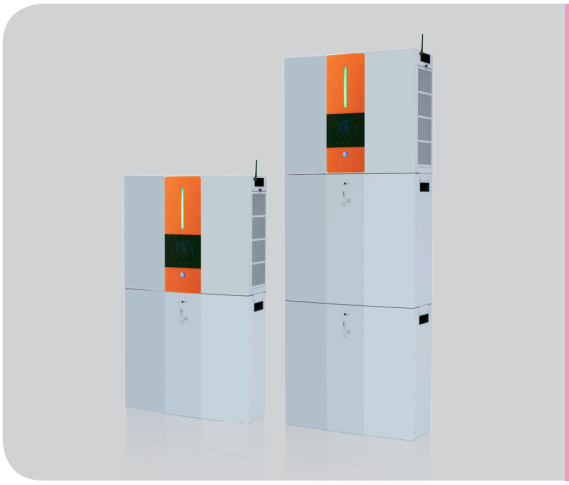
ESS510 Energy Storage System

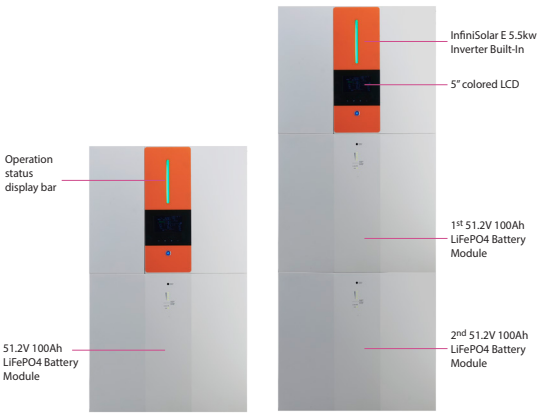
5.5kw hybrid solar inverter with 5kwh Lithium-ion battery

UN 38.3 NRS 097-2-1 G99

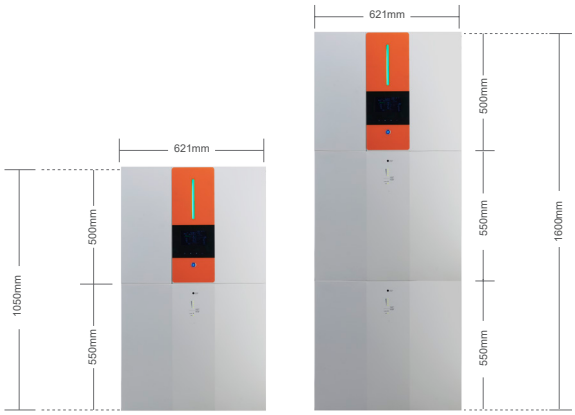


- Integrated 5.5kw hybrid solar inverter and lithium-ion battery module
- Self-consumption and Feed-back to the Grid
- Programmable supply priority for PV, battery or Grid
- User-adjustable battery charging current
- Programmable multiple operation modes: Grid-tie, off-grid and grid-tie with backup
- Built-in timer for various mode of on/off operation
- Multiple communication for USB, RS232, Modbus, SNMP, GPRS and Wi-Fi
- Monitoring software for real-time status display and control
- Enhance AC/Solar charger to 100A
- Scalable Li-Ion battery expansion
- Li-Ion battery life cycle: 8000 cycles at 25 °C
- High surge discharging current up to 3C
- IP 20

ESS510, 5.5kw hybrid inverter with
5kwh lithium-ion scalable battery module



DIMENSION



Accessory

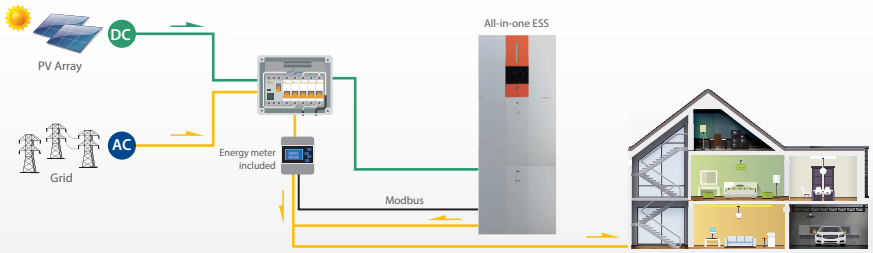


Maximum 10 pcs of battery modules



System Diagram

Add ESS into existing home utility system



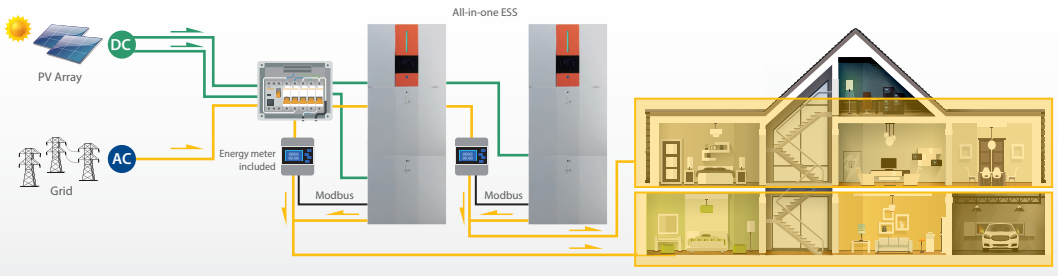
Supply independent power to specific area, no power shutdown even Grid is not available



Supply independent power to whole house



Separate two ESS systems to supply whole house



ESS Energy Storage System Specification

INVERTER MODEL	ESS 5.5kw
Maximum PV Input Power	6500W
Rated Output Power	5500W
Maximum Charging Power	2880W
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	116 VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	2 / 2 x 13 A
GRID OUTPUT	
Nominal Output Voltage	208/220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC*
Max. Output Current	23.9A*
Maximum Conversion Efficiency (DC/AC)	96%
European Efficiency @ Vnominal	95%
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	170 -280 VAC
Maximum AC Input Current	40 A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	208/220/230/240 VAC
Efficiency (DC to AC)	93%
BATTERY CHARGER	
Nominal DC Voltage	48 VDC
Maximum Charging Current	100 A
PHYSICAL	
Dimension, D x W x H (mm)	214 x 621 x 500
Net Weight (kgs)	25
STANDARD	
Compliance Safety	IEC/EN 62109-1/-2, IEC 62040-1, EN 61000-6-4, EN IEC 61000-6-2, EN IEC 61000-3-11, EN 61000-3-12, IEC 61727, IEC 62116, G99, NRS 097-2-1, EN 50549-1

BATTERY MODULE	ESS II-4810
CAPACITY	5000Wh
PARAMETERS	
Nominal Voltage	51.2VDC
Full Charge Voltage (FC)	56V
Full Discharge Voltage (FD)	42V
Typical Capacity	100Ah
Max Continuous Discharging Current	150A
Max Discharging Current	192A at 1min
Protection	BMS, breaker
Charge Voltage	56V
Charge Current	20A (0.2C)
Maximum Charge Current	50A (0.5C)
Standard Charge Method	0.2C CC (Constant current) charge to FC, CV (Constant voltage FC) charge till charge currentdecline to <0.05C
Inner Resistance	<20m ohm
Dimension, D X W X H (mm)	214 x 621 x 550
Net Weight (kgs)	55
STANDARD	
Compliance Safety	IEC 62619, EN 61000-6-3, EN 61000-6-1, UKCA, UN38.3

*These figures may vary depending on different AC voltage and contry regulation.
Product specifications are subject to change without further notice.