



SolarEdge DC-Optimized Technology Better by Design



SolarEdge Home is the future-ready smart energy ecosystem that gives you control of your energy day and night. SolarEdge Home offers a better way to produce, store and manage energy in PV systems, from inverters and batteries to EV chargers, backup and smart energy devices.

More Energy

- Optimized energy output per module
- A full DC-coupled solution
- Record-breaking system efficiency

Complete Home Energy Management Solution

- Smart connectivity capabilities
- Easily extend all your energy needs with our future-ready capabilities
- Control of PV production, storage, EV charging, and smart energy devices, all from a single app

Extended Reliable Backup

- Get more power, resilience, and backup runtime, giving you peace of mind during short and prolonged outages
- Partial-to-full home backup
- Multi-day backup

#1 Solar Inverter Company*

- Up to 25-year warranty
- SolarEdge has operated in the UK since 2010 (~80K PV systems and ~7K batteries were installed through to September 2023)
- Publicly traded on NASDAQ
- Leader in safety with a per-module heat detection
- Complies with the stringent European and American safety and data-protection standards

* In revenue, excluding China; Including China, #1 inverter company globally by revenues 2018-2021 and #2 in 2022.
Source: IHS PV Market Tracker Q1 '23

Optimizing Solar Power in Everyday Life

SolarEdge's inherent DC Optimized technology advantage enables homeowners to harvest more energy, store it more efficiently and use more of it than AC-coupled system architecture.

Harvest More Energy

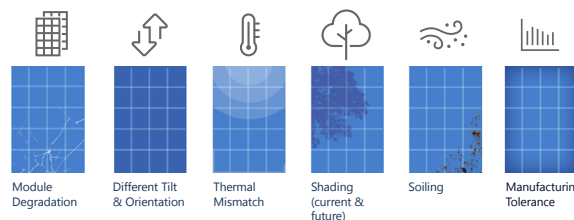
When it comes to getting the maximum solar energy from a solar system, SolarEdge's DC-optimized technology harvests more energy than string systems.

With string systems, when one or more of the modules are under-performing due to everyday occurrences, like shade, dust, leaves and snow, the production output of the entire row of modules will drop to the level of the lowest performing module. This means that homeowners aren't getting the maximum amount of solar power.

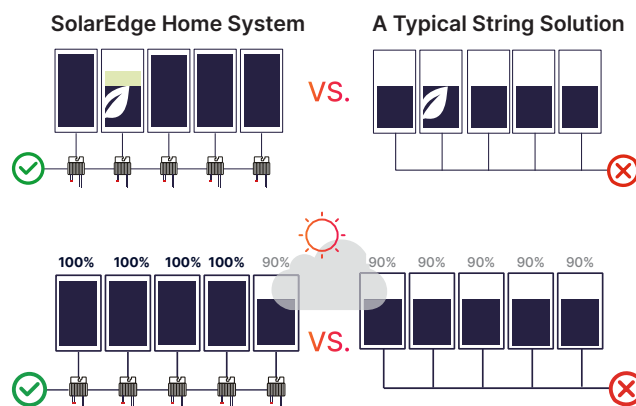
With SolarEdge technology, the lowest performing module will not lower the overall performance of the rest of the modules in the row. **This means that with SolarEdge, each module produces at its maximum ability at all times, ensuring greater energy yield from the entire system.**

More energy = more savings on your energy bill.

Types of Module-mismatch



The "Weakest Link" Penalty:



More energy harvested with SolarEdge DC-optimized technology

SolarEdge Solution	A Typical String Solution
★★★★★	★★★
More energy – full module-level optimization using Power Optimizers. Mitigates module mismatch and minimizes power losses	Energy loss – no module-level optimization. Performance is limited to the lowest producing module on the string. Module mismatch can occur
Full visibility & monitoring in real-time of module level performance	Limited module-level monitoring – no real-time data on module performance & safety
Simplified design – possibility of multiple module types and orientations in each string, long and uneven strings	Limited design flexibility – design restrictions significantly limit system layout and size
Advanced safety features – Sense Connect, Arc Fault Circuit Interrupter, SafeDC™	Typically have limited safety features

Store More Energy

SolarEdge Home highly efficient DC-coupled batteries store excess solar energy for powering the home when rates are high or at night. When installed with our SolarEdge Home Backup Interface, they provide reliable backup power during outages*.

In addition, our batteries raise the bar on system efficiency, safety, and ease of use – making them an essential part of any SolarEdge Home installation.

- **Reduce electricity bills** – Save money by storing excess solar energy for use when rates are high.
- **Stay powered up** – Enjoy reliable backup power during outages.
- **Take control of your energy usage** – Monitor and manage your energy production and consumption with a single, easy-to-use app.
- **Peace of mind** – Industry long standing product warranties and the #1 solar inverter company**.

* Backup applications are subject to local regulations and require connection with SolarEdge Home Hub Inverter and the SolarEdge Home Backup Interface.

** In revenue, excluding China; Including China, #1 inverter company globally by revenues 2018-2021 and #2 in 2022. Source: IHS PV Market Tracker Q1 '23"

More energy gained with DC-coupled technology

SolarEdge Solution	A Typical String + AC-Coupled Solution
★★★★★	★★
Minimized clipping (= more available power) for maximized output due to cutting edge DC-coupled technology	More clipping (= less available power) and excess DC production is lost due to AC-coupled technology
More oversizing – more opportunity to harvest, store and use more power (~200% oversizing)	Less oversizing – less opportunity to harvest, store and use power (up to ~150% oversizing)
Battery energy is saved with only 1 DC-AC conversion. DC-coupling allows more oversizing and less clipping	Battery energy is lost with 3 DC-AC conversions. AC- coupling does not allow storage of clipped energy, relies on surplus PV energy
Higher round-trip system efficiency (including battery)	Lower round-trip system efficiency (including battery)
100% Higher power output range of inverters – up to 10kW	Maximum power output of inverters is only up to 5kW , meaning the whole system is limited to 5kW energy production
Higher capacity (9.7kWh) – ability to power more home appliances simultaneously and for longer periods of time, while saving money and avoiding overloading or overheating	Lower capacity (up to 9.5kWh)



SolarEdge Home Real-Life Scenario of a Typical UK Home

Let's picture a typical home in the UK with 12 × 370W modules installed on the roof, 4.44 peak sun hours a day on average, and consuming 10kWh on average daily.



Why Choose SolarEdge Home?

When comparing our system's performance to a typical string solution with an AC-coupled battery, both oversized by **~140%***

With SolarEdge, you can get up to **20 days more energy** every year, which equals up to **£693 savings** per year!

And, if you oversize your SolarEdge system by **200%**, you can get up to **50 days more energy** every year, which equals up to **£1434 savings** per year! **

* Percentage is based on common system use case in the UK.

** Based on simulation performed by SolarEdge during 2023.

SolarEdge Home Advanced Backup Solution

Designed for seamless integration, our home backup solution enables solar power to flow 24/7.

- Defines essential appliances to keep the power on longer during an outage
- Sets battery levels for partial or whole home backup
- Scalable solution by adding multiple batteries for additional backup power and duration
- Designed to control large appliances with SolarEdge Home Load Controller, to prevent the system from tripping
- Reliable backup power: In an outage, it enables SolarEdge Home Battery to enter a standby state to preserve its energy for longer periods

Extended reliable backup with SolarEdge full home backup solution

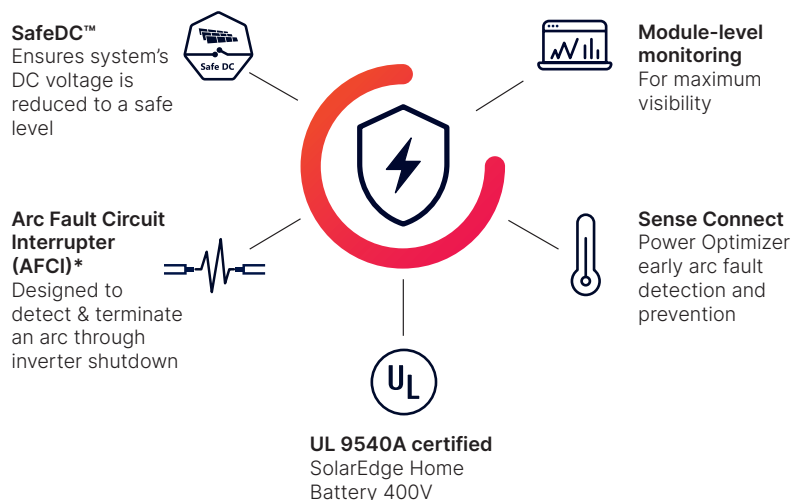
SolarEdge Solution	A Typical String Solution
★★★★★	★★★
Partial-to-full home backup – as per customer's choice and changing needs	Basic home backup – inability to fully control all generation devices
Installing battery with the SolarEdge Home Backup Interface at the same time is not mandatory . Allows future scaling up, and/or change in preferences after initial installation	In a combined solution of battery + inverter + backup, the backup unit must be installed at the same time with the battery
Multi-day backup (up to 20 days in a row), allows PV to charge the battery	No multi-day backup capability – meaning less available backup time every day and depending on battery capacity
A full ecosystem from one vendor, with the ability to completely control the import and export of energy. Fully compliant with G100 Issue 2, Amendment 2 UK regulation	Not a full ecosystem from one vendor - relies on all third party vendors to provide separately and conjoined, compliance with G100 Issue 2, Amendment 2 regulation

The One-Stop-Shop That Places Safety First

SolarEdge's safety suite complies with the most stringent international safety standards, often going beyond existing industry requirements.

SolarEdge pioneered built-in connector temperature monitoring (**Sense Connect technology**) which detects and prevents system's potential arcs. This combined with SolarEdge's **SafeDC™ Technology** & **Arc Fault Circuit Interrupter (AFCI)*** means the system can be shut down automatically.

Our system is designed to provide rooftop safety using module-level monitoring in real-time and provide alerts.



* For inverters compliance compatibility, please refer to the following app note:
https://knowledge-center.solaredge.com/sites/kc/files/arc_fault_detection_application_note.pdf

SolarEdge - One Trusted Vendor

SolarEdge Solution	A Typical String + AC-Coupled Solution
★★★★★	★★
Advanced safety suite with built-in SafeDC™ and patented Sense Connect* features - TNO Validated!	Typically have limited safety features
Easy to upgrade No extra work needed on the AC distribution board, DC-coupled enables easy connection of a battery	Hard to upgrade Requires upgrades for the AC distribution board **, AC-coupled makes it more complicated to connect a battery
25 year warranty on Power Optimizers, 12-25 year warranty on inverters	Only 5-10 year warranty on inverters
Remedies under warranty do not decrease over time	Remedies under warranty decrease over time , according to compensation scheme, which factors-in battery age
All manufactured by one vendor , SolarEdge Home complies with the highest safety standards including G100 Issue 2, Amendment 2	Having several third party manufacturers connected on one site each with separate G100 control can complicate installations, and can lead to lockout periods on certain devices

* Requires a firmware version upgrade available in our S-Series Power Optimizers.

** When adding batteries to the system.

SolarEdge Home Portfolio



Rv: 2023/12/V01/UK



SolarEdge Home is a smart energy ecosystem that enables homeowners to control and optimize their energy production, consumption and storage with a single app. Using its own Operating System, SolarEdge Home manages the home's solar and grid power 24/7 to minimise electricity costs and maximise savings. In addition to SolarEdge Power Optimisers, inverter and battery, the solution includes a complete portfolio of smart energy devices so homeowners can grow their ecosystem as their energy needs evolve.



SolarEdge

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