



Powering the future:

Mission Critical Edge Computing for Energy Storage

SOLUTION BRIEF



Mission Critical Edge Computing for Energy Storage Operations

Energy storage operations are critical to the stability and reliability of the power grid. Mission critical Edge Computing can help energy storage operators to optimise their operations and improve energy management. By incorporating Edge Computing into energy storage operations, operators can have real-time monitoring and control of energy storage systems, enabling them to make informed decisions, improve energy efficiency, and ensure the stable and reliable delivery of power to customers.

Overcoming Challenges

- Complexity
- Integration
- Scalability
- Flexibility
- Data management
- Maintenance and upgrades
- Reliability

Benefits of Mission Critical Edge Computing

Reduced Latency

Reduced time for data to travel to and from a central location means faster response times for energy storage systems.

Improved reliability and availability

Energy storage systems can continue to operate even if the connection to a central location is lost.

Improved Security

Less sensitive data to be transmitted over the network, reduces the risk of data breaches and cyber-attacks.

Increased Efficiency

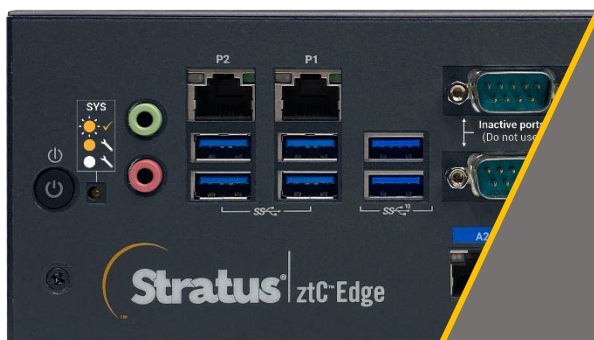
Real-time monitoring and control of energy storage systems leads to more efficient use of energy storage resources.

Flexibility

In remote locations, it may not be feasible to connect to a central location. Local computing allows energy storage systems to be deployed in a wider range of locations.

Cost savings

Reduced need for expensive infrastructure and centralised data centres, leads to cost savings for energy storage systems.



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



Use Cases for Edge Computing

Real-time data processing: Processing sensor data from energy storage systems in real-time enables them to quickly identify and respond to any issues or anomalies.

Predictive maintenance: Analysing sensor data from energy storage systems to predict when maintenance is required, reduces downtime and increases the overall efficiency of the site.

Control and optimisation: Control and optimisation of the energy storage sites, ensures that they are operating at peak performance and maximising energy generation.

Autonomous operation: Reduces the need for human intervention and increasing the overall efficiency of the energy storage sites.

Security: Detect and respond to cyber threats, protecting energy storage sites from potential attacks.

Remote monitoring: Remotely monitor and control energy storage sites, reducing the need for on-site personnel.

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

Fault detection and diagnosis: Detect and diagnose faults, reducing downtime and increasing the overall efficiency of energy storage sites.

Real-time performance monitoring: Real-time monitoring of battery health, charge and discharge rate support site longevity.

Not all Mission Critical Computing Platforms are Equal!

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

- Integrated virtualisation 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

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