

# Digital Twin in SolarEdge ONE for C&I - Application Note

## Revision History

Version 1.0, August 2024: Initial Version

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## SolarEdge ONE for C&I overview

SolarEdge ONE for C&I is an orchestrated platform for monitoring and managing PV fleets, storage, EV-charging stations, and load optimization. You can optimize all your energy assets using live data analytics to achieve cost savings.

## Digital Twin overview

The Digital Twin tool displays a digital, visual representation of your site. It enables you to do the following:


- View data at the module level.
- Inspect and analyze the site and its components.
- Perform remote commands on all devices located at the site.

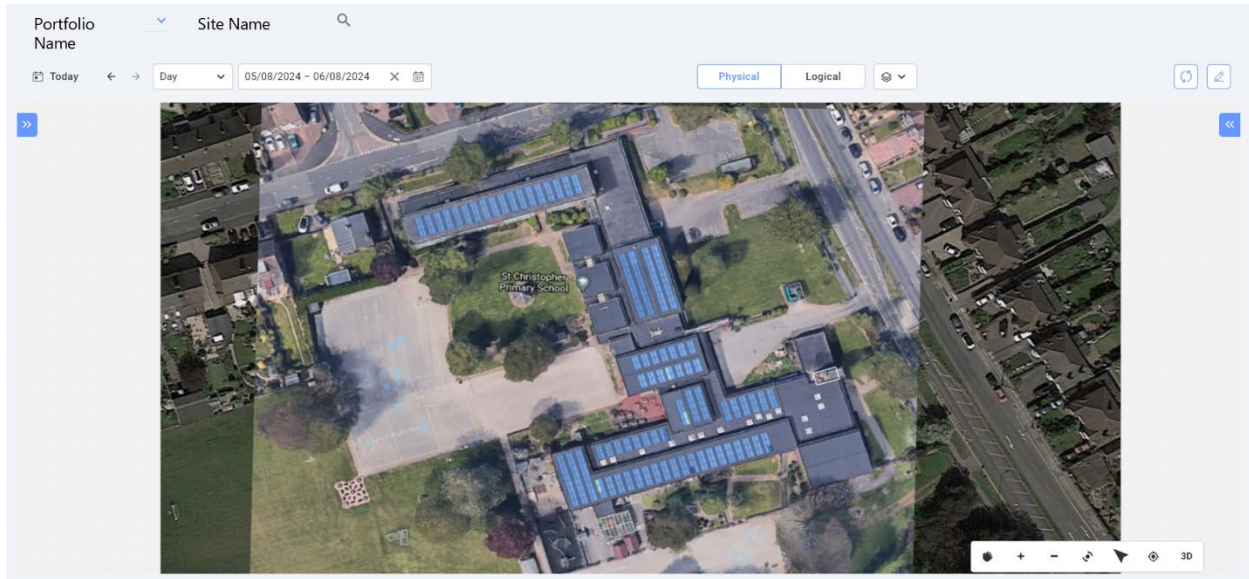
It is connected to the [SolarEdge Designer Tool](#) where you plan, build, and validate your SolarEdge commercial systems.

Refer to [Using the Site Layout Editor in the Monitoring Platform Application Note](#) and the [Editing a site layout in the SolarEdge monitoring platform video](#) for further information on how


to create, edit and map your site.

To open the Digital Twin dashboard:

1. Log in to the [Monitoring platform](#).
2. To access your site, click the **SITE NAME**.  
The **ONE** for **C&I** dashboard is displayed.
3. On the **Main Menu**, click .  
The **Digital Twin** dashboard is displayed.

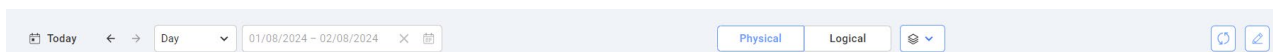


To change your portfolio or site name:






From the **Search**  dropdown lists, select from the options available, or type in the names of the portfolio and site you are searching for.

## Dashboard information

### Dashboard ribbon



On the dashboard, select from the following:

-  **Time period:** Day, Week, Month, Year, or customize the dates in the date calendar.
-  **Physical:** Select to view the [Physical](#) layout of your site.
-  **Logical:** Select to view the [Logical](#) layout of your site.
-  **Layers:** From , select which of the following layers you want to view on your site:

- **Data layers:** Alerts and Temperature



**NOTE**



Temperature can only be viewed in the **Day** time period.

- **Visual layers:** Obstacles, Roof Edges and Satellite





#### NOTE


Roof Edges can only be viewed in 2D.

- **Refresh:** If you make any changes in Layout Editor to your site, such as adding or replacing a device, or adding an obstacle, click . The layout is updated.
- **Layout Editor:** Click . This redirects you to the [Layout Editor](#), where you edit your site.

## Device tree

 Site Name

No filters defined 

Search component name or SN 

- >  Inverter 1 (7E0D8F76-90)
- >  Inverter 2 (7E09F094-0B)

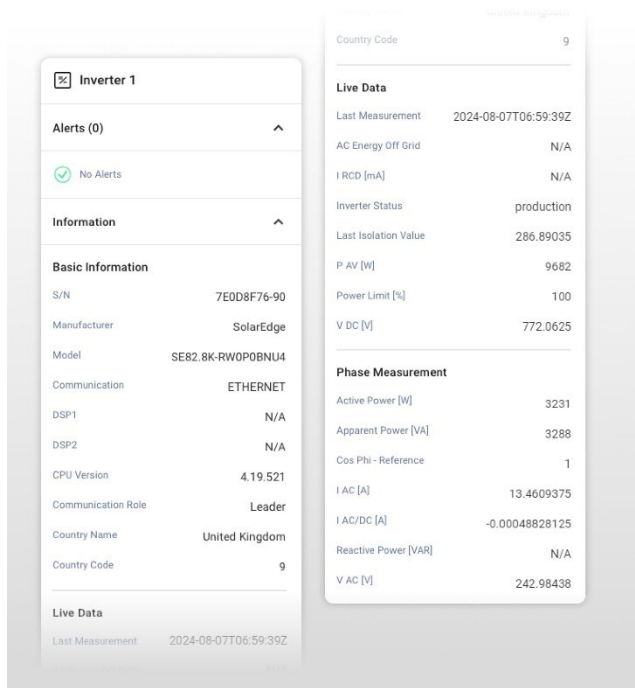
On the Device tree you search for all devices on site. You select devices in the following ways:

- In the **filter** field, select the dropdown list to filter by device.
- In the **Search component name or SN** field, type the device name or serial number.
- From the dropdown list, select the device.
- Click a device on the Physical or Logical layout and the device tree automatically highlights that device.

If the device tree is not displayed, click  to expand.

## Side panel

This following image is a representation of a side panel:



The Side Panel displays information on each device at your site.

**To view device information on the side panel:**

Click the device in the device tree, or click the device on the Physical or Logical layout of the site. The side panel automatically displays the device's information.









If you select other devices on the device tree or in the layouts, the side panel updates automatically.

If the side panel is not displayed, click  to expand.

## Tooltips

**To view Tooltips for modules and optimizers on your site:**

Hover your cursor over a panel, a tooltip appears with the following information:









-  The number of optimizers per module, for example, 1 optimizer for 2 panels.
-  The tilt 
-  The azimuth 
-  The name of the manufacturer
-  The model type
-  The serial number

## Alerts

## Navigation controls



The following navigation controls are available on the Physical layout:

- <sup>2D</sup> **Camera mode:** Click 2D to view a 3D view of your site, click 3D to view the site in 2D. 2D is the default mode.
-  **Reset view:** Resets your site back to its original orientation.
-  **Point north:** Sets your site to point north.
-  **Rotate the view:** Rotates your site, to view it from different angles. Click  again to stop rotating.
-  **Zoom:** Zoom out of your site.
-  **Zoom:** Zoom into your site, until you view [dynamic data layers](#) on each module.
-  **Pan:** Navigate the view of your site. Click  again to stop navigating.

### NOTE

Logical layout includes the following navigation controls:



## Dynamic data layers

There are two data layers:

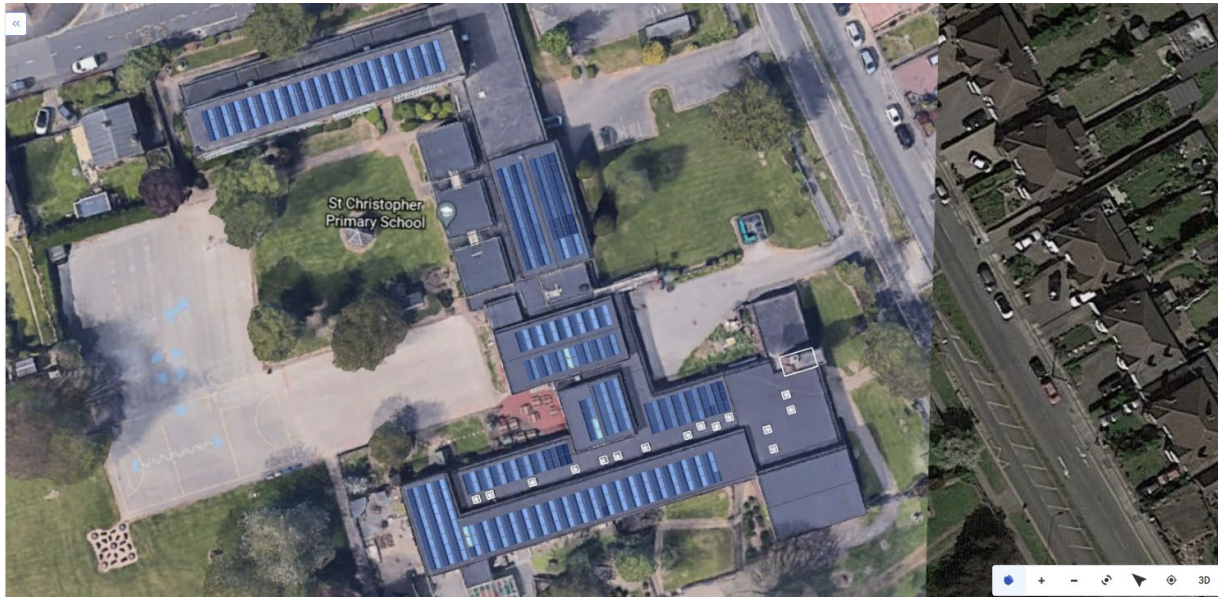
- **Energy Layer:** Displays the amount of energy produced by each optimizer. This is the default layer.
- **Temperature Layer:** Displays an optimizer's maximum daily temperature.

Dynamic data layers display cumulative data for optimizers, and updates every five minutes. You can view the energy layer in daily, weekly, monthly, yearly or custom views by changing the time period in the [dashboard ribbon](#).

To view the Temperature layer:

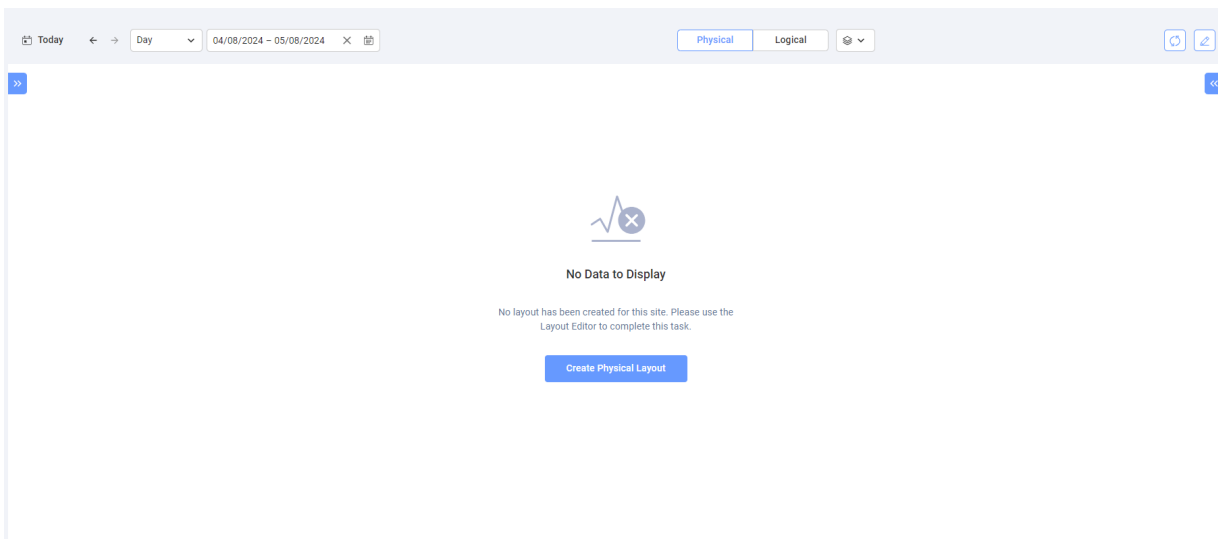
From the **Layers** options on the dashboard ribbon, select **Temperature**.

## Physical layout



Physical layout is a physical representation of your site. It enables you to view the placement of each component on site and to view module level data.

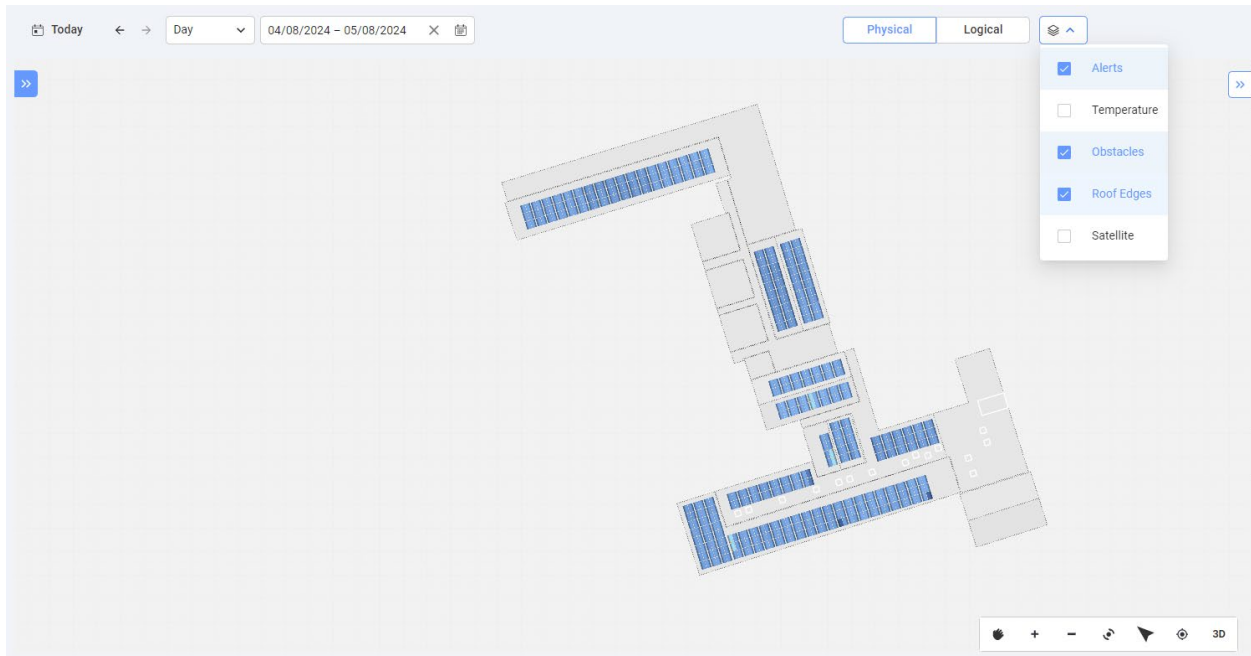
If your site does not have a Physical layout, the following information is displayed:



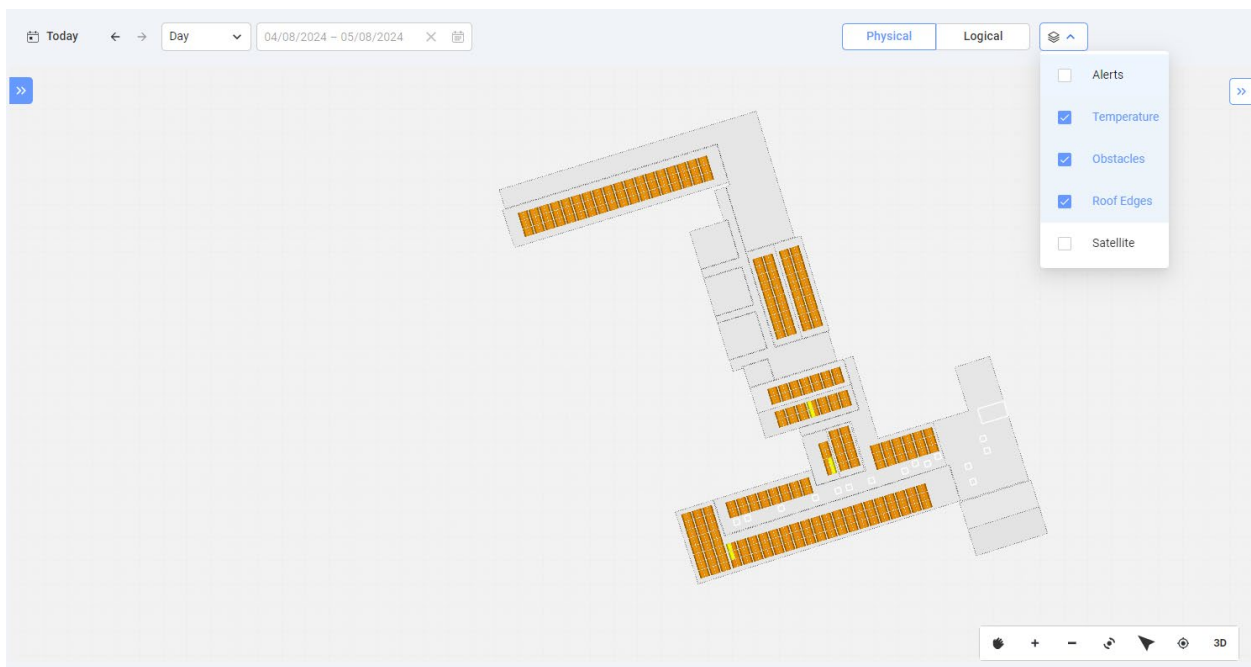
Click **Create Physical Layout**. You are redirected to the [Layout Editor](#) where you create a physical layout of your site.

## Examples of different Physical layouts

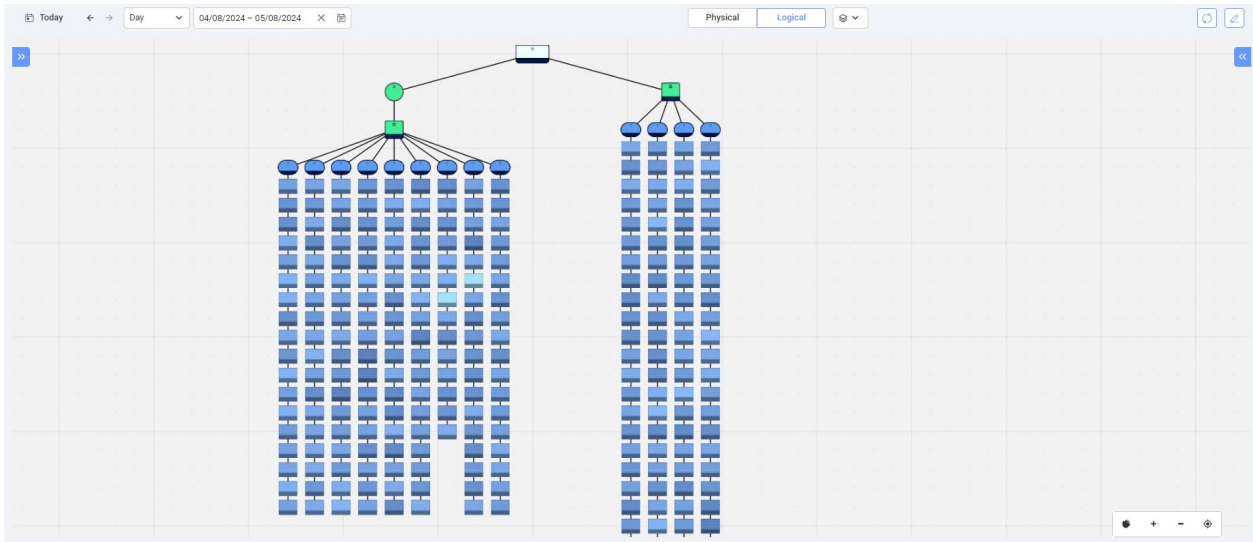
The following image is an example of an energy layer, with the satellite layer removed.



The following image is an example of a temperature layer, with the satellite layer removed.



## Logical Layout



Logical layout is a dynamic, single-line diagram, that represents the site’s logical connections. The following system components can be viewed on logical layout:

- Site:
- Meter:
- Inverter:
- Module:
- String:

**NOTE**  
You can only view Logical layout in 2D.