

SolarEdge Residential Offering for Installers



solar**edge**

Content

04	SolarEdge Fact Sheet
06	The Complete SolarEdge Residential Solution
08	More Energy from Each Panel
10	Superior Safety
12	Design Flexibility
13	Peace of Mind
14	Single Phase Inverters with HD-Wave Technology
15	Three Phase Inverters for Residential Installations
16	EV Charging Single Phase Inverter
18	Single Phase Inverters with Compact Technology
19	The New Standard in Inverter Commissioning
20	Full Monitoring of PV and StorEdge Systems
21	Monitor Home Consumption with a SolarEdge Energy Meter
22	The StorEdge Solution: Enabling Energy Independence
24	Maximising the Homeowner's Solar Investment with StorEdge
26	Basic StorEdge DC-Coupled Applications
28	Advanced StorEdge Configurations
30	StorEdge Case Study: Increasing Self-Consumption
32	Smart Energy Products
34	Export Limitation Solution
36	Faster, Easier PV System Design
37	Working with SolarEdge
38	Residential Product Offering
40	SolarEdge Ordering Information

SolarEdge Fact Sheet

About us

In 2006, SolarEdge invented an intelligent inverter solution that has changed the way power is harvested and managed in PV systems. Today, we are a global leader in smart energy technology. By deploying world-class engineering capabilities and with a relentless focus on innovation, we create smart energy products and solutions that power our lives and drive future progress.

Vision

We believe that continuous improvement in the ways we produce and consume energy will lead to a better future for us all



Bankability

- Approved by major banks and financial institutions worldwide
- SolarEdge (SEDG) is traded on NASDAQ
- Our financial strength and stability, combined with our cutting-edge technology, has propelled us to become one of the largest residential inverter manufacturers in the world

Global outreach

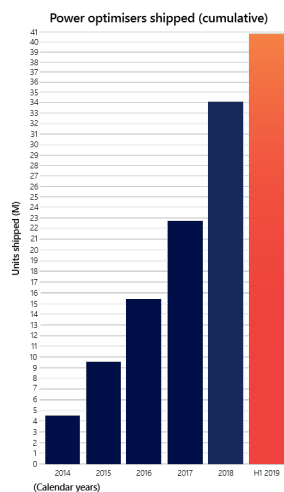
- Systems installed in over 130 countries across five continents
- Sales via leading integrators and distributors
- Follow the sun call centers
- Local teams of sales, service, marketing, and training experts
- Global manufacturing capabilities with tier 1 electronic manufacturing service companies



Received nearly 30 awards from prestigious organisations including Red Herring, Frost & Sullivan, Intersolar, the Stratus Award, and the Edison Awards™

Shipping since 2010

- Over 1.5 million inverters shipped worldwide
- SolarEdge's monitoring platform continuously tracks over a million installations across the globe



Corporate social responsibility

- As an industry leader in renewable energy technologies, SolarEdge strives to limit the harmful effects of traditional energy sources by promoting the spread of clean, sustainable energy around the world
- SolarEdge is in full compliance with international standards on quality and control, ethical conduct and environmental protection



Patents

SolarEdge has a vast portfolio of intellectual property, with hundreds of awarded patents and patent applications

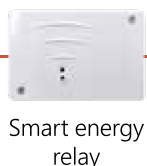
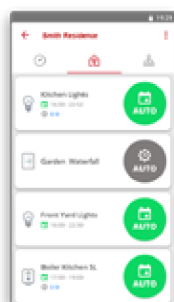
Product reliability

- 25-year power optimiser warranty and 12-year inverter warranty, extendable to 20 or 25 years
- SolarEdge products and components undergo rigorous testing, and have been evaluated in accelerated life chambers
- Reliability strategy includes proprietary application specific ICs (ASIC)

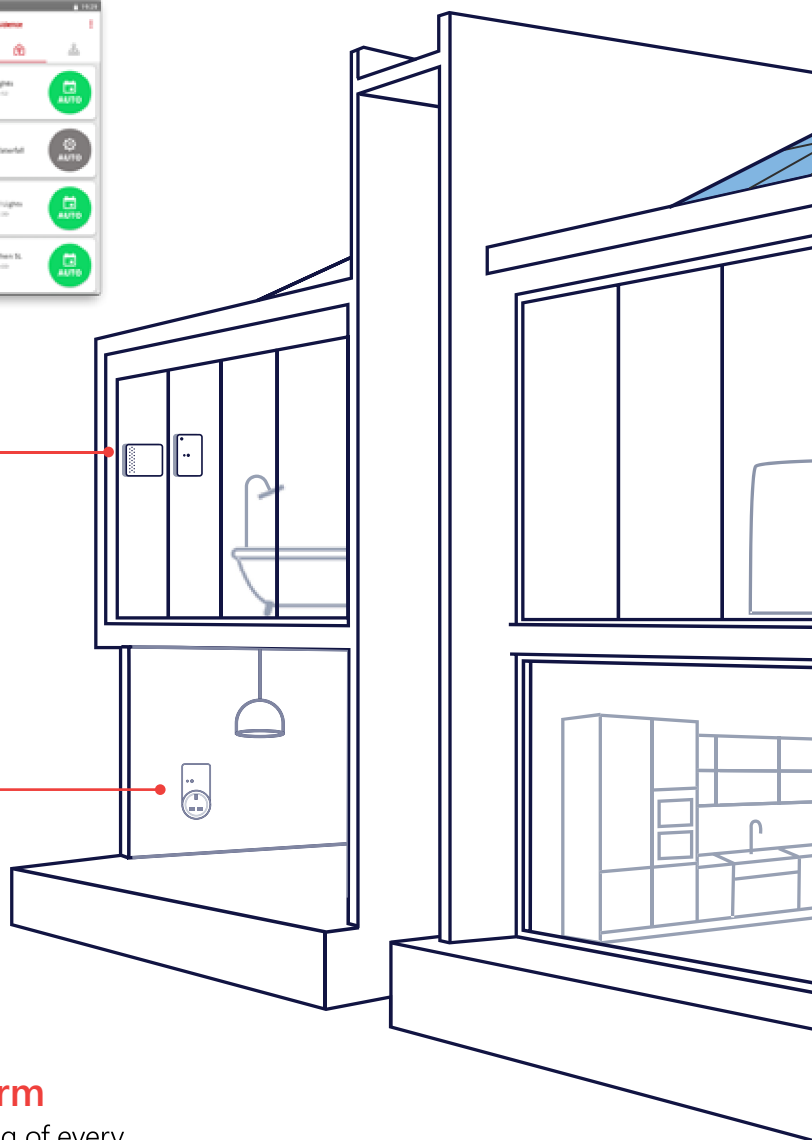
The Complete SolarEdge Residential Solution

Smart energy

- Utilise excess solar energy to power heat pumps, to heat water, or to power lights and other home appliances
- Automatic, on-the-go control of smart devices via SolarEdge's monitoring platform



Smart energy socket



Monitoring platform

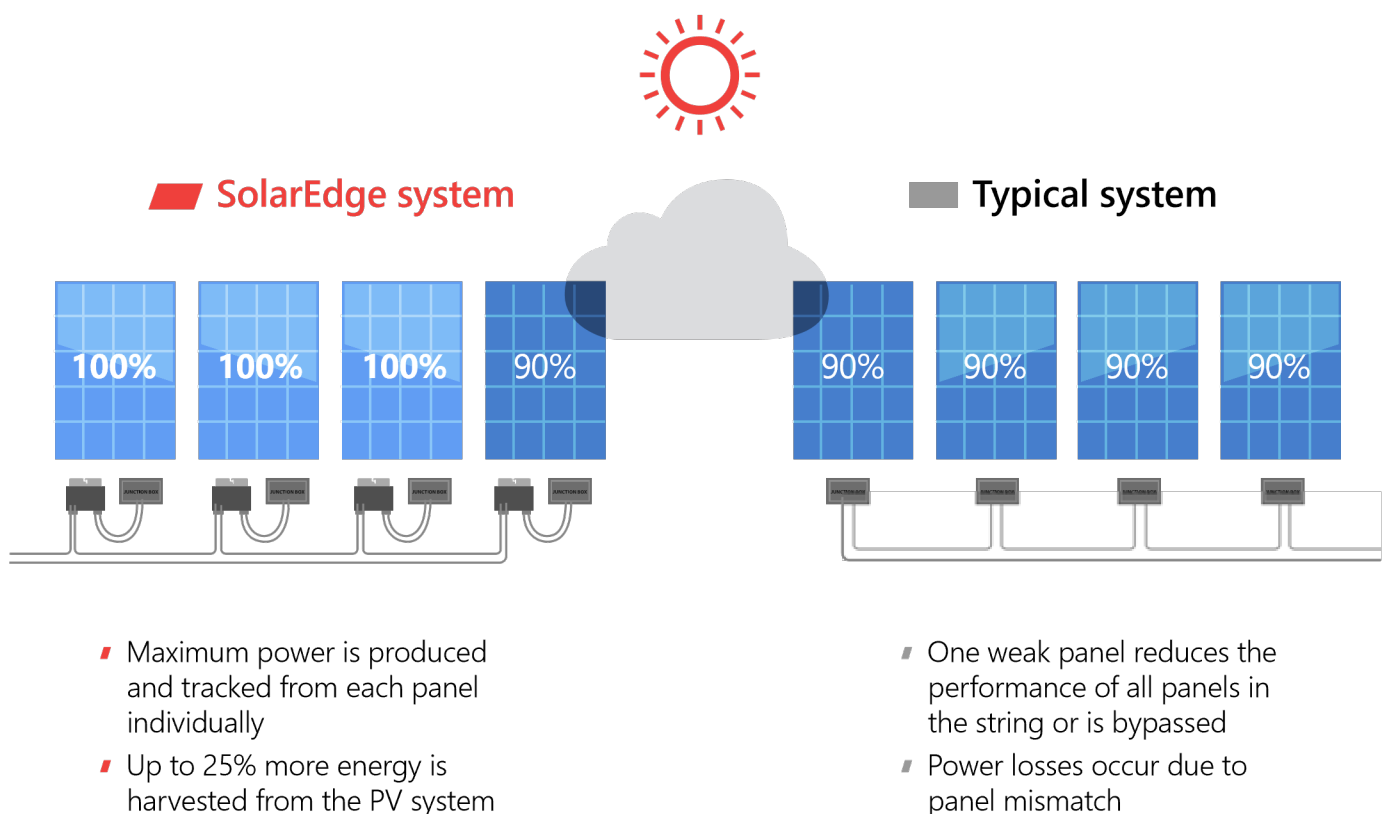
- Free real-time monitoring of every system panel
- Monitoring of PV production, consumption and self-consumption, smart energy, as well as battery and EV charging levels
- Automatic alerts
- Access from your mobile device, anytime, anywhere



More Energy from Each Panel

In a PV system, each panel has an individual maximum power point. Differences between panels are unavoidable in PV installations. With traditional inverters, the weakest panel reduces the performance of all panels.

With SolarEdge, each panel produces the maximum energy, and mismatch-related power losses are eliminated.



Homeowner value: more energy

More power = more revenue and more savings on your electricity bill.

One underperforming solar panel connected to a traditional string inverter negatively impacts the performance of an entire string. SolarEdge minimises this issue by allowing each panel to perform to the best of its ability at all times.

Inverter voltage < 30v



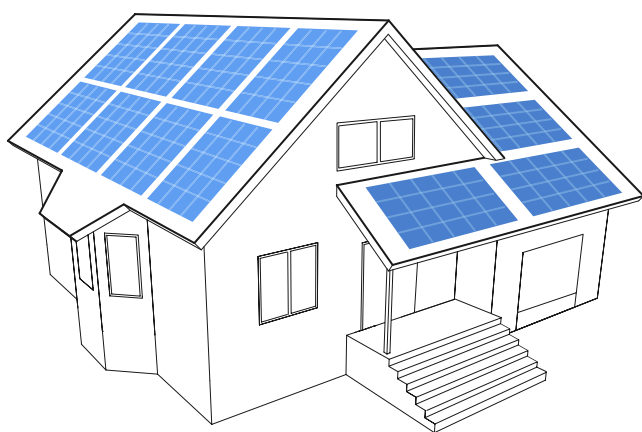
Design Flexibility

More power, more revenue, and more aesthetic rooftops

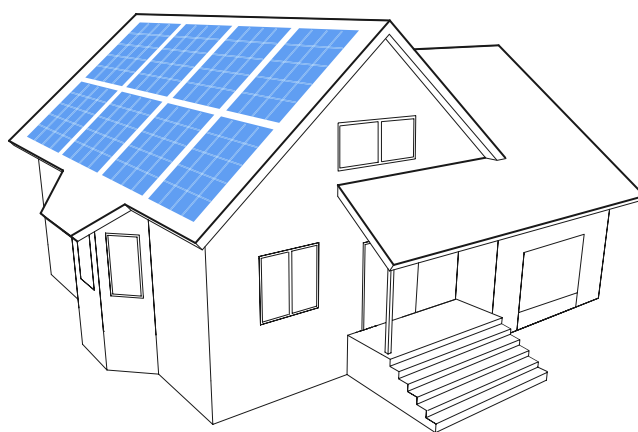
The SolarEdge system topology enables efficient use of all available roof space through unprecedented design flexibility. A wide variety of string lengths is possible with no requirement for matching string lengths. With longer strings, the installer's BoS costs are lowered. The size and layout of an array is no longer defined by electrical constraints. Shaded panels do not bring down the entire string performance, and panels power rating, bin, and type can be mixed in multiple orientations or tilts, in the same string.

With SolarEdge's optimised design flexibility, every installation can become more profitable with the ability to sell more panels at no extra customer acquisition and installation costs.

 **SolarEdge system**



 **Typical system**



Homeowner value: design flexibility

SolarEdge combines optimal rooftop usage with an aesthetic design, for more power and more savings. Mix and match panel types to easily expand your solar system later.

Single Phase Inverters with HD-Wave Technology

A new era for inverter technology

Representing one of the most significant leaps in solar technology in the past 20 years, SolarEdge's HD-Wave technology is a novel power conversion topology that significantly decreases inverter size and weight, while also achieving record 99% weighted efficiency.

Activating and configuring the inverter is now done directly through your smartphone using the SetApp mobile application.



Achieving more with less

By employing distributed switching and advanced digital processing to synthesise a clean, high-definition sine wave, inverters with HD-Wave technology have $<1/2$ the heat dissipation, 16x less magnetics, and 2.5x less cooling components than previous SolarEdge inverters, which are already among the smallest on the market.

Product features:

- Multiple sizes with 2.2kW to 10kW inverter range
- More energy from a record 99% weighted efficiency
- More panels on the rooftop with up to 155% DC/AC oversizing
- Easy installation due to small size and light weight
- Improved reliability with less heat
- Superior safety with SafeDC and arc detection
- High visibility with built-in panel-level monitoring
- Quick and easy inverter commissioning directly from your smartphone using the SolarEdge SetApp
- Backward compatibility with existing SolarEdge systems

EV Charging Single Phase Inverter

The world's first EV charging inverter

Increase your revenue with the world's first EV charging PV inverter. It offers users the ability to charge electric vehicles up to 2.5 times faster than a standard EV charger through an innovative solar boost mode that utilises grid and PV charging simultaneously.

By installing the EV charging inverter, your customers also benefit from the reduced hassle of installing separately a standalone EV charger and a PV inverter, as well as integration with the SolarEdge monitoring platform.

Whether your customer owns an EV now or just wants to be EV-ready, drive your business into the future with SolarEdge.



Key benefits



Combines sun and grid power for charging up to 2.5 times faster than standard EV chargers



Reduces workload and costs of installing a standalone EV charger and a PV inverter



An EV-ready solution, future-proofed for new EV purchase or replacement, and compatible with multiple EV connectors



Maximises self-consumption by using excess PV for EV charging⁽¹⁾



Fully integrated with the monitoring platform and easy inverter commissioning using the SetApp mobile app



Built-in meter enables separate tracking of EV power usage for visibility and control



12-year warranty⁽²⁾, extendable to 20 or 25 years



Demand-response ready

Single Phase Inverters with Compact Technology

Affordable, green electricity for small residential rooftops

SolarEdge has developed a residential DC-optimised inverter solution, ideally suited for homes with limited roof space, social housing projects, or for meeting minimum sustainability requirements.

The single phase inverter with compact technology is packed with the standard SolarEdge benefits such as greater energy harvest from each panel, long-term product warranties, advanced safety features, and free panel-level monitoring. It is easily installed on either existing rooftops or new builds, and delivers clean energy, which is affordable, efficient, and safe.

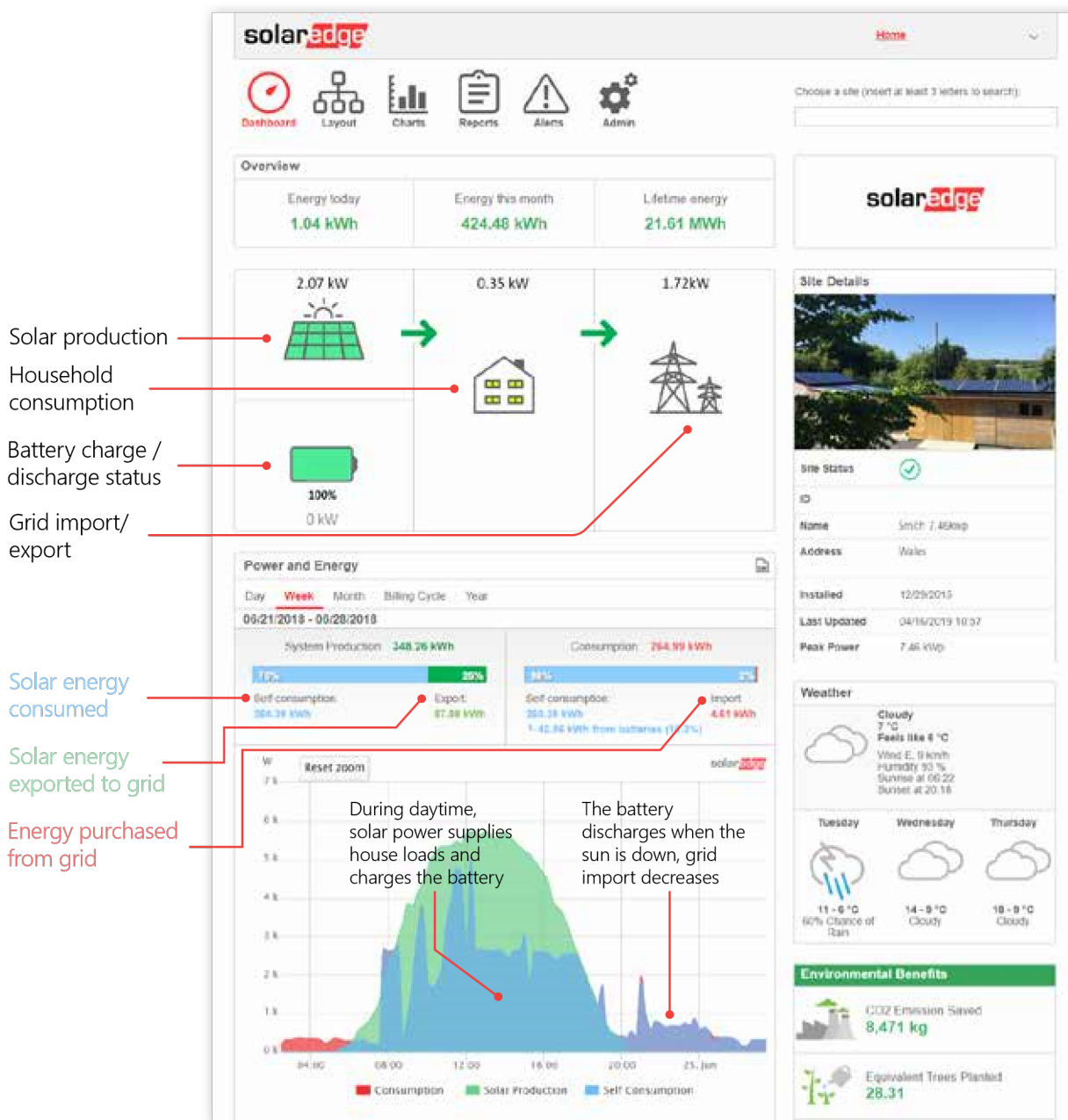


Specifically designed for rooftop systems of 4-8 panels

- Power optimiser and inverter designed to work exclusively with each other
- Inverter is available in three sizes: 1000VA, 1500VA, and 2000VA
- Extremely compact, lightweight, and easy to install
- One or two 60-cell PV panels, or one 72/96-cell panel, can be connected to each input
- Quick and easy inverter commissioning directly from your smartphone using the SolarEdge SetApp
- IP65-rated inverter — suitable for indoor or outdoor installation
- Flexible communication options for maximum cost effectiveness, depending on project requirements
- Real-time monitoring of individual or multiple systems

Full Monitoring of PV and StorEdge Systems

The SolarEdge monitoring platform provides insight into household PV production and consumption, displaying the power flow between the PV array, battery, grid and house loads as well as tracking real-time system data.



The StorEdge Solution: Enabling Energy Independence

Combining SolarEdge's breakthrough PV inverter technology with leading battery storage systems, the StorEdge solution helps homeowners reduce their electricity bills while maximising energy independence from the grid.



StorEdge is based on a single SolarEdge DC optimised inverter that manages and monitors PV production, consumption and storage. StorEdge is compatible with the LG Chem RESU 7H and 10H batteries.



Maximising the Homeowner's Solar Investment with StorEdge

The StorEdge system is full of benefits for the installer and homeowner alike.



More energy

- Power optimisers increase rooftop energy harvest
- PV power is stored directly in the battery
- DC coupled battery solution allows high system efficiency, as there are no additional conversions from AC to DC and back to AC



Simple design and installation

- A single inverter for PV, storage and backup power
- Outdoor installation allows flexibility in battery location
- No special wires are required > utilises the same PV cables



Full visibility and easy maintenance

- Monitor the battery status, PV production, and self-consumption data
- Smarter energy consumption to reduce electricity bills
- Monitor battery energy levels and remaining hours of backup power
- Remote diagnostics
- Remote firmware upgrades to both inverter and battery



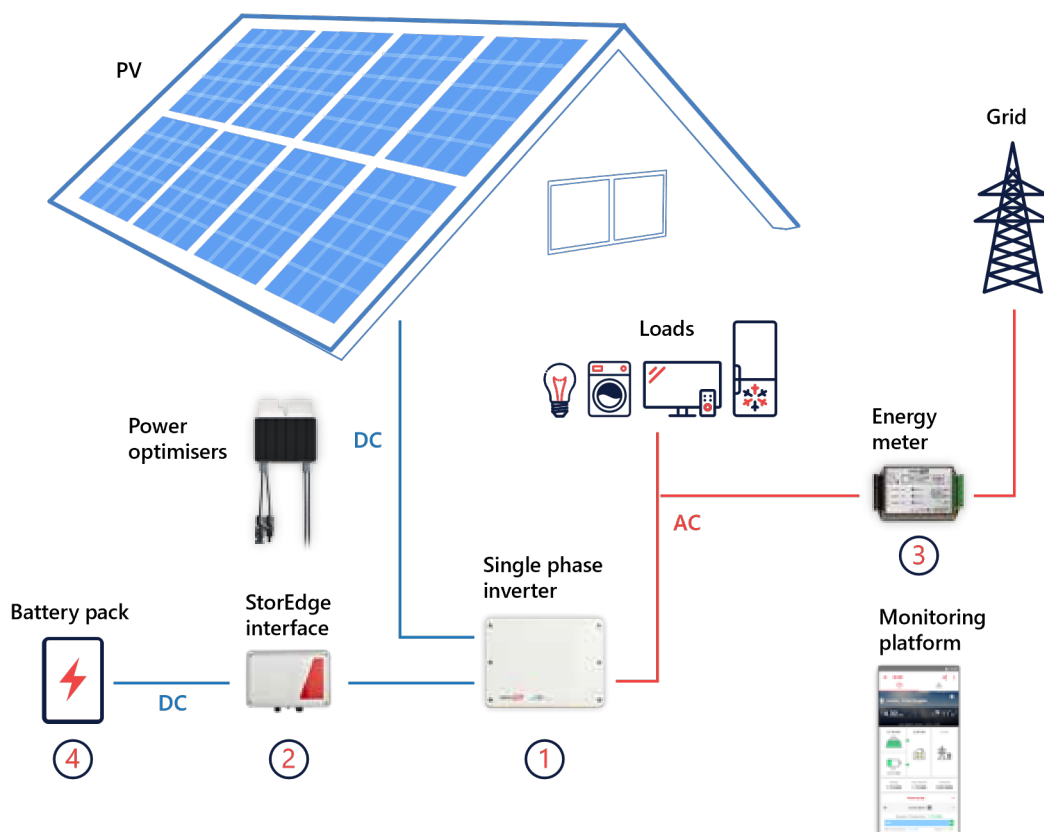
Enhanced safety



- PV array and battery voltage reduced to a safe voltage automatically upon AC shut down when not in backup mode
- Complies with VDE 2100-712 and IEC 60947

Basic StorEdge DC-Coupled Applications

Optimising self-consumption



1. Single phase inverter

The inverter manages battery and system energy, in addition to its functionality as a PV inverter

2. StorEdge interface

Connects the battery to a SolarEdge inverter
Connects to the inverter in parallel to the PV strings

3. Energy meter with modbus connection and current transformers

For measuring electricity import and export

The energy meter is required for self-consumption management

4. Battery pack

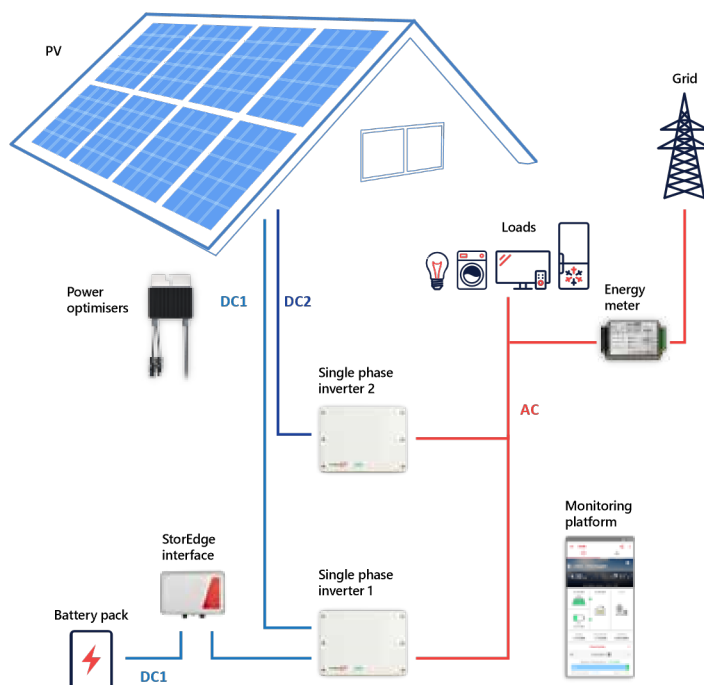
Compatible with DC coupled, high-voltage and high-efficiency batteries from LG Chem

Compatible with
 **LG Chem**

Advanced StorEdge Configurations

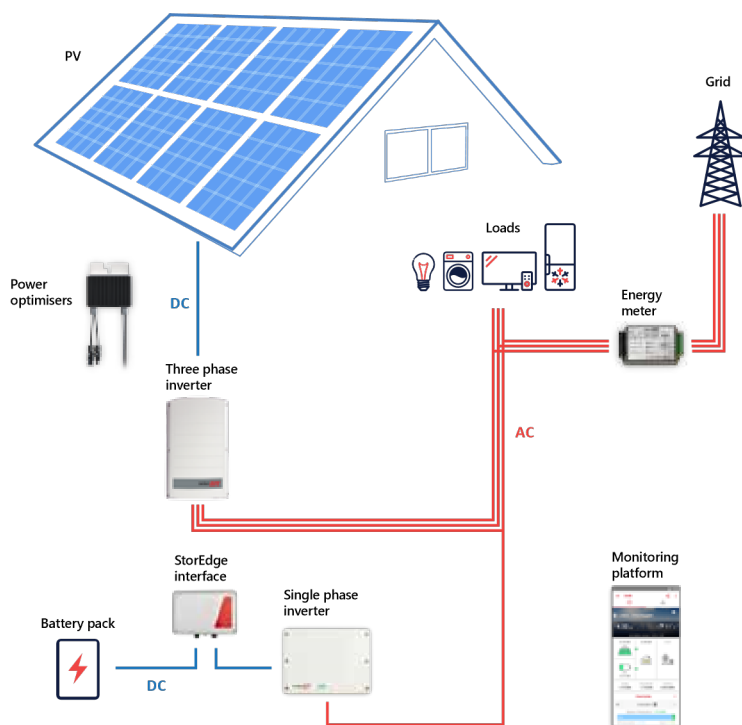
/ More PV power

A second single phase inverter is added for the purposes of handling the additional PV power needed.



/ Connection to a SolarEdge three phase inverter

For installations using a SolarEdge three phase inverter, the StorEdge system, including an additional single phase SolarEdge inverter, connects to the three phase inverter's AC output (AC-coupled)



StorEdge Case Study: Increasing Self-Consumption

By simply adding StorEdge to its existing SolarEdge PV system, this typical household was able to more than double its self-consumption levels.

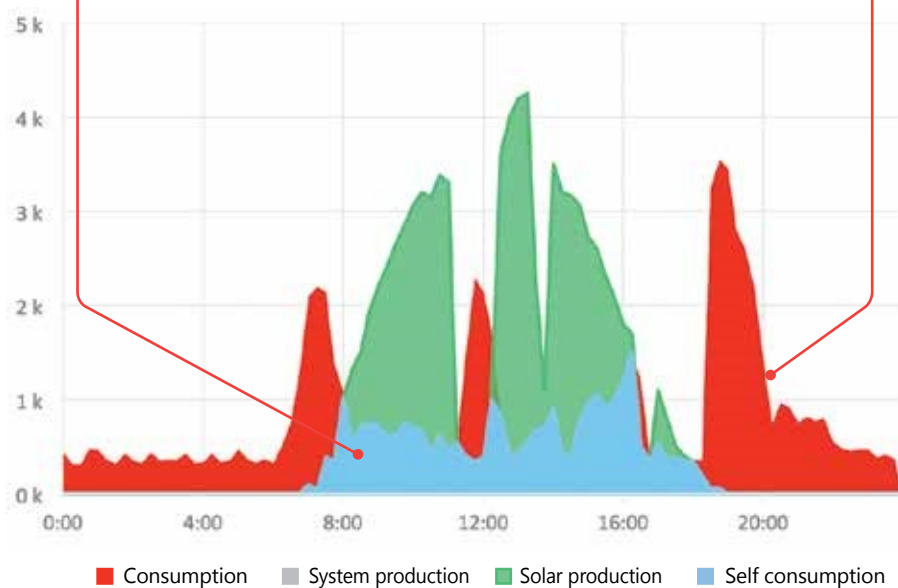
Before – monitoring self-consumption:

5kW System on April 8, 2015 (before battery installation)

Total produced energy	Total purchased energy	Total consumed energy	Self-consumption level
21.37 kWh	13.57 kWh	20.61 kWh	7.04kWh 33%

During the day, PV powers the house, less energy is purchased

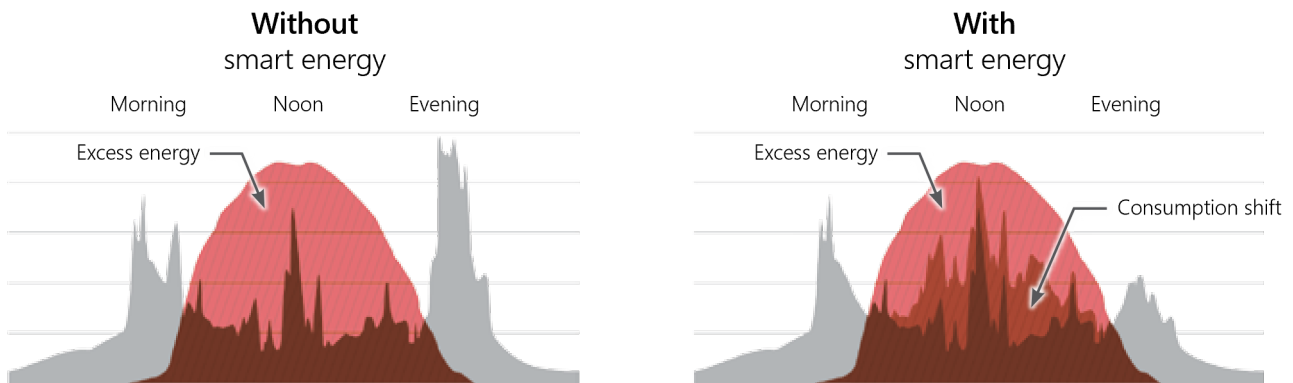
When there is no PV, all consumed energy is purchased from the grid



*Based on a SolarEdge 5kW residential PV system

Smart Energy Products

Designed to automatically use the PV system's excess power to increase solar energy usage, SolarEdge's smart energy products help the homeowner achieve lower electricity bills, increased energy independence, and greater convenience. The smart energy suite combines solar energy, storage management smart energy under the control of a single SolarEdge inverter.



Smart energy applications



Smart energy hot water

Wireless controller automatically diverting excess PV energy to the hot water boiler, providing hot water and highly cost-effective energy storage



Smart energy switch & smart energy socket

Wireless switch for controlling electrical loads, such as pool pumps, fans, lighting and other home appliances

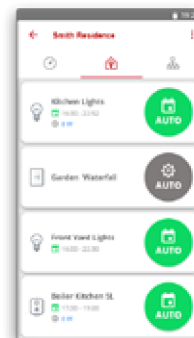


Smart energy relay

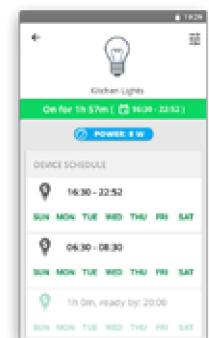
Wireless relay for controlling high loads using an external control interface, such as smart grid-ready supported heat pumps

Control in the palm of your hand

Use SolarEdge smart switches to control household appliances remotely and on-the-go, anytime, anywhere, via the SolarEdge monitoring mobile app.



Smart energy monitoring dashboard



Set water heater schedule

Export Limitation Solution

Reduce electricity bills, increase your self-consumption

Grid electricity prices are constantly on the rise. This situation motivates the installation of large PV systems that allow owners to minimise consumption from the grid during the day. However, in some countries local regulations limit the amount of PV power that can be exported to the grid or allow no export whatsoever, while allowing the use of PV power for self-consumption. Therefore, without an energy management system, PV systems cannot be installed (if no export is permitted) or are limited in size.

SolarEdge offers an export limitation option, integrated in the SolarEdge inverter firmware, which dynamically adjusts PV power production. This allows you to use more energy for self-consumption when the loads are high, while maintaining the export limit also when the loads are low.

SolarEdge export limitation

- Export limitation is integrated into the inverter firmware - install only an energy meter
- Fast Response Time - ensuring that even with rapid changes in load consumption and PV production the export power does not exceed the limit
- Failsafe Operation - the operation is designed to guarantee that the exported power will never exceed the preconfigured limit under any fault

SolarEdge inverter as energy manager

- Export limit is configured via the inverter user interface
- In a multi-inverter system, one inverter will serve as the energy manager
- Installed SolarEdge inverters can be firmware upgraded with the export limitation option

Meter support

- The inverter can read a meter installed either at the grid connection point or at the load consumption point
- Two types of meters may be used:
 - An RS485 meter, available from SolarEdge; the meter connects to the RS485 terminal block of the SolarEdge inverter
 - A meter with an S0 interface and an S0 meter adapter cable available from SolarEdge
- The inverter maintains the output power limit with accuracy equal to that of the meter



Faster, Easier PV System Design

The Designer is a free web-based tool that helps you lower your PV design costs and close more deals by making more compelling customer proposals. Use the online tool to plan, build and validate your SolarEdge systems from inception to installation.

Access the Designer platform via the Login menu on the SolarEdge homepage.

Save time and money

- ▀ Design PV systems using the latest satellite imagery — no reason to perform an onsite survey prior to first customer meeting
- ▀ Free for use — no need for expensive design tools to perform basic tasks
- ▀ Maximise roof utilisation and enjoy SolarEdge design flexibility advantages with instant validation
- ▀ Eliminate costly installation mistakes by creating visual wiring diagrams of your PV system



Close more deals

- ▀ Impress your customers with a visually attractive 3D simulation of their roof
- ▀ Make quick, on-the-fly design modifications based on homeowner feedback
- ▀ Offer more compelling customer proposals with Designer's comprehensive reports and accurate energy simulations



Enjoy a modern, intuitive platform

- ▀ Clean, interactive, graphical interface
- ▀ Web-based access from any Mac or PC
- ▀ Multi-user access to your Designer account for easy project collaboration automatic upgrades — no need to install new versions or download datasets



Residential Product Offering

Complete residential PV solution



Movie



Installer catalog



Homeowner brochure

Single phase inverters with HD-Wave technology

2.2kW-10kW



Movie



Datasheet

Three phase inverters

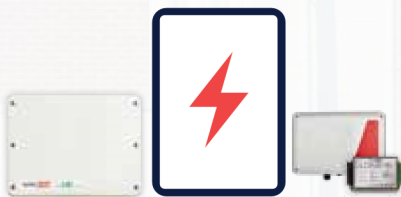
3kW-10kW



Datasheet

StorEdge™ for on-grid applications

Stores unused PV power on a battery for maximised self-consumption



Movie



Brochure



Datasheet

StorEdge™ with backup power

Maximises self-consumption and provides backup power when grid is down



Movie



Brochure



Datasheet

Smart energy

Utilises excess PV for increased self-consumption and lower electricity bills



Movie



Smart energy hot water datasheet



Smart energy devices datasheet

SolarEdge Ordering Information

Contact your local SolarEdge distributor for more information

Part Number	Product Description	
Single Phase Inverters with HD-Wave Technology; with SetApp Inverter configuration; 12-year warranty included		
SE2200H-RW000BNN4	1ph Inverter with HD-Wave Technology, 2.2kW, (-40°C)	
SE3000H-RW000BNN4	1ph Inverter with HD-Wave Technology, 3.0kW, (-40°C)	
SE3500H-RW000BNN4	1ph Inverter with HD-Wave Technology, 3.5kW, (-40°C)	
SE3680H-RW000BNN4	1ph Inverter with HD-Wave Technology, 3.68kW, (-40°C)	
SE4000H-RW000BNN4	1ph Inverter with HD-Wave Technology, 4.0kW, (-40°C)	
SE5000H-RW000BNN4	1ph Inverter with HD-Wave Technology, 5.0kW, (-40°C)	
SE6000H-RW000BNN4	1ph Inverter with HD-Wave Technology, 6.0kW, (-40°C)	
SE8000H-RW000BNN4	1ph Inverter with HD-Wave Technology, 8.0kW, (-40°C)	
SE10000H-RW000BNN4	1ph Inverter with HD-Wave Technology, 10.0kW, (-40°C)	
NEW: Single Phase Inverters, Power Optimiser with Compact Technology; Includes 12-year inverter warranty and 25-year power optimiser warranty; For small rooftops of 4-8 panels		
Basic Option: No Monitoring or Smart Energy Management		
SE1000M-RWK01NNN4	1ph 1.0kW Inverter (-40°C) & M2640 Power Optimiser	
SE1500M-RWK01NNN4	1ph 1.5kW Inverter (-40°C) & M2640 Power Optimiser	
SE2000M-RWK01NNN4	1ph 2.0kW Inverter (-40°C) & M2640 Power Optimiser	
Extended Option: Including Monitoring and Smart Energy Management		
SE1000M-RWK02BNN4	1ph 1.0kW Inverter (-40°C) & M2640 Power Optimiser	
SE1500M-RWK02BNN4	1ph 1.5kW Inverter (-40°C) & M2640 Power Optimiser	
SE2000M-RWK02BNN4	1ph 2.0kW Inverter (-40°C) & M2640 Power Optimiser	
Three Phase Inverters; with SetApp Inverter configuration; 12-year warranty included		
SE4K-RW0TEBNN4	3ph Inverter, 4.0kW, (-40°C)	
SE5K-RW0TEBNN4	3ph Inverter, 5.0kW, (-40°C)	
SE7K-RW0TEBNN4	3ph Inverter, 7.0kW, (-40°C)	
SE8K-RW0TEBNN4	3ph Inverter, 8.0kW, (-40°C)	
SE9K-RW0TEBNN4	3ph Inverter, 9.0kW, (-40°C)	
SE10K-RW0TEBNN4	3ph Inverter, 10.0kW, (-40°C)	
SE12.5K-RW000BNN4	3ph Inverter, 12.5kW, (-40°C)	
Single Phase Inverters with HD-Wave Technology, with Built-in Cellular; with SetApp Inverter configuration; 12-year warranty included for inverter and Cellular plug-in		
SE2200H-RW000BGN4	1ph Inverter with HD-Wave Technology, 2.2kW, Cellular, (-40°C)	
SE3000H-RW000BGN4	1ph Inverter with HD-Wave Technology, 3.0kW, Cellular, (-40°C)	
SE3500H-RW000BGN4	1ph Inverter with HD-Wave Technology, 3.5kW, Cellular, (-40°C)	
SE3680H-RW000BGN4	1ph Inverter with HD-Wave Technology, 3.68kW, Cellular, (-40°C)	
SE4000H-RW000BGN4	1ph Inverter with HD-Wave Technology, 4.0kW, Cellular, (-40°C)	
SE5000H-RW000BGN4	1ph Inverter with HD-Wave Technology, 5.0kW, Cellular, (-40°C)	
SE6000H-RW000BGN4	1ph Inverter with HD-Wave Technology, 6.0kW, Cellular, (-40°C)	

SolarEdge Ordering Information

Contact your local SolarEdge distributor for more information

Part Number	Product Description	
Communication Products; 5-year warranty included		
SE1000-GSM02-B	Cellular Plug-In	
SE-ANT-ZBWIFI-KIT	Antenna kit for Wi-Fi Communication	
SE-SIM-R12-EU-S1	SolarEdge 12-Year Prepaid Data Plan, for Residential Systems	
SE-SIM-R12-EU-S2	SolarEdge 12-Year Prepaid Data Plan, for StorEdge systems	
For inverters with a display		
SE1000-RS485-IF	RS485 Plug-In for Inverters	 
SE1000-GSM02	Cellular Plug-In for Single Phase Inverters with HD-Wave Technology	
SE-3PH-GSM-K2	Communication Board and Cellular Plug-In Upgrade for Three Phase Inverters	
SE1000-WIFI01	Wi-Fi Plug-in	
Metering Solutions		
SE-WND-3Y400-MB-K2	1ph/3ph 230/400V, Energy Meter with Modbus Connection, DIN-Rail, CLASS 05, V2	  
SE-ACT-0750-50	50A Split-Core Current Transformer	
SE-CTML-0350-070	70A Small Split-Core Current Transformer	
SE-ACT-0750-100	100A Split-Core Current Transformer	
SE-ACT-0750-250	250A Split-Core Current Transformer	
SE-CTS-2000-1000	1000A Split-Core Current Transformer	
SE1000-SOIF01	S0 meter adapter cable	
Smart Energy; 5-year warranty included		
SEHAZB-HEAT-CONT-3	3kW Smart Energy Hot Water	   
SEHAZB-SWITCH-MTR	Smart Energy Switch	
SEHAZB-DR-SWITCH-2	2 x Smart Energy Relay	
SEHAZB-SCKT-MTR-GB	Smart Energy Socket, Great Britain	
SE1000-ZB06-MOD	Smart Energy ZigBee Plug-in (for inverters with a display)	
SE-ZBSLV-B-S1-RW	Smart Energy ZigBee Plug-in (for inverters with SetApp configuration)	

SolarEdge is a global leader in smart energy technology. By leveraging world-class engineering capabilities and with a relentless focus on innovation, SolarEdge creates smart energy solutions that power our lives and drive future progress.

SolarEdge developed an intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. The SolarEdge DC optimised inverter maximises power generation while lowering the cost of energy produced by the PV system.

Continuing to advance smart energy, SolarEdge addresses a broad range of energy market segments through its PV, storage, EV charging, UPS, and grid services solutions.

 SolarEdge

 @SolarEdgePV

 @SolarEdgePV

 SolarEdgePV

 SolarEdge

 infoUK@solaredge.com

solaredge.com

© SolarEdge Technologies, Ltd. All rights reserved. SOLAREEDGE, the SolarEdge logo, OPTIMIZED BY SOLAREEDGE are trademarks or registered trademarks of SolarEdge Technologies, Inc. All other trademarks mentioned herein are trademarks of their respective owners. Date: 09/2019/V01/ENG UK. Subject to change without notice.

This document includes estimates of various parameters of the compared solar systems, including annual A/C energy production, performance ratio and shading loss based on PVsyst computer-simulated results for installations using our and competing systems. While we are not aware of any reason to believe these estimates and comparisons are materially inaccurate or misleading, they are inherently uncertain and the projected results are not guaranteed. Actual results will vary depending on a number of factors, including actual field conditions, quality of instalment and other variances from the assumptions underlying the estimates. Although care has been taken to ensure the accuracy, completeness and reliability of the estimates and comparisons presented, SolarEdge assumes no responsibility for these. MORE SPECIFICALLY, IN NO EVENT SHALL SOLAREEDGE BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL OR INCIDENTAL LOSSES OR DAMAGES RESULTING FROM OR ARISING OUT OF USE OF OR RELIANCE ON THE ESTIMATES AND COMPARISONS PRESENTED.

