

As AI Data Centers — on Earth and eventually in Space — Hit a Cooling Wall, Frore Systems has the answers.

LiquidJet™, Frore Systems' innovative new direct-to-chip liquid cooling coldplate can further slash AI model training time and maximizes token throughput of the 1950W NVIDIA Rubin GPU.

SAN JOSE, California – December 29, 2025 – Frore Systems today announced several major advancements to **LiquidJet™**, its direct-to-chip liquid cooling coldplate for AI data centers, reinforcing its position as the most scalable, future-ready coldplate for next-generation AI infrastructure on Earth and eventually in Space.

Frore Systems first unveiled LiquidJet with its groundbreaking **3D short-loop jetchannel microstructure** at OCP in October 2025, demonstrating **50% higher cooling performance** than the current coldplates used with 1400W NVIDIA Blackwell Ultra.

Now, Frore Systems has further improved LiquidJet design with **multistage cooling architecture** and **3D hybrid cell structures** that achieves impressive performance improvements on both the Blackwell Ultra and Rubin GPUs. For 1400W NVIDIA Blackwell Ultra, the new design increases cooling performance by 75%, or alternatively reducing max GPU die temperature by 7.7°C compared to current coldplates. For the 1950W Nvidia Rubin GPU, increasing cooling performance by over 50%, or delivering a 7.5°C lower max die temperature. In parallel, Frore Systems has reduced the LiquidJet coldplate weight by over 50% while retaining full reliability.

Together, these advances enable higher GPU performance, slashing training time and maximizing token throughput, improve power usage effectiveness (PUE), lessen water usage and lower GPU server rack weight, significantly reducing total cost of ownership (TCO).

“What we launched last October was just the beginning,” said Seshu Madhavapeddy, CEO and Founder of Frore Systems. “By introducing multistage architecture and 3D hybrid cell structures that focus on cooling hot spots in the GPU and a breakthrough lightweight design, we’ve expanded LiquidJet’s performance lead even more. This is exactly why we built LiquidJet— a coldplate that evolves as fast as the frontier AI models, GPUs, systems, and data centers it supports.”

A Coldplate Built for the AI Roadmap Ahead: LiquidJet is fabricated using **Frore’s semiconductor manufacturing processes adapted to metal wafers** enabling **3D short-loop jet channel microstructures, multistage cooling** and **3D hybrid cell structures** which can be precisely matched to target the hotspots in modern GPU power maps. This results in a much higher performance not possible in coldplates limited by 2D flows in skived microchannels.

These latest innovations further strengthen LiquidJet's ability to scale with next-generation GPU architectures, including **NVIDIA Rubin, Rubin Ultra** and **NVIDIA Feynman platforms exceeding 4,000W**; and **custom hyperscaler ASICs** with a variety of power profiles and densities.

Designed as a drop-in upgrade, LiquidJet allows data centers to achieve next-generation performance in new facilities, or upgrade existing ones, without redesigning racks, manifolds, or liquid loops.

Redefining AI Data Center Liquid Cooling: As AI infrastructure scales, cooling has become a primary limiter of performance, efficiency, and cost. LiquidJet transforms the coldplate into a **strategic system-level enabler** — unlocking higher compute performance, improved PUE, and reduced TCO.

"There are multiple ways hyperscalers can leverage LiquidJet depending on their business objectives," said Madhavapeddy. "For example, leveraging the increase in GPU performance to slash training time and maximize token throughput. Or, for customers optimizing for PUE, LiquidJet can support much higher liquid inlet temperatures. This eliminates the need for chillers — and the massive power draw they require — maximizing revenue per MW in power constrained data centers."

"LiquidJet is uniquely futureproof." Madhavapeddy continued, "As data centers are eventually deployed in space, reduced liquid volume and coldplate weight will become even more critical. LiquidJet will meet the moment with continued advances in performance and weight reduction."

Live Demonstrations at CES 2026: Frore Systems will demonstrate LiquidJet live at **CES 2026**, showcasing: LiquidJet coldplate performance for cooling **1,950W NVIDIA Rubin, 600W/cm² extreme hotspot cooling**, and **single-reticle 1,200W ASIC cooling**. Additional demonstrations include Edge AI devices with **AirJet®** and **AirJet® PAK solid-state active air cooling**, featuring Industrial Edge IoT devices, consumer devices and Qualcomm Snapdragon X2 Elite compute reference platforms.

Experience the future of AI performance in the Frore Systems Demonstration Room, **January 6–9**, Venetian Expo, Level 2, Room **2401B**, Las Vegas.

About Frore Systems

Frore Systems is a pioneer in advanced thermal technologies that unleash performance across data centers and edge devices. The company's flagship solutions include **LiquidJet™**, a multi-stage 3D short-loop jetchannel liquid cooling coldplate for data centers delivering higher GPU performance, improved PUE and reduced TCO; and **AirJet®**, the world's first solid-state active cooling chip used in consumer, industrial, and IoT markets delivering higher performance in ultra-compact, silent, light, dustproof and water-resistant edge devices. Frore's patented cooling technologies are integrated into products from major OEMs and system builders worldwide. Frore Systems is headquartered in Silicon Valley, with manufacturing operations in Taiwan.

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