Edge Zero

SOLUTIONBRIEF

Microgrid Solutions

Edge Zero's microgrid solution uses real-time low voltage monitoring to optimize distributed energy resource (DER) integration and ensure stable, efficient operations. Through our EdgeSensors and EdgeConnected platform, operators gain valuable insights into power flows, asset health and fault detection, enabling proactive microgrid management and reducing costs. Scalable and easily integrated with existing systems, Edge Zero enhances microgrid performance, dynamic energy management and resilience in both isolated and interconnected microgrid environments.

Challenges in Microgrid Management

Increased DER Penetration

Growing integration of solar PV, battery storage and electric vehicle (EV) charging stations into microgrids places stress on the existing infrastructure.

Power Quality and Reliability Concerns

Microgrids often face operational challenges in maintaining power quality and ensuring stable electricity flows across distributed assets.

Limited Visibility

Without real-time monitoring, operators struggle to manage faults, forecast loads and optimize asset performance leading to inefficient operations.

Microgrid Benefits and Key Features

Asset Management

- Power quality monitoring to ensure stable microgrid operation
- Preventative maintenance to extend asset life
- Reduction in unnecessary infrastructure upgrades.

DER Integration

- Hosting capacity analysis to optimize DER usage
- Localized DER analysis for optimal asset siting
- Data supports for managed EV and battery charging

Fault Detection and Safety

- Immediate fault detection
- Saftey alerts and outage reporting
- LoRa Mesh to enhance remote connectivity

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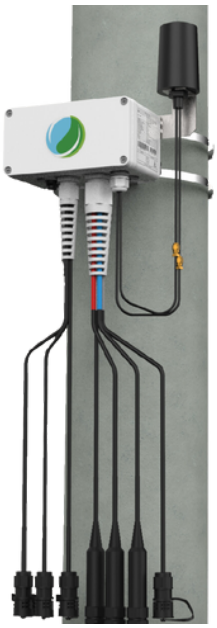
A Bundled Hardware and Software Solution



EdgeSensor (600 Series)

Grid Edge Power Quality Monitor - Grid and Transformer Monitoring Unit

The EdgeSensor(600 Series) is a compact grid power quality monitor designed to provide real-time data on low voltage network performance. It is an intelligent, software-driven full power quality grid monitoring sensor that is mesh-network enabled and reports live transformer data and status alarms.

EdgeSensor

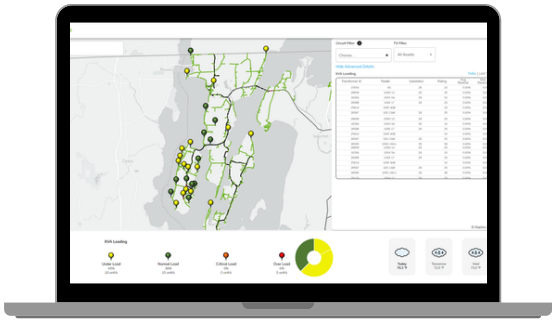
Multi-parameter Local Energy Sensor

The EdgeSensor tracks critical site-level data like voltage, current, and power factor in real time. Installed at the main electrical panel or circuits, it helps optimize energy use, reduce costs and enable proactive maintenance at the site. Its data analytics provide insights that integrate with existing systems for better performance management.

EdgeConnected™

Low Voltage Monitoring Platform

Edge Zero gives grid operators, distribution utilities and network operators the tools to maintain reliability and power quality as customers adopt new technologies and electric vehicles at scale. EdgeConnected utilizes live data from the low-cost EdgeSensor line of products to provide insights for asset management, program design and measurement and verification purposes.



Integration with Existing Systems

Private Networks & Islanded Microgrids

Edge Zero seamlessly integrates with local systems in islanded mode or within private networks, providing real-time data to optimize site performance without relying on external connections and data. In these scenarios, the system communicates directly with on-site infrastructure to monitor and support management of energy flows, DER integration and load balancing — all while maintaining outage and fault alarming to promote private network safety.

Grid Connections and Monetization

When grid-connected, Edge Zero integrates with external systems such as Meter Data Management Systems (MDMS), Demand Response Management Systems (DRMS), and Distributed Energy Resource Management Systems (DERMS) for comprehensive, end-to-end microgrid management. Its RESTful API allows for easy integration into both IT and OT environments, ensuring smooth operation without adding complexity.

Explore Pilot Programs

Evaluate system scalability, affordability, and integration with existing infrastructure.

Concept	Design	Delivery	Data Collection	Evaluation
Detailed Overview & Proposal	Workshop & Implementation Plan	Supply, Onboarding & Ongoing Support	Operational Pilot & Ongoing Reporting	Data-rich Report & Pathway to Scale