# AI data centre boom fuels innovation surge for infrastructure providers



The rapid expansion of artificial intelligence is fuelling strong growth for infrastructure providers, with companies like Vertiv and Applied Digital poised to benefit from surging global demand for AI computing capacity.

Vertiv has unveiled its latest innovation—the MegaMod CoolChip, a high-density prefabricated modular data centre solution that cuts deployment times by up to 50% compared to conventional builds. The system uses direct-to-chip liquid cooling, essential for managing the intense heat output of AI processors. It is also highly configurable, allowing integration with various AI platforms and scalability to meet diverse client requirements.

The MegaMod CoolChip exemplifies the shift towards offsite fabrication and modular design, combining rapid deployment with the reliability needed for AI workloads. It forms part of Vertiv’s 360AI portfolio, which includes pre-engineered power, cooling and lifecycle services aimed at halving typical infrastructure rollout timelines.

Vertiv has also expanded its manufacturing footprint with a new 215,000-square-foot facility in Pelzer, South Carolina, focused on modular systems and power solutions for AI and high-performance computing data centres. The investment supports growing demand and contributes to advanced manufacturing employment. Applied Digital is similarly well positioned, as generative AI and machine learning continue to drive demand for purpose-built data centres. Across the sector, infrastructure is evolving to prioritise modularity, thermal efficiency and deployment speed—addressing the power and cooling challenges intrinsic to AI operations.

This wave of innovation signals a pivotal moment for markets including the UK, which is seeking to establish global leadership in AI infrastructure. Turnkey, rapidly deployable systems like Vertiv’s MegaMod CoolChip offer both technical and economic advantages, helping firms and governments scale AI capabilities swiftly and responsibly.

With infrastructure providers driving advances in liquid cooling and modular deployment, the data centre landscape is being redefined to meet next-generation computing demands. The momentum reflects a broader alignment of industrial growth, technological leadership and sustainable innovation across the AI ecosystem.

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## Bibliography

1. <https://finance.yahoo.com/m/bdde9cd2-db4b-3a22-88de-ac98250d456e/ai-data-center-buildout.html?.tsrc=rss> - Please view link - unable to able to access data
2. <https://investors.vertiv.com/financial-news/news-details/2024/Vertiv-Launches-High-Density-Prefabricated-Modular-Data-Center-Solution-To-Accelerate-Global-Deployment-of-AI-Compute/> - Vertiv has introduced the MegaMod CoolChip, a high-density prefabricated modular data centre solution designed to expedite the deployment of AI computing infrastructure. This solution integrates advanced technologies, including direct-to-chip liquid cooling, to deliver turnkey AI-critical digital infrastructure up to 50% faster than traditional on-site construction methods. The MegaMod CoolChip can be configured to support platforms from leading AI compute providers and scaled to meet customer requirements, offering flexibility and efficiency in AI data centre deployments.
3. <https://www.datacenterdynamics.com/en/news/vertiv-launches-high-denisty-prefabricated-modular-data-center-for-ai/> - Vertiv has unveiled the MegaMod CoolChip, a high-density modular data centre offering tailored for artificial intelligence (AI) applications. This solution aims to accelerate the deployment of AI capacity by up to 50% compared to standard on-site construction. The MegaMod CoolChip employs liquid cooling, including direct-to-chip cooling, and can be configured to support platforms from various AI compute providers, providing scalability and efficiency for AI data centre needs.
4. <https://datacentremagazine.com/technology-and-ai/vertiv-launches-high-density-prefabricated-modular-data-center-solution-to-accelerate-global-deployment-of-ai-compute> - Vertiv has launched the MegaMod CoolChip, a liquid cooling-equipped prefabricated modular data centre solution engineered to enable efficient and reliable AI computing. The solution can be configured to support platforms of leading AI compute providers and scaled to customer requirements. By integrating offsite fabrication with best-in-class AI-ready technologies, MegaMod CoolChip can reduce the time to deploy AI-critical digital infrastructure by up to 50%.
5. <https://datacentremagazine.com/technology-and-ai/vertiv-introduces-simplified-ai-data-centre-solution> - Vertiv has introduced the Vertiv 360AI solutions, designed to accelerate AI adoption through pre-engineered infrastructure solutions, digitised management, and end-to-end service. This approach aims to result in up to twice as fast deployment compared to typical infrastructure installation. The solutions include power, cooling, enclosures, lifecycle services, and digitised management, enabling customers to deploy AI systems faster with greater flexibility and customisation.
6. <https://www.datacenterfrontier.com/machine-learning/article/55286307/vertiv-expands-ai-infrastructure-arsenal-with-new-data-center-power-cooling-and-deployment-solutions> - Vertiv has expanded its AI infrastructure offerings with new data centre power, cooling, and deployment solutions. These include a unified management platform, prefabricated modular infrastructure, high-density cooling solutions, and next-generation DC power systems. Designed to address challenges such as power density, thermal management, deployment speed, and operational complexity, these solutions aim to support the rapid scaling of AI-driven data centres.
7. <https://www.datacenterfrontier.com/cooling/article/55232809/vertiv-and-ddc-invest-to-expand-high-density-ai-hpc-data-center-capabilities> - Vertiv has expanded its manufacturing operations in North America to support the growing demand for AI and high-performance computing (HPC) data centres. The new facility in Pelzer, South Carolina, adds 215,000 square feet of manufacturing space and is expected to create up to 300 skilled jobs. This expansion aims to produce a range of Vertiv infrastructure solutions, including integrated modular systems and modular power solutions, specifically designed for data centres.