VULTR

AI and Cloud Infrastructure for Manufacturing and Energy

Optimize smart factory operations, predictive maintenance, supply chain management, and industrial processes with AI-ready cloud infrastructure.

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Driving Intelligent Manufacturing and Energy with AI and Cloud

Enhancing manufacturing processes with Vultr's high-performance cloud infrastructure, Vultr Cloud GPU data center edge, and low-latency IoT solutions — providing manufacturers a competitive advantage on a global scale.

Vultr specializes in AI-driven cloud infrastructure tailored to the evolving needs of modern manufacturing and energy enterprises — from improving smart factory operations to optimizing supply chains and advancing robotic automation. We provide manufacturers with tools to unlock the full potential of AI and machine learning, facilitating real-time decision-making, operational efficiency, and strategic scalability, all within an easy-to-use, flexible, and cost-effective framework.

By integrating Vultr's expansive global cloud infrastructure with powerful GPU technology, we offer manufacturers and energy producers a robust solution that propels the industry forward. Vultr's products and services bridge the gap between traditional manufacturing and energy techniques and the demands of the digital age, democratizing access to state-of-the-art AI tools for smart factories and supply chains worldwide. This strategic combination enhances production capabilities and supports manufacturers and energy producers to navigate the complexities of Industry 4.0, driving innovation and competitive advantage in an evolving marketplace.

AI impacts how manufacturing and energy companies operate

As manufacturing and energy evolve towards more digitally integrated operations, the need for robust and scalable computing resources has never been more critical. Vultr Cloud GPU, provides manufacturers and energy producers with global access to high-end GPU resources. This setup ensures virtually no downtime, allowing companies to leverage advanced computational capabilities instantly, no matter their location. This seamless access is crucial for enabling complex simulations, real-time analytics, and machine learning applications that are integral to modern manufacturing processes.

Navigating economic pressures while investing in innovation poses a significant challenge for manufacturers and energy firms. Vultr's cloud solutions offer a unique advantage, being up to 90% more affordable than traditional hyperscalers without compromising performance. This cost-effectiveness allows manufacturing and energy firms to strategically align their technology investments with actual usage and scaling needs, thus maximizing ROI and supporting growth. By choosing Vultr, manufacturers and energy producers can invest confidently in the technology needed to drive their operations forward without the burden of excessive costs or inefficient resource allocation.

Safeguarding manufacturing and energy

Protecting customer data and digital operations

Vultr's AI-based cybersecurity measures comprehensively monitor the cloud supply chain to identify risks and vulnerabilities. Optimized cloud compute, combined with managed databases, process and store large datasets securely while complying with a wide range of data protection laws to ensure robust cybersecurity measures across the manufacturing network.

Predictive maintenance and quality control

AI deployments predict and prevent equipment failures, ensuring continuous production and higher-quality outputs, reducing downtime and maintenance costs.

Optimize production efficiency

AI-driven systems dynamically adjust operations and workflows, enhancing responsiveness to production demands and reducing waste.

Challenge: Addressing key barriers to AI adoption in manufacturing and energy

Surging demand for GPU resources

As manufacturers advance towards smart factories — with 83% believing these solutions will transform production within five years — the demand for GPU resources for real-time analytics and machine learning often exceeds available capacity, causing project delays. Similarly, the energy sector faces growing demand for GPUs, driven by the need for predictive analytics, grid optimization, and real-time energy trading, which are critical for managing increasingly complex energy networks.

Financial constraints and investment in AI

Manufacturers spend $30 million annually on cloud services, slightly below the global average, yet budget constraints and uncertain ROI hinder further investment. With 16% of manufacturing CEOs viewing AI as the most impactful future technology, cost-effective solutions are essential. Similarly, the energy sector faces rising costs and the need to modernize infrastructure, with 20% of energy executives identifying AI as key to innovation. Both sectors require efficient AI solutions to drive progress.

Sources: Deloitte Insights, Infosys, Gartner

A complete manufacturing and energy ecosystem with Vultr Cloud GPU

Vultr optimized with state-of-the-art AMD GPUs

- **AMD Instinct™ MI300X GPU:** Accelerated predictive maintenance, supply chain optimization, and real-time production analytics in manufacturing and energy.
- **AMD Instinct™ MI325X GPU:** High-performance computing for AI and HPC workloads, including deep learning and large-scale simulations.

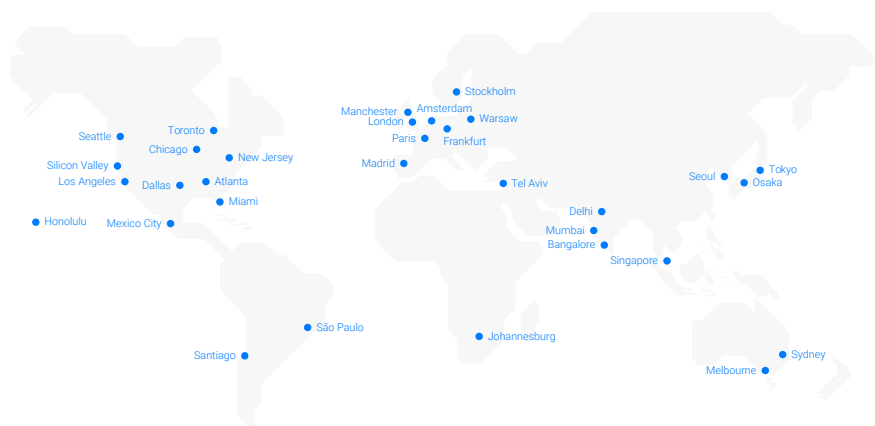### Vultr optimized with state-of-the-art AMD GPUs

- **NVIDIA GH200 Grace Hopper™ Superchip:** Real-time analytics for predictive maintenance and quality control
- **NVIDIA HGX H100:** Multi-GPU workloads, including large AI model training for supply chain optimization
- **NVIDIA L40S:** Advanced computer vision tasks for product quality inspection
- **NVIDIA A40:** Visual effects rendering for product design and visualization
- **NVIDIA A16:** High-performance virtual desktop infrastructure (VDI) for remote monitoring and management

Supporting manufacturing and energy across six continents

32
Global cloud data center regions

Seattle • Toronto • Chicago • New Jersey • Silicon Valley • Los Angeles • Dallas • Atlanta • Miami • Honolulu • Mexico City • Manchester • London • Paris • Frankfurt • Stockholm • Amsterdam • Warsaw • Madrid • Tel Aviv • Delhi • Mumbai • Bangalore • Singapore • Seoul • Tokyo • Osaka • São Paulo • Santiago • Johannesburg • Sydney • Melbourne

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Vultr Cloud Alliance ecosystem

The Vultr Cloud Alliance is a collaborative initiative that brings together partners like Qdrant, SQream, and DDN for AI initiatives, and Console Connect for secure private networking to support IoT devices and edge computing in the manufacturing and energy industry.

Advanced IoT and edge computing

Vultr enhances manufacturing and energy operations by supporting the integration of AI, IoT, 5G, and edge computing solutions. By processing data closer to its source, Vultr reduces latency and accelerates real-time decision-making in these environments. This capability is crucial for optimizing everything from assembly line operations to supply chain logistics, ensuring manufacturers and energy producers can respond swiftly to operational insights.

Read the datasheet: *Hybrid Cloud Architecture for IoT, Edge Computing, and AI Workloads →*

Take advantage of next-generation use cases

Securing smart factory operations

Vultr's GPU-accelerated Kubernetes Engine enables smart factories to utilize AI for predictive maintenance and quality control. This setup ensures operational productivity while minimizing resource usage. Vultr's infrastructure also supports real-time data analysis and secure data management, which is crucial for maintaining high operational integrity and responsiveness.

Connected automotive technology

Vultr provides robust support for connected vehicle technology, allowing for real-time monitoring and over-the-air updates. This technology enables automotive companies to integrate augmented reality and 3D streaming, enriching customer interaction and driving post-purchase engagement. The scalability and performance of Vultr's GPU-accelerated instances ensure that automotive manufacturers can offer cutting-edge features and gather valuable insights for continuous innovation.

Semiconductor and Hi-tech electronics development

Vultr's cloud solutions are tailored for high-stakes electronic design automation and product lifecycle management. These capabilities facilitate accelerated AI training and complex simulations, enhancing collaboration across distributed teams and speeding up the time-to-market for new products.

Advance supply chain intelligence

Access real-time analytics and AI to optimize supply chain decisions, predict market fluctuations, and streamline logistics, ensuring timely delivery and inventory accuracy.

Robotics and automation

Leverage AI to control robotic systems, improving manufacturing process speed, accuracy, and safety and enabling higher throughput with less manual intervention.

Learn more about Vultr's Manufacturing and Energy solutions and contact us at vultr.com to get started. →