



# Monitoring Platform

## User's Guide

For System Owners

Version 2.1

## Disclaimers

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## Emission Compliance

This equipment has been tested and found to comply with the limits applied by the local regulations.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.

## Version History

- Version 2.1, August 2020 – added layout chapter
- Version 2.0, March 2020 – updated user interface screenshots
- Version 1.0, November 2019 – first release

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## Introducing the SolarEdge Monitoring Platform

The SolarEdge monitoring platform enables monitoring the technical and financial performance of one or more Photovoltaic sites with SolarEdge equipment. It provides accurate information about present and past performance of each module individually and about the system as a whole, enabling users to detect, pinpoint and troubleshoot faults, efficiently manage maintenance operations and analyze site profitability.

Smart algorithms continuously track the power, voltage, and current of all modules and inverters, as well as a range of statistical and meteorological indicators to detect performance events that require intervention or maintenance.

These features enable installers and system owners to verify site functionality and monitor its performance.

## Using the SolarEdge Monitoring Platform

### Getting Started

To use the SolarEdge monitoring platform, your system installer will create and register your system and then add you as the system owner.

Once the installer initiates your registration, you will receive an invitation e-mail with a link to a form to fill in.

→ **To activate your account:**

1. Click the link sent to you in the invitation email message. The registration form is displayed:

Figure 1: Registration Form

2. Enter your details and select the required check-boxes.
3. Click **Save** to complete the registration and get access to your solar system.
4. When the "Thank You" page appears (Figure 2), click **Log in to the Monitoring platform**. The Login window is displayed (Figure 3).

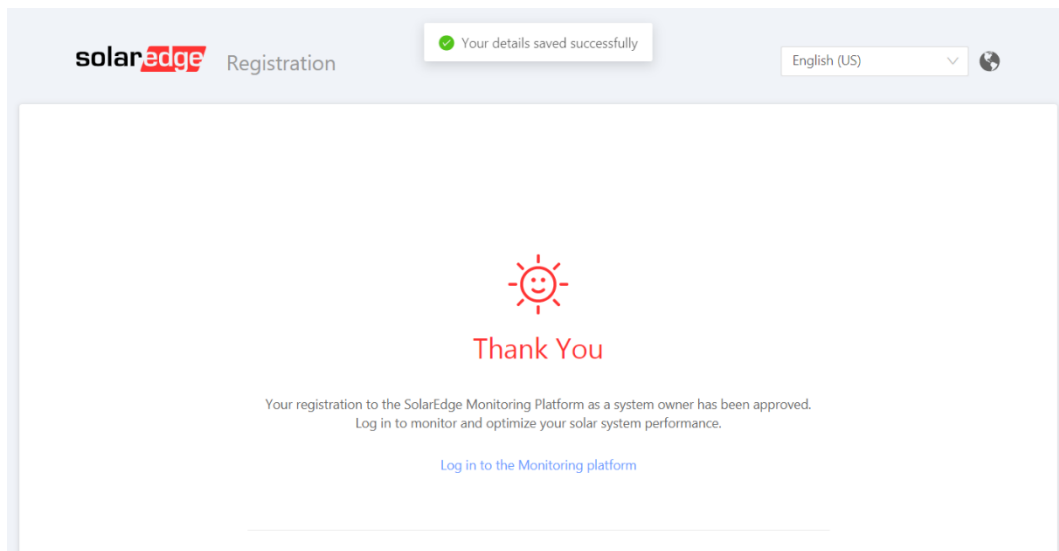


Figure 2: Thank You Page

→ To launch the SolarEdge monitoring platform:

1. Do one of the following:

- Go to <https://monitoring.solaredge.com>.
- From the SolarEdge website, click the Monitoring Platform Login link at the top of the screen.

The Login window is displayed.

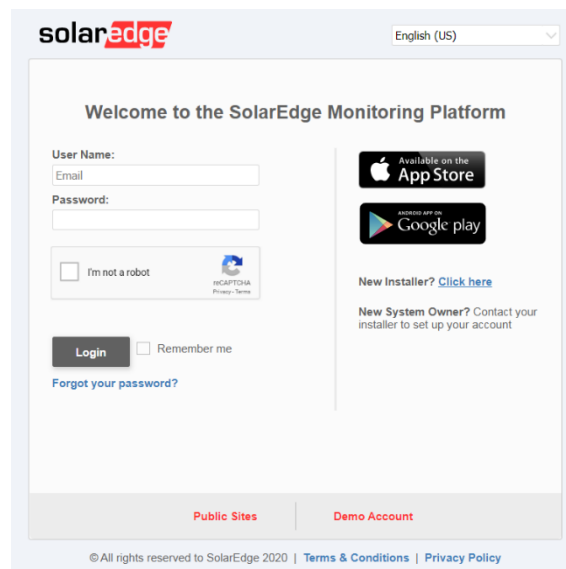


Figure 3: Login Window

2. Enter your e-mail and password (as filled in the registration form) and click **Login**.

If more than one site is assigned to you, the list of your SolarEdge sites appears in the Site List on the [Home Page](#). If only one site is available, the site's [Dashboard](#) is automatically displayed, without going through the Site List.

## User Settings

→ To set user preferences:

1. Click the dropdown arrow next to your username and select **User Settings**. The User Settings window is displayed.

The screenshot shows the SolarEdge User Settings interface. At the top, there is a header with the SolarEdge logo and navigation links for 'Home' and 'Username' (with a dropdown arrow). Below the header, the 'Contact Details' section contains input fields for First Name, Last Name, Email, Phone, Zip Code, Home Address, Home Address 2, Country (dropdown), State/Region (dropdown), and City. The 'Settings' section includes a Current Password field (masked with dots), a 'Change Password' link, Display Units (dropdown, currently set to Imperial), and Language (dropdown, currently set to English (US)). A blue 'Save' button is positioned at the bottom center of the form.

Figure 4: User Settings Window

2. Set the following:

- First Name
- Last Name
- Email
- Phone number
- Zip Code
- Address
- Change password – Click and modify if necessary
- System Units: Metric or Imperial
- Language: Select the language in which the monitoring platform will display. When you change the language, the localized data changes automatically, including numbers, currency and date formats.

3. Click **Save**.

## Home Page

The home page lists all the installed sites that you have permission to view. It provides an overall view of the various sites managed by the monitoring platform.

If you only have access to one site, the site's [Dashboard](#) is automatically displayed, without going through the home page. If you require access to additional sites, contact your installer.

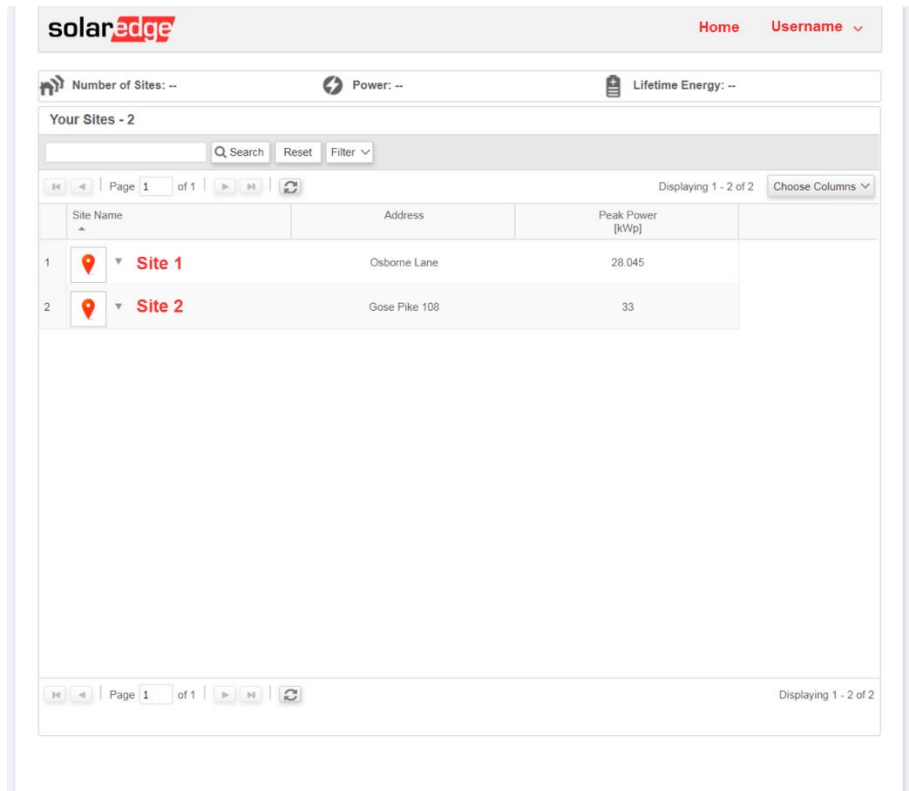


Figure 5: Home Page

→ To use the home page:

1. Click Home at the top right toolbar. The site list is displayed containing the following information about each site:

Column	Description
Site Name	A link to more information about a site. Click the site name to display the <a href="#">site dashboard</a> .
Address	Information on a site's physical location.
Peak Power	Specifies the total DC power ratings of all the modules.

2. Do the following as required:

- To control which columns appear, click **Choose Columns** to open a dropdown list, and check the boxes for the columns you wish to display.



The screenshot shows the SolarEdge monitoring interface. At the top, there's a navigation bar with the SolarEdge logo, 'Home', and a user profile dropdown. Below that, there are summary cards for 'Number of Sites: --', 'Power: --', and 'Lifetime Energy: --'. The main section is titled 'Your Sites - 2' and contains a table with two columns: 'Site Name' and 'Peak Power [kWp]'. The table lists two sites: 'Site 1' with a peak power of 28.045 kWp and 'Site 2' with a peak power of 33 kWp. A 'Choose Columns' dropdown menu is open, showing a list of columns that can be displayed, including Address, Address 2, City, Zip code, State, Country, Installation date, PTO Date, and Peak Power [kWp].

Site Name	Address	Peak Power [kWp]
1 Site 1	Osborne Lane	28.045
2 Site 2	Gose Pike 108	33

Figure 6: Displaying Columns

- To sort the site list by the values in any column, click on the column's title. This toggles the order from ascending to descending and vice versa. Alternatively, click the column's dropdown arrow and select either Sort Ascending or Sort Descending.
- Use the navigation bar above the list to navigate through the pages and refresh site information.
- Search for a specific site using the search box. The search text is remembered even if the browser is closed and re-opened.

## Site Dashboard

The Dashboard provides a high-level view of the information collected by the monitoring platform for a specific site.

To access a site's dashboard, simply click on the site name in the home page site list. If you only have access to one site, the site's Dashboard is automatically displayed.



Figure 7: Site Dashboard

## How to read the site dashboard

### Site overview

The site overview area shows accumulated energy and revenue for the site. Each box specifies a value and its measurement unit.

The revenue is calculated by multiplying the site-specific feed-in tariff per kWh by the actual energy produced. The revenue is displayed in the currency predefined by the user.

Energy today 13.25 kWh	Energy this month 78.12 kWh	Lifetime energy 34.57 MWh	Lifetime revenue \$6,152.37
---------------------------	--------------------------------	------------------------------	--------------------------------

Figure 8: Site Overview

### Power flow diagram

The Power Flow diagram shows real-time system behavior – from solar production to site consumption, and grid import or export. For systems equipped with StorEdge, the battery charge / discharge status and state of energy will also be shown.

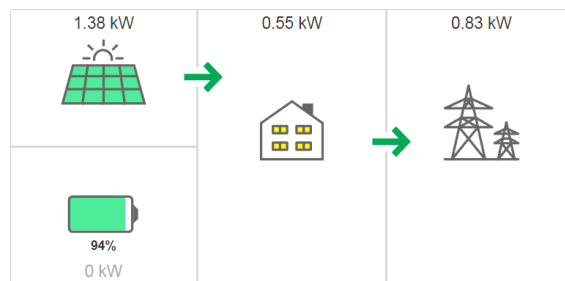


Figure 9: Power Flow Diagram

### Power and energy

If a consumption meter is installed, a consumption bar is displayed\*. The consumption reading represents your solar energy consumption:

- **System production** – the bar represents the solar energy produced in terms of self-consumption and export. The self-consumption percentage represents the amount of solar energy that used to power site loads, while the export percentage represents the amount of solar energy that was exported to the grid.
- **Consumption** – the bar represents the total energy consumed in terms of self-consumption and import. The self-consumption percentage represents the amount of energy consumed from solar energy, while the import percentage represents the amount of energy consumed from the grid.

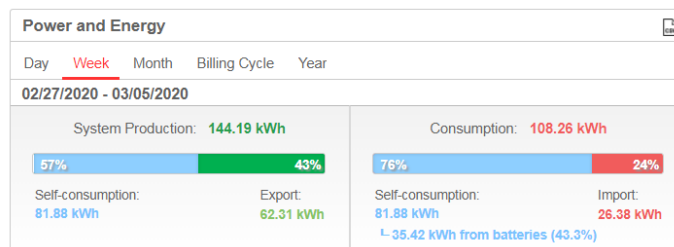


Figure 10: Consumption Bar

\* If a meter is not installed in the site, contact your installer to install a consumption meter in order to gain access to consumption and self-consumption data.

The power and energy chart is found directly below the consumption bar (when it appears). The chart shows the power production of this site over a specified period. The default period is the billing cycle.

The X-axis represents time and the Y-axis represents the power produced in kW (when in Day or Week view), or the energy produced in kWh (when in Month, Billing Cycle, or Year view). Use the tabs above the graph to select the desired view.

Power level is a function of variable factors, such as the irradiance level and ambient temperature. Therefore, the power-curve typically rises and falls each day.

If there is a data connection between a production meter and your SolarEdge system, then the production data displayed here is taken from the meter's readings. If not, the data is taken from your site inverter or module production readings.

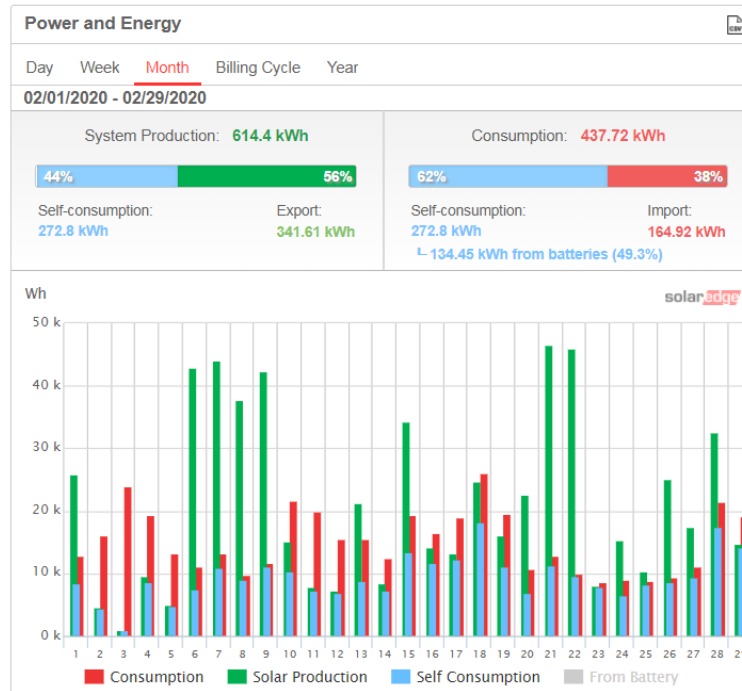


Figure 11: Weekly Power and Energy Chart View

→ **How to read the power and energy chart**

The solar production shown in green represents the power or energy produced from the sun. The consumption, marked in red, displays the site's loads consumption. In blue, the self-consumption is shown.

## Comparative energy

The comparative energy chart compares the energy produced at the site during corresponding periods in previous years. You can select to compare months or quarters of different years, or even entire years' output.

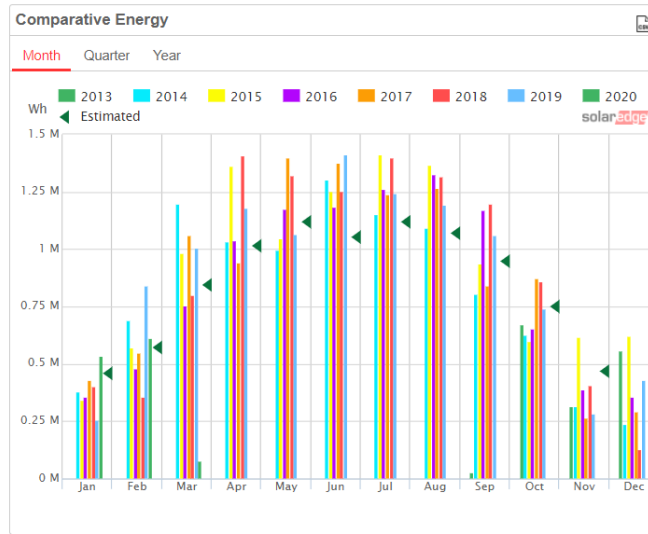


Figure 12: Comparative Energy Chart

## Site Details

The site details box displays general information about the site - status, ID, name, location, date installed, date the information was last updated, and the site's peak power.

If an EV charger or smart energy products are connected in the site, an indication for each one will also be displayed.

Site Status	
ID	28898
Name	Maisach 1
Address	123 Maisach lane, Maisach
Installed	03/27/2013
Last Updated	03/04/2020 13:31
Peak Power	8.82 kWp

Figure 13: Site Details

## Weather

The Weather area shows the current weather conditions together with other details as well as the forecast for the next few days. This information may be helpful when estimating future power production levels.

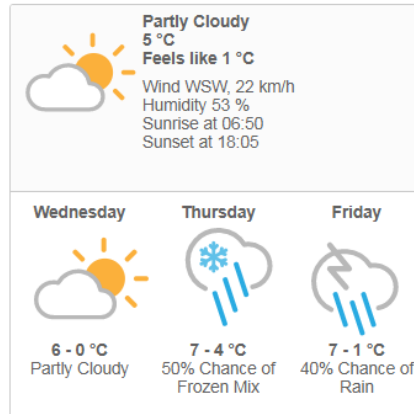


Figure 14: Weather

## Environmental Benefits

The environmental benefits area shows the accumulated impact that non-renewable energy producing methods would have had on the environment had they have been used to produce the amount of energy generated by this site. To learn how the environmental benefits are calculated [read our dedicated technical note](#).

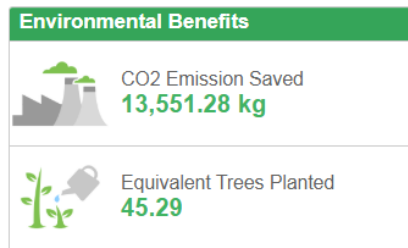


Figure 15: Environmental Benefits

# Layout

## Overview

The layout window shows a schematic outline that represents inverters, their strings and the modules in each string. Near-real-time performance data is displayed for these components.



To view the layout, select a site and click the **Layout** icon in the top-left corner of the screen.

Use the layout to:

- View the latest performance of specific components.
- Compare and analyze the performance of various components, such as modules.
- Pinpoint the location of alerted components.
- See how components are connected to each other.

The layout offers both physical layout and logical layout views, as follows:

- Physical layout: Shows a bird’s eye view of the actual placement of each component in the site, including inverters, clusters, strings and modules.
- Logical layout: Shows a schematic logical view of the components in the site, meaning inverters, clusters, strings, modules and their electrical connectivity.

## Physical Layout

The physical layout schematic shows a layout of the components in the field: inverters, clusters, strings, modules and their physical arrangement in the site. This layout offers a virtual bird’s eye view of the system’s components and their location, which functions as a usable tool for troubleshooting maintenance problems.



Figure 16: Physical Layout

When in the physical layout window, click the **Physical layout** button in the toolbar and select logical layout to display the logical layout schematic.

If a physical layout was not created for the site, the logical layout will be the default view.

## Elements in the Physical Layout Schematic

A sample physical layout schematic is shown in the figure below:

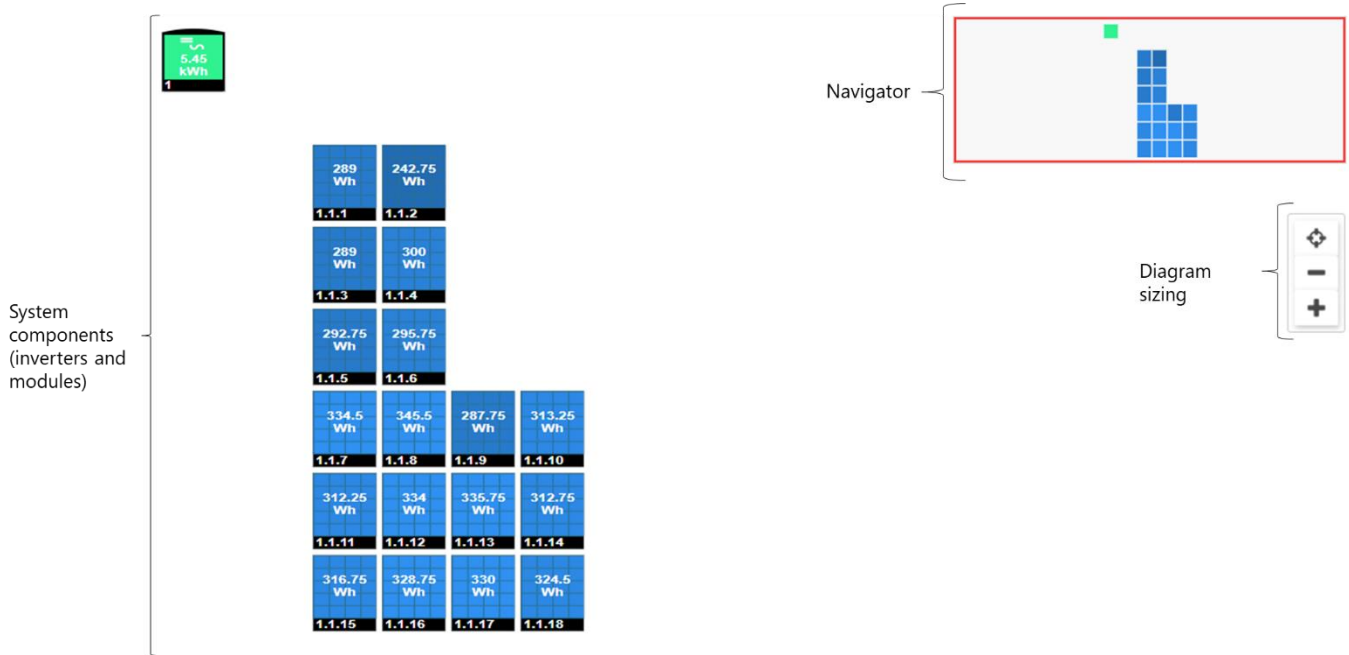


Figure 17: Elements in the Diagram

For each system component in the layout diagram (inverters and modules), the following information is displayed:

- **Amount of Energy:** Indicates the energy produced by this component and its underlying components in the period chosen above the diagram.
- **Color Code:** In the layout schematic, all the elements of the diagram are color coded according to the amount of energy they have produced in the timeframe specified by the buttons in the [toolbar](#).

The color-coding is comparative, that is, a module which has produced the most energy over the selected timeframe is displayed in light blue, while a module which has produced less energy is darker.

The color-coding is also normalized, so the modules' color is relative to their full capacity. For example, a 300W module is the same color as a 400W module, when both produce the same percentage of their full capacity. Normalization is also in accordance with the number of power optimizers connected to each string.

## Diagram Sizing

The layout diagram can be fitted to your viewing needs:

- **Zoom in/out:** Make the diagram smaller or larger. Click the + button to zoom in or the - button to zoom out. When using a mouse, you can also use the wheeling scroll to zoom in or out.
- **Fit to screen:** Resizes the display of the diagram to fit in the screen

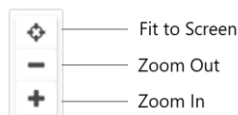


Figure 18: Diagram Sizing Options



## Navigator Tool

The Navigator tool at the top right-hand side of the window indicates the area displayed in the diagram using a red frame. When zooming in the layout, the red frame can be dragged to display other areas in the layout.

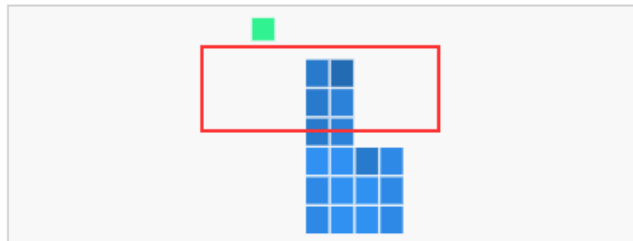


Figure 19: Navigator Tool

## Logical Layout

The Logical Layout shows a schematic logical layout of the components in the site: inverters, strings, modules and their electrical connectivity. This layout displays a logical view of the installation site, showing which modules are connected in each string, which strings are connected to each inverter, etc.

The following diagram displays the Logical Layout of the installation whose Physical Layout was shown above:

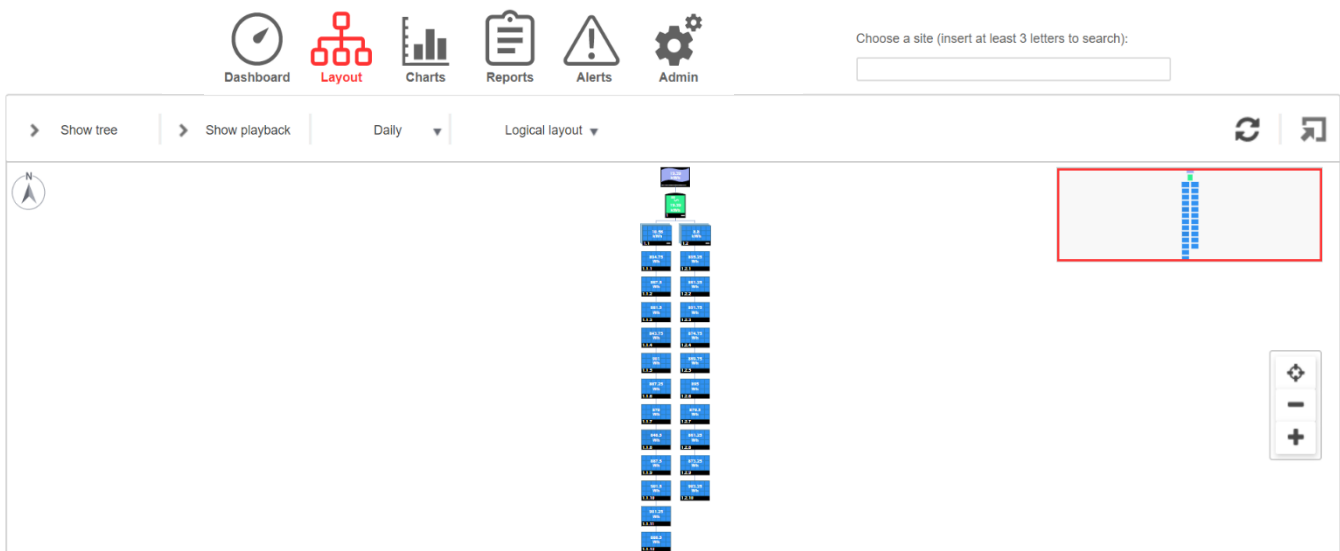


Figure 20: Logical Layout





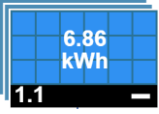
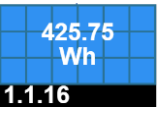
### NOTE

The Layout schematic automatically zooms in or out, based on the number of components displayed in the window.

When in the Logical Layout window, click the **Logical layout** button in the toolbar and select Physical Layout to display the Physical Layout diagram.

Both windows show the inverter with its associated strings and modules.

## Component Types

Component	Description
	<b>Site:</b> Represents the site level. Displays the energy produced by the site for the selected period.
	<b>Inverter:</b> Represents an installed inverter. Displays the energy sum produced by the strings or modules connected to it.
	<b>String:</b> Represents strings of modules. Displays the energy sum produced by the modules comprising the string.
	<b>Module:</b> Represents a single module. Displays the energy produced by the module.

## Component Options

For each component in the layout diagram, the following options can be selected by right-clicking the component:

- **Info:** Provides a window with details table for the selected component. For more information, see the [Component Details](#) section.
- **Alerts:** Redirect you to the alerts tab and displays all alerts related to the selected component.
- **Choose Charts:** Select a chart type to display for this component. This action will redirect you to the Charts tab.
- **Collapse/Expand:** Expand or collapse the selected components in the diagram, thus hiding or showing its underlying component hierarchy.

Large-scale site installations may contain thousands of modules. To enable simple site navigation, the SolarEdge monitoring platform enables the user to expand or collapse each hierarchical group of elements, one at a time. For example, expanding the inverter level shows all its connected modules.

- **View Device Screen (only for inverters):** View the inverter LCD Display in real-time. For SetApp enabled inverters, the LCD display will present the current inverter status.

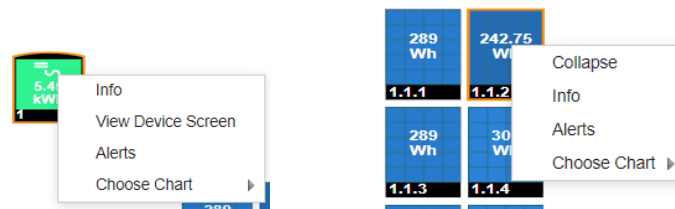



Figure 21: Component Options

## Component Details

For each component or multiple components in the layout, e.g. inverters and modules, you can display its up-to-date details and performance data, such as the last power output measured.

→ **To view component details:**

1. Select one or more components of the same type in the diagram (for example, only modules or only inverters). You can use Ctrl + Click to perform multiple selections. Modules from different strings can be selected, as well as strings from different inverters. Alternatively, you can use the mouse to draw and drag a selection box around the components whose details you want to display.
2. Right-click the selected components and select **Info**, or click  on the toolbar
3. Use the table information for near-real-time comparison of component performance, in order to troubleshoot faults and find their root cause, for example, checking which strings are producing less energy and locating the individual modules in those strings that may cause this situation.

## Inverter Details

When the selected component is of inverter type, inverter-related information is displayed in the window, as shown below.

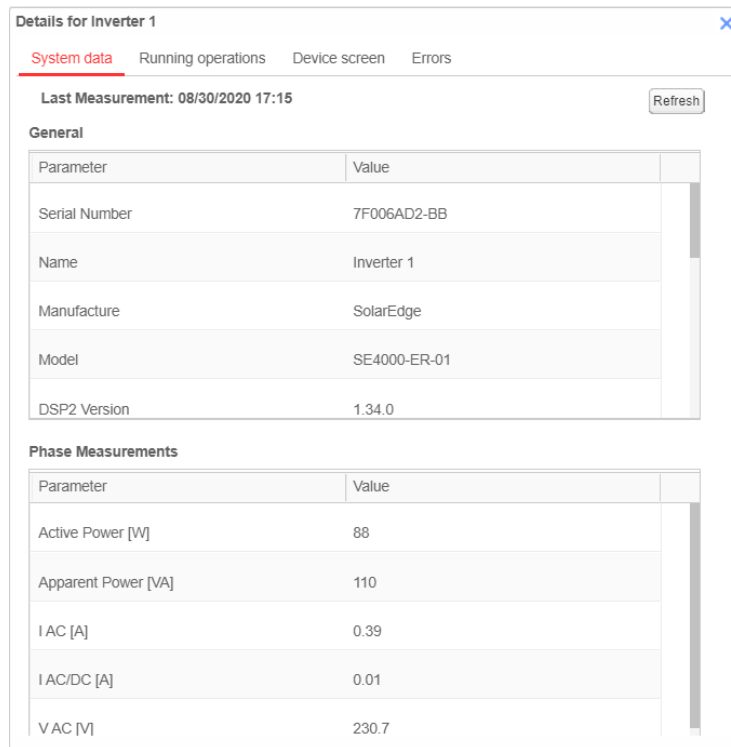


Figure 22: Inverter Details Window

### System Data

The Inverter Details tab displays by default the System data tab. This tab displays the most recent readings taken by the inverter, including the date and time they were taken. The following parameters are measured and shown for the inverter:

Parameter	Description
Serial Number	A unique identifier of this component.
Name, Manufacturer, and Model	Identifying information assigned to this component.
DSP 2 Version, Communication Board (CPU) Version, DSP1 Version	The firmware versions currently installed on the inverter.
Country Name, Country Code	Inverter country settings.
I RCD [mA]	RCD Current, measured in Amps.
Inverter Status	Current production status of the inverter.
Last Isolation Value [KOhm]	Inverter isolation value, measured in Kilo-Ohms.
P AC [W]	Inverter output power / inverter AC power, measured in Watts.
Power Limit [%]	Inverter output power limit, measured in percentage.
V DC [V]	Inverter DC voltage, measured in Volts.
Active Power [W]	Inverter active power, measured in Watts.
Apparent Power [VA]	Inverter Apparent Power, measured in VA.
I AC [A]	Inverter output current/inverter input current, measured in Amps.
I AC/DC [A]	Inverter out DC current, measured in Amps.
V AC	Inverter output voltage / inverter AC voltage, measured in Volts.

## Running operations

This tab displays the operations currently being executed remotely on the inverter (e.g. reset, pairing).

## Device screen

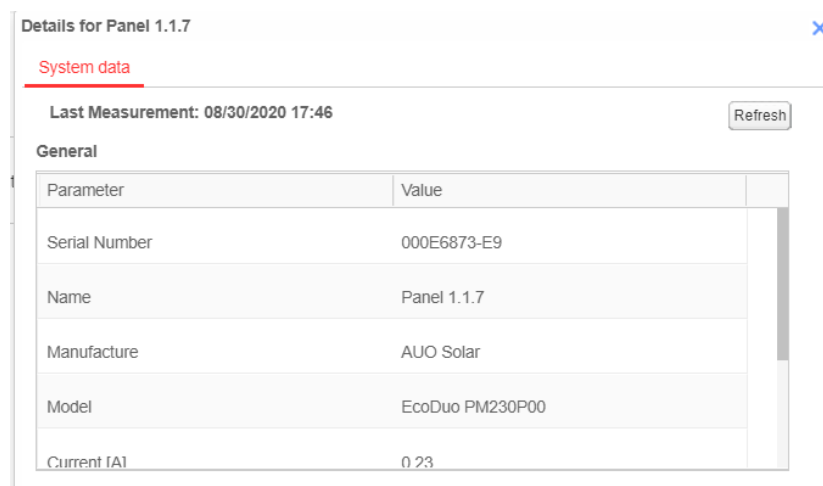
This tab presents the data currently shown on the LCD Display. For SetApp enabled inverters, the LCD display presents the current inverter status.

## Errors

This tab allows you to view any errors related to the selected inverter.

## Module details

When the selected component is of module type, module-related information is displayed in the window, as shown below.



The screenshot shows a window titled "Details for Panel 1.1.7" with a close button (X) in the top right corner. Below the title is a red underlined tab labeled "System data". Underneath, it displays "Last Measurement: 08/30/2020 17:46" and a "Refresh" button. A "General" section follows, containing a table with the following data:

Parameter	Value
Serial Number	000E6873-E9
Name	Panel 1.1.7
Manufacture	AUO Solar
Model	EcoDuo PM230P00
Current [A]	0.23

Figure 23: Module Details Window

**System data**

The information window includes a single tab – System data. This tab provides the most recent module readings, including the date and time they were taken. The following parameters are measured and shown for the selected module:

Parameter	Description
Serial Number	A unique identifier of this component.
Name, Manufacturer, and Model	Identifying information assigned to this component.
Current [A]	Module output current/inverter input current, measured in Amps.
Optimizer Voltage [V]	Power optimizer output voltage, measured in Volts.
Power [W]	Module output power / inverter AC power, measured in Watts.
Voltage [V]	Module output voltage / inverter AC voltage, measured in Volts.

**Actions in multiple components details window**

When selecting multiple components, the following actions can be performed in the details window:

- a. **Enlarge.** Fit the details window to the entire screen
- b. **Export to Excel.** Save the component details in Excel format
- c. **Copy to Clipboard.** Copy the data as text

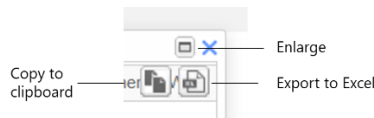


Figure 24: Details window actions

**Toolbar**





The toolbar of the layout schematic provides options as described in the table below.

Icon	Description
➤ Show tree	<b>System components tree:</b> Displays all components in the system according to their level. Click on a component to view its location in the layout schematic.
➤ Show playback	<b>Show playback:</b> dynamically visualizes the power production of a site during a selected time fragment (either a day or a week).
Daily ▼	<b>Timeframe Selection list:</b> Select a timeframe in which to display the energy production by each component in the layout.
Logical layout ▼	<b>Physical / Logical Layout:</b> Displays the Physical or Logical Layout Schematic for the entire site. Selected components remain selected when moving between the different layouts.
	<b>Hierarchy:</b> Use the Hierarchy button to display the modules connected to each inverter.
	<b>Show/Hide Preview:</b> Shows or hides the Navigator tool, as described in the <a href="#">Navigator Tool</a> section.
	<b>Refresh:</b> To refresh the Layout Schematic and Component Detail table, click this icon.


## Playback

The Playback dynamically visualizes the power production of a site during a selected time fragment (either a day or a week).

To open the playback viewer click **Show Playback**  Show playback  on the window's toolbar. The playback viewer is displayed.



**Figure 25: Playback Viewer**

- Choose **Normal** or **Accelerated** for the playback speed.
- Click  to show how the modules' energy production changes in time, represented by the [color code](#) detailed earlier.
- Drag the slider along the timeline to focus on a chosen time fragment.

The resolution of the playback data is 15 minutes.

## Support Contact Information

If you have technical problems concerning SolarEdge products, please contact us:



<https://www.solaredge.com/service/support>

Before contact, make sure to have the following information at hand:

- Model and serial number of the product in question.
- The error indicated on the SetApp mobile application, LCD screen, on the monitoring platform, or as displayed by LEDs, if there is such an indication.
- System configuration information, including the type and number of modules connected and the number and length of strings.
- The communication method to the SolarEdge server, if the site is connected.
- The product's software version as it appears in the ID status screen.



**solar**edge