



SolarEdge ONE for C&I

Product Overview



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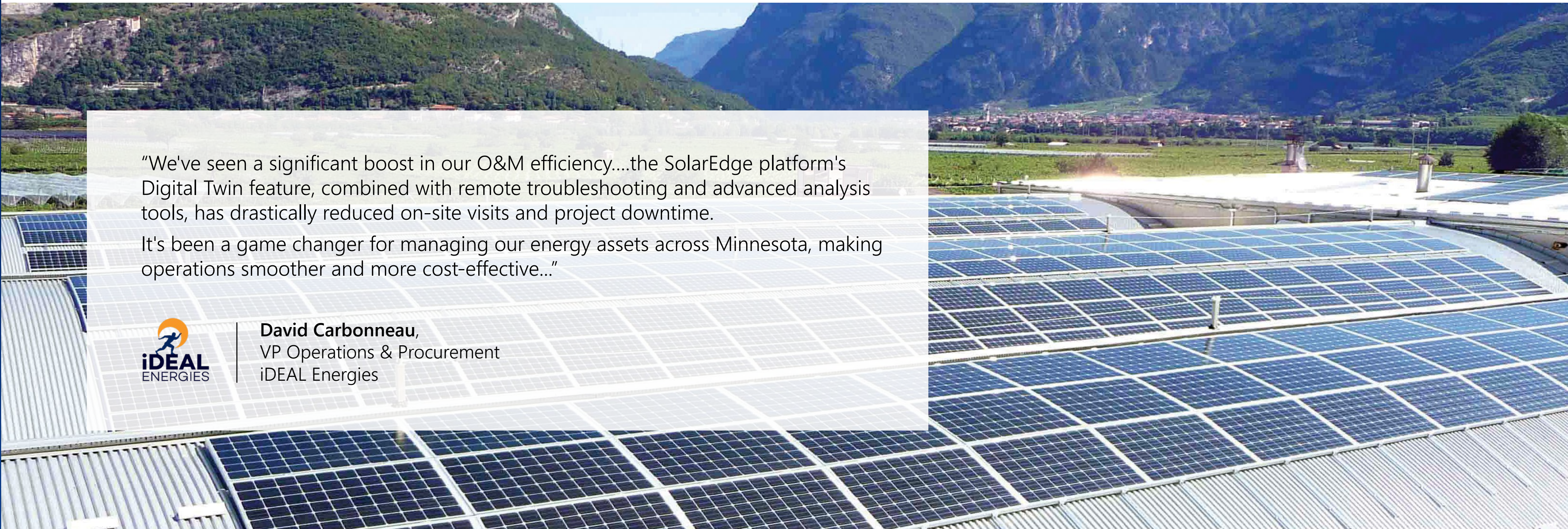
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200kW, Trentino, Italy, Installed by Elettronord

"We've seen a significant boost in our O&M efficiency....the SolarEdge platform's Digital Twin feature, combined with remote troubleshooting and advanced analysis tools, has drastically reduced on-site visits and project downtime. It's been a game changer for managing our energy assets across Minnesota, making operations smoother and more cost-effective..."



David Carbonneau,
VP Operations & Procurement
iDEAL Energies



Introduction to SolarEdge ONE for C&I

A cloud-based energy optimization platform, designed specifically for C&I energy professionals.

Incorporating extensive customer feedback as well as our own vast expertise in commercial solar, SolarEdge ONE for C&I places an unprecedented amount of system data at your fingertips, enabling deep performance analysis, monitoring and advanced management capabilities across the energy site.

Operate
& Maintain

For EPCs and
O&M teams

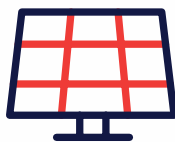
Optimize
& Manage

For Energy
stakeholders

SolarEdge ONE for C&I orchestrates a site's entire energy portfolio, including:

PV

SolarEdge inverters
and Power Optimizers



Storage

SolarEdge CSS-OD
batteries



EV Chargers

Multiple charge points
using SolarEdge or
third-party devices



Building Assets

Onsite power consumption
assets e.g. IOT energy
devices, sensors, etc.



Main Benefits



Single Ecosystem for Energy Optimization

- / Optimizes site production, storage and consumption
- / Manages and monitors all onsite energy infrastructure
- / Saves on complicated third-party integrations



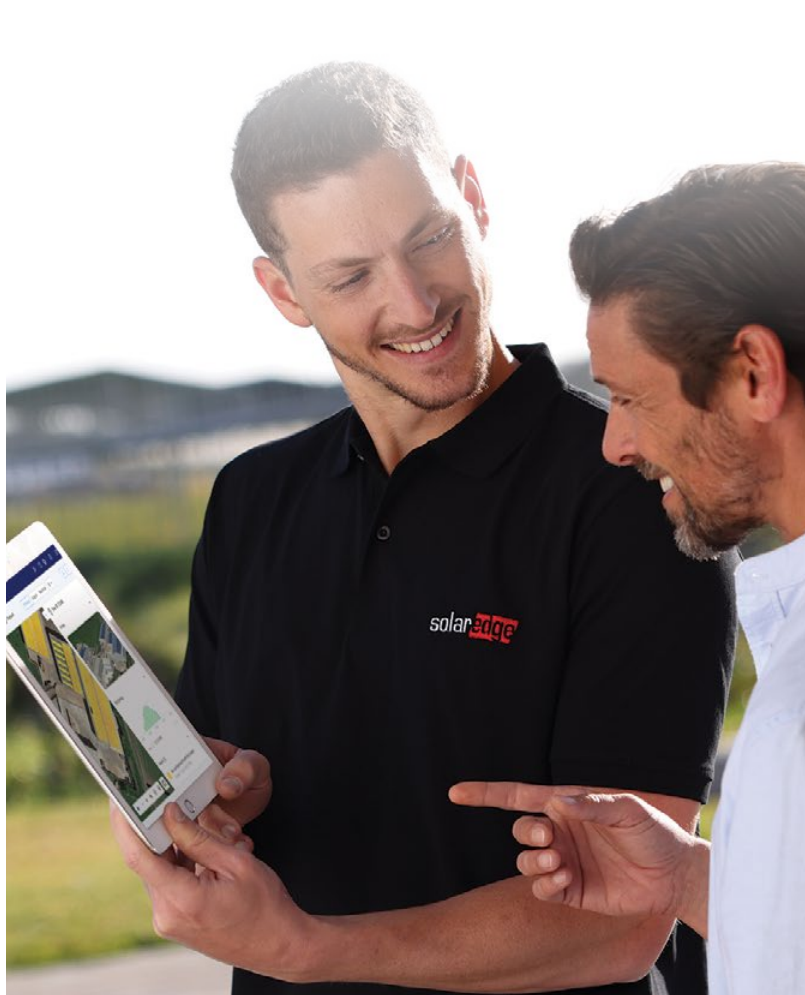
Enables Data-Driven Decisions and Actions

- / Orchestrates decision-making based on customer definitions and market conditions
- / Provides real-time insights at every level: from fleet and site levels down to individual modules, devices and battery cells
- / One data inventory that serves multiple functions and needs within the organization



Developed by Industry Experts

- / Developed inhouse by SolarEdge, with proven expertise in PV, EV charging, load management, and data analytics
- / SolarEdge's leading product portfolio is installed across 375K+ commercial sites. Over 50% of Fortune 100 companies have SolarEdge technology on their rooftops



Includes Advanced Cyber Protections

- / Fortified with advanced cyber capabilities that are designed to protect against current and future cyber threats
- / Helps to ensure business continuity and data protection
- / Safeguards the connection between SolarEdge devices and customers' networks



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EPCs and O&M Teams

SolarEdge ONE for C&I includes a comprehensive set of capabilities designed to benefit EPCs and O&M teams seeking reduced PV site maintenance costs and greater operational efficiency.

Common Challenges

- / To ensure optimal system performance, EPCs and O&M teams require advanced monitoring tools that can significantly save maintenance costs by reducing unnecessary truck rolls and time onsite. Maintenance teams can gain additional time and resources with the ability to rapidly identify and address system issues using remote troubleshooting tools and alerts
- / Further operational complexities can arise from maintaining a PV ecosystem consisting of assets provided by multiple vendors as opposed to dealing with just one vendor for all hardware, software and service requirements

SolarEdge ONE Benefits

Designed to lower maintenance costs and increase efficiency, throughout the entire project lifetime, via:

- / Streamlined site operation, minimized downtime and reduced site visits with remote device operation and configuration
- / Real-time inspection of fleet and site performance with easy identification of underperforming system components
- / Proactive maintenance and quick response to critical issues with a live alerts system and remote troubleshooting
- / A single vendor for all software, warranty, servicing and training needs

"SolarEdge ONE has heralded a far deeper level of granularity in respect to performance statistics, monitoring metrics, fault finding, and reporting. This enables us to; cut down time spent identifying existing or potential faults, accelerate response times to events and provide more accurate and detailed levels of reporting.

This all ensures we can continue to meet the high standards we set ourselves in respect to ensuring the best possible customer experience, highest uptimes, greatest yields and the safest systems."



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Energy Stakeholders

Includes multiple personas each with a specific set of responsibilities and goals that require the extensive management tools and energy optimization processes provided by SolarEdge ONE for C&I:

- / **Facility manager** - handles site safety as well as oversees the technical performance of the PV system and connected devices
- / **Energy manager** - works to reduce site energy bills and maximize system ROI
- / **Renewables team** - concerned with meeting ESG goals
- / **Asset owners/Investors/Finance managers** - responsible for improving site/PV fleet financial performance managing PPAs

Common Challenges

- / Monitoring site energy production is critical when trying to identify drops in PV system performance (e.g., caused by shading, malfunctions, etc.). Without it, potential energy loss will adversely affect the site's ROI, already challenged by spiking energy costs and lower solar incentives.
- / PV systems also generate a vast amount of data related to energy production, consumption, and system performance. Analyzing this data to optimize system operation and identify trends can be complex, especially for large-scale installations, and especially if using several software platforms from multiple vendors.

SolarEdge ONE Benefits

Designed to reduce energy costs, meet environmental impact goals and maximize sites' ROI using SolarEdge ONE for:

- / **Energy optimization**
Optimize the performance of energy assets to save costs, lower operational expenses and meet ESG goals
- / **Load management**
Manage energy demand to avoid peak demand charges and improve overall energy efficiency

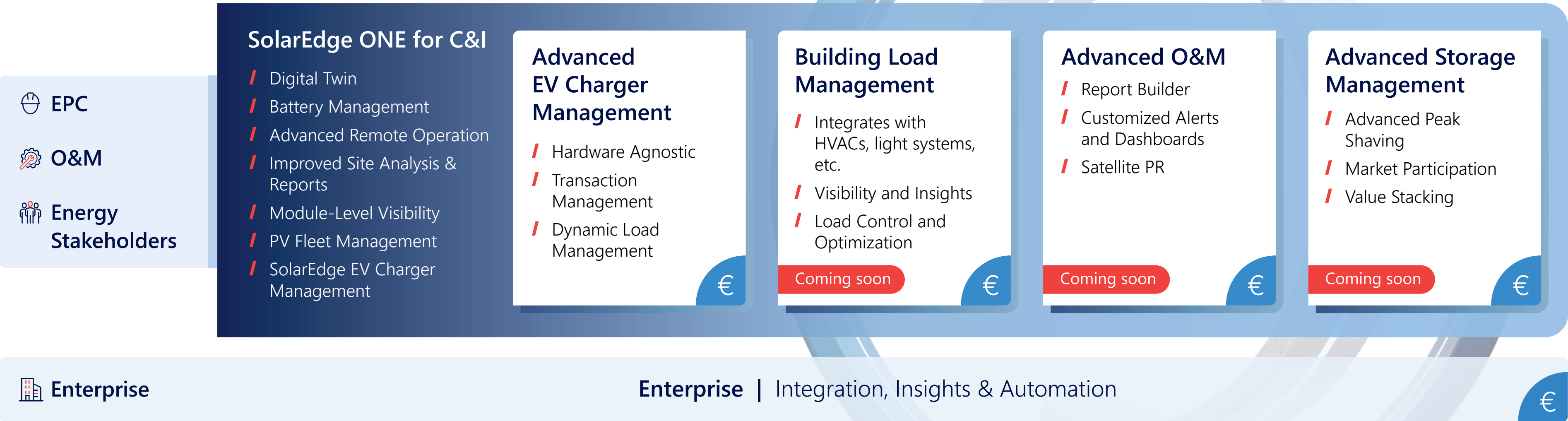
5MW, Mitzpe Ramon, Israel, Installed by EnerT



Software Scope

SolarEdge ONE for C&I includes a wealth of innovative capabilities designed to meet the varying needs of system stakeholders.

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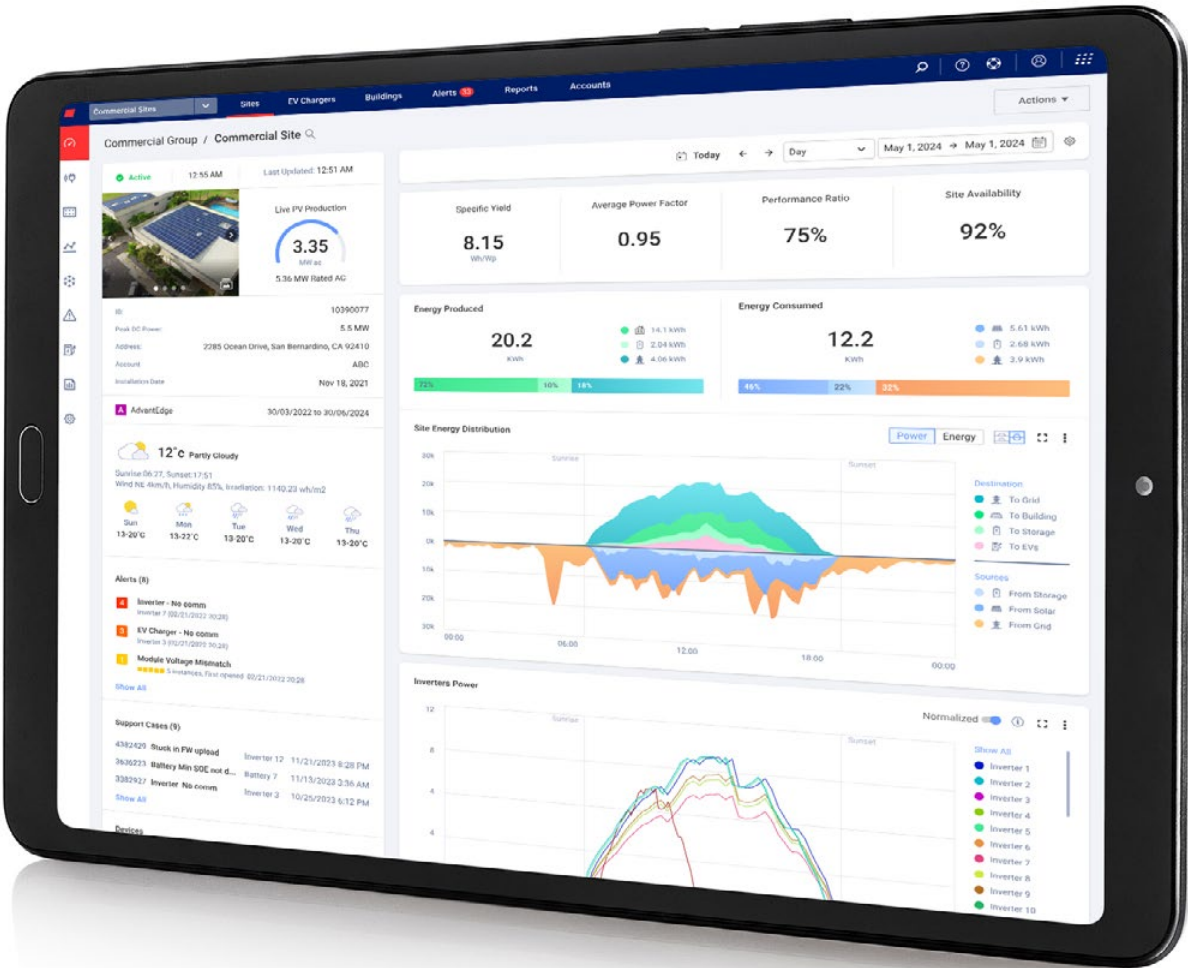
The SolarEdge ONE for C&I core functionalities are accessible by all SolarEdge system users. Highlighted in this chapter, these features cater to PV professionals requiring comprehensive O&M, PV monitoring, storage and EV management capabilities.

PV Fleet Management

- / Includes advanced dashboards providing real-time, comprehensive views and management capabilities for all sites across the account's portfolio
- / Displays a live view of key site performance indicators such as Yield, Performance Ratio, and Site Availability/Uptime and additional aggregated data through visualization of comparative heatmaps, graphs, charts, and an alert system
- / Conveniently groups sites according to different parameters such as geographic location or installation size
- / Uses interactive charts to quickly determine best/worst performing sites on daily/weekly/monthly/annual basis

Site Management

- / The Site dashboard offers a comprehensive view of site performance making it easy to monitor, analyze, and optimize the system for maximum efficiency and profitability
- / Features a live view of several KPIs (e.g. current power, production, Performance Ratio) as well as energy production per site/inverter. These KPIs let you assess and track the efficiency, reliability, and productivity of the site operations helping to ensure energy yield is reaching its potential. Based on this information, informed decisions can be made and areas for improvement may be identified
- / Uses interactive charts to display production, consumption and energy import/export data on daily/weekly/monthly/annual basis
- / Updated equipment list showing all devices installed on site and supported by SolarEdge ONE for C&I





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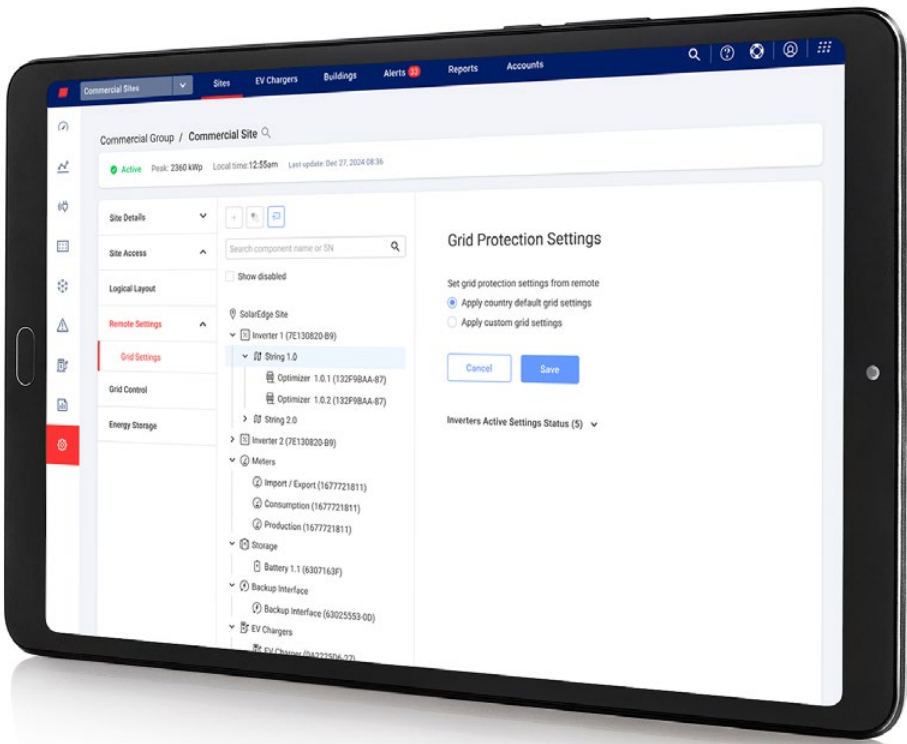
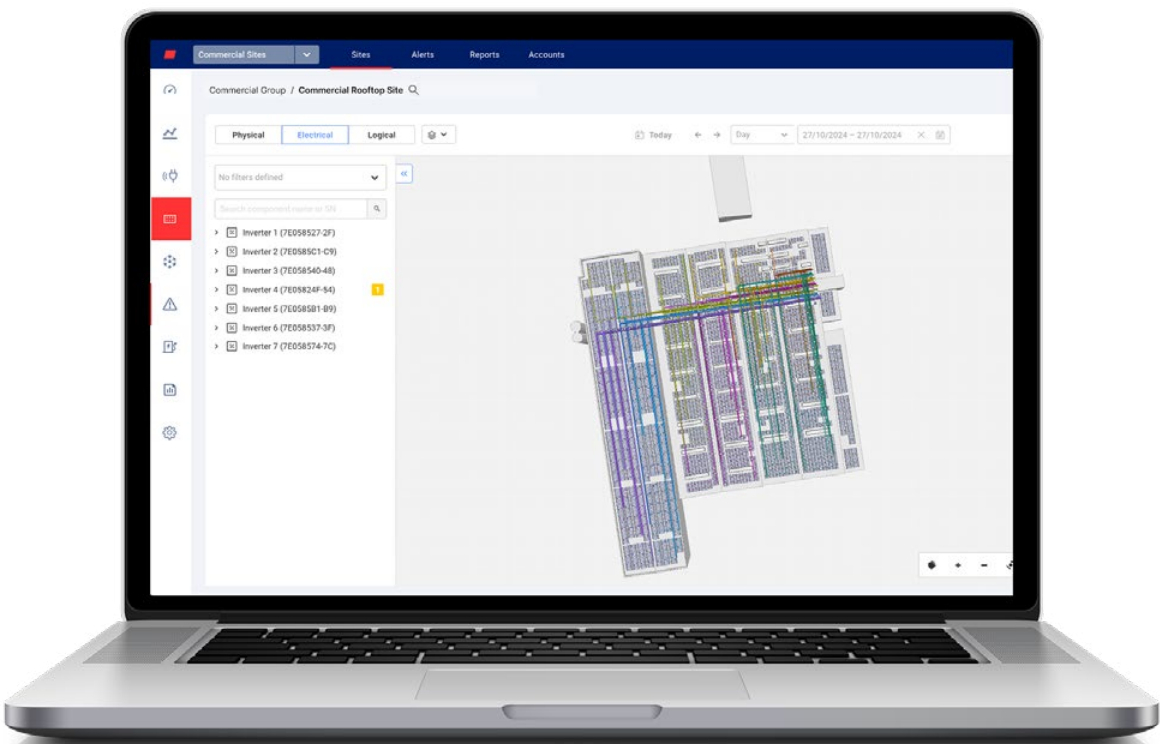
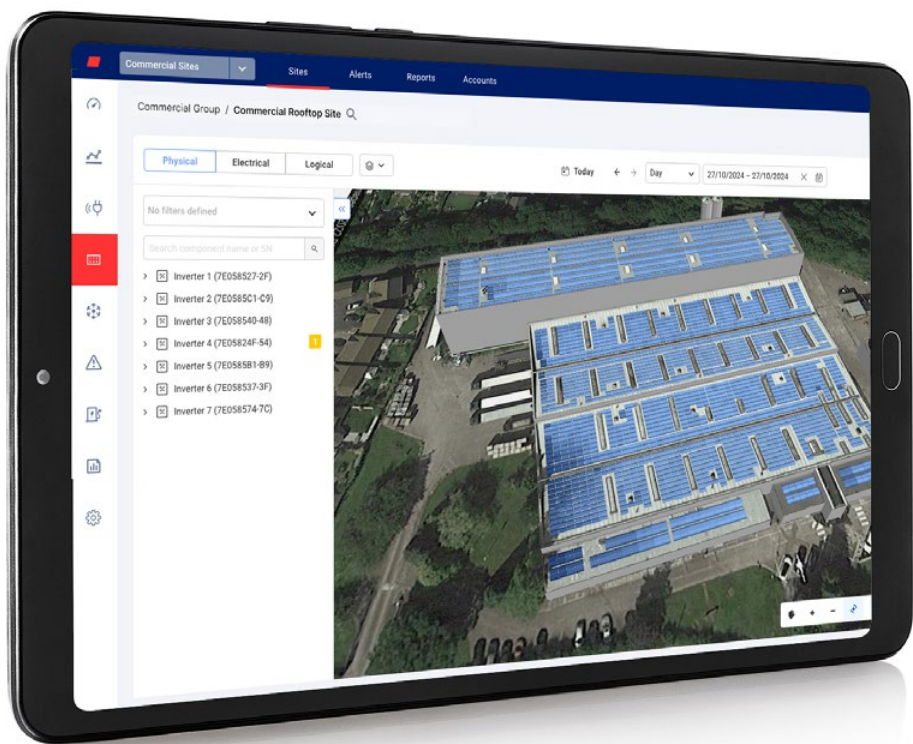
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Digital Twin

Physical layout

- / A powerful new site layout tool that merges the site's virtual representation (e.g. from SolarEdge Designer) with real-time site data
- / Allows users to quickly perform site inspection, analysis, and remote configuration of all devices onsite
- / Displays the data using one of two data layers:
 - Energy Layer - data is presented according to the energy produced by each module e.g. for quick identification of underperforming modules over a defined time period
 - Thermal Layer – each Power Optimizer's current temperature is displayed to help spot anomalies in module energy production, highlight potential fire risks or satisfy insurance requirements

Electrical layout

- / Detailed site view showing all electrical AC/DC cable connections per system inverter and string as well as other component connections e.g. batteries
- / Provides a visual representation of the site hierarchy
- / Supports remote commands such as pairing and restart
- / Integrates with the Layout Editor, ensuring the most updated site configurations are reflected

Device Configuration and Operation

- / Reduce time on site by viewing and configuring devices remotely
- / From the comfort of your office, easily update device parameters such as inverter power control or grid settings or set import/export limits.
- / Includes an audit trail to track each device configuration that was made



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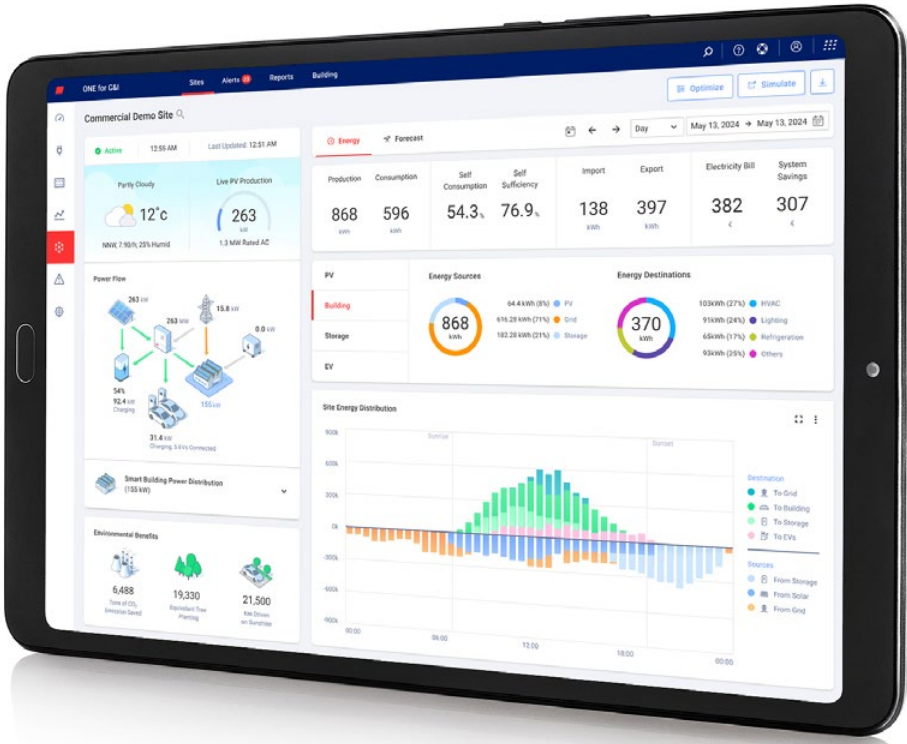
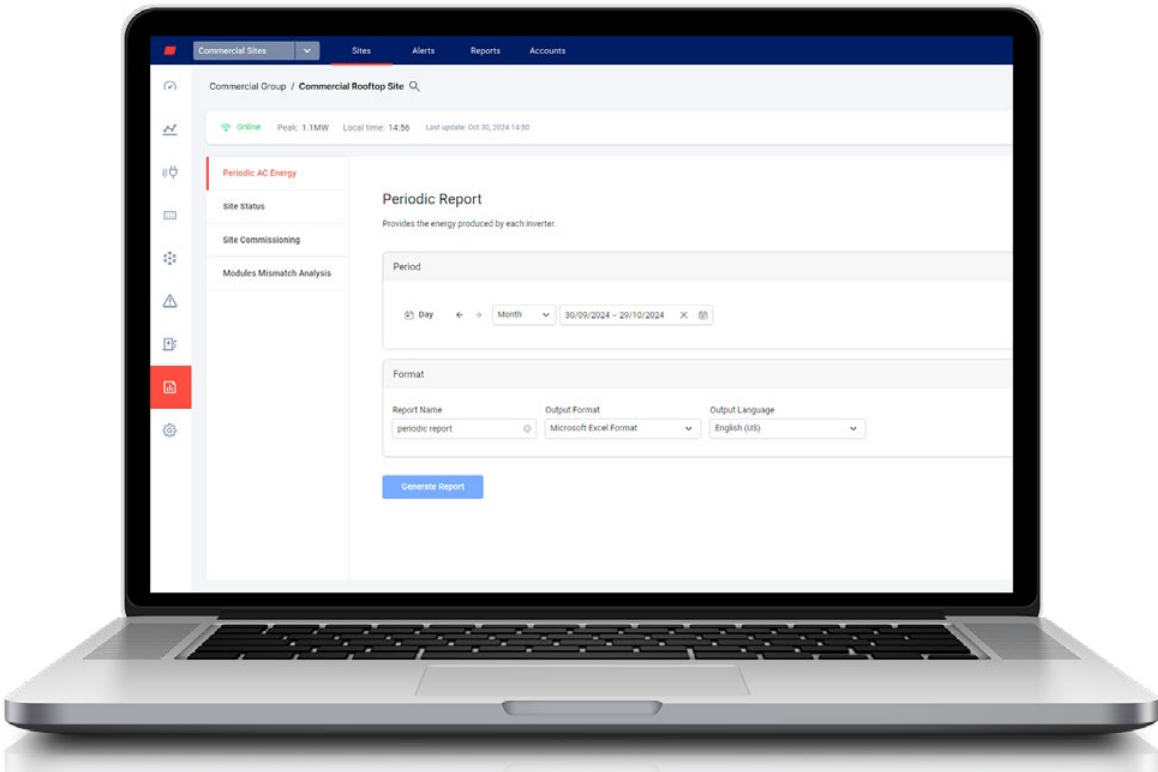
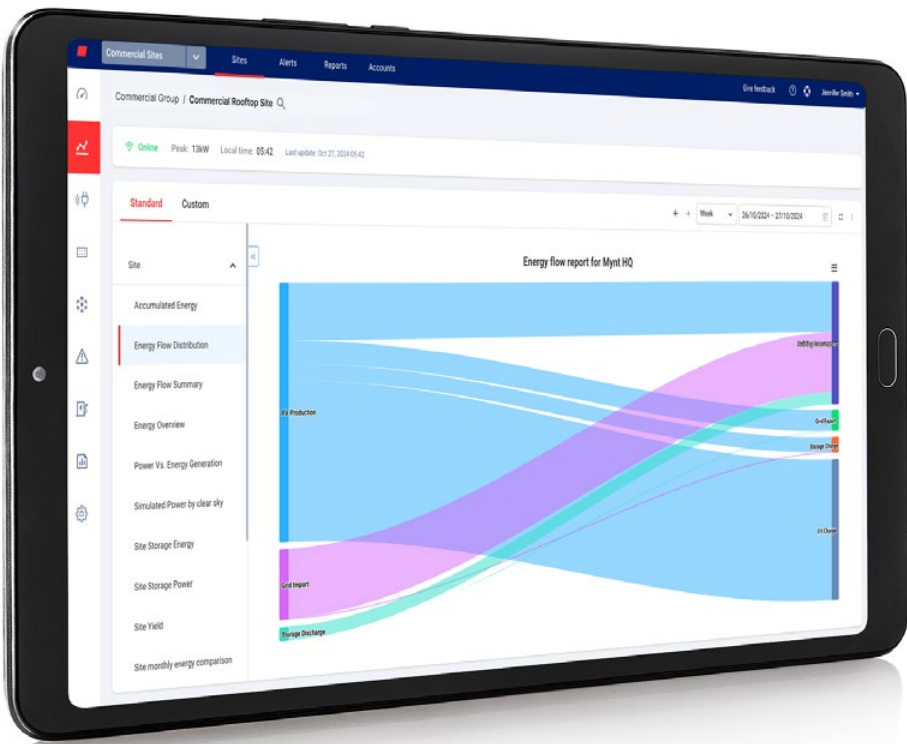
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Site Analysis Tools

- / Comprises an extensive set of pre-configured charts that enables a deep dive into site and device-level data for quick and easy performance analysis e.g. investigate the correlation between site production and irradiance to understand if the site is performing as expected
- / Charts showing expected energy production can also be generated, using simulations to predict the amount of electricity that a PV system is expected to produce over a given time
- / Take advantage of advanced customization tools to easily generate additional charts specific to your O&M requirements

Reports

- / Generate detailed reports to analyze and compare site performance according to the individual Site level or Account level
- / Multiple report types are available e.g. to help detect under-performing modules, verify site communications and commissioning, or review system production over time
- / Report generation runs in the background, so you can continue to work in SolarEdge ONE uninterrupted
- / Supports export to PDF, Excel, and HTML

Energy Board

- / Provides comprehensive insights into each site's energy management with real-time power flow visualization and aggregated energy consumption data
- / Illustrates the breakdown of energy usage and energy distribution throughout the site from energy source to destination e.g. you can check, over a defined time period, how much of the battery storage is charged by PV compared to the grid and how this energy is then energy distributed from the battery to the various destinations (building, EV and grid)
- / Displays key site data such as production, consumption and system savings according to daily/weekly/monthly/annual time periods

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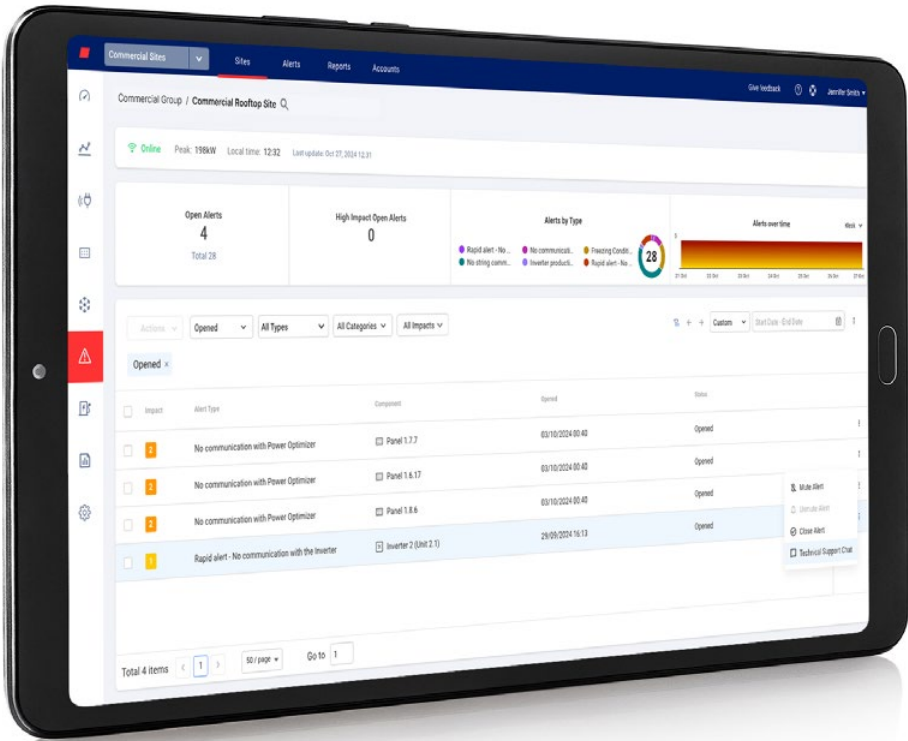
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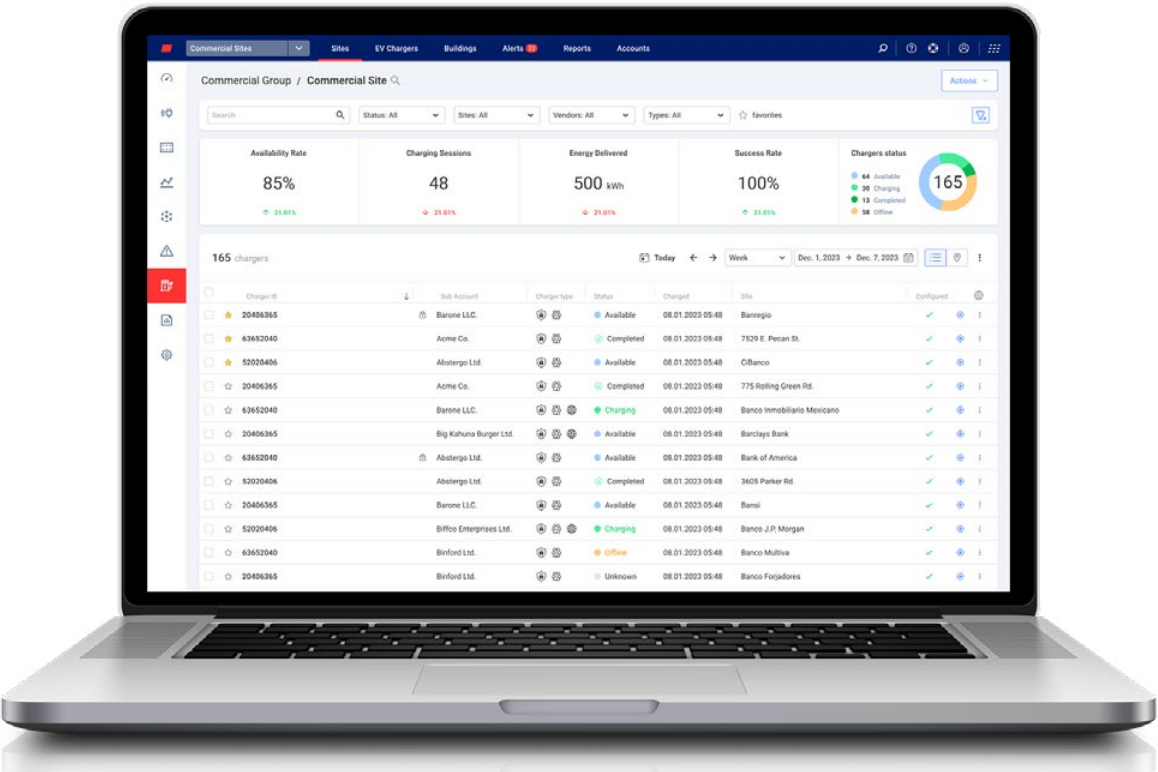
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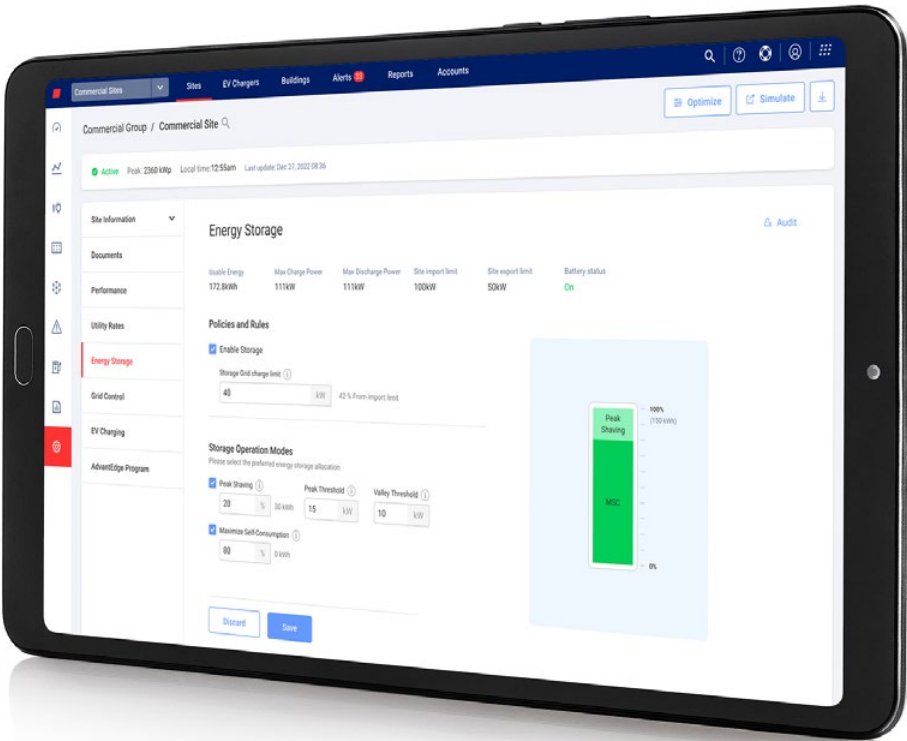
Alerts Tool

- / Provides a pinpointed overview of any potential issues that may require attention, across all sites in your SolarEdge portfolio
- / Alerts are automatically prioritized based on their impact e.g. on energy production or site safety, and are color-coded to make it easy to identify critical issues



EV Management

- / Supports SolarEdge EV Chargers only
- / Includes charging from excess PV
- / Enables remote monitoring of EV charging stations across your fleet
- / Via the main EV dashboard, add new drivers and view extensive EV charger data such as connection status, last charge time and duration, charging costs, driver name, etc.



Battery Monitoring and Management*

- / Supports the SolarEdge Commercial Storage System: CSS-OD*
- / Includes real-time view of key data for all battery-related devices such as battery inverter, battery cabinet, so you can easily monitor the health of the supported storage solutions:
 - Analyze battery inverter power and voltage levels, power per phase and connection device status i.e. detailing which battery cabinets are connected
 - Analyze the status of module and cells
- / Features remote configuration capabilities e.g. toggle storage grid charge limits in order to limit how much the battery is charged from the grid
- / Enables remote management of storage optimization settings e.g. adjust Peak Shaving and Maximum Self-Consumption modes that use smart algorithms to optimize energy allocation

* Available in selected countries only

SolarEdge ONE Controller for C&I

The SolarEdge ONE Controller* is a local communication gateway that seamlessly integrates the site's energy infrastructure including PV inverters, batteries, meters, and more.

- / Combines with SolarEdge ONE to optimize the use of locally generated energy for lower electricity costs
- / Complies with grid regulations to enable safe, reliable electricity generation (PPC)
- / Required when connecting SolarEdge storage solutions to enable real-time storage control
- / A cyber gateway for external communications, designed to protect against unauthorized access

The ONE Controller supports integration with third-party digital sensors and energy meters.

/ Digital sensors: Used to measure site conditions such as temperature and irradiance i.e. to enable Performance Ratio calculations

/ Energy meters:
For site production, consumption, and import/export measurements, also enabling the connection of additional devices such as batteries



The need for digital sensors and energy meters

Many C&I sites today only measure energy production. They don't include the necessary devices, such as environmental sensors and meters, that would enable them to collect the data needed to perform Performance Ratio calculations or gain deeper insight into their consumption patterns, for example. By bundling these products together with the SolarEdge ONE software, SolarEdge customers can only benefit from having more site data that will greatly improve their fleet analysis capabilities, not to mention the possibility of expanding their system functionality e.g. to include storage.

* Purchased separately



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We're here to ensure your O&M goes smoothly

Automated Self-Service Tools

 **Support Chat**

- / Contact your local support engineer in your time zone and native language
- / Receive recommendations for troubleshooting specific system or device alerts
- / Easily issue RMAs based on the device alert and information (part/device SN)

 **Resource Center**

- / Easily access all relevant application notes
- / 'How to' guides and tutorials

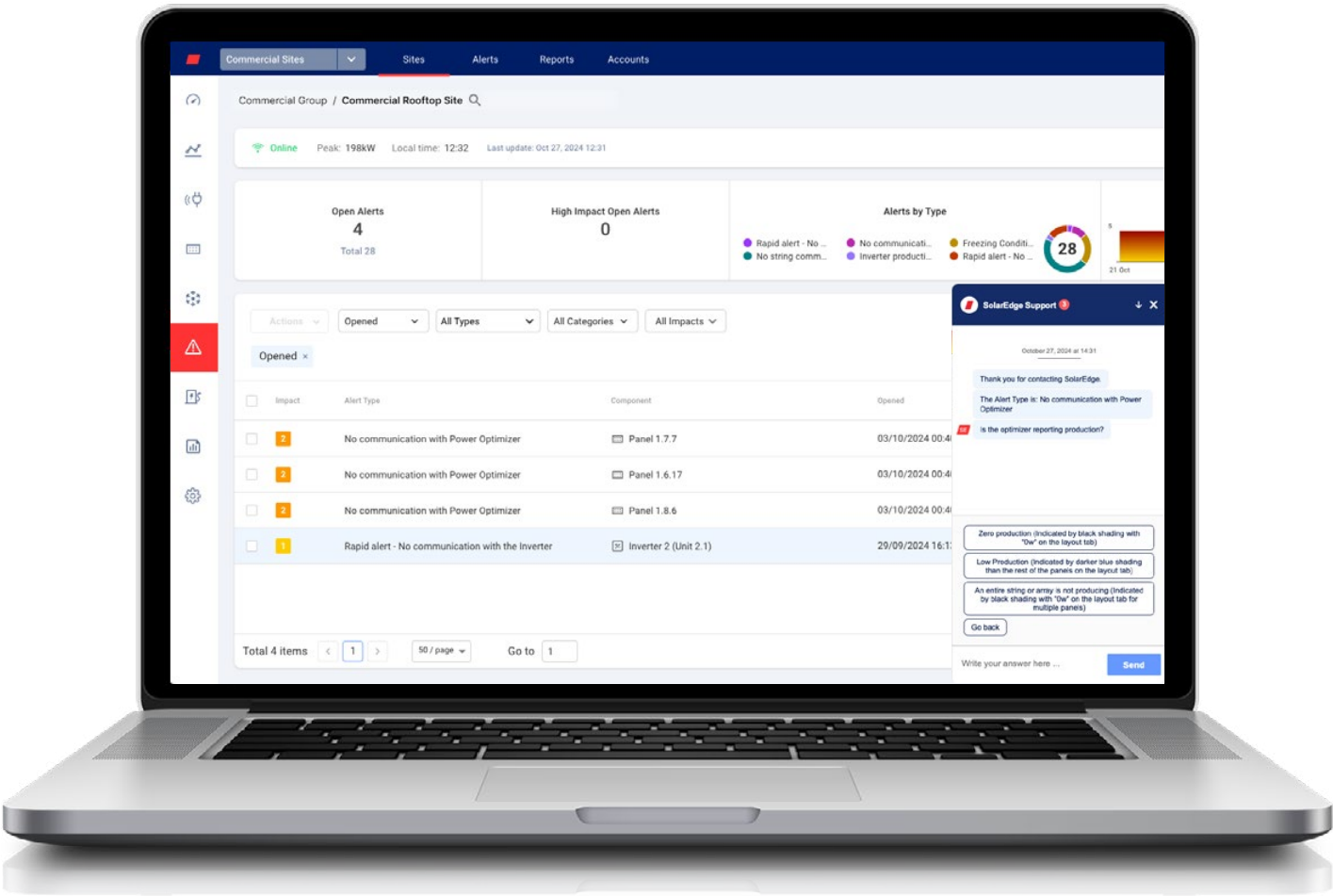
Direct Communication Support

 **Call Us**

- / Place a service call (toll-free number)
- / Call our dedicated, trained experts

 **Contact Us**

- / Send new feature requests
- / Share your feedback
- / Email us on any other topic





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About SolarEdge

SolarEdge Technologies is a global leader in renewable energy technology that applies world-class engineering and innovation to provide solar PV solutions for the residential, commercial and utility segments. SolarEdge brings an optimized approach to generating, storing, managing and consuming energy. The company develops and produces PV inverters and Power Optimizers, energy management and optimization solutions, energy storage and grid services. SolarEdge’s DC-optimized technology is installed in millions of homes in over 140 countries, and more than 50% of Fortune 100 companies have SolarEdge technology on their rooftops. SolarEdge is accelerating the transition towards distributed, sustainable energy networks which will optimize energy everywhere.

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400 kWp carport, 768 kWp rooftop, Waterloo, Canada
Installed by VCT Group