SUNGROW
Clean power for all

COMMERCIAL PV/ ESS PLANT

SYSTEM SOLUTIONS

2024 / 2025

ABOUT SUNGROW

Sungrow Power Supply Co., Ltd. (“Sungrow”) is the world’s most bankable inverter brand with over 405 GW installed worldwide as of June 2023. Founded in 1997 by University Professor Cao Renxian, Sungrow is a leader in the research and development of solar inverters with the largest dedicated R&D team in the industry and a broad product portfolio offering PV inverter solutions and energy storage systems for utility-scale, commercial & industrial, and residential applications, as well as internationally recognized floating PV plant solutions, NEV driving solutions, EV charging solutions and renewable hydrogen production systems. With a strong 27-year track record in the PV space, Sungrow products power over 150 countries worldwide.

As a leader in innovation in the solar industry, Sungrow possesses a dynamic technical R&D team which consists of over 3100 employees. The Company has also invested in its own in-house testing center approved by SGS, CSA, and TÜV Rheinland. Sungrow has the world’s largest inverter factory, with a global annual production capacity of 305 GW, including 25 GW outside China.

Offering a wide range of solutions and services, Sungrow is committed to providing clean power for all and is steadfast in its efforts to become the global leader in clean power conversion technology. Learn more about Sungrow by visiting www.sungrowpower.com.

GLOBAL LEADING PV & ESS SUPPLIERD

No.1 PV Inverter global shipment

Source: S&P Global Commodity Insights

27	6000	150+	40%
Years in the Solar Industry	Patent applications	Countries with Sungrow Installations	R&D personnel ratio

NO.1

Largest PV Inverter R&D Team

405GW

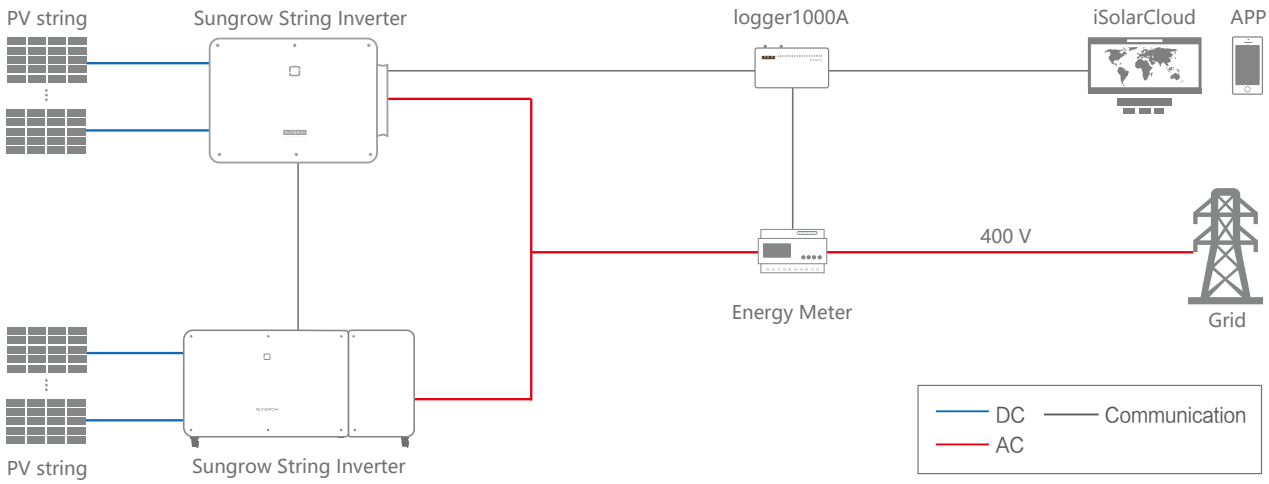
Inverter equipment installed globally Until June 2023

305GW

Inverter equipment annual production capacity

C&I PV PLANT SYSTEM SOLUTION

C&I PV Plant System Solution

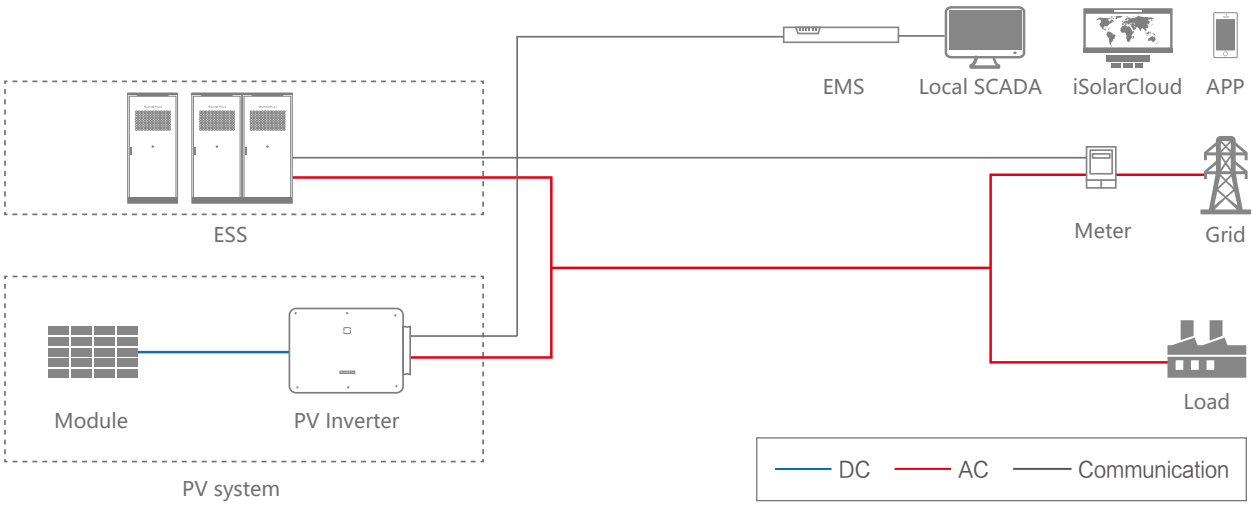


Recommend Products

SG110CX-P2 | SG110CX | SG30/50CX-P2 | SG30/50CX | SG15/20RT | WiNet-S | EyeM4 | logger1000A

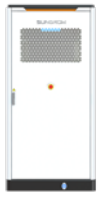
C&I PV+ESS SOLUTION

C&I PV+ESS Solution



Recommend Products

ST535kWh-250kW-2h



ST225kWh-110kW-2h-AU

SG110CX-P2

SG30/50CX

SG110CX-P2

Multi-MPPT String Inverter for 1000 Vdc System

NEW

HIGH YIELD

- 12 MPPTs with max. efficiency 98.4%
- DC 30A MPPT current input, compatible with over 600W+ PV module

SMART O&M

- Key component diagnosis and protection
- Smart IV Curve Diagnosis
- Grid fault record function, easy for remote O&M

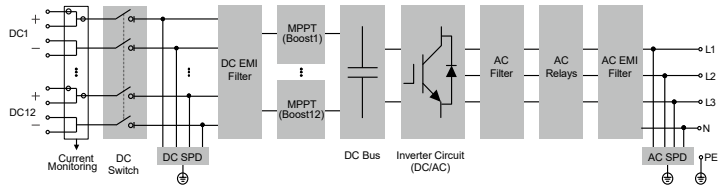
LOWER INVESTMENT

- Compatible max. 240mm² Al AC cables
- Drawer-style cable sealing plate support AC cable pre-assembly

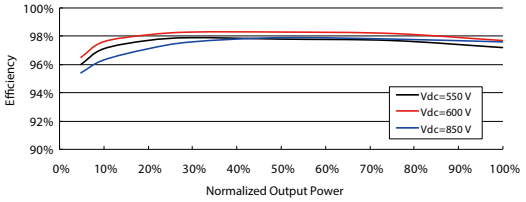
PROVEN SAFETY

- IP66 protection and C5 Anti-corrosion
- DC Type I+II SPD, AC Type II SPD
- Support AFCI 2.0 function

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG110CX-P2
Input (DC)	
Recommended max. PV input power	154 kW
Max. PV input voltage	1100 V
Min. PV input voltage / Startup input voltage	180 V / 200 V
Rated PV input voltage	600 V
MPP voltage range	180 – 1000 V
No. of independent MPP inputs	12
No. of PV strings per MPPT	2
Max. PV input current	360 A (30 A / 30 A / 30 A / 30 A / 30 A / 30 A / 30 A / 30 A / 30 A / 30 A / 30 A / 30 A)
Max. DC short-circuit current	480 A (40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A/ 40 A / 40 A)
Output (AC)	
Rated AC output power	110 kW
Max. AC output apparent power	110 kVA
Rated AC output apparent power	110 kVA
Max. AC output current	167.1 A
Rated AC voltage	3 / N / PE, AC 230 / 400 V
AC voltage range	320 – 480 V
Rated grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz
Harmonic (THD)	< 3 % (at rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / connection phases	3 / 3-N-PE
Efficiency	
Max. efficiency / European efficiency	98.4 % / 98.1 %
Protection & Function	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Surge protection	DC Type II / AC Type II
Ground fault monitoring	Yes
DC switch	Yes
PV String current monitoring	Yes
PID recovery function	Yes
DC Terminal Protective Cover	Yes
Arc fault circuit interrupter (AFCI)	Yes
Communication dongle (EyeM4)	Yes
General Data	
Dimensions (W*H*D)	1019*793*360 mm
Weight	87 kg
Topology	Transformerless
Degree of protection	IP66
Corrosion	C5
Night power consumption	≤4 W
Operating ambient temperature range	-30 to 60 ℃
Allowable relative humidity range (non-condensing)	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m
Display	LED, Bluetooth+APP
Communication	RS485 / WLAN / Ethernet, Optional: 4G
DC connection type	MC4 -Evo2 (Max. 6 mm^2)
AC connection type	OT or DT terminal (Max.240 mm^2)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, IEC 61000-6-3, AS/NZS 4777.2:2020
Grid Support	Q at night function, LVRT, HVRT,active & reactive power control and power ramp rate control
Country of manufacture	China

SG110CX Premium

Multi-MPPT String Inverter for 1000 Vdc System

AU

HIGH YIELD

- 9 MPPTs with max. efficiency 98.7%
- Compatible with bifacial module
- Built-in PID recovery function

SMART O&M

- Touch free commissioning and remote firmware upgrade
- Smart IV Curve Diagnosis *
- Fuse free design with smart string current monitoring

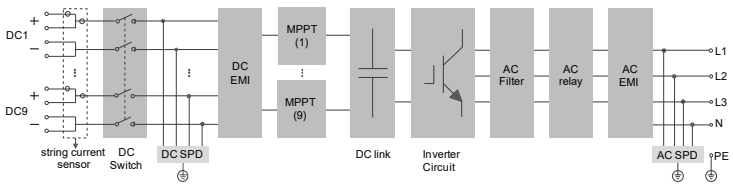
SAVED INVESTMENT

- Compatible with Al and Cu AC cables
- DC 2 in 1 connection enabled
- Q at night function

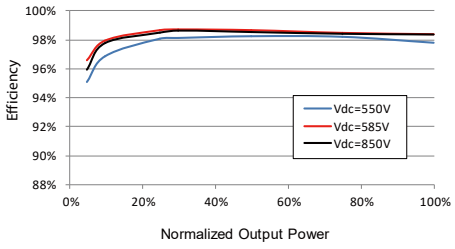
PROVEN SAFETY

- IP66 and C5 protection
- Type II SPD for both DC and AC
- Compliant with global safety and grid code

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG110CX
Input (DC)	
Recommended max. PV input power	147 kW
Max. PV input voltage	1100 V **
Min. PV input voltage / Start-up input voltage	200 V / 250 V
Rated PV input voltage	585 V
MPP voltage range	200 – 1000 V
No. of independent MPP inputs	9
No. of PV strings per MPPT	2
Max. PV input current	234 A (26 A / 26 A / 26 A / 26 A / 26 A / 26 A / 26 A / 26 A / 26 A)
Max. DC short-circuit current	360 A (40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A)
Output (AC)	
Max. AC Output power	110 kVA @ 45 ℃ / 100 kVA @ 50 ℃
Rated AC output apparent power	110 kVA
Max. AC output current	158.8 A
Rated AC voltage	3 / N / PE, 400 V
AC voltage range	320 – 460V
Rated grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
Harmonic (THD)	< 3 % (at rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / AC connection	3 / 3-PE
Efficiency	
Max. efficiency / European efficiency	98.7 % / 98.5 %
Protection and Function	
DC reverse polarity protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Yes
DC switch	Yes
AC switch	No
PV string monitoring	Yes
Q at night function	Yes
PID recovery function	Yes
DC terminal protective cover	Yes
Communication dongle (EyeM4)	Yes
Surge protection	DC Type II / AC Type II
General Data	
Dimensions (W*H*D)	1051*660*362.5 mm
Weight	89 kg
Topology	Transformerless
Degree of protection	IP66
Night power consumption	< 2 W
Operating ambient temperature range	-30 to 60 ℃ (> 50 ℃ derating)
Allowable relative humidity range	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display	LED, Bluetooth+APP
Communication	RS485 / Optional: WLAN, Ethernet
DC connection type	MC4 (Max. 6 mm²)
AC connection type	OT / DT terminal (Max. 240 mm²)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4110:2018, VDE-AR-N 4120:2018, IEC 61000-6-3, EN 50549, AS/NZS 4777.2:2020, CEI 0-21, VDE 0126-1-1/A1 VFR 2014, UTE C15-712-1:2013, DEWA
Grid Support	Q at night function, LVRT, HVRT,active & reactive power control and power ramp rate control
Country of manufacture	China

* Only compatible with Sungrow Logger, EyeM4 and iSolarCloud

** The inverter enters the standby state when the input voltage ranges between 1,000V and 1,100V. If the maximum DC voltage in the system can exceed 1000V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

SG30/50CX-P2

Multi-MPPT String Inverter for 1000 Vdc System

NEW

HIGH YIELD

- DC 15A current input, compatible with over 500W+ PV module
- Dynamic shading optimization mode
- Built-in PID recovery function

SMART O&M

- Key component diagnosis and protection
- Smart IV Curve Diagnosis
- Grid fault record function, easy for remote O&M

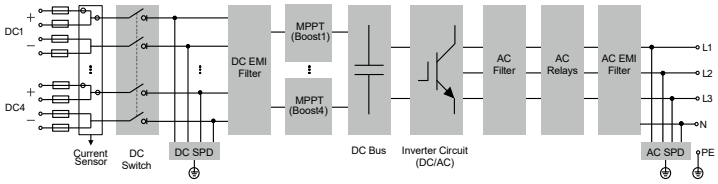
LOWER INVESTMENT

- Easy to handle thanks to 34% weight reduced
- Plug and Play with Buckle Design

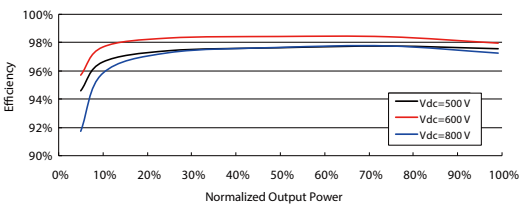
PROVEN SAFETY

- IP66 protection and C5 Anti-corrosion
- DC Type I+II SPD, AC Type II SPD
- Support AFCI 2.0 function

CIRCUIT DIAGRAM (SG50CX-P2)



EFFICIENCY CURVE



Type designation	SG30CX-P2	SG50CX-P2
Input (DC)		
Recommended max. PV input power	42 kWp	70 kWp
Max. PV input voltage	1100 V	
Min. PV input voltage / Startup input voltage	160 V / 200 V	
Rated PV input voltage	600 V	
MPP voltage range	160 – 1000 V	
No. of independent MPP inputs	3	4
No. of PV strings per MPPT	2	
Max. PV input current	90 A (30 A / 30 A / 30 A)	120 A (30 A / 30 A / 30 A / 30 A)
Max. DC short-circuit current	120 A (40 A / 40 A / 40 A)	160 A (40 A / 40 A / 40 A / 40 A)
Output (AC)		
Rated AC output power	29.9 kW	50 kW
Max. AC output apparent power	29.9 kVA	50 kVA
Rated AC output apparent power	29.9 kVA	50 kVA
Max. AC output current	48.15 A	80.5 A
Rated AC voltage	3 / N / PE, AC 230 / 400 V	
AC voltage range	312 – 480 V	
Rated grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz	
Harmonic (THD)	< 3 % (at rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / connection phases	3 / 3-N-PE	
Efficiency		
Max. efficiency / European efficiency	98.5 % / 98.3 %	
Protection & Function		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
AC short circuit protection	Yes	
Leakage current protection	Yes	
Surge protection	DC Type I+II / AC Type II	
Ground fault monitoring	Yes	
DC switch	Yes	
PV String current monitoring	Yes	
PID recovery function	Yes	
DC Terminal Protective Cover	Yes	
Arc fault circuit interrupter (AFCI)	Yes	
Communication dongle (EyeM4)	Yes	
General Data		
Dimensions (W*H*D)	600*625*240 mm	
Weight	35 kg	36 kg
Topology	Transformerless	
Degree of protection	IP66	
Corrosion	C5	
Night power consumption	≤5 W	
Operating ambient temperature range	-30 to 60 ℃ (> 45 ℃ derating)	
Allowable relative humidity range (non-condensing)	0 – 100 %	
Cooling method	Smart forced air cooling	
Max. operating altitude	4000 m	
Display	LED, Bluetooth+APP	
Communication	RS485 / WLAN / Ethernet, Optional: 4G	
DC connection type	MC4 -Evo2 (Max. 6 mm²)	
AC connection type	OT terminal (16~35 mm²)	OT or DT terminal (35~50 mm²)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, IEC 61000-6-3, AS/NZS 4777.2:2020	
Grid Support	Q at night function, LVRT, HVRT,active & reactive power control and power ramp rate control	
Country of manufacture	China	

SG30/50CX Premium

Multi-MPPT String Inverter for 1000 Vdc System

AU

HIGH YIELD

- Up to 5 MPPTs with max. efficiency 98.7%
- Compatible with bifacial module
- Built-in PID recovery function

SMART O&M

- Touch free commissioning and remote firmware upgrade
- Smart IV Curve Scanning *
- Fuse free design with smart string current monitoring

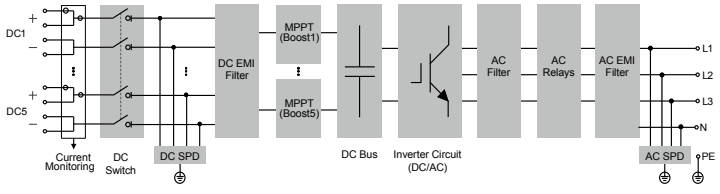
SAVED INVESTMENT

- Compatible with Al and Cu AC cables
- DC 2 in 1 connection enabled
- Cable free communication with optional WLAN

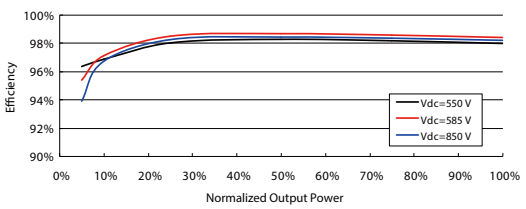
PROVEN SAFETY

- IP66 and C5 anti-corrosion grade
- Type II SPD for both DC and AC
- Satisfied global safety and grid code

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG30CX	SG50CX
Input (DC)		
Recommended max. PV input power	45 kW	76 kW
Max. PV input voltage	1100 V **	
Min. PV input voltage / Start-up input voltage	200 V / 250 V	
Rated PV input voltage	585 V	
MPP voltage range	200 – 1000 V	
No. of independent MPP inputs	3	5
No. of PV strings per MPPT	2	
Max. PV input current	78 A (26 A / 26 A / 26 A)	130 A (26 A / 26 A / 26 A / 26 A / 26 A)
Max. DC short-circuit current	120 A (40 A / 40 A / 40 A)	200 A (40 A / 40 A / 40 A / 40 A / 40 A)
Output (AC)		
Max. AC Output power	29.9 kVA	50 kVA
Rated AC output apparent power	29.9 kVA	50 kVA
Max. AC output current	48.15 A	80.5 A
Rated AC voltage	3 / N / PE, 230 / 400 V	
AC voltage range	312 – 528 V	
Rated grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz	
Harmonic (THD)	< 3 % (at rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / connection phases	3 / 3-PE	
Efficiency		
Max. efficiency / European efficiency	98.6 % / 98.3 %	98.7 % / 98.4 %
Protection and function		
DC reverse polarity protection	Yes	
AC short circuit protection	Yes	
Leakage current protection	Yes	
Grid monitoring	Yes	
Ground fault monitoring	Yes	
DC switch	Yes	
AC switch	No	
PV string monitoring	Yes	
Q at night function	Yes	
PID recovery function	Yes	
DC Terminal Protective Cover	Yes	
Communication dongle (EyeM4)	Yes	
Surge Protection	DC Type II / AC Type II	
General Data		
Dimensions (W*H*D)	702 * 595 * 310 mm	782*645*310 mm
Weight	50 kg	62 kg
Topology	Transformerless	
Degree of protection	IP66	
Night power consumption	≤2 W	
Operating ambient temperature range	-30 to 60 ℃ (> 45 ℃ derating)	
Allowable relative humidity range	0 – 100 %	
Cooling method	Smart forced air cooling	
Max. operating altitude	4000 m (> 3000 m derating)	
Display	LED, Bluetooth+APP	
Communication	RS485 / WLAN / Optional: Ethernet	
DC connection type	MC4 (Max. 6 mm^2)	
AC connection type	OT or DT terminal (Max.70 mm^2)	
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, IEC 61000-6-3, AS/NZS 4777.2:2020	
Grid Support	Q at night function, LVRT, HVRT,active & reactive power control and power ramp rate control	
Country of manufacture	China	

*: Only compatible with Sungrow Logger, EyeM4 and iSolarCloud

**: The inverter enters the standby state when the input voltage ranges between 1,000V and 1,100V. If the maximum DC voltage in the system can exceed 1000V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

SG15/20RT

Multi-MPPT String Inverter for 1000 Vdc System

AU

HIGH YIELD

- Lower startup & wider MPPT voltage
- Compatible with 500W+ PV modules
- Built-in PID recovery function

SMART MANAGEMENT

- 24/7 Live Monitoring
- Remote firmware updates
- Smart IV curve scanning

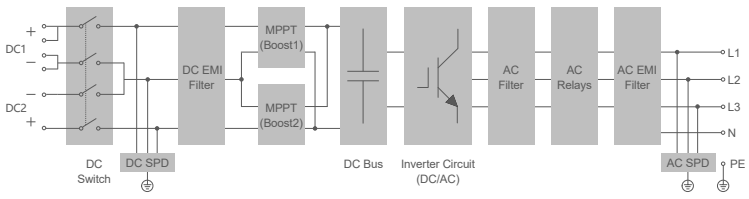
SAFE AND DURABLE

- Quick arc fault circuit interrupter
- Build-in Type II DC&AC SPD
- C5 anti-corrosion & IP65

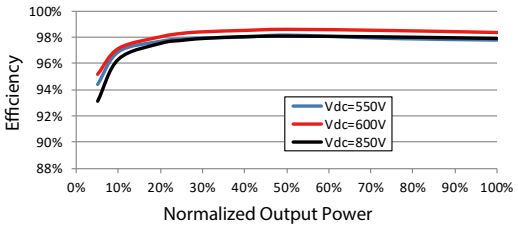
EASY AND USER FRIENDLY

- Light and compact design
- Plug and play connectors
- Fast and easy commissioning via App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG15RT	SG20RT
Input (DC)		
Recommended max. PV input power	22.5 kWp	30 kWp
Max. PV input voltage	1100 V *	
Min. PV input voltage / Start-up input voltage	180V / 180V	
Rated PV input voltage	600 V	
MPP voltage range	160 V – 1000 V	
No. of independent MPP inputs	2	
No. of PV strings per MPPT	2 / 2	
Max. PV input current	64 A (32 A / 32 A)	
Max. DC short-circuit current	80 A (40 A / 40 A)	
Output (AC)		
Rated AC output power (@230V, 50Hz)	15000 W	20000 W
Max. AC output apparent power	15000 VA	20000 VA
Rated AC output apparent power	15000 VA	20000 VA
Max. AC output current	22.7 A	30.3 A
Rated AC output current (at 230 V)	21.7 A	29 A
Rated AC voltage	3 / N / PE, 230 / 400 V	
AC voltage range	180 V – 276 V / 311 V – 478 V	
Rated grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz	
Harmonic (THD)	60 Hz / 55 – 65 Hz	
Power factor at rated power / Ajustable power factor	< 3 % (at rated power)	
Feed-in phases / AC connection	> 0.99 / 0.8 leading – 0.8 lagging	
Efficiency	3 / 3 - N - PE	
Max.efficiency / European efficiency		
Protection&Function	98.5 % / 98.1 %	
Grid monitoring		
DC reverse connection protection	YES	
AC short-circuit protection	YES	
Leakage current protection	YES	
Surge protection	YES	
DC switch	DC Type II / AC Type II	
Arc fault circuit interrupter (AFCI)	YES	
PID recovery function	YES	
General Data	YES	
Dimensions (W * H * D)	370 * 480 * 195 mm	
Weight	22 kg	
Mounting method	Wall-mounting bracket	
Topology	Transformerless	
Degree of protection	IP65	
Corrosion	C5	
Operating ambient temperature range	-25 ℃ to 60 ℃	
Allowable relative humidity range (noncondensing)	0% – 100%	
Cooling method	Smart forced air cooling	
Max. operating altitude	4000 m	
Display	LED	
Communication	WLAN / Ethernet / RS485 / DI / DO	
DC connection type	MC4 (Max. 6 mm²)	
AC connection type	Plug and play	
Grid compliance	IEC 62109-1/2, AS/NZS 4777.2: 2020	
Country of manufacture	China	

* The inverter enters the standby state when the input voltage ranges between 1,000V and 1,100V. If the maximum DC voltage in the system can exceed 1000V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

ST225kWh-110kW-2h-AU

PowerStack Liquid Cooled C&I Energy Storage System

Preliminary

NEW

LOWER COST

- Fully integrated system design with pre-installation and pre-commissioning, to reduce commissioning work on site
- Innovative AI bionic thermal balance, 33 % reduction in all-day system heat loss
- Balanced heat dissipation by liquid cooling, the cell temperature difference ≤ 2.2 ℃

SAFETY AND RELIABLE

- Seamless switch (< 20 ms) to provide continuous power supply for off-grid operation
- AI monitoring of cell health with early warning, to manage thermal runaway
- PACK, RACK, PCS three-level overcurrent protection
- Three-level fire safety design and accurate early warning of thermal runaway, to prevent fire event

EFFICIENT AND FLEXIBLE

- High-efficiency PCS with max.efficiency 98.6 %
- Seamless side by side parallel connection
- Supporting 2 h - 4 h system

SMART AND ROBUST

- iSolarCloud App or Web cloud monitoring, to provide real-time alarm and troubleshooting solution
- Near-distal intelligent wireless operation and one-key remote upgrade, to reduce labour O&M cost

Technical Data	ST225kWh-110kW-2h-AU
DC side	
Cell type	LFP
System battery configuration	256S1P
Nominal capacity	229 kWh
Nominal voltage range	691.2 V – 934.4 V
AC side (on-grid)	
Nominal power	110 kW
Nominal voltage	400 V
Voltage range	340 V – 440 V
Nominal frequency	50 Hz
Frequency range	45 Hz – 55 Hz
Max.THD of current	< 3 % (at nominal power)
DC component	< 0.5 % (at nominal power)
Power factor range	1.0 leading - 1.0 lagging
AC side (off-grid)*	
Nominal voltage	400 V
Nominal frequency	50 Hz
Max.THD of voltage	< 3 % (linear load)
Unbalance load capacity	100 %
System parameter	
Dimension（W * H * D）	1150 * 2450 * 1610 mm
Weight	≤ 3100 kg
Degree of protection	IP55
Auxiliary power supply	Internal power supply (default) / External power supply (optional)
Anti-corrosion degree	C3 (default) / C5 (optional)
Operation humdity range	0 % – 00 % (non-condensing)
Operation temperature range	-30 ℃ to 50 ℃ (> 45 ℃ derating)
Altitude	≤ 3000 m
Temperature control method	Intelligent liquid cooling
Noise	≤ 70 dB
Fire suppression system	Flammable gas detector, Smoke detector, Heat detector, Alarm sounder, Aerosol, Water pipeline
Communication interfaces	Ethernet
Communication protocols	Modbus TCP
Standard	IEC 62619, IEC 63056, IEC 62040, IEC 62477, IEC 61000, UN 38.3, AS/NZS 4777.2, AS/NZS 3000
Max.Parallel quantity (off-grid)	≤ 10
Transformer cabinet parameter**	
Transformer capacity	250 kVA
Primary side voltage / Secondary side voltage	400 V / 400 V (Dyn11)
Nominal frequency	50 Hz
Dimensions (W*H*D)	1200 * 2000 * 1200 mm
Weight	≤ 1500 kg
Degree of protection	IP54
Anti-corrosion degree	C3 (default) / C5 (optional)
Operation humidity range	0 % – 100 % (non-condensing)
Operation temperature range	-30 ℃ to 50 ℃ (> 45 ℃ derating)
Altitude	≤ 3000 m
Temperature control method	Air cooling

* A transformer cabinet is needed additionally when the system is in off-grid mode

PowerStack Liquid Cooling Commerical Energy Storage System (Grid-connected)

LOW COSTS

- Highly integrated ESS for easy transportation and O&M
- All pre-assembled, no battery module handling on site
- 8 hour installation to commission

SAFE AND RELIABLE

- DC electric circuit safety management includes fast breaking and anti-arc protection
- Multi level battery protection layers formed by discreet standalone systems offer impeccable safety
- Intelligent leakage protection and liquid refilling system

EFFICIENT AND FLEXIBLE

- Intelligent liquid cooling ensures higher efficiency and longer battery cycle life
- Modular design supports parallel connection and easy system expansion
- Front Cable Entry, save cable tray

SMART AND ROBUST

- Fast state monitoring and faults record enables pre-alarm and faults location
- Integrated battery performance monitoring and logging

Product Name	ST535kWh-250kW-2h	ST570kWh-250kW-2h	ST1070kWh-250kW-4h	ST1145kWh-250kW-4h
Battery cabinet data				
Cell type	LFP			
System battery configuration	300S2P	320S2P	300S2P*2	320S2P*2
Battery capacity (BOL) at DC side	537kWh	573kWh	537kWh*2	573kWh*2
System output voltage range	810~1095V	864~1168V	810~1095V	864~1168V
Dimensions of battery unit (W * H * D)	2180*2450*1730mm (single cabinet)			
Weight of battery unit	5900kg (single cabinet)	6100kg (single cabinet)	5900kg (single cabinet)	6100kg (single cabinet)
Degree of protection	IP54			
Anti-corrsion grade	C3			
Relative humidity	0 ~ 100% (non-condensing)			
Operating temperature range	-30 to 50°C (> 45°C derating)			
Max. working altitude	3000m			
Cooling concept of battery chamber	Liquid cooling			
Fire safety equipment	Aerosol ,flammable gas detector and exhausting system			
Communication interfaces	Ethernet			
Communication protocols	Modbus TCP			
Compliance	IEC62619,IEC63056,IEC62040,IEC62477,UN38.3			
PCS cabinet data				
Nominal AC power	250kVA@45°C			
Max.THD of curretnt	<3% (at nominal power)			
DC component	<0.5% (at nominal power)			
Nominal grid voltage	400V			
Nominal grid voltage range	360V~440V			
Nominal grid frequency	50/60Hz			
Nominal grid frequency range	45Hz~55Hz, 55-65Hz			
Dimensions (W*H*D)	1800*2450*1230mm			
Weight	1600kg			
Degree of protection	IP54			
Anti-corrsion grade	C3			
Allowable relative humidity range	0 ~ 95 % (non-condensing)			
Operating temperature range	-30 to 50°C (> 45°C derating)			
Max. working altitude	3000m			
Communication interfaces	Ethernet			
Communication protocols	Modbus TCP			
Compliance	IEC61000,IEC62477,AS4777.2			

PowerStack Liquid Cooling Commerical Energy Storage System(Off-grid)

LOW COSTS

- Highly integrated ESS for easy transportation and O&M
- All pre-assembled, no battery module handling on site
- 8 hour installation to commission

SAFE AND RELIABLE

- DC electric circuit safety management includes fast breaking and anti-arc protection
- Multi level battery protection layers formed by discreet standalone systems offer impeccable safety
- Intelligent leakage protection and liquid refilling system

EFFICIENT AND FLEXIBLE

- Intelligent liquid cooling ensures higher efficiency and longer battery cycle life
- Modular design supports parallel connection and easy system expansion
- Front Cable Entry, save cable tray

SMART AND ROBUST

- Fast state monitoring and faults record enables pre-alarm and faults location
- Integrated battery performance monitoring and logging

Product Name	ST535kWh-250kW-2h	ST570kWh-250kW-2h	ST1070kWh-250kW-4h	ST1145kWh-250kW-4h
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Anti-corrsion grade	C3			
Relative humidity	0 ~ 100% (non-condensing)			
Operating temperature range	-30 to 50°C (> 45°C derating)			
Max. working altitude	3000m			
Cooling concept of battery chamber	Liquid cooling			
Fire safety equipment	Aerosol ,flammable gas detector and exhausting system			
Communication interfaces	Ethernet			
Communication protocols	Modbus TCP			
Compliance	IEC62619,IEC63056,IEC62040,IEC62477,UN38.3			
PCS cabinet data				
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Max.THD of curretnt	<3% (at nominal power)			
DC component	<0.5% (at nominal power)			
Nominal grid voltage	400V			
Nominal grid voltage range	360V~440V			
Nominal grid frequency	50/60Hz			
Nominal grid frequency range	45Hz~55Hz, 55-65Hz			
Dimensions (W*H*D)	1800*2450*1230mm			
Weight	1600kg			
Degree of protection	IP54			
Anti-corrsion grade	C3			
Allowable relative humidity range	0 ~ 100% (non-condensing)			
Operating temperature range	-30 to 50°C (> 45°C derating)			
Max. working altitude	3000m			
Communication interfaces	Ethernet			
Communication protocols	Modbus TCP			
Compliance	IEC61000,IEC62477,AS4777.2			
Transformer cabinet data				
Transformer capacity	250kVA@45°C			
Nominal grid voltage	400V/400V			
Nominal grid frequency	50/60Hz			
Dimensions (W*H*D)	1200*2000*1200mm			
Weight	2500kg			
Degree of protection	IP54			
Anti-corrsion grade	C3			
Allowable relative humidity range	0 ~ 100% (non-condensing)			
Operating temperature range	-30 to 50°C (> 45°C derating)			
Max. working altitude	3000m			

IDC30E

Fast DC charger for electric vehicles

NEW

RELIABLE

- IP65 protection and C5 anti-corrosion
- Service lifetime up to 10 years
- Innovative design without additional filter mat to enjoy maintenance free

EFFICIENT

- Max. efficiency up to 96.5 %
- Dynamic load management to optimize EV charging
- Independent air duct design to achieve efficient cooling

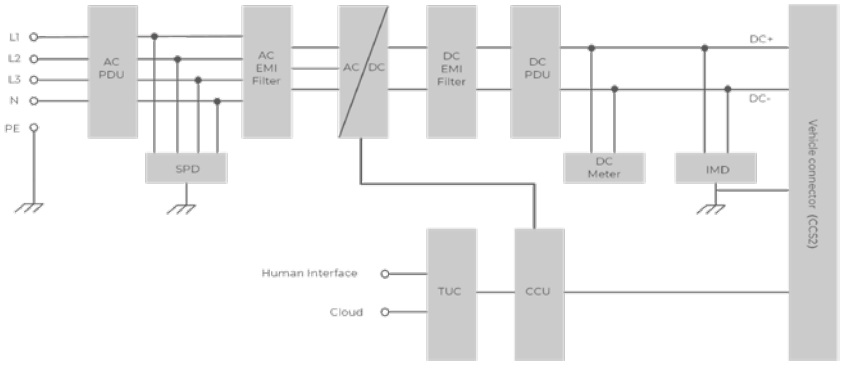
FLEXIBLE APPLICATION

- Adaptive voltage range 200 - 1000 Vdc, compatible with new electric vehicles
- Compatibility with PV-ESS system reserved

USER FRIENDLY

- Support various options for authentication
- Suitable for C&I and residential usage with EMC Class B
- Environmental friendly with extremely low noise < 50 dB(A)

CIRCUIT DIAGRAM



Technical parameters	IDC30E
Charging connector	
Connector type	CCS2
EVSE-vehicle protocol	DIN SPEC 70121
Number of EV served	1
Cable length	5 m
DC Output	
DC output power	30 kW
DC output voltage	200 Vdc - 1000 Vdc
DC output current	80 A
AC Input	
Grid voltage	3 / N / PE, 400 Vac (± 10 %)
Nominal grid frequency	50 Hz
Grid frequency range	45 Hz - 55 Hz
Earthing system	TN-C, TN-S, TN-C-S, TT
Nominal input current	46 A
Max. input current	52 A
Power factor	≥ 0.99
Total harmonic distortion (THDi)	< 5 % at full output po wer
Overvoltage category	III
Efficiency	
Max. efficiency	96.5%
Protection	
Over / under voltage protection	Yes
Over-current protection	Yes
Short-circuit protection	Yes
Over-temperature protection	Yes
Surge protection	Yes
User interface	
Display	7-inch color touch screen
Language	English (default) Other languages available by firmware upgrade
Authentication	RFID-card, Plug & Play, Auto-charge
Firmware update	Over-the-air (OTA) by iEnergyCharge
RFID system	ISO / IEC 14443 A / B, ISO / IEC 15693
Energy metering	DC metering (CE compliant)
Communication interface	4G, Ethernet, WLAN
Communication protocol (charger-to-CSMS)	OCPP 1.6 J, Ready for OCPP 2.0.1
Emergency stop	Yes, integrated
Mechanical data	
Dimensions (W*H*D)	500 * 800 * 242 mm
Weight	53 kg
Installation method	Wall-mounting (default), Stand column, trolley (optional)
Mechanical impact protection	IK10 *
Environmental data	
Degree of protection	IP65
Anti-corrosion degree	C5
Operating ambient temperature range	-35 °C to 55 °C
Allowable relative humidity range	5 % - 95 % (n on-condensing)
Max. operating altitude	≤ 2000 m
Cooling method	Smart forced air cooling
Noise (typical)	≤ 50 dB (A)
EMC	Class B
General data	
Compliance	EN IEC 61851-1, EN 61851-24, IEC 61851-1 / 23 / 24
Warranty	3 years (standard)
Country of manufacture	Made in China

* The mechanical impact protection degree of HMI is IK08.

WiNet-S

LAN Communication Module

SMART AND FLEXIBLE

- WLAN or Ethernet, flexible compatibility of plant networking, one-click access to iSolarCloud
- Automatic network configuration with DHCP, transmission without configuration
- Free WLAN configuration, easy and time saving

SIMPLE AND EFFICIENT

- Plug and play, quick installation
- Data interval in seconds, quick glance for what you want
- Support of Smart IV Curve Diagnosis[1]
- Support of local and remote parameter setting and firmware updates

SAFE AND RELIABLE

- Password and encrypted transmission for data protection
- IP66, wide temperature range

Type designation	WiNet-S
Communication	
Max. number of devices	1
LED display	LED * 3
Communication Mode	
Internet communication	Channel * 1, 10/100Mbps self-adaption, Communcation distance ≤100m
WLAN commnunicatoin	802.11 b/g IEEE802.11n HT20@2.4GHz IEEE802.11n HT40@2.4GHz 2.4 GHz
Power Supply	
DC input	5 VDC, 2.1 A
Power consumption	≤5 W
Ambient conditions	
Operating Temperature	-30 °C to 60 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W * H * D)	48 * 132 * 36 mm
Mounting type	Plug and play

EyeM4

Wireless Communication Module for Multiple Inverter

SMART AND FLEXIBLE

- One-click access to iSolarCloud
- One module can manage up to 10 inverters for remote maintenance and control
- Plug and play, easy installation

CONVENIENT O&M

- Built-in Web server for monitoring and configuration, by PC or smartphone browser no App required
- Support of plant maintenance by remote Web access, optimized OPEX
- Support of local and remote parameter setting and firmware updates

Type designation	EyeM4
Communication	
Max. number of devices	10
LED display	LED × 3
Wireless communication	
4G communication	LTE(FDD): B1, B3, B5, B8 LTE(TDD): B38, B39, B40, B41 TD-SCDMA: B34, B39 CDMA: BC0 GSM: 900MHz/1800MHz WCDMA: B1, B8
WLAN commnunicatoin	802.11 b/g/n/ac HT20/40/80 MHz 2.4 GHz / 5 GHz
Power supply	
DC input	5 VDC, 0.8 A
Power consumption	<4 W
Ambient conditions	
Operating Temperature	-30 °C to 60 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W * H * D)	48 * 130 * 36 mm
Mounting type	Plug and Play
Ordering information	
EyeM4A	Supports 4G and WLAN communication
EyeM4C	Supports WLAN communication

Logger1000A

The Logger1000 is a data acquisition, protocol conversion device suitable for inverters, combiner boxes, meteo stations, and energy meters in PV power plants. It supports power control, acts as gateway and assists with plant maintenance.

FLEXIBLE NETWORKING

- Support of RS485, Ethernet, 4G, WLAN communication
- Support of energy meter, meteo station, sensors and other equipment access

CONVENIENT O&M

- Inverter batch parameter setting and firmware updates
- Plant maintenance by remote Web access, optimized OPEX
- Active and reactive power control
- Local monitoring

EASY OPERATION

- Automatic Modbus address distribution
- Built-in Web server for monitoring and configuration, by PC or smartphone browser; no APP required

Type designation	Logger1000A
Communication	
Max. number of devices	30
Communication ports	
RS485 interface	3
Ethernet	1*RJ45, 10 / 100Mbps
Digital input	5, Max. 24V DC
Analog input	4, support 4 – 20 mA or 0 – 10 VDC
Wireless communication	
4G Band	LTE(FDD): B1, B3, B5, B8 LTE(TDD): B40 WCDMA: B1, B8
WiFi communication	802.11 b / g / n / ac HT20 / 40 / 80 MHz 2.4GHz / 5GHz
Power Supply	
DC input	24 VDC, 1.2 A
DC output	24 VDC, 0.5 A
Power consumption	<10 W
Ambient conditions	
Operating Temperature	-30 °C to 60 °C
Storage Temperature	-40 °C to 70 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP20
Mechanical parameters	
Dimensions (W * H * D)	200 * 110 * 60 mm
Weight	500 g
Mounting type	Top-hat rail mounting / wall mounting

EMS3000CP

The products are suitable for industrial and commercial energy storage power plant

AI DISPATCH

- 36GW of renewable energy assets can be connected to the cloud, and 100TB of massive data can be provided every day for the training of multiple sets of AI algorithms, with high prediction accuracy
- Diversified forecasting models cover power forecasting, load forecasting, scheduling management, production planning and other business scenarios, proactively predict and analyze customer power consumption behavior, provide optimal scheduling solutions, and increase energy storage revenue

EFFICIENT OPERATIONS

- Proximal mobile monitoring operation and maintenance, real-time monitoring unlimited
- Cloud-side collaboration to achieve remote operation

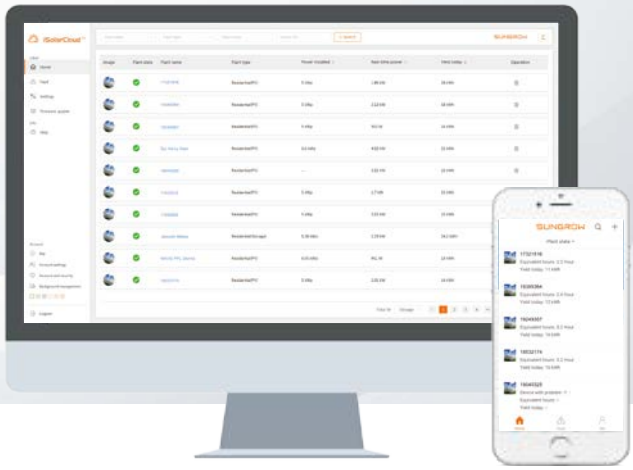
SAFE AND RELIABLE

- Three layers of safety protection, data security does not leak

Type designation	EMS3000CP
System	
Controller	EMS300CP
OS	Linux
Max. number of devices	ES capacity: ≤5 MWh PV capacity: ≤6 MWp
Typical functions	Countercurrent prevention, demand control, time-sharing power, force control, SOC balancing, load forecasting, power forecasting, scheduling management, support for iSolarCloud
Communication	
RS485 interface	7
DI / DO	16 / 4
Fiber port	2*100 / 1000 Mbps
Ethernet port	6*10 / 100 Mbps
Fiber Splice Box	4-Input and 24-Output SC Single mode
WLAN	802.11 b/g n, HT20/40, 2.4 GHz
Power supply	
AC input	100 V ~ 240 V
DC input	24V (±10%)
Power consumption	max. 50 W
Ambient conditions	
Operating Temperature	-30 ℃ to 60 ℃
Storage Temperature	-40 ℃ to 70 ℃
Relative air humidity	5 % – 95 % (non-condensing)
Elevation	≤ 3000 m
Protection class	IP65
Mechanical parameters	
Dimensions (W*H*D)	860 * 610 * 272 mm
Weight	≤35 kg
Mounting type	Wall hanging, rack mounting/ground mounting, outdoor and indoor
Box material	Metal
Cable specification	AC cable: The recommended cable diameter is 1.5mm², and the distance is less than 10m DC cable:The recommended cable diameter is 1.5mm², and the distance is less than 10m RS485 cable: 0.75~1.5mm² outdoor twisted-pair cable with uv-shielding layer, the maximum length is less than 1000m (baud rate 9600)
Ordering information	
EMS3000CP	The EMS3000CP includes EMS300CP, SPD, AC adapter, Switch, OTB, Firewall (Optional)

iSolarCloud

Remote Monitoring and O&M Platform



FLEXIBLE AND FRIENDLY

- Centralized power plant management, optimized OPEX
- Flexible data access, Web portal and App, remote or local maintenance
- Easy account management, share plants with co-workers and friends

SAFE AND RELIABLE

- Hierarchical access management
- Cyber security and redundant data storage over the lifecycle of plants, certified data security
- Full log for trace and audit

SIMPLE AND EFFICIENT

- Scan QR to create plant or get support, devices automatic access
- Accurate positioning of faults, quick trouble shooting, real-time push of information, reducing time to resolve faults
- Parameter setting, firmware updates, IV curve diagnosis, data analysis and automated reports
- Support of plant maintenance by remote Web access of local data logger

Type designation	iSolarCloud
Monitoring Device	
Device type	Inverter, combiner box, meteo station, energy meter, transformer and other plant devices
Monitoring Capacity	More than 100 GW (scalable)
Data Collection	
Time interval	5 minutes
General Data	
Language	Chinese, English, German, French, Spaish, Portuguese, Italian, Dutch, Polish, Japanese, Korean, Vietnamese, Traditional Chinese
Data storage time	> 25 years
Storage capability	> 100PB
System reliability	99.99%
Minimum Web requirements	
Browser	IE 11, Chrome 65, Safari 11, Firefox 60
Resolution	1366 * 768, 1920 * 1080 recommended
Minimum Operating Environment for App	
Dimensions (W * H)	1920 * 1080, 2001 * 1125, 1280 * 720
Mounting type	Android 5.0, iOS 10.0

SUNGROW

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