



Transforming Manufacturing

The Power of Edge Computing



Mission Critical Edge Computing for Manufacturing Operations

Mission critical edge computing plays a pivotal role in the manufacturing industry by facilitating real-time decision making, minimising latency, and bolstering reliability. By bringing computational power and data processing capabilities closer to the manufacturing process, it enables prompt analysis of data, swift issue identification, and optimization of production processes. This reduced latency translates into faster response times and near-instantaneous feedback, enhancing operational efficiency and quality control.

Overcoming Challenges

- Downtime and operational efficiency
- Latency and network dependency
- Scalability and flexibility
- Data management
- Integration with existing systems
- Maintenance and upgrades

Benefits of Mission Critical Edge Computing

Real-time monitoring and control

Enabling operators to quickly identify and address issues and optimize performance.

Improved reliability and availability:

Processing data closer to the source reduces the risk of network failures and delays, increasing the reliability and availability of manufacturing operations.

Increased energy efficiency

By analysing sensor data and adjusting turbine settings in real-time can lead to increased energy efficiency and improved power generation.

Reduced costs

By reducing the need for expensive and complex centralised systems, and enabling remote monitoring and control. Virtualisation also reduces the number of on-site servers and complexity.

Enhanced security

Processing sensitive data locally, reduces the risk of data breaches and cyber-attacks.

Advanced analytics

Implementing advanced analytics and machine learning capabilities at the edge, allows for better decision making and optimisation of manufacturing operations.



Protecting critical operations at the edge, where speed and efficiency meet.



Use Cases for Mission Critical Edge Computing

Real-time Equipment Monitoring and Maintenance: Enables proactive maintenance by analysing real-time sensor data, minimising downtime in manufacturing plants.

Quality Control and Defect Detection: Ensures consistent product quality by detecting deviations from standards and enabling immediate corrective actions.

Predictive Analytics for Process Optimisation: Analyses historical and real-time data to optimise manufacturing processes, reducing waste and increasing efficiency.

Inventory and Supply Chain Management: Enables real-time inventory tracking and supply chain optimisation, minimising stockouts and improving overall efficiency.

Autonomous Robotics and AGVs: Supports autonomous navigation and material handling, enhancing productivity and safety in manufacturing environments.

Energy Management and Sustainability: Facilitates proactive energy optimisation and identification of energy-saving opportunities, contributing to cost savings and sustainability.

Edge-Based Human-Machine Interfaces (HMIs): Provides real-time information and intuitive control for operators on the shop floor, improving monitoring and decision-making.

Edge-Based Machine Learning (ML): Enables real-time inference and anomaly detection, enhancing automation and responsiveness in manufacturing operations.

Not all Mission Critical Computing Platforms are Equal!

Our secure, rugged, highly automated computing solution delivers redundant virtualized industrial applications quickly and easily, improving productivity and reducing risk.

- Integrated virtualization and availability
- Redundant server design
- Automated protection and recovery
- Industrial interoperability
- OT maintainability
- Health monitoring and fully managed support



About Stratus

Stratus ensures the continuous availability of business-critical applications for the most demanding environments. For over 40 years, we have provided reliable and redundant zero-touch computing, enabling organisations to turn data securely and remotely into actionable intelligence at the Edge, cloud, and data center – driving uptime and efficiency.

Our Service offering:

- System design and sizing
- Proof of Concept and testing
- Full solution stack deployment
- Site commissioning
- Education and certifications
- Fully managed services

Expand your knowledge.
Talk to us today!

www.stratus.com

