EdgeTunePower

# ADVANCED SCADA, HISTORIAN AND HMI SOLUTIONS


EdgeGlance Pro

www.edgetunepower.com

# TRANSFORM YOUR POWER PLANTS AND DATA CENTER

### Optimize Control with Advanced SCADA & HMI

In the evolving landscape of renewable energy, efficiency, reliability, and compliance with industry standards are critical for maximizing returns on investment. EdgeTunePower (ETP) offers a robust SCADA and HMI platform specifically designed for renewable power plants and battery energy storage systems, adhering to the highest industry standards. Our solution provides real-time monitoring, automated controls, and advanced data visualization to ensure optimal energy production and storage management.

# KEY FEATURES

## Real-Time Monitoring and Compliance with North American Standards:

Monitor energy production, battery charge cycles, and system health with real-time updates while ensuring compliance with industry standards such as NERC Critical Infrastructure Protection (CIP) for cybersecurity and reliability.

## Automated Controls & System Optimization:

Control and optimize your plants with event-driven automated controls that maximize efficiency and safety.

## Scalability for Growth:

Designed to grow with your operation, our platform supports scalable monitoring and control. Whether managing a small solar farm or a multi-site grid-connected system, our solution adapts easily.

# ERCOT MOD Testing for SCADA Compliance

EdgeTunePower's ERCOT Model on Demand (MOD) Testing services ensure SCADA compliance with ERCOT's Model Validation (MOD) Standards. Our testing solutions help generation resources, transmission operators, and utilities meet ERCOT's stringent grid interconnection and model validation requirements

## SCADA Model Validation:

Ensures accurate telemetry and real-time data representation in ERCOT's Energy Management System (EMS).

## Grid Code Compliance:

Validates models to align with ERCOT's MOD-026 and MOD-027 standards.

## Data Integrity & Accuracy

Verifies SCADA system responsiveness, data mapping, and communications with ERCOT's control centers.

## Pre-Certification Testing:

Minimizes risks of rejections and delays in ERCOT model approvals.

## Enhanced Security:

Protects against unauthorized access by requiring multiple verification steps.

## Compliance Ready:

Meets NERC-CIP and other cybersecurity regulatory requirements.

## User-Friendly:

Seamless integration with existing SCADA authentication protocols.

## Adaptive Access Control:

Supports role-based access, time-restricted authentication, and location-based verification.

# Multi-Factor Authentication (MFA) for SCADA Security

In an era of increasing cyber threats, securing Supervisory Control and Data Acquisition (SCADA) systems is critical. Multi-Factor Authentication (MFA) enhances security by requiring users to verify their identity through multiple authentication factors before accessing SCADA networks. This approach significantly reduces the risk of unauthorized access, data breaches, and cyberattacks.

# INTEGRATING LEADING TECHNOLOGIES:

# IGNITION EMPOWERED BY inductive automation.

Our SCADA and HMI solution is built on powerful, proven technologies that enhance reliability and efficiency. Ignition provides the foundation for real-time control, data visualization, archiving, and compliance with international and North American standards.

**Ignition is an industry-leading SCADA platform designed to meet the operational needs of modern energy systems. With Ignition, our solution delivers:**

## Real-Time Status:

Collect and process data from solar inverters, batteries, and sensors in real time using a wide range of industrial communication protocols.

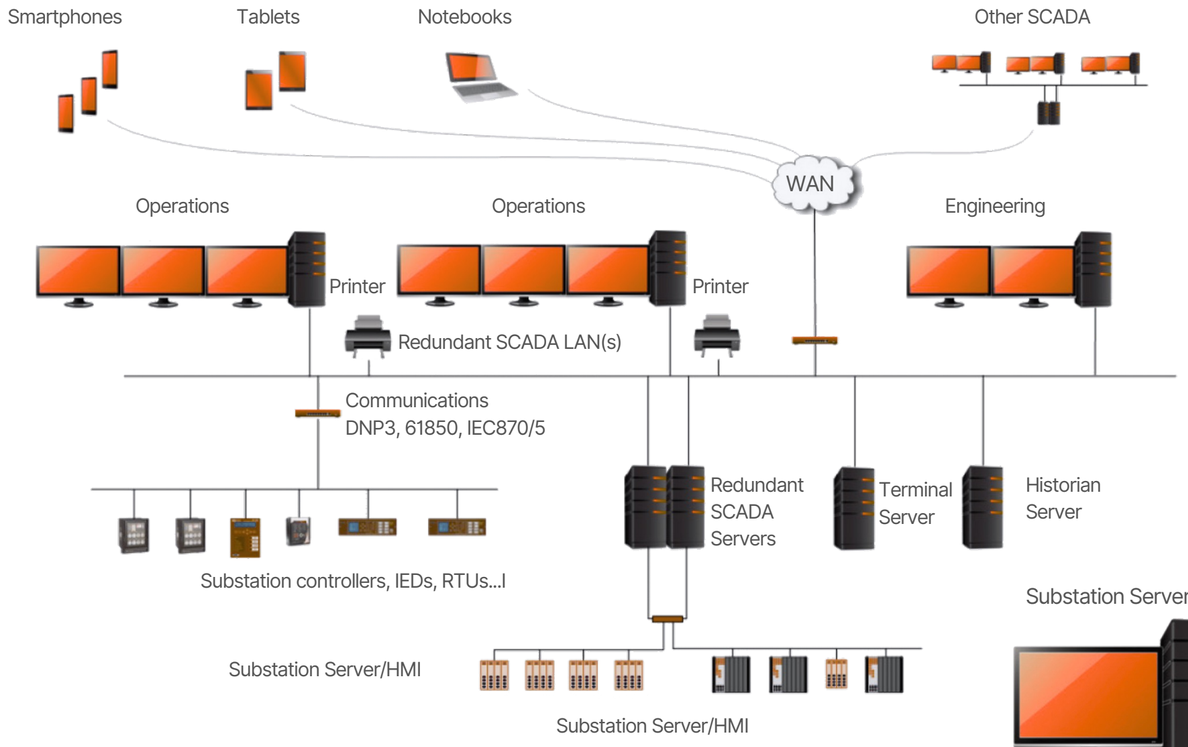
## Event-Driven Automation:

Quickly respond to system events and alarms with Ignition event-driven architecture for optimal performance.

## Advanced Alarm Management:

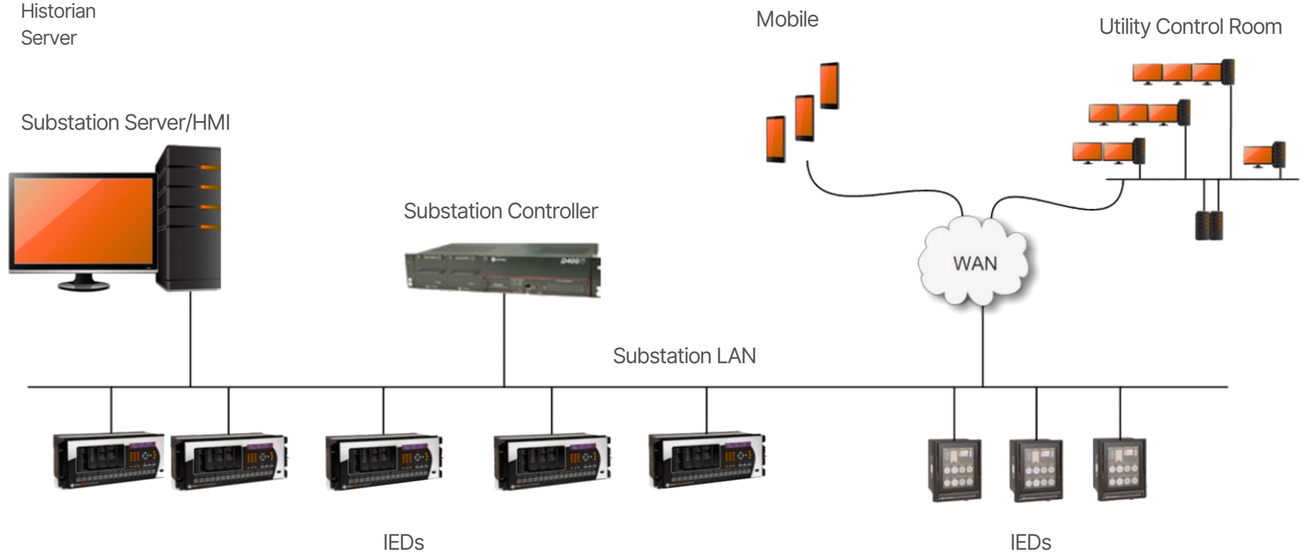
Stay ahead of potential issues with customizable alarm notifications that integrate seamlessly into your operational workflow.

# Real-Time Power System Testing with PPC




EdgeTunePower's SCADA architecture is designed for scalability in multi-server deployments, offering high availability with redundant systems and support for multiple sites operations.

EdgeTunePower's SCADA architecture can be deployed as a standalone computer, together with ETP's PMS/PPC capabilities for effective substation management and automation of Microgrid, and colocation power plant or data center.



# ETP’s HISTORIAN

- **Customizable Dashboards:** Grafana offers tailored, interactive dashboards for real-time and historical data visualization.
- **Multi-source Data Integration:** Telegraf collects data from various sources, which Grafana displays for centralized monitoring.
- **Real-Time Monitoring:** InfluxDB enables efficient real-time data updates for improved decision-making.
- **Historical Data Analysis:** InfluxDB stores long-term data for detailed analysis, with Grafana visualizing trends.
- **Lightweight Data Collection:** Telegraf efficiently collects and sends data to InfluxDB, ensuring low-latency monitoring.
- **Scalable and Extensible:** Grafana, InfluxDB, and Telegraf are open-source and scalable, growing with operational needs.

Grafana telegraf influxdb


**Grafana, InfluxDB, and Telegraf provide scalable, real-time monitoring through customizable dashboards, multi-source data integration, and efficient historical analysis.**

# Why Choose Our Solution?

## Complete Visibility into the Power Plant Controller (PPC)

Our Advanced SCADA solution provides block diagrams and parameters of the PPC implemented in the plant, facilitating access to PPC models for future studies and adjustments.

## Built-in NERC MOD-25, MOD-26, and MOD-27 Testing

Our SCADA system performs automated NERC MOD tests while ensuring alarms are observed and responded to, enabling remote and efficient testing.

## Comprehensive Cybersecurity Measures

Built-in cybersecurity features include encryption, multi-factor authentication, and firewall protections to safeguard against cyber threats in compliance with NERC CIP standards.

## Customizable Dashboards

Tailor the interface to specific operational needs using Grafana’s advanced dashboarding tools, allowing real-time monitoring and historical data analysis to inform key decisions.

## Data-Driven Decision Making

Use historical data and real-time analytics to make informed decisions, including event-triggered automation for optimizing energy flow based on grid conditions and demand forecasts.

# CONTACT US

## GET YOUR FREE DEMO TODAY AND EXPLORE OUR ENERGY SOLUTIONS!

**Toronto:** 2425 Matheson Blvd E 8th Floor, Mississauga, ON L4W 5K4 (REGUS), Room 817

**Vancouver:** 1021 Kennedy Avenue, North Vancouver, BC, V7R1L6, Canada

**Laboratory:** Unit 102, 1575 Pemberton Avenue, North Vancouver, BC, V7P2S3, Canada

info@edgetunepower.com
www.edgetunepower.com