

Solution Overview

Accelerating Enterprise AI Adoption with Liquid-Cooled Dell PowerEdge XE7745 Servers

As enterprises look to scale AI initiatives, many face a difficult choice: invest in large-scale infrastructure and the associated power and cooling requirements, or delay deployment until long-term demand is better understood. For many organizations, the capital investment, facility modifications, and deployment timelines required to support these workloads can make it difficult to align infrastructure growth with business needs.

The Dell PowerEdge XE7745 addresses these challenges with a flexible path to enterprise AI adoption. Designed for AI inferencing, model fine-tuning, HPC, visualization, and mixed accelerated workloads, the ultra-dense 4U platform delivers high-performance accelerated computing in a compact form factor. Built with dual 5th Gen AMD EPYC™ processors and support for up to eight high-density NVIDIA RTX PRO™ 6000 Blackwell GPUs, it provides a scalable foundation for organizations to expand AI workloads from pilot projects to production deployments.



Dell PowerEdge XE7745

The JetCool Solution

As a trusted Dell OEM partner, JetCool offers a turnkey, liquid-cooled version of the Dell PowerEdge XE7745 that combines enterprise AI compute with single-phase, direct-to-chip liquid cooling technology to maximize server performance and efficiency. Designed as a cost-effective alternative to large-scale AI infrastructure investments, the solution enables organizations to deploy AI capacity at the server or rack-level while reducing infrastructure complexity and upfront deployment costs. SmartPlate™ cold plate technology removes heat directly from the CPUs and GPUs, lowering chip temperatures, helping avoid thermal throttling, dramatically reducing fan noise, and enabling sustained performance under peak loads.



JetCool's Liquid-Cooled Dell PowerEdge XE7745

The liquid-cooled Dell PowerEdge XE7745 delivers benefits spanning performance, efficiency, infrastructure compatibility and lifecycle support:

▶ Power Efficiency

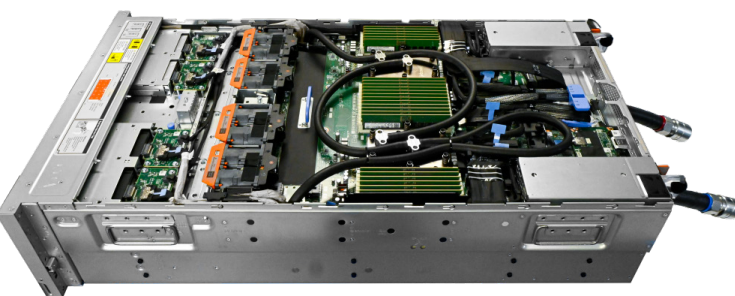
Lowers total server power consumption by up to 30% by slashing fan speed by up to 70%.

▶ Enhanced Thermal Performance

Lower CPU temperatures by up to 7% and GPU operating temperatures by up to 11% compared to air cooling.

▶ Reduced Noise

Lower acoustic output by up to 23 dB, making the liquid-cooled Power Edge XE7745 a solution that can be deployed in enterprise environments.

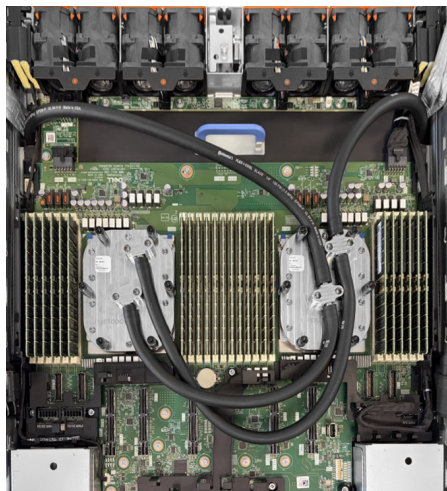


▶ Lifecycle Services & Warranty Support

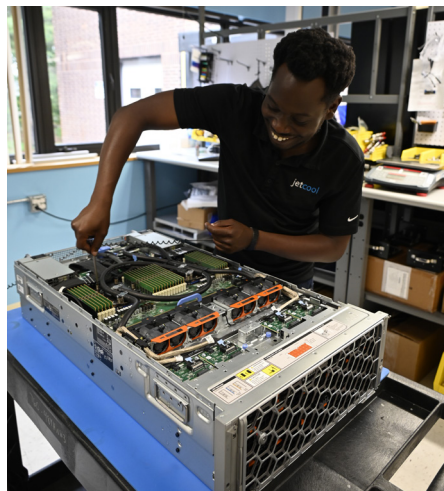
Delivered as a fully integrated, tested solution with commissioning, deployment support, ongoing maintenance, lifecycle services, and unified warranty coverage for a lower-risk path to AI deployment.

Partnership with Dell Technologies

JetCool's partnership with Dell Technologies has further strengthened its position in the market. Together, they are bringing advanced products to market at any scale, anywhere on the planet. Dell's OEM Solutions Team, known for their tech-forward approach and best-in-class servers, storage, and networking, complement JetCool's innovative cooling technology. This collaboration leverages Dell's world-class supply chain and delivery capabilities, enabling companies to bring their intellectual property to market efficiently.



**JetCool's Cold Plates for 5th Gen
AMD EPYC Processors**



**JetCool's Cold Plates for NVIDIA
RTX PRO 6000 GPUs**

Expected Outcomes

The liquid-cooled Dell PowerEdge XE7745 demonstrates how advanced cooling technologies can help make enterprise AI infrastructure more accessible, scalable, and efficient. By combining high-performance accelerated computing with JetCool's direct-to-chip liquid cooling expertise, organizations can deploy AI capacity with greater flexibility while reducing complexity, improving energy efficiency, and supporting the continued growth of AI-driven initiatives at a lower price point. For more information on the liquid-cooled Dell PowerEdge XE7745, visit <https://jetcool.com/Dell>.