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About SolarEdge

About Us

In 2006, SolarEdge revolutionized the solar industry by inventing a better way to collect and manage energy in PV systems. Today, we are a global leader in smart energy technology. By deploying worldclass 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 manage the energy we consume will lead to a better future for us all



Bankability

- Approved by major banks and financial institutions worldwide
- 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

Power Optimizers Shipped (Cumulative)

SolarEdge (SEDG) is traded on NASDAQ

Global Outreach

- Systems installed in over 120 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 with tier 1 electronic manufacturing service companies









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

Shipping Since 2010

- Over 1 million inverters shipped worldwide
- SolarEdge's monitoring platform continuously tracks hundreds of thousands of installations across the globe

28 27 26 25 24 23 22 21 20 19 18 17 16 15 11 10 9 8 7 6 5 4 3 2 11 10 9 8 7 6 5 4 3 2 11 (Calendar Years)

Corporate Social Responsibility

As a global leader in smart energy technologies, SolarEdge is committed to a sustainable world and 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

Reliability

- 25-year power optimizer 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)



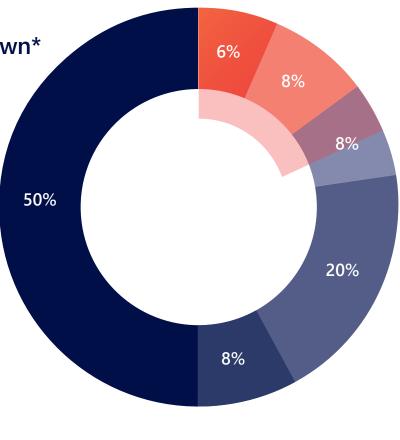
The Importance of Inverter Selection

Commercial Rooftop Installation Cost Breakdown*

Inverters account for less than 10% of the system cost but,

- Manage 100% of system production
- Influence up to 20% of system cost
- Control O&M expenses through PV asset management solutions

Therefore, the inverter selection is critical for the long term financial performance of a PV system as it can maximize energy production and reduce lifetime costs.



Other

■ Installation Labor ■ Racking materials

PV Modules

* Based on NREL 2017

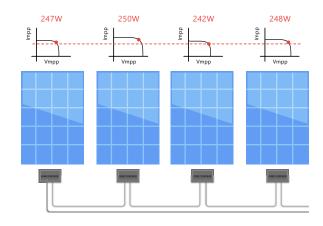
Inverter

BOS

Maximum Energy Yield in Commercial Installations

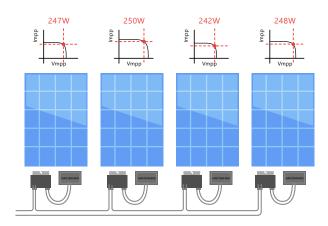
Unavoidable in commercial installations, module-level mismatch occurs when modules in a string have different Maximum Power Points (MPPs). Arising from a variety of sources, the mismatch decreases the energy yield of the entire string.

Traditional String Inverter



- MPPT per string all modules operate at same current, regardless of their individual MPP
- Weak modules reduce the performance of all modules in the string or are bypassed
- Power losses due to module mismatch

SolarEdge DC Optimized Inverter Solution



- Module-level MPPT current & voltage adjusted at the module level
- Maximum power produced and tracked from each module individually
- 2%-10% more energy from the PV system

The SolarEdge DC optimized inverter solution mitigates power losses caused by module mismatch for maximum power generation from each module. With SolarEdge, strong modules are not affected by the weaker ones.

Examples of power mismatch in commercial installations:

Manufacturing Tolerance Mismatch

The module manufacturer-warranted output power range may vary greatly. A standard deviation of 3% is sufficient to result in ~2% energy loss.

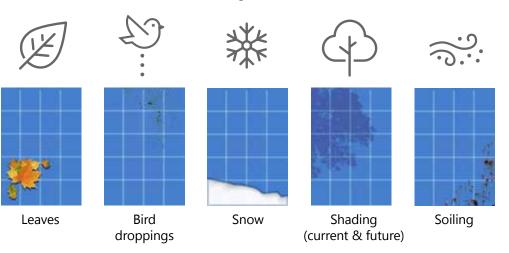


Guaranteed power output from module manufacturers 0~+3%

Soiling, Shading & Leaves

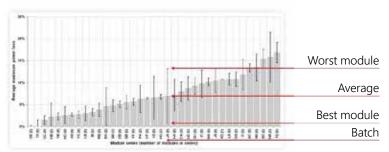
Module soiling, from dirt, bird droppings or snow, contributes to mismatch between modules and strings.

While there may be no obstructions during site design, throughout a system's lifetime, a tree may grow or a structure may be erected that creates uneven shading.



Uneven Module Aging

Module performance can degrade up to 20% over 20 years, however, each module ages at a different rate, which causes aging mismatch.



Source: A. Skoczek et. al., "The results of performance measurements of field-aged c-Si photovoltaic modules", Prog. Photovolt: Res. Appl. 2009; 17:227–240

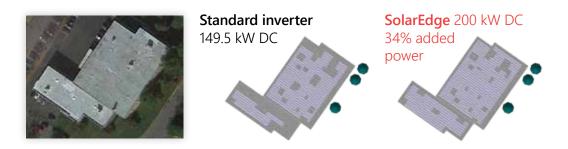


Design Flexibility

More Power

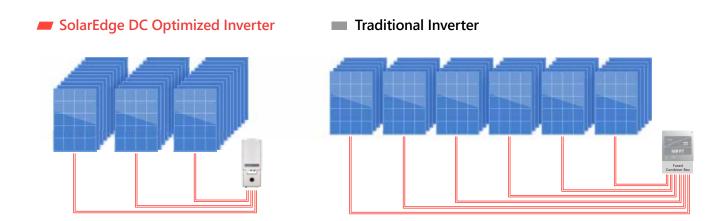
With module-level power optimization and maximum design flexibility, more modules can be installed on the roof, enabling a shorter project payback period SolarEdge power optimizers enable installation of:

- Modules in partially shaded areas
- Strings of uneven lengths
- Strings in multiple orientations and different roof facets



Reduced BoS Cost

Up to 15kW per string allows for more modules per string. This leads to fewer strings per inverter and therefore less wiring, combiner boxes, and fuses



145kW SolarEdge system, The Netherlands, installed by New Energy Systems 12 | Solar Edge Commercial Offenne

PV Asset Management with Module-Level Monitoring



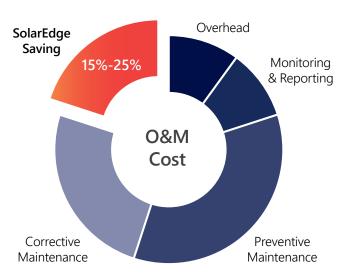
As equipment prices drop and system sizes trend upward, PV projects are increasingly seen as secure longterm investment opportunities. Like any financial asset, PV systems must be monitored and managed to realize their full potential.

Traditional inverters offer limited information, such as string-level or system-level monitoring that can indicate underperformance of the array, but little else. It then becomes costly and time consuming to send skilled technicians to perform on site troubleshooting.

The SolarEdge DC optimized inverter solution offers advanced PV monitoring and asset management.

Power optimizers constantly track MPP and report high-resolution data on module performance.

The SolarEdge monitoring platform transforms O&M from a manual, resource-intensive process to an automated, at-a-glance service, ensuring that every plant is performing to the best of its ability at all times.



^{*} Exclusive of module cleaning

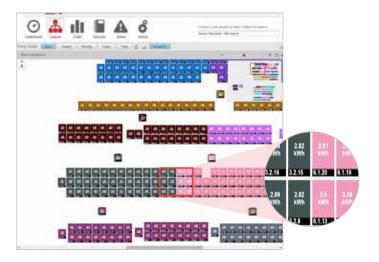
PV Asset Management with Module-Level Monitoring (cont.)

SolarEdge's Monitoring Platform Features:

1. Real-time remote monitoring at the module, string, and system levels



The logical layout displays the electrical connectivity between modules, strings and inverter

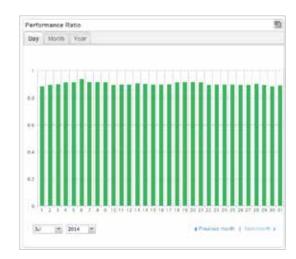


The hierarchy layout displays grouping of components per inverter

2. Comprehensive analytics tracking and reports of energy yield, system uptime, performance ratio, and financial performance

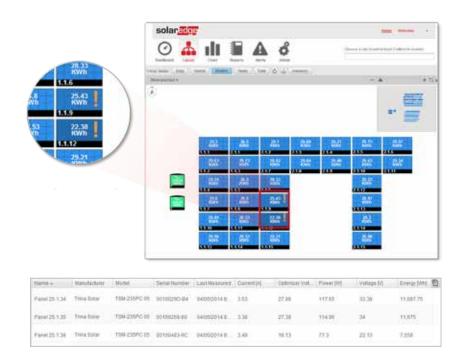


Dashboard - Energy production is displayed with weekly, monthly and yearly resolution

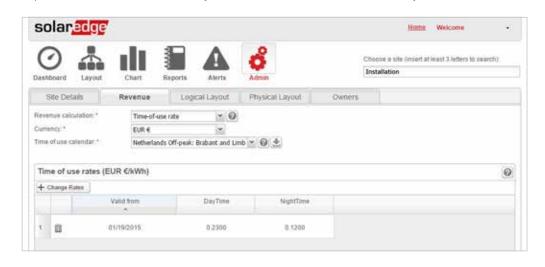


Performance Ratio - Analyze and track the system's performance ratio using satellite data or onsite sensors

3. Pinpointed and automatic alerts for immediate fault detection, accurate maintenance, and rapid response. The alerts show the specific fault location, fault description, and fault status. Energy thresholds alerts can be set to detect underperforming modules. Custom settings available for time of day and offset from sunrise and sunset.



4. The time-of-use feature allows system owners to define peak and off-peak rates in order to track expected PV revenue. This may be used as an indication of the systems ROI.



PV Asset Management with Module-Level Monitoring (cont.)

5. Accurate and remote troubleshooting for fast and efficient resolution with minimal and shortened onsite visits. Examples of identifying underperforming modules:

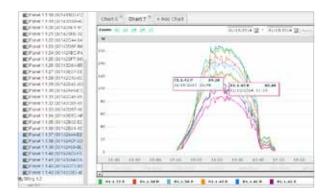
Soiling







Potential Induced Degradation (PID)



Looking at the modules within one string, it is possible to see the power degradation increasing towards the negative pole.



No need to send technicians to the roof –module voltage is measured remotely

Bypass Diode Failure



It is easy to identify the bypass diode failure with the module-level voltage graphs. The faulty module outputs at only 2/3 of the voltage (5/6 in this case of power optimizer connected to two modules).

6. The consumption monitoring feature shows data about electricity consumption, PV production, and self-consumption. This feature is integrated into all SolarEdge inverters and requires only a connection of a SolarEdge energy meter.



16 | SolarEdge Commercial Offering

700kW SolarEdge system, Santa Clara, UT Installed by Creative Energies **18** | SolarEdge Commercial Offering

Enhanced Safety

The SolarEdge solution includes inverter-embedded rapid shutdown functionality without the need for additional roof-mounted devices. The function de-energizes PV source circuits from all sources to less than 30 Volts within 30 seconds.





- personnel and firefighters ■ The SolarEdge inverter solution meets the most advanced safety standards
- NEC 2011 AFCI Compliant | NEC 2014 & 2017 Rapid Shutdown Compliant

in the string cables to protect installers, maintenance



Future Compatibility & Warranty

As part of PV asset management planning, it is important to account for future costs that can impact the return on investment of a PV system. The SolarEdge DC optimized inverter solution effectively minimizes these potential costs.

Forward compatibility eliminates expensive stock of spare module inventory.

- Replacement: SolarEdge allows modules of different power classes and brands in the same string.
- Expansion: New power optimizers can be utilized in the same string with older models.

SolarEdge offers 25-year power optimizer warranty, 12-year inverter warranty, and free monitoring for 25 years. SolarEdge offers extended warranties at attractive prices.





Power Optimizers 730W-850W

Three Phase Inverters 9kVA-100kVA

Monitoring Platform

SolarEdge provides low-cost inverter replacement out of warranty

~40% less than traditional inverters

Products are certified for ammonia resistance - suitable for agricultural areas

All inverter models are UL1741 SA certified, for CPUC Rule 21 grid compliance



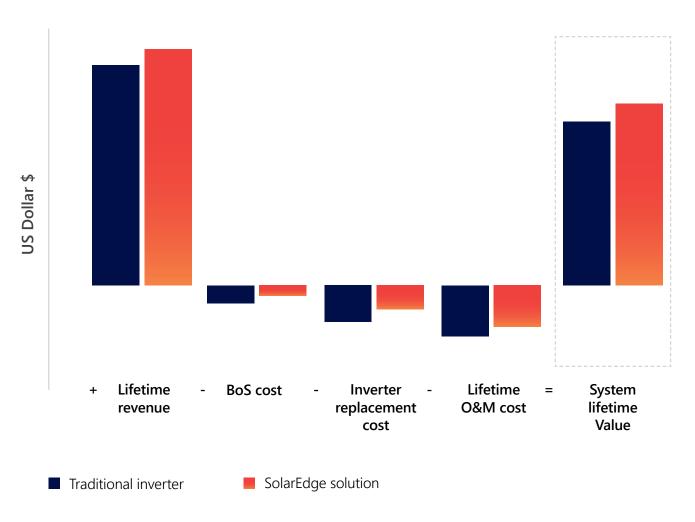
1.3MW SolarEdge system, Arizona, USA Developed by AES Distributed Energy, Inc. (formerly Main Street Power) Installed by Rosendin Electric 22 | SolarEdge Commercial Offering

A Higher Lifetime Value

The SolarEdge DC optimized inverter solution offers a better LCOE for a system's lifetime by maximizing yield and reducing costs.

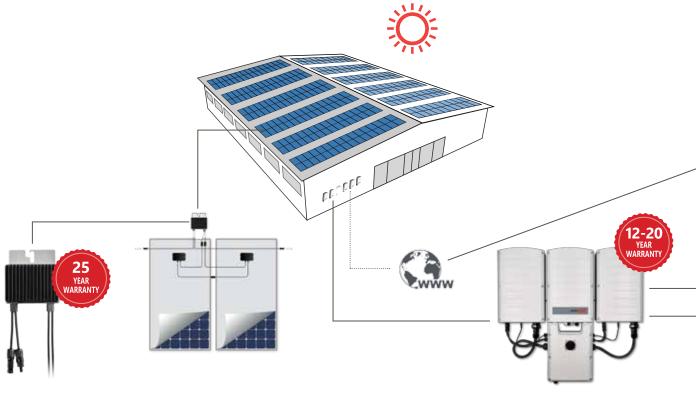
The SolarEdge DC optimized inverter solution maximizes power generation at the individual module level, which leads to a higher lifetime revenue from PV systems. While the initial cost of the SolarEdge solution is generally slightly higher than the equivalent traditional inverter system, the total installation cost as well as the lifetime maintenance cost is lower. This makes the SolarEdge solution more economically attractive.

Lifetime PV System Cost and Revenue



Commercial System Diagram

The SolarEdge solution consists of inverters, power optimizers, and a monitoring platform. The technology provides superior power harvesting and module management by connecting power optimizers at the module level. The ability to connect two modules to one optimizer, combined with DC to AC conversion and grid interaction being centralized at a simplified PV inverter maintains a competitive cost structure.



P730-P850 2-to-1 Power **Optimizer Configuration**

- Module-level MPPT no mismatch power losses
- Strings of uneven lengths, modules on multiple azimuths & tilts
- Compatible with all three phase SolarEdge inverters
- SafeDC™ automatic module-level safety shutdown

9kVA-100kVA Inverter

- Specifically designed to work with power optimizers
- Superior efficiency
- Easy installation, including 2-person install for large capacity models
- Easy, step-by-step inverter activation and commissioning with the SetApp mobile application
- Built-in communication hardware, with optional GSM plug-in
- Integrated DC Safety Switch
- Embedded export limitation



- Full visibility of system performance
- Remote troubleshooting
- Access via browser or any Android, iOS smart phone or tablet
- Communication with the power optimizers over existing DC power lines (PLC)



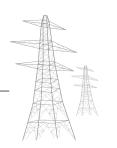
SolarEdge Data Logger

Connection of environmental sensors with several wireless communication options, providing monitoring and control



Environmental Sensors

Used to calculate site performance ratio and measure environmental conditions



Grid Interaction

Supports power control, e.g. zero export limitation, local and remote active/reactive power control, inverter AC relay control for secondary grid protection; low voltage and frequency ride through.

200kWp Rooftop System Comparison

Comparison of a 204.6kWp SolarEdge system to a system with a leading traditional string inverter

The system, in Watertown MA, comprises $660 \times 310 \text{Wp}$ modules. One system was designed with 1 x SE100KUS and 1 x SE66.6KUS SolarEdge inverters, and 330xP700 power optimizers in a 2:1 configuration. The second system was designed with 7x24kW traditional string inverters.

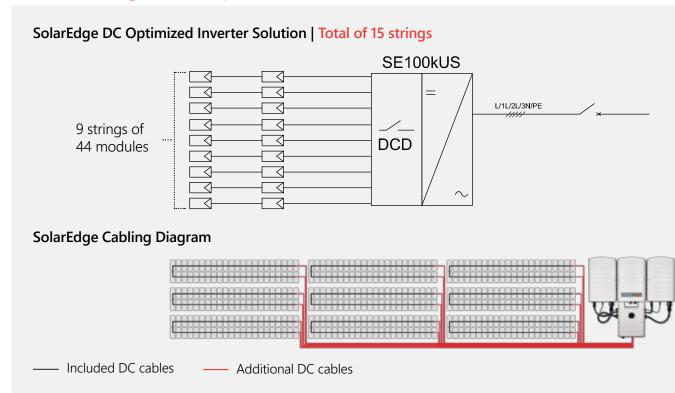
The SE66.6KUS & SE100KUS models are three phase inverters with synergy technology, combining large capacity with reduced installation time and cost.

Energy Comparison

Helioscope was used to simulate the first year yield of both systems. 25 years yield was calculated assuming 1% annual degradation and 0.12% annual mismatch growth due to uneven aging.

	Traditional String	SolarEdge	SolarEdge Advantage	
	Inverter	System		
Year 1 yield (MWh)	269.5	275.2	2.1%	
Year 25 yield (MWh)	198.9	209.1	5.1%	
25 years cumulative yield (MWh)	5,848	6,054	3.5%	

Electrical Diagram Comparison

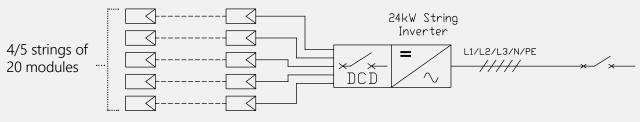


BoS Comparison

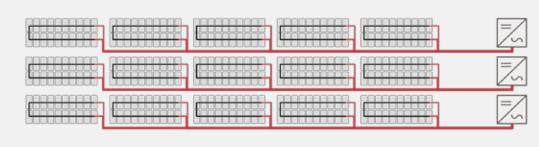
	Traditional String Inverter	SolarEdge System
DC power (kWp)	204.6	204.6
AC power (kVA)	168.0	166.5
DC/AC sizing	1.22	1.23
Modules	660	660
Inverters	7	2
No. of strings	33	15
Modules per string	20	44
DC Cable length (ft)	9,837	5,692
AC Cable length (ft)	370	180
Cable Cost (%)	100%	56%
DC box (pcs)	7	-
AC combiner (pcs)	1	1
Communication module (pcs)	7	-
Data logger (pcs)	1	-
BoS cost saving*	-	2.8c/w

 $[\]ensuremath{^{\star}}$ Estimated saving on labor and materials for DC and AC BoS

Traditional String Inverter System | Total of 33 strings

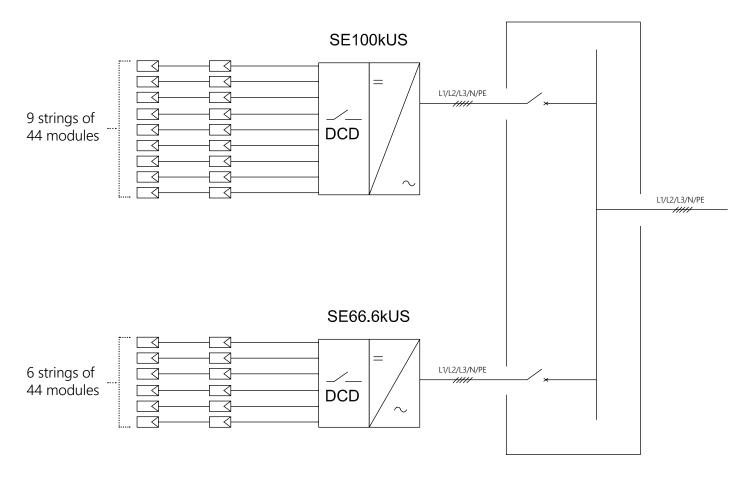


Standard Inverter Cabling Diagram

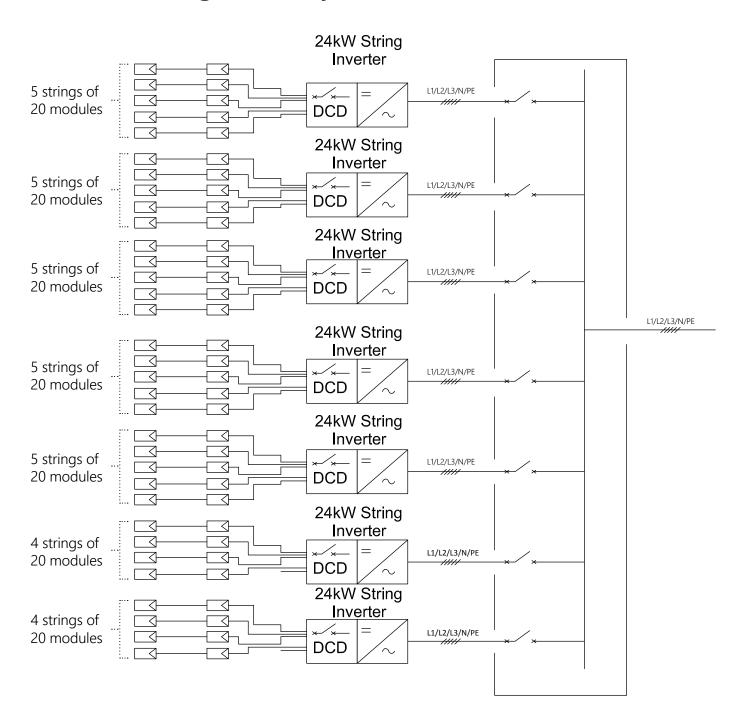


200kWp Electrical Diagram Comparison

SolarEdge DC Optimized Inverter Solution



Traditional String Inverter System



1MWp Ground Mount System Comparison

Comparison of a 1MWp SolarEdge solution to an identical system with a traditional string inverter

The system, in Southbridge MA, comprises of 3,180 \times 315Wp modules. One system was designed with 7 x SE100KUS and 1 x SE66.6KUS SolarEdge inverters and 1,610xP700 power optimizers in a 2:1 configuration. The second system was designed with 13 \times 60kW traditional string inverters.

The SE66.6KUS & SE100KUS models are three phase inverters with synergy technology, combining large capacity with reduced installation time and cost.

Energy Comparison

Helioscope was used to simulate the first year yield of both systems. 25 years yield was calculated assuming 1% annual degradation and 0.12% annual mismatch growth due to uneven aging.

	Traditional String Inverter	SolarEdge System	SolarEdge Advantage
Year 1 yield (MWh)	1,395	1,419	1.7%
Year 25 yield (MWh)	1,030	1,079	4.8%
25 years cumulative yield (MWh)	30,267	31,224	3.2%

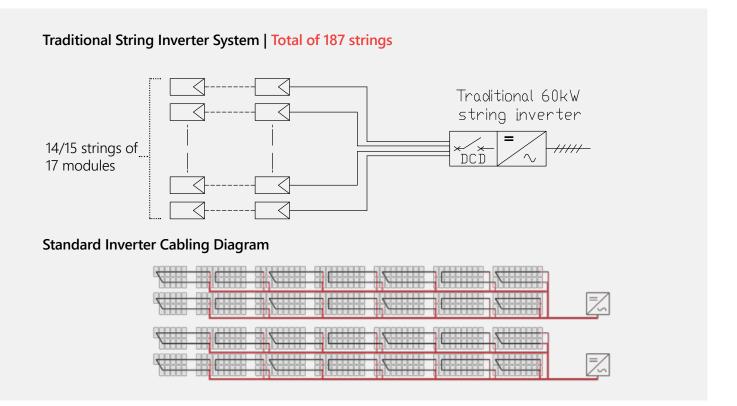
Electrical Diagram Comparison

SolarEdge DC Optimized Inverter Solution | Total of 69 strings 9 strings of 46 modules SolarEdge Cabling Diagram Included DC cables Additional DC cables

BoS Comparison

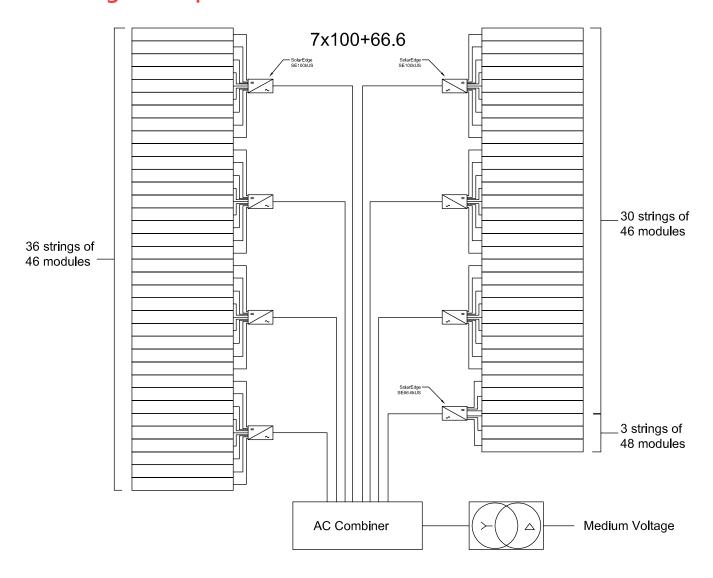
	Traditional String Inverter	SolarEdge System
DC power (kWp)	1,001.4	1,001.7
AC power (kVA)	780	766
DC/AC sizing	1.28	1.31
Modules	3,179	3,180
Inverters	13	8
No. of strings	187	69
Modules per string	17	46/48
DC Cable length (ft)	31,042	11,915
AC Cable length (ft)	10,250	5,020
Cable length (%)	100%	36%
AC combiner box (pcs)	2	2
Data logger (pcs)	1	-
BoS cost saving*	-	2.2 c/w

^{*} Estimated saving on labor and materials for DC and AC BoS

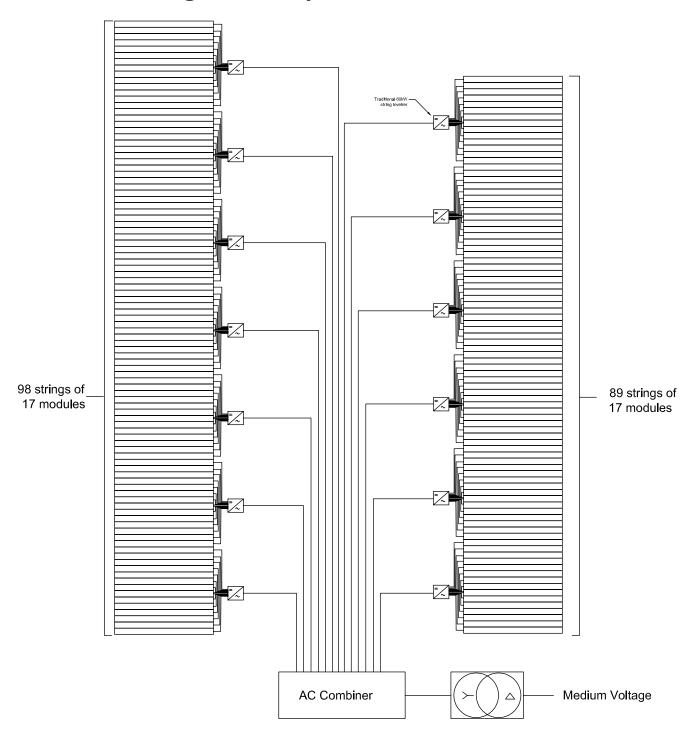


1MWp Electrical Diagram Comparison

SolarEdge DC Optimized Inverter Solution



Traditional String Inverter System







Commercial Offering Ordering Information Contact your local SolarEdge distributor for more details

Part Number	Product Description		
Three Phase Invert	ers; 12-year warranty included, -40 °C	•	
For inverters with a dis			
SE9K-USR28NNU4	3ph Inverter, 9.0kW, 208V, with AC Automatic Rapid Shutdow	3ph Inverter, 9.0kW, 208V, with AC Automatic Rapid Shutdown, DC Safety Switch and AFCI	
SE10K-USR48NNU4	3ph Inverter, 10.0kW, 270/480V, with AC Automatic Rapid Shu		
SE20K-USR48NNU4	3ph Inverter, 20.0kW, 270/480V, with AC Automatic Rapid Sh		
For inverters without a	display, supporting the SetApp mobile application		
SE14.4K-USR28BNU4	3ph Inverter, 14.4kW, 208V, with AC Automatic Rapid Shutdown, DC Safety Switch and AFCI	Inverter activation, configuration, and	
SE30K-USR48BNU4	3ph Inverter, 30.0kW, 270/480V, with AC Automatic Rapid Shutdown, DC Safety Switch and AFCI	commissioning is now performed via the	
SE33.3K-USR48BNU4	3ph Inverter, 33.3.0kW, 270/480V, with AC Automatic Rapid Shutdown, DC Safety Switch and AFCI	Inverter SetApp mobile application.	-
Three Phase Invert	ers with Synergy Technology; with SetApp Mobile	e Application; 12-year warranty	
included, -40 °C			
SE43.2K-USRP0BNU4	3ph Inverter Primary Unit, 43.2kW, 208V, with AC Automatic Safety Switch and AFCI		
SE66.6K-USRP0BNU4	3ph Inverter Primary Unit, 66.6 KW, 270/480V, with AC Automatic Rapid Shutdown, Connection Unit, DC Safety Switch and AFCI		VI - DI
SE100K-USRP0BNU4	3ph Inverter Primary Unit, 100kW, 270/480V, with AC Automatic Rapid Shutdown, Connection Unit, DC Safety Switch and AFCI		
SESU-USRS0NNN4	Inverter Secondary Unit Note: For SE43.2K/SE66.6K, one Secondary Unit is required; f required	or SE100K, two Secondary Units are	
Power Optimizers ;	25-year warranty included		B.H. 258
P730	Designed for 2x 72-cell high power modules, 730W/125V, MC	C4, output cable length 6.9'	
P800p	Designed for parallel connection of 2x 96 cells 5" modules, dual input, 800W/120V, MC4, output cable length 5.9'		
P850	Designed for 2x high power/bi-facial modules, 850W/120V, MC4, output cable length 6.9'		
Frame-Mounted Po	ower Optimizers; 25-year warranty included		
P730-5NC4AFX	Designer for 2x high power 72-cell modules, 730W/125V, MC 6.9'	4, frame mounted, output cable length	
Metering Solutions	5		O. Company
SE-RWND-3D-480-MB	Energy Meter for 480V Grid, NEMA3R, C12.20, CT sold separa	ately	
SE-RWND-3D-208-MB	Energy Meter for 208V Grid, NEMA3R, C12.20, CT sold separa		100
SEACTL-1250-150-C3	Current Transformer, 150A, Kit of (3)		
SEACTL-1250-300-C3	Current Transformer, 300A, Kit of (3)		
SEACTL-1250-600-C3	Current Transformer, 600A, Kit of (3)		
Environmental Sen			
SE1000-SEN-IRR-S1	Irradiance Sensor 0-1.4V		O
SE1000-SEN-TAMB-S2	Ambient Temperature Sensor 0-10V		
SE1000-SEN-TMOD-S2	Module Temperature Sensor 4-20mA		
SE1000-SEN-WIND-S1	Wind Velocity Sensor 4-20mA		
SEACTL-1250-600-C3	Current Transformer, 600A, Kit of (3)		1
The warranty and service	e for these products is provided directly by Ingenieurbüro Men see http://www.imt-solar.com/products.html	cke & Tegtmeyer GmbH.	0

Part Number	Product Description		
Communication Pro	oducts		
SE1000-DTLG-S1	Data Logger		
SE1000-CCG-G-S1	Commercial Gateway		
For inverters with a disp	blay		
SE1000-ZBGW-K5-NA	ZigBee Gateway and ZigBee Plug-in		
SE1000-ZBRPT05-NA	ZigBee Repeater		
SE1000-ZB05-SLV-NA	ZigBee Plug-in		
SE1000-RS485-IF-NA	RS485 Plug-in		
For inverters without a	display, supporting the SetApp mobile application		THE REPORT OF THE PARTY OF THE
SE-RS485-SPD2-K1-B	Surge Protection Device Plug-in for RS485 for 3ph Inverter	S	The state of the s
SE-RS485-SPD2-K1	Surge Protection Device Plug-in for RS485 for 3ph Inverters		
Cellular Communic	ations for Commercial Inverters; Requires Inver	ter Monitoring Service, ordered	
directly via SolarEdo			
For inverters with a disp	play	Inverter Monitoring Service	583a
SE-GSM-R05-US-S4	For commercial systems up to 500kWp, US only	• Up to 500kWp, with 5-year GSM	
SE-GSM-R05-NA-S4	For commercial systems up to 500kWp, non-US	service	1 H
For inverters without a	display, supporting the SetApp mobile application	• >500kWp - 1MWp, with 5-year GSM service	额
SE-GSM-B-R05-US-S4	For commercial systems up to 500kWp, US only	• >1MWp - 1.5MWp, with 5-year GSM	A SME I
SE-GSM-B-R05-NA-S4	For commercial systems up to 500kWp, non-US	service • >1.5MWp - 2MWp, with 5-year GSM service • >2MWp, with 5-year GSM service	
Accessories			
SE-GNDLUG5-100	SolarEdge Grounding Lug Kit for 100 Power Optimizers		
SE-GNDPLATE-100	SolarEdge Grounding Plate Kit for 100 Power Optimizers		
DCD-3PH-1TBK	Single Input Kit for SE14.4KUS & SE33.3KUS Safety Switch (5 units)		
FLD-DCD-FUSE-S1	FLD 30 x 25A Fuses for 3ph Inverters		
FLD-KIT-3PH-NA	Field Service Kit for 3ph Inverter (requires training by SolarEdge Support team)		
Inverter Warranty E	extensions		
Please refer to https://wv	vw.solaredge.com/us/service/warranty		
Satellite-based Perf	formance Ratio		
SE-SAT-PR-S1	Satellite-based Performance Ratio; one site, for one year	For full details visit:	1 + 2 + 7
SE-SAT-PR-S2	Satellite-based Performance Ratio; one site, for one year plus one year historical data	https://www.solaredge.com/us/ products/pv-monitoring/satellite- based-pr	ma.
Display Products		·	$\gamma\gamma$
SE17K-EMP-US	Demo 3ph Inverter, for 9-33.3kW Inverters, with DC Safety Switch		
SE100K-P-EMP-U	Demo 3ph Inverter with Synergy Technology, Primary Unit 100kW		W = m
SESU-US-EMP	Demo 3ph Inverter with Synergy Technology, Secondary Unit		

Comprehensive Service Suite

SolarEdge supports you throughout your PV project life cycle. We provide the tools and services to help you grow your business with us.

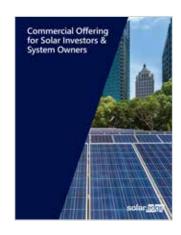




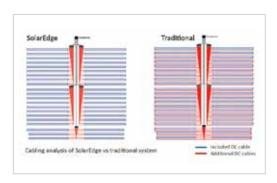


Project Design and Pre-Sale

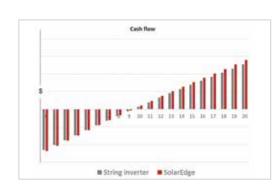
Our dedicated tools and engineering services help you close deals.



Training and tools help your sales team convey the added value of the SolarEdge solution



Tailor-made design optimization by SolarEdge pre-sale engineers



LCOE and ROI analysis



PV simulation and comparative system analysis

Comprehensive Service Suite (Cont.)

Project Execution

Our advanced tools and features will assist you to easily and smoothly execute projects.



Project design validation prior to installation



Hands-on installation training by local field engineers



Installation validation checklist



DC safety protecting installers from high DC voltage



Easy and flexible string layout



Remote and on-site installation **support** by local service teams



Easy inverter activation and commissioning using the mobile SetApp



Remote operations to commission and activate the installation



Automatic commissioning report

Operation & Maintenance

Our advanced monitoring platform allows you to guarantee system availability and high performance ratio for system lifetime.

Performance Monitoring



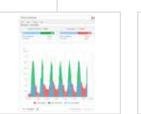
Fleet management



Pre-scheduled performance and status reports of multiple sites



alerts

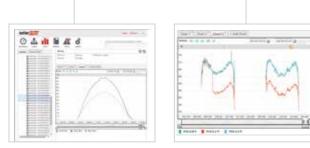


Pinpointed automatic Inter-site and multi-site comparisons



Satellite-based performance ratio

Fault Detection



Inverter and module-level fault identification

Remote troubleshooting tools

Service



Rapid RMA process



Follow the sun call center

Executive Reporting



Site specific automated production reports

8.5GW of systems shipped worldwide

Ground Mounts



Industrial Rooftops



Farms & Agriculture



Public Buildings



Carports, Floating Systems & Safety



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