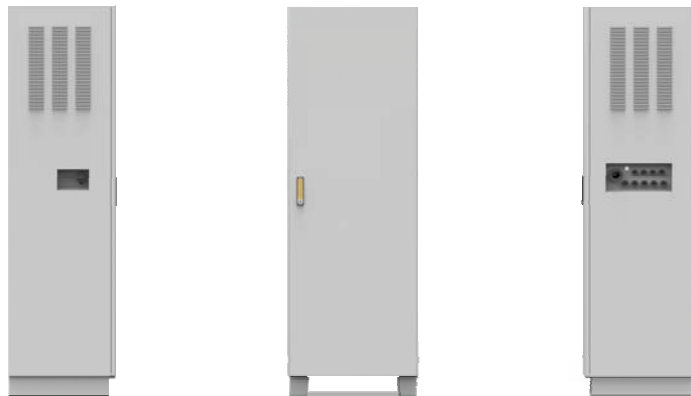




Energy Storage Battery

US Version

8.0 KVA SOLAR INVERTER WITH 10KWH / 20 KWH LiFeP04 BATTERY



- Pure sine wave output. 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 and Wi-Fi.
- Monitoring software for real-time status display and control.
- Enhance AC / Solar charger to 190A.
- Scalable Li-Ion battery expansion.
- LiFeP04 battery life cycle:5000 cycles at 25°C.
- High surge discharging current up to 2C.
- IP 54

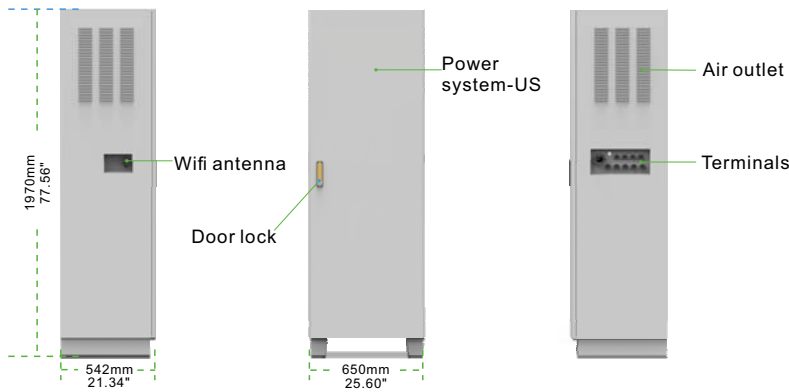
Application Scenarios



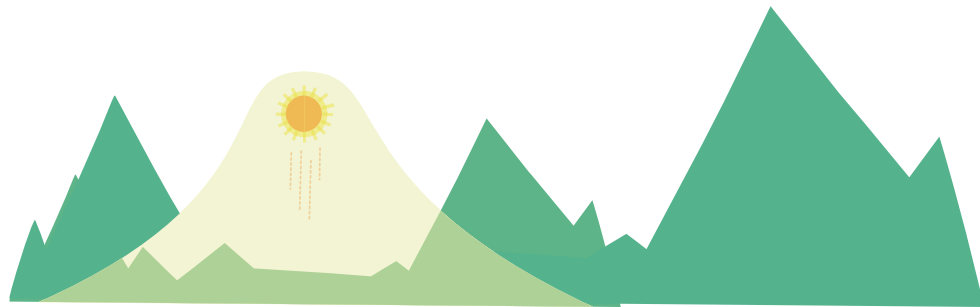
Technical Specifications-All-in-one computer (US Version)

Model	YL-ESC-US8A10	YL-ESC-US8A20
Efficiency		
Max Efficiency	≥98%	
CEC Efficiency	≥97%	
On Grid AC Output		
Rate AC Output Power	8KVA	
AC Output Voltage	120/240Vac(split phase), 208Vac(2/3 phase),230Vac(single phase)	
AC Output Frenquecny	50/60Hz	
Grid Type	Split phase. 2/3 phase. Single Phase	
Max Output Current	38.3A	
AC Reverse Charging	Yes	
PF	-0.8leading~+0.8lagging	
Output THDI	<2%	
PV Input		
PV Input Power	12KW	
MPPT Number	4	
PV Voltage Range	350V/85V-500V	
MPPT Voltage Range	120V-500V	
Single MPPT Input Current	12A	
Battery Pack		
Nominal Voltage	51.2V	51.2V
Full Charge Voltage (FC)	56V	56V
Full Discharge Voltage (FD)	45V	45V
Typical Capacity	200Ah	400Ah
Maximum Continuous Discharging Current	190A	190A
Maximum Discharging Current	190A	190A
Protection	BMS, Breaker	BMS, Breaker
Inner Resistance	20 m ohm	20 m ohm
Protection		
Ground Protection	Yes	
AFCI Protection	Yes	
Islanding Protection	Yes	
DC Disconnect Detection	Yes	
Battery Reverse Protection	Yes	
Battery Charge And Discharge Protection	Yes	
Insulation Testing	Yes	
GFCI	Yes	
DC Anti-thunder	Yes	
AC Anti-thunder	Yes	
Input Overvoltage&Under-voltage Protections	Yes	
Output Overvoltage&Under-voltage Protections	Yes	
AC&DC Over-current Protection	Yes	
AC Short-circuit Current Protection	Yes	
Overheating protection	Yes	
General Data		
Operation Temperature Range	-25 ~ +60 Centigrade scale	
Environment Humidity	0~95%	
Altitude	0~4000M (over 2000M derating)	
System Parameters		
Dimension:D x W x H (mm)	*****	650*542*1970mm / 25.60"x21.34"x77.56"
Net Weight (kg)	*****	340kg
IP Rank	Ip55	

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



US hybrid inverter with 20-60 kWh LiFePO4 battery module



Consumption of stored energy

Morning: minimal energy production, high energy needs. At sunrise the solar panels start to produce energy, though not enough to cover the morning energy needs. The battery will bridge the gap with the stored energy from the previous day.

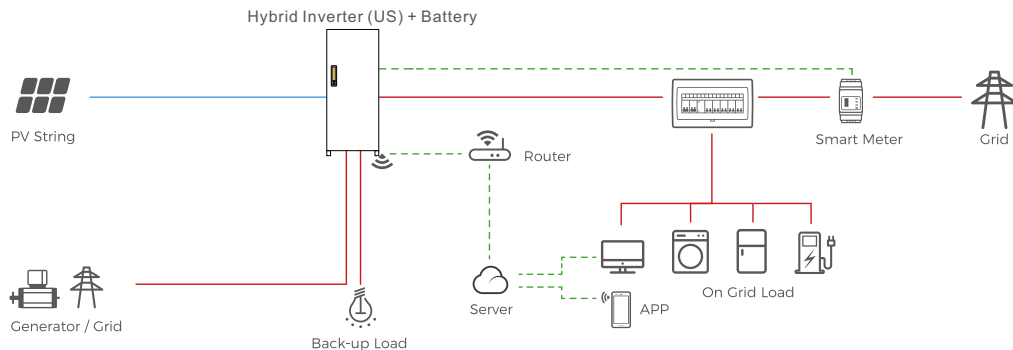
Consumption of solar energy

Midday: highest energy production, low energy needs. In the daytime the energy generated from the solar panels is at its peak. But since nobody is home the energy consumption is very low so that most of the generated energy is stored in the battery.

Solar energy production

Evening: low energy production, high energy needs. The highest daily energy consumption is in the evening when the solar panels produce little or no energy. The battery will cover the energy need with the energy produced in the daytime.

Schematic Diagram of Solution



Trouble Shooting Steps

Problem determination based on: Whether the battery can be turned on. If battery is turned on, check the red light is off, flashing or lighting; if the red light is off, check whether the battery can be charged/discharged.

Preliminary determination steps: Battery cannot be turned on, switch on the lights are all no lighting or flashing. If the battery external switch is ON, the RUN light is flashing, and the external power supply voltage is 51.2V or more, the battery still unable to turn on, please contact distributor.

- The battery can be turned on, but red light is lighting, and cannot be charged or discharged, red light is lighting, that means system is abnormal, please check values as following.
- Temperature: Above 50°C or under -10°C, the battery could not work. Solution: to move battery to the normal operating temperature range between -10°C and 50°C. Current: If current is larger than 100A, battery protection will turn on. Solution: Check whether current is too large or not, if it is, to change the settings on power supply side.
- High Voltage: If charging voltage above 58.4V battery protection will turn on. Solution: Check whether voltage is too high or not, if it is, to change the settings on power supply side. Low Voltage: When the battery discharges to 40V or less, battery protection will turn on. Solution: Charge the battery for some time, the red light will turn off. Excluding the four points above, if the faulty is still cannot be located, turn off battery and repair.
- The battery cannot be charged or discharged. Cannot be charged: Disconnect the power cables, measure voltage on power side if the voltage is 56.5-57.6V, rest the battery, connect the power cable and try again, if still not work, turn off battery and contact distributor. Unable to discharge: Disconnect the power cables and measure voltage on battery side. If it is under 40V, please charge the battery; if voltage is above 51.2V and still cannot discharge, turn off battery and contact distributor. Emergency Situations.

Matters Need Attention

- Do not immerse the battery in water or allow it to get wet.
- Do not use or store the battery near sources of heat such as a fire or heater.
- Do not reverse the positive(+) and negative(-) terminals.
- Do not connect the battery directly to wall outlets or car cigarette-lighter sockets.
- Do not put the battery into a fire or apply direct heat to it.
- Do not short-circuit the battery by connecting wires or other metal objects to the positive(+) and negative(-) terminals.
- Do not pierce the battery casing with a nail or other sharp object, break it open with a hammer, or step on it.
- Do not strike, throw or subject the battery to severe physical shock.
- Do not directly solder the battery terminals.
- Do not attempt to disassemble or modify the battery in any way.
- Do not place the battery in a microwave oven or pressurized container.
- Do not use the battery in combination with primary batteries (such as dry-cell batteries) or batteries of different capacity, type or brand.
- Do not use the battery if it gives off an odor, generates heat, becomes discolored or deformed, or appears abnormal in any way. If the battery is in use or being recharged, remove it from the device or charger immediately and discontinue use.
- If the battery leaks and electrolyte gets in your eyes, do not rub them. Instead, rinse them with clean running water and immediately seek medical attention. If left as is, electrolyte can cause eye injury.

