

# DER Optimization Software: Site Controller

## Site Controller Overview

Enel X's Distributed Energy Resources (DER) Optimization Software includes a localized site control system that directs DER storage and other DER operations at a specific site. It interfaces with our cloud-based energy management platform and performs local site services and site data caching. Events and metrics from store controllers are collected by the site controller and pushed to the cloud. Metrics from other distributed energy resources, like solar or fuel cell, are also collected for management of the entire site. The site controller makes control decisions throughout the day based on a variety of factors, such as real-time demand, time of use, and solar production. It then utilizes its storage resources to optimize behind-the-meter savings.

## Seamless Integration

Our software seamlessly integrates with a building's electric infrastructure, renewable energy systems, building management systems, and other energy control devices.

## Intelligent Management

Our intelligent DER Optimization Software enables customers to network with existing energy management systems. It offers unique capabilities for bi-directional AC/DC load/source management including energy time-shifting, load following, demand capping, and voltage/frequency support.

## Control and Performance

Our software monitors and tracks performance in real time, allowing the customer to select operational mode response to load fluctuation, and manage the storage system.

## Applications

- > Peak shaving
- > Energy time shifting
- > Renewables integration
- > EV charging
- > Voltage/frequency support
- > Critical load support and back-up
- > Microgrids

## Site Controller Options

- > Battery-agnostic architecture allows for seamless integration of lithium-ion or other battery chemistries
- > Advanced battery charging profiles

## Features

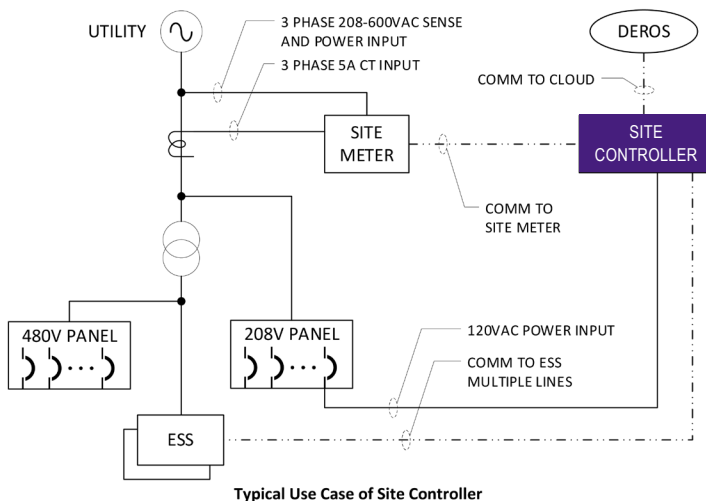
- > Intelligent DER Optimization Software
- > Bi-directional power control
- > Integrated power and energy control
- > Minimum Import Protection
- > Flexible and adaptive site power
- > Optional aggregation of multiple systems into a single aggregate system

## Technical Specifications

Mechanical specifications	
Weight	45 lb.
Dimensions	26.7"H x 25.4"W x 11.4"D
Mounting options	Wall mount

Environmental Specifications	
Operating Temp	-40°C to 50°C (-40°F to 122°F)
Storage Temp	-40°C to 85°C (-40°F to 185°F)
Humidity	40°C @ 95% RH non-condensing
Enclosure Type	Polycarbonate
Rating	NEMA 4, 12, 4X & UL94-5VA
Labels	3M 7908

Compliance Specifications	
Site Controller Certifications	UL508A, UL9540 Subpart — Compliant
CPU Certifications	CE, FCC Part 15 Class B



Performance Specifications	
Power Input	200W
Connectivity	Ethernet, no modem: 9x 10/100TX  Ethernet ports, with modem: 13x 10/100TX  Fiber ports: 2x SFP, wireless (with modem)
Communications	Ethernet TCP/IP, Modbus TCP/IP, Fiber, 4G (with modem)
Nominal Input Voltage	120/240 VAC
Operating Voltage Range	110 to 132, 182 to 264 VAC
CPU	Intel® Atom™ E3825 & Celeron® N2930, DDR3L- 1066/1333MHz 2GB/4GB on-board memory  2 GbE, rich I/O: 4COM, SATA, USB3.0, SMBus/I2C, GPIO, full-size Mini PCIe, full-size mSATA  Supports iManager (SUSI 4.0), SUSIAccess and Embedded Software APIs

