data center demand and high-performance chips
- NeuCool is compatible with the existing data center and edge infrastructure and leverages Accelsius' North American supply chain and production to scale quickly with demand
- Mission-critical engineering delivers a robust, resilient and serviceable system to maximize uptime and data center performance
- The NeuCool platform will be showcased at Data Center World 2024, April 15-18, in Washington, D.C.

AUSTIN, Texas--([BUSINESS WIRE](#))-- Data Center World 2024-- [Accelsius™](#), whose patented two-phase direct-to-chip liquid cooling systems enable unprecedented high-performance computing and compute density for data center and edge computer operators, today announced NeuCool™, its in-rack solution that delivers unmatched thermal performance.

With a capacity that has been tested beyond 1,500 watts per server chip (CPU, GPU, hot components), NeuCool is ideally suited for today's powerful processors that run AI, machine learning, high-performance computing and other intensive workloads. The company will showcase its technology at Data Center World 2024, set for April 15-18 at the Walter E. Washington Convention Center in Washington, D.C.

"Our team has worked tirelessly to prepare for this day," said Josh Claman, Accelsius' CEO. "Over the past several months, we've been finalizing development and testing, building out our partner network, taking orders, and scheduling deployments of our NeuCool systems as part of our Ascent Journey Program. Now we're ready to expand engagements with partners and customers in person to show them this new era of cooling technology."

The AI boom is fueling an exponential increase in data centers worldwide, but concerns are growing about the accompanying need for electricity to power these sites and the environmental impact they bring. About a third of the world's 8,000 data centers are in the U.S., but the [build-out is a worldwide phenomenon](#). Globally, the International Energy Agency estimates that electricity consumption from data centers, AI and cryptocurrency could double by 2026.

The NeuCool two-phase direct-to-chip in-rack solution offers a fit-for-purpose solution for these challenges with an estimated 50% savings in energy costs, an 80% reduction in CO2 emissions, and zero water used.

A Water-Free, Closed-Loop System Readily Adaptable to Existing Facilities

Highly-engineered vaporators (also known as cold plates) are mounted directly to targeted hot-spot chips. Rather than water, an eco-friendly, safe dielectric refrigerant flows through the vaporators, where it nucleates into a vapor. That vapor then travels through an industrial manifold to an intelligent Platform Control Unit (iPCU), condensing back into a liquid in a closed-loop system and returning to the vaporator for additional cooling.

The NeuCool architecture is driven by the iPCU (a highly-engineered CDU) with enterprise-grade redundancies, industrial components and extensive safety testing to maximize system uptime. NeuCool's modular design enables seamless integration into existing data center facilities and at the edge via water-cooled doors, dry coolers or other heat rejection methods.

Accelsius' NeuCool solution is supported by comprehensive professional services spanning system architecture, integration, deployment, and maintenance. This white glove treatment is delivered through an expanding network of approved service providers with liquid cooling expertise. The company also employs a US-based supply chain and manufacturing process to reduce lead times and ensure overall system quality.

The company is taking orders now, with deployments planned to begin later this month. Visit accelsius.com or email info@accelsius.com to learn more about the Accelsius NeuCool two-phase direct-to-chip in-rack solution.

About Accelsius

Accelsius, founded by Innventure LLC, empowers data center and edge operators to meet their business, financial, and sustainability goals through next-generation cooling systems. The Accelsius NeuCool Platform delivers a patented direct-to-chip, two-phase cooling technology with best-in-class thermal efficiencies. NeuCool uses a sustainable, safe dielectric fluid & intelligent monitoring to provide a risk-free technology that scales from a single rack to an entire data center. NeuCool technology combined with Accelsius' US-based manufacturing and robust professional services program gives data center operators the confidence to evolve cooling approaches while ensuring performance improvements & continued uptime. For more information, visit www.accelsius.com. LinkedIn: <https://www.linkedin.com/company/accelsius/>

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