Unleashing the Power of the Wind

Mission Critical Edge Computing for Wind Energy

Mission Critical Edge Computing for Wind Farm Operations

Mission critical Edge Computing is a vital component in the optimization of wind energy systems. By processing vast amounts of data in real-time at the edge of the network, it enables quick decision making and improved performance. This results in higher energy generation, enhanced operational efficiency, and increased reliability, making it an essential technology for the future of wind energy.

Overcoming Challenges

- Remote management
- Network connectivity
- Cybersecurity
- Data management
- Integration with existing systems
- Maintenance and upgrades
- Scalability

Benefits of Mission Critical Edge Computing

Real-time monitoring and control
Enabling operators to quickly identify and address issues and optimize performance.

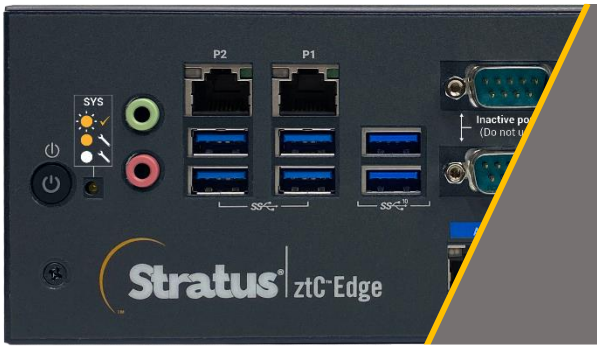
Improved reliability and availability: Processing data closer to the source reduces the risk of network failures and delays, increasing the reliability and availability of wind farm systems.

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 centralized 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 optimization of wind farm operations.



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

Use Cases for Edge Computing

Real-time data processing: Process sensor data from wind turbines in real-time, enabling the wind farm to quickly identify and respond to any issues or anomalies.

Predictive maintenance: Analyze sensor data from wind turbines to predict when maintenance is required, reducing downtime and increasing the overall efficiency of the wind farm.

Control and optimization: Control and optimize the operation of wind turbines, ensuring that they are operating at peak performance and maximizing energy generation.

Autonomous operation: Reduce the need for human intervention and increasing the overall efficiency of the wind farm.

Security: Detect and respond to cyber threats, protecting the wind farm from potential attacks.

Remote monitoring: Remotely monitor and control wind turbines, reducing the need for on-site personnel.

Data storage and analytics: Store and analyze large amounts of sensor data, providing insights that can be used to improve the performance and efficiency of the wind farm.

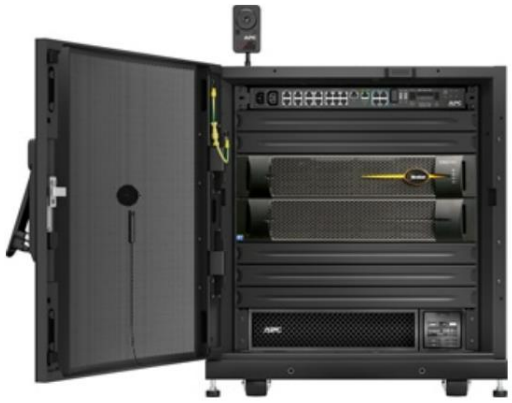
Fault detection and diagnosis: Detect and diagnose faults in wind turbines, reducing downtime and increasing the overall efficiency of the wind farm.

Real-time performance monitoring: Monitor and report the performance of wind turbines in real-time, providing insights that can be used to optimize the operation and improve the overall efficiency of the wind farm.

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