



为世界输出优质动力  
**DELIVERING PREMIUM**  
POWER TO THE WORLD

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Provide integrated solutions for energy storage  
Output high-quality power for the world



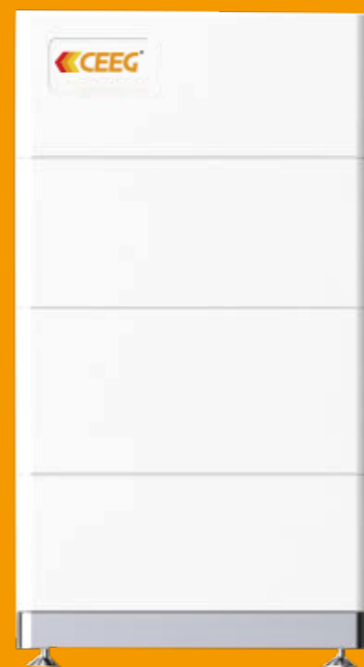
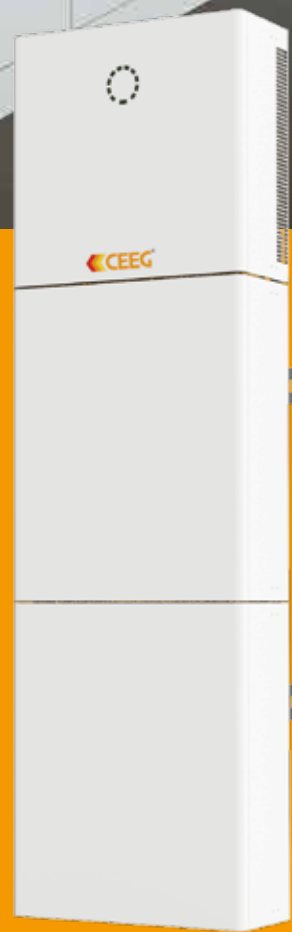


**CEEG , 31 years of history**  
**Far-sighted , Innovative , Responsible**

**CSUN was founded for 17 years**  
**and is a subsidiary of CEEG**



# CEEG Energy Storage Family Representative Product



Energy storage all-in-one machine

Inverter

Battery box

Optical storage

Hybrid optical storage integrated machine

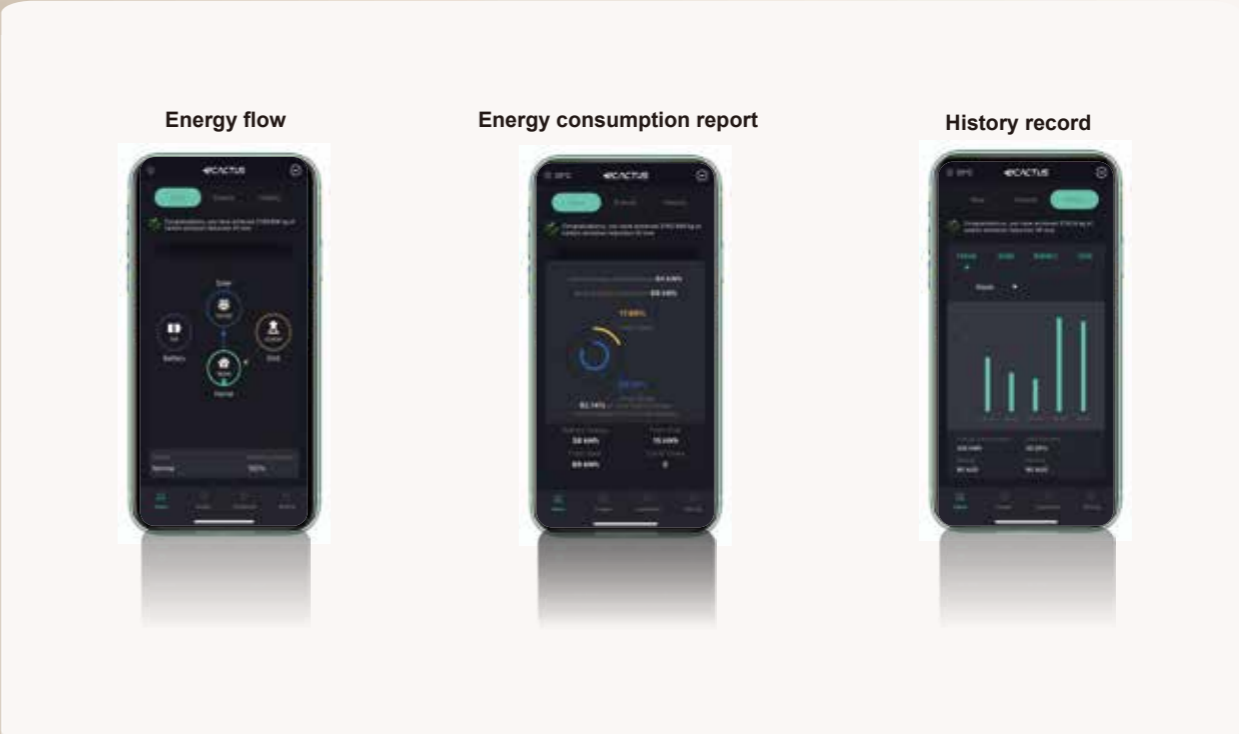
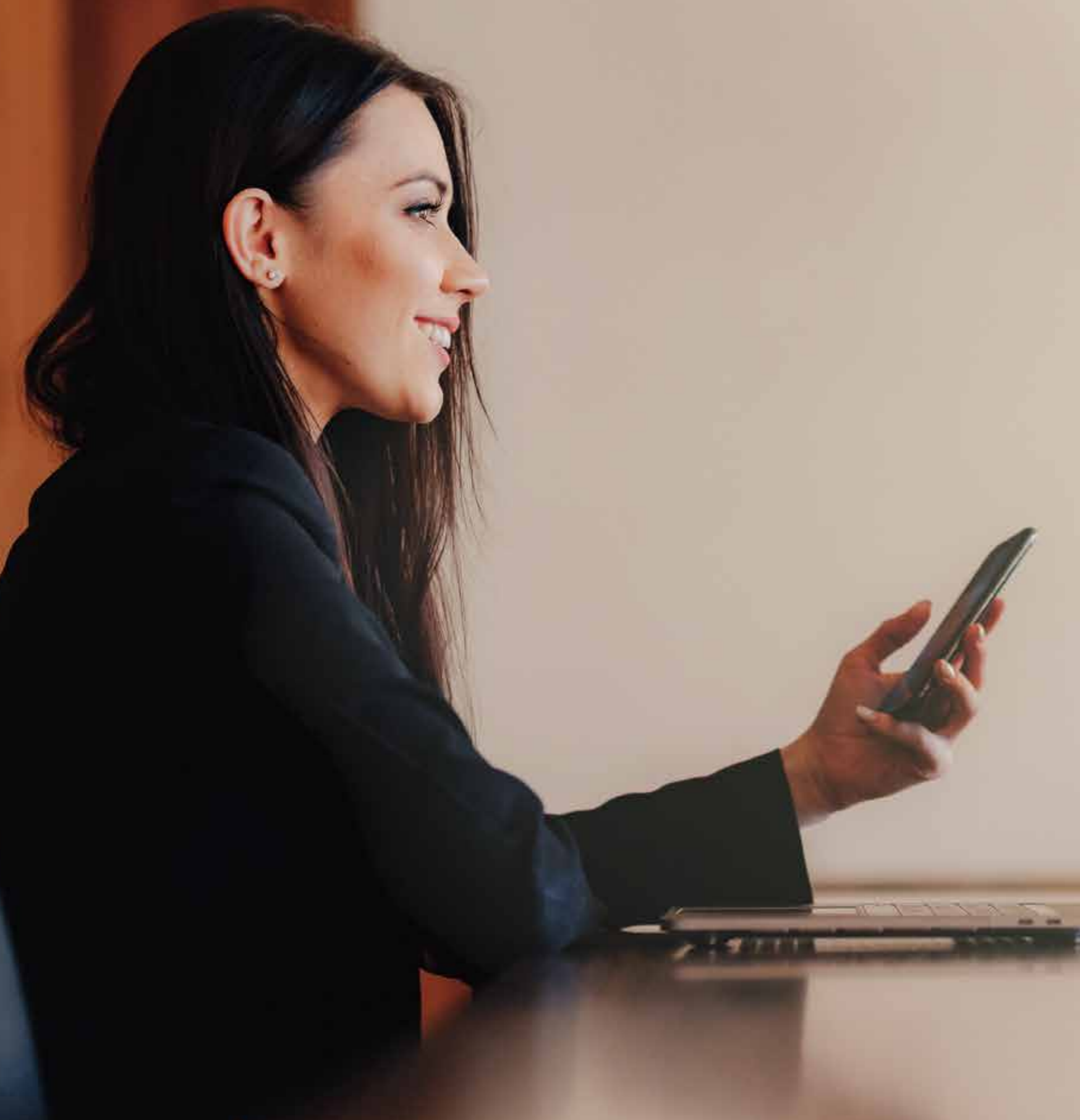
## Energy storage all-in-one machine

Decorate your life with  
the beauty of technology

### Product Highlights

- White design in household appliances
- Modular design, increase or decrease the quantity at will, convenient for maintenance and expansion
- Selection of long-life batteries, produced by reputed manufacturers
- Intelligent management, handy and pretty
- Multiple safety design





These energy use suggestions will give you a better understanding of how home energy is consumed. For example, telling if you are wasting energy.

Therefore, a better way to use energy is completely defined by you.

# If you want to get these suggestions, we can send you an email.

Model	CHCI-3.6K-TT	CHCI-5.0K-TT	/
PV Input			
Absolute max Voltage [V]	600		
MPPT Voltage Range [V]	100...550		
Max. DC Input Power [W]	4800	6650	/
Start-up Voltage [V]	90		
Rated Operating Voltage [V]	360		
Max. Input Current [A]	12.5/12.5		
Isc PV[A]	18/18		
NO.of MPP Trackers	2		
NO.of Strings per MPP Tracker	1		
Battery input side			
Battery Capacity	LiFePO4 5.12kWh/10.24kWh		
Nominal Battery Voltage [V]	204.8 /409.6		
Battery Voltage Range [V]	160...227.2/320...454.4		
Max. Charge/Discharge Current [A]	25/25		
AC Input/Output			
Rated Power [W]	3600	5000	/
Max. Apparent Power to Grid [VA]	3960	5500	/
Max. Apparent Power from Grid [VA]	7200	10000	/
Rated Voltage [V]	220/230/240		
Rated Frequency [Hz]	50/60		
Rated AC Current to Grid[A]	16	21.7	/
Rated AC Current from Grid[A]	32	43.4	/
Displacement Power Factor	1(-0.8...+0.8 adjustable)		
THDi	< 3%		
EPS Output (With Battery)			
Max. Output Power [W]	3600	5000	/
Max. Apparent Power [VA]	4320,60s	6000,60s	/
Rated Voltage [V]	230 (±2%)		
Norminal Frequency [Hz]	50/60 (±0.2%)		

Max. Output Current [A]	18.8	26.1	/
Switch time [ms]	< 10		
THDv @ Linear Load [%]	< 3		
Efficiency			
PV Max. Efficiency[%]	97.6		
PV Europe Efficiency[%]	97		
PV Max. MPPT Efficiency[%]	99.9		
Battery Charge by PV Max. Efficiency[%]	98		
Battery Discharge Efficiency [%]	96.7		
Protection			
Over/Under voltage protection	Yes		
DC isolation protection	Yes		
Over current protection	Yes		
DC injection monitoring	Yes		
Residual current detection	Yes		
Anti-islanding protection	Yes		
Over load protection	Yes		
Battery Input reverse polarity protection	Yes		
PV reverse polarity protection	Yes		
Surge protection	Yes		
Over heat protection	Yes		
General Data			
Dimension (W/D/H)[mm]	550*233*1125	/	
Dimension of Packing (W/D/H)[mm]	645*302*1370	/	
Net weight [kg]	68	/	
Gross weight [kg]	78	/	
Operation Temp [° C]	-25...+60		
Relative Humidity[%]	0~95		
Altitude [m]	≤ 4000 (>3000 Derating)		
Ingress Protection	IP65		
Cooling	Natural		
Inverter Topology	Non-isolated		
Human Interface	LED/APP		
BMS Communication Interface	RS485/CAN		
Meter Communication Interface	RS485		
Noise Emission [dB]	< 25		
Standby Power Consumption [W]	< 5		



**CHIS  
inverter**

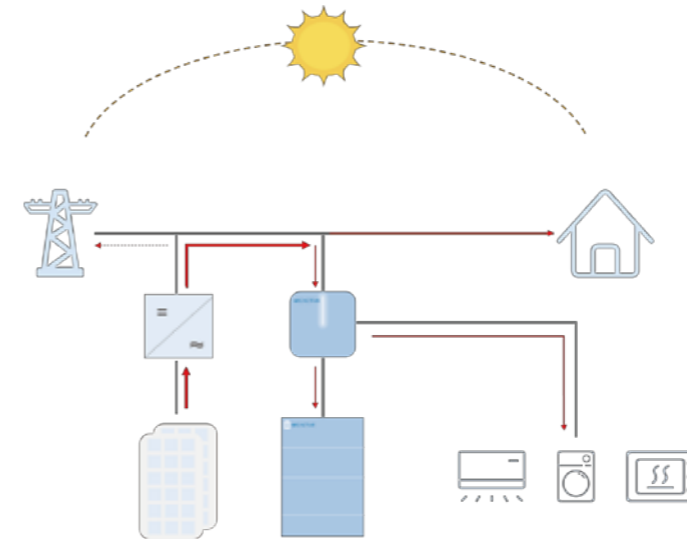
# What CHIS brings?

## Mode A Free your energy

Even on cloudy days,  
you can use stored clean energy throughout the day



Usually, the clean energy generated by your solar system can be almost used up by your house instead of being fed into the utility grid. In this way, you will contribute a lot to carbon emission reduction. In addition, you can reduce power consumption during peak hours, thereby saving money.

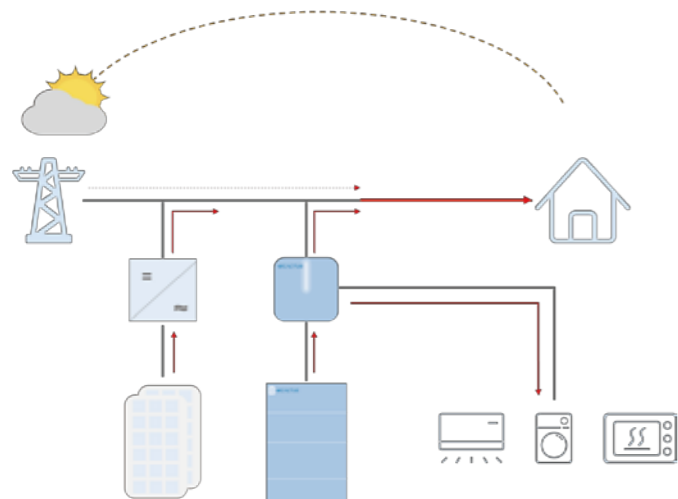


When the sun is blazing at noon and the household electricity consumption is low.

When there is enough solar energy to support household energy consumption, the excess solar energy will be charged into the battery by CHIS for later use.

If the battery is fully charged, the solar energy will be fed into the utility grid.

## Maximize the use of clean energy

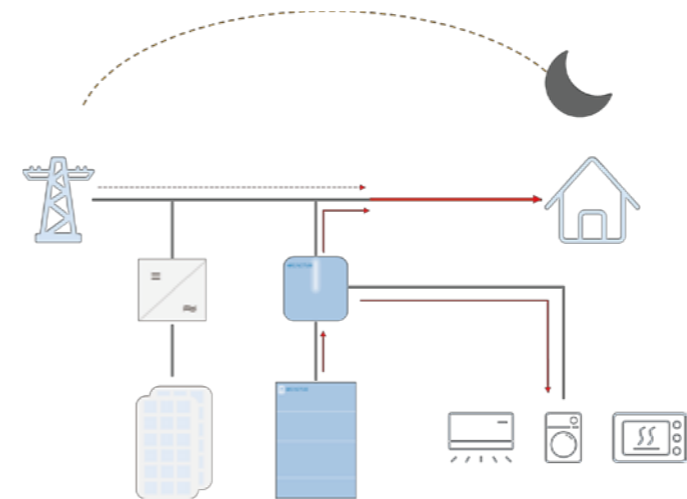


When there is not enough sunshine during morning, evening or bad weather and meets household electricity consumption peaks.

When there is not enough solar energy to support household energy consumption, the battery will be discharged by CHIS to meet the power demand, and the stored energy will be used until it is completely consumed.

Moreover, if solar panels and batteries still cannot meet energy consumption, the public grid will be used to continue to supply energy.

## Maximize the use of clean energy.



When there is no sunshine at midnight or on cloudy days.

At night or on a cloudy day, the solar panels cannot generate any electricity, and CHIS will discharge the battery to fully meet your household energy needs.

If your home's energy needs are high, the utility grid will help you.

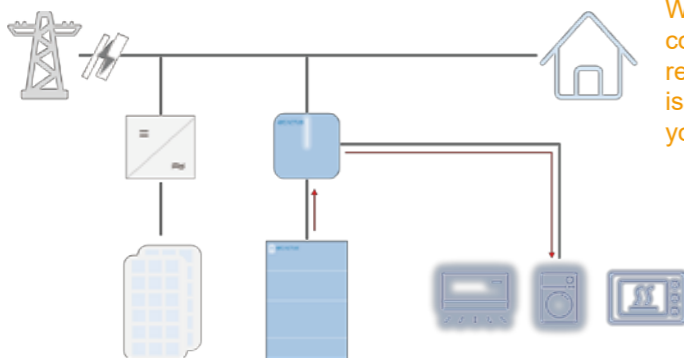


## Mode B Emergency power supply

The switching time of less than 10ms keeps your equipment unaffected. It is enough to keep focusing on what you have at hand.



Imagine: When you are enjoying family time with your children, or partying with friends or doing important work, how terrible shall be if unexpected power outages happens. For such accidents, the backup function is very important. For CHIS, no matter which mode it is in, it can always protect you from the impact of power outages.

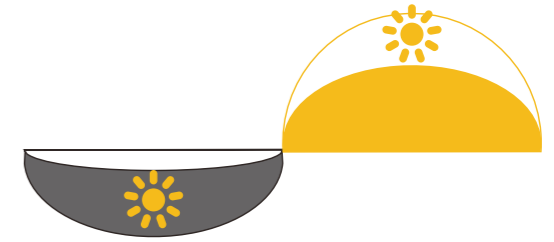


When there's power failure, important equipment connected to the EPS port of the CHIS inverter will remain in working condition until the stored energy is exhausted. Usually a capacity of 10kWh will help you get through the whole day.

**Gone are the days of power failure**

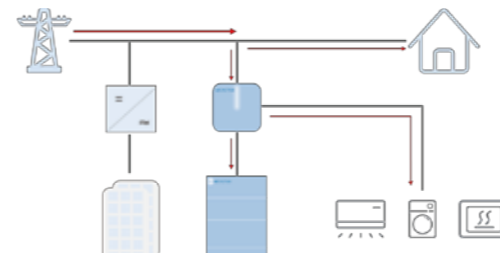
## Mode C Peak cutting and valley filling

Always use cheaper energy from the utility grid and save money every day.

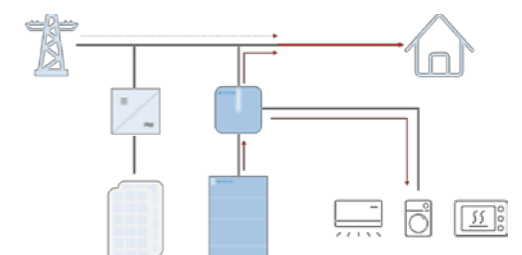


Generally, when the difference between the peak electricity price and the valley electricity price is very large, which can reach until 1.0 USD/kWh. Using our CHIS and CHBS-10.3 can save nearly \$10.0 USD per day, or \$3650 USD per year.

Valley time: battery discharge



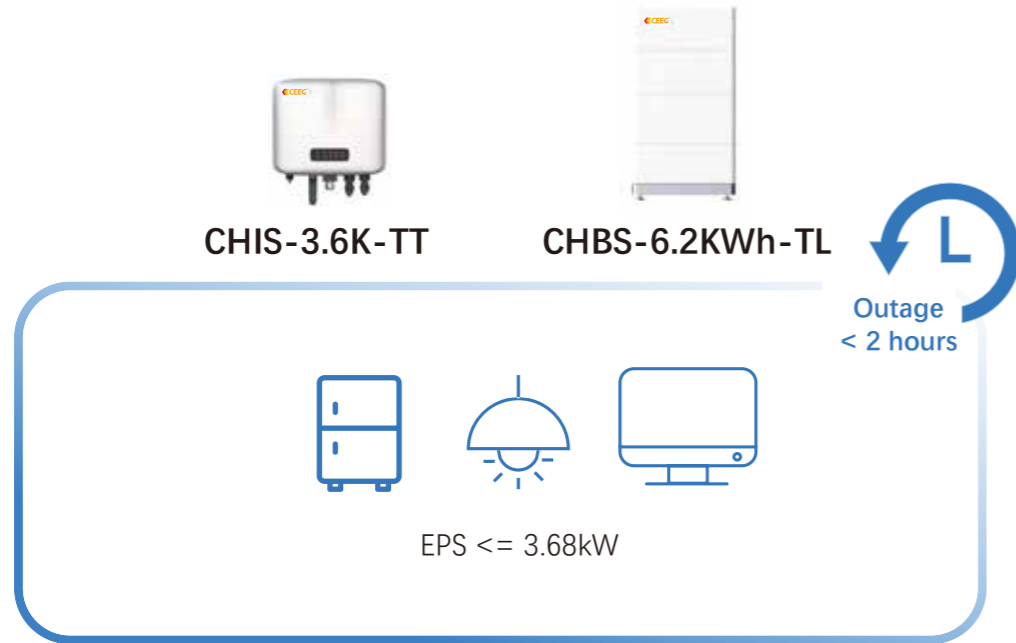
Peak hours: battery charge



You can use CHIS's cheap power supply when you choose the peak-cutting and valley-filling mode. When the electricity price is low, WH-SPA will charge the battery during off-peak hours. When electricity prices are high, WH-SPA will discharge during peak hours to meet your household energy needs. In this case, you can always use the power supply at a lower price. In the event of a power failure, EPS can still work.

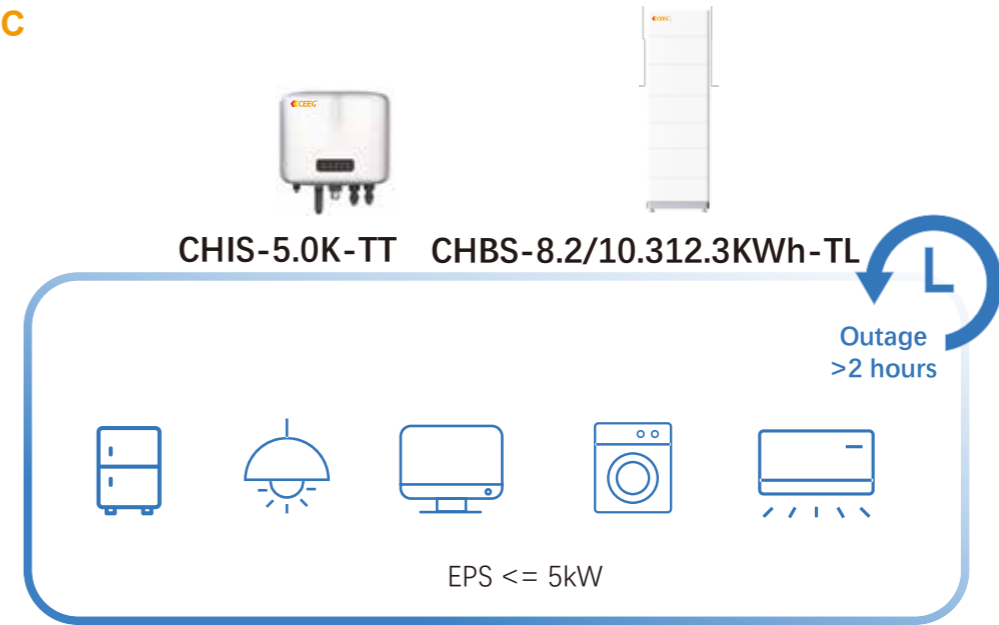
**Ensure that you are always using a cheaper source of energy**

**Selection Guide**  
**Case A**



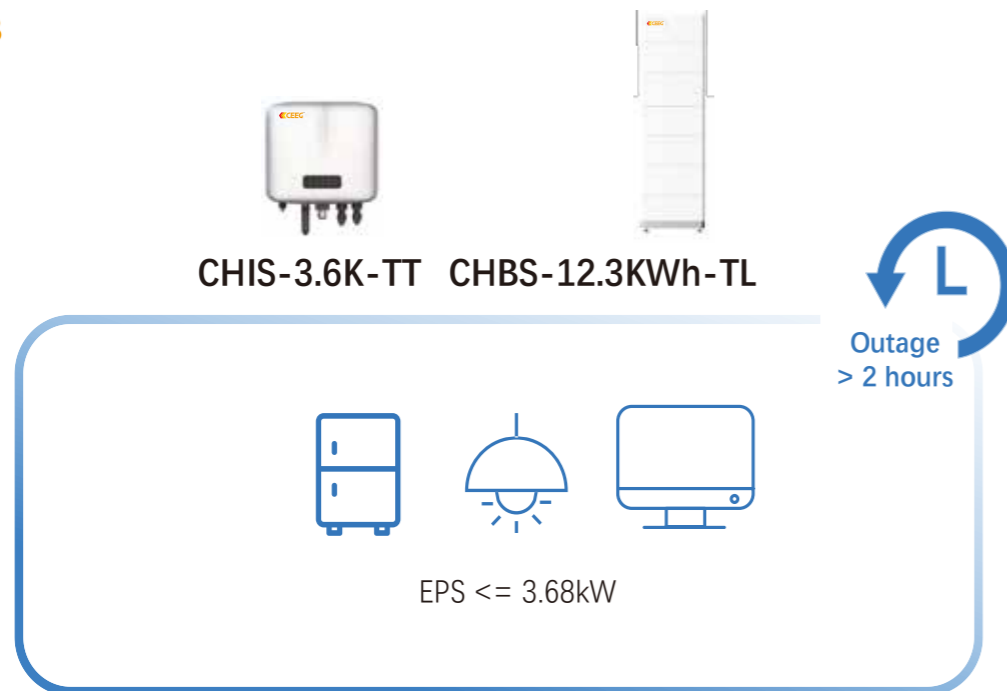
Note:  
1. Equipment with a total power of 3kW runs for less than 2 hours at the same time. Such extreme situations are usually not achieved, which means that the backup time will be longer.  
2. A complete 3.68kW power output requires at least 3 battery modules.

**Selection Guide**  
**Case C**

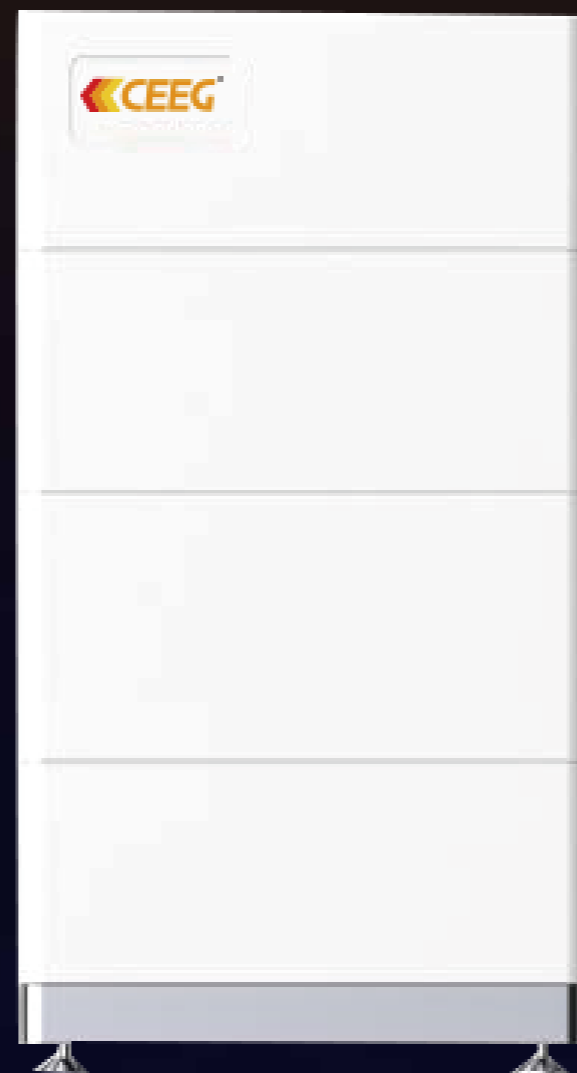


Note:  
1. Equipment with a total power of 3kW can run for less than 2 hours at the same time. Such extreme situations are not usually achieved, which means that the backup time will be longer.  
2. At least 4 battery modules are required for full power output of 2,5kW.

**Selection Guide**  
**Case B**



Note:  
1. Equipment with a total power of 3kW can run for less than 2 hours at the same time. Such extreme conditions are usually not reached, which means that the backup time will be longer.



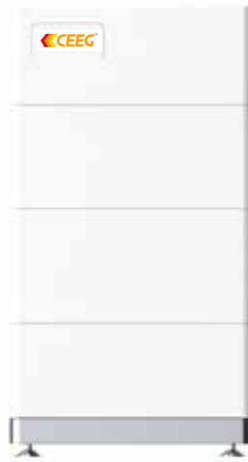
**CHBS**  
**battery box**  
High voltage battery



## From single battery to module, all pass the test

The CEEG Myrtillo battery box is based on lithium iron phosphate batteries.

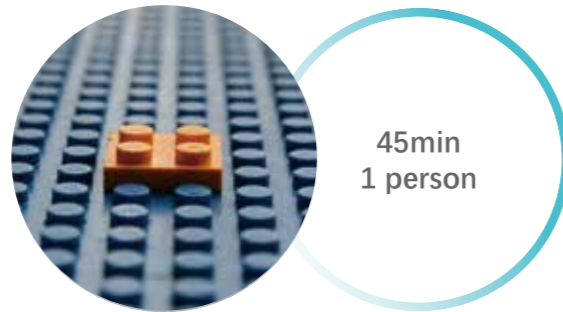
- High temperature and humidity test
- Output overload test
- External short circuit test
- Short circuit test between modules
- Perforation test



Safety first and more to offer.  
We ensure the quality of the whole life cycle

## We make installation easy and fast

Save you more time



### Plug and play

Module weight less than 23kg, easy to install

### Modular design

Battery module adopts modular design 2.05kWh/module

### IP55

Outdoor installation brings more possibilities

## We ensure the quality of the whole life cycle



The charging and discharging efficiency reaches 98%.  
The overall efficiency >95%.



The depth of discharge 90%.



Under the conditions of use specified in the user manual, we guarantee 6000 cycles

## Scalable, easy to upgrade, highly reliable and more intelligent

### Scalability

With 2 to 6 WH-BX battery modules, the system can be expanded to 4.1 to 12.3kWh.

### Remote upgrade

Upgrade via remote control



The dual-core BMS complies with automotive-grade standards.

- Active and passive balance
- Multiple fault detection
- Temperature, current and voltage monitoring
- Additional high temperature shutdown function

✓ IEC62040-1:2017

✓ IEC62619:2017

Full certification from single battery to system





**CBCI  
storage**

## Application scenarios

Solar storage transformation of photovoltaic power stations, household solar storage energy saving, small islands, scenic spots, parks, hotels, factories and other micro-grids, 4S car stores, new residential solar storage charging piles, demonstration and education of universities and research institutes, Instrumentation battery charge and discharge test, high-altitude remote military defense communications, household container mobile power supply, base station power supply reconstruction in edge areas, and marine aquaculture ship power supplies.

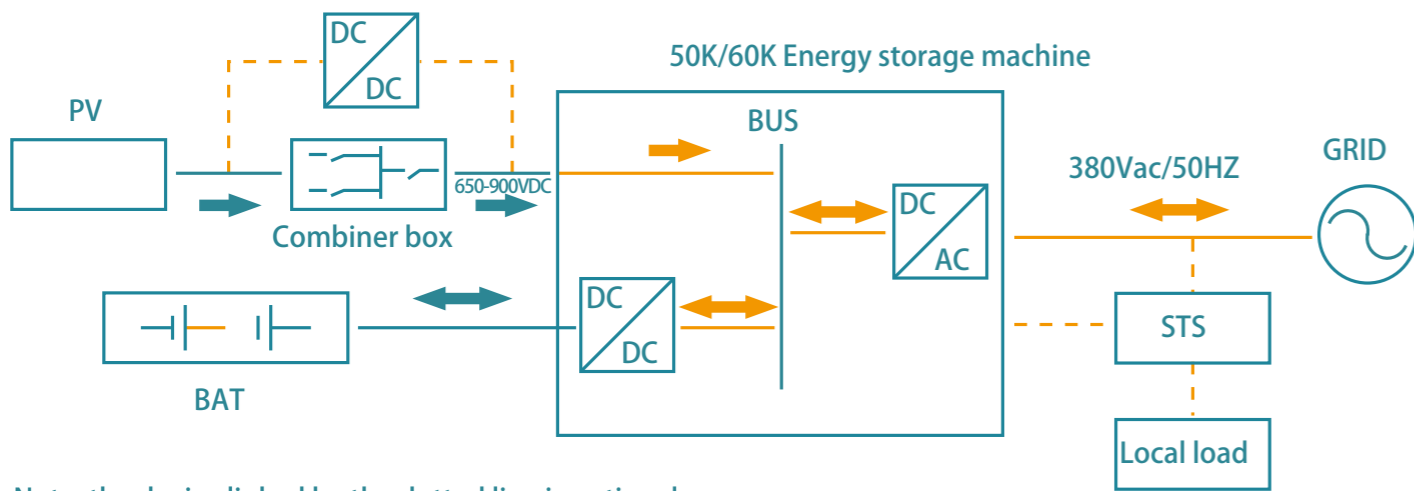
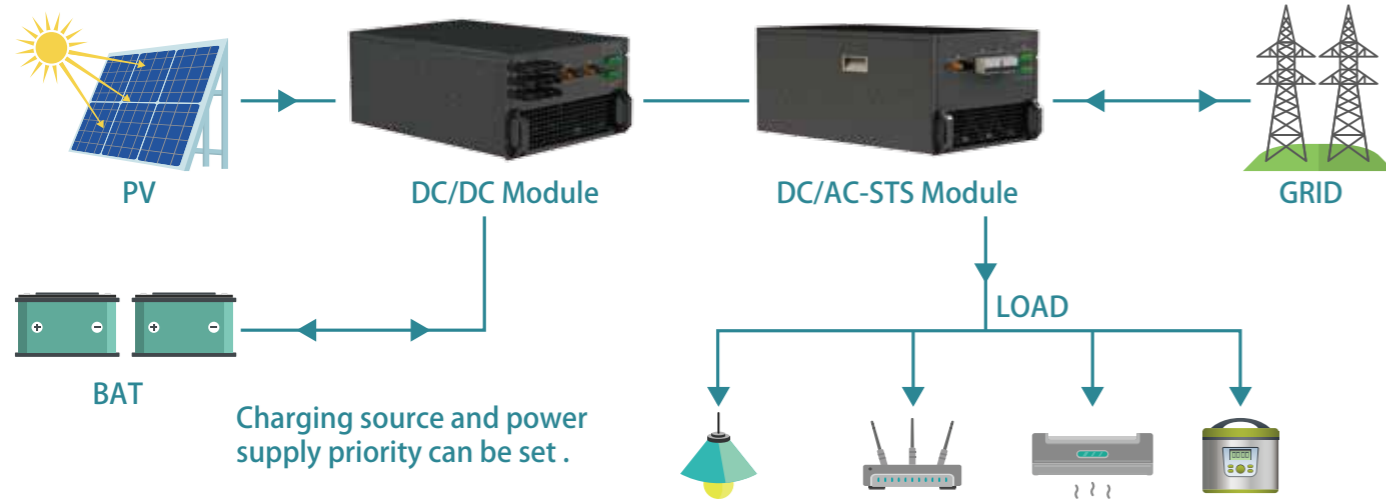


**PV --- DC/DC control module diagram**



**DC/AC+STS power module**

### 20K/30K Energy storage machine



Note: the device linked by the dotted line is optional.

### Product Features

#### Reliability

- Multiple protection functions; high and low temperature resistance, moisture resistance, strong environmental adaptability
- Support local and remote software upgrade function, fault self-diagnosis function
- Pre-warning function of important device failure
- Seamless switching between off-grid and grid-connected, DC wide voltage input
- Full power UPS function, hierarchical SOC design to ensure the reliability of power supply for critical loads

#### Intelligence

- Multiple working mode design, support online switching
- Intelligent fan adjustment design, reduce power consumption and noise
- Integrated local EMS function, anti-reverse flow, intelligent supply and demand adjustment

#### Adaptability

- Three-phase 100% unbalanced load, strong load adaptability
- Multiple communication modes (RS485, WIFI, GPRS, Bluetooth, Ethernet), dry contact output, convenient expansion and monitoring management
- Support lithium batteries, lead-acid batteries, flow batteries
- Support mutual switching between diesel engine and mains

#### Efficiency

- Intelligent DSP digital control, faster data processing
- Multi-channel PV MPPT access to improve power generation utilization
- Modular design DC/DC, DC/AC, STS modules are optional
- Support battery pack cabinet function

Model	CBCI-10K-TT	CBCI-20K-TT	CBCI-30K-TT	CBCI-50K-TT	CBCI-60K-TT
<b>DC Input (PV)</b>					
Max. Input Voltage [VDC]	1000				
MPPT Voltage Range [VDC]	250 ~ 900			650 ~ 900	
Number of MPPTs	2	3	3	1	1
Max. Current Per MPPT [A]	25	25	25	85	90
Max. Input Power Per MPPT [kW]	10	10	10	55	60
<b>DC Input (Battery)</b>					
Battery Type	Lithium, Lead-Carbon, Lead Acid, etc				
Operating Voltage Range [V]	250 ~ 650				
Max. Charging Current [A]	75	75	75	150	150
Max. Discharge Current [A]	75	75	75	150	150
<b>AC Output (Grid Side)</b>					
Rated Output Power [kW]	10	20	30	50	60
Max. Output Apparent Power [kVA]	11	22	33	55	66
Max. Output Current [A]	±15.9	±31.7	±47.6	±79.3	±86.6
Rated Grid Voltage [VAC]	3 / N / PE, 230 / 400			3 / PE, 230 / 400	
Rated Grid Frequency [Hz]	50 / 60				
Grid Frequency Range [Hz]	45 ~ 55 / 55 ~ 65				
THDi	<3% (Rated Output Power)				
DC Component	<0.5% In				
Power Factor	> 0.99 (Rated Output Power)				
Feed Phase Number	3 / 3				
<b>AC Output (Load)</b>					
Rated Output Power [kW]	10	20	30	50	60
Max. Output Apparent Power [kVA]	11	22	33	55	66
Max. Output Current [A]	15.9	31.7	47.6	79.3	86.6
Rated Output Voltage [V]	3 / N / PE, 230 / 400			3 / PE, 230 / 400	
Output Voltage Range [V]	224 ~ 238 / 388 ~ 412				
Rated Output Frequency [Hz]	50 / 60				

<b>Efficiency</b>					
Max. Efficiency	98.60%				
Euro Efficiency	98.30%				

<b>Protection</b>					
Protection Function	DC Reverse Polarity Protection, AC Short Circuit Protection, Leakage Current Protection, Grid Monitoring, Anti-island Protection, String Detection, Surge Protection				

<b>General Data</b>					
Installation Style	Rack-mounted				
Weight [Kg]	Inverter 45Kg Controller 30Kg				
Ingress Protection	IP20				
Self-consumption [W]	< 20				
Operating Temperature Range [°C]	-25 ~ +60 (>45 Derating)				
Operating Humidity Range	≤ 95% RH (No Condensation)				
Cooling Method	Smart Fan Cooling				
Max. Altitude	4000 (>3000 Derating)				
Display	LED, APP				
Communication	RS485 / Ethernet (Optional: Bluetooth, WiFi, GPRS)				

<b>Certification</b>					
EMC + Safety + Grid Regulation	EN / IEC / VDE				

<b>Remarks</b>					
DC/DC-50K/60K	Optional Equipment For 50K / 60K Models, External Connection				
STS	Optional Equipment For 50K / 60K Models, External Connection, Used For On/Off-grid Switching And Local Loads Power Supply				



**Hybrid  
optical storage  
integrated  
machine**



### Application scenarios

Household new building and restructuring, household ESP, Emergency portable source, dead zong household source, portable herdsman electricity supply, intelligent transportation UPS, high altitude frontier defense communications, base station communication source reconstruction for backcountry district, marine source .



### Product Features

- White color flowing product surface
- Convenient Moduel design for increasing/decreasing, maintaining and flashing
- Famous manufacturer provide microchip with good lifespan
- Intelligent management,householding design
- Various security design,safe&reliable house-use
- Friendly environmental temperature
- Long circle life
- Efficient invertering
- High energy density
- Working over 10 years



Model	CBCI-50K-TT	CBCI-60K-TT	CBCI-100K-TT	CBCI-125K-TT	CBCI-150K-TT
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#### DC Input (PV)

Max. Input Voltage [V]	850				
MPPT Voltage Range [V]	600 ~ 850				
Number of MPPTs	3	3	3	3	3
Max. Input Power Per MPPT [kW]	20		30		

#### DC Input (Battery)

Battery Type	Lithium, Lead-Carbon, Lead Acid etc				
Operating Voltage Range [V]	320 ~ 600		400 ~ 600		
Rated Voltage [V]	360		480		

#### AC Output (Loads)

Rated Output Power [kW]	50	60	100	125	150
Max. Output Apparent [kVA]	55	66	110	137	165
Overload Capacity	110% for Ten Minutes, 120% for One Minutes				
Rated Grid Voltage [V]	230 / 400 (3 / N / PE)				
Rated Grid Frequency [Hz]	50 / 60				
THDi	<3% (Rated Output Power)				

#### AC Output (Grid-side)

Rated Output Power [kW]	50	60	100	125	150
Rated Grid Voltage [V]	230 / 400 (3 / N / PE)				
Rated Grid Frequency [Hz]	50 / 60				

#### Efficiency

Max. MPPT Efficiency	99.90%				
Max. Efficiency	93.00%	93.00%	94.00%	94.00%	94.00%

#### Protection

DC Reverse Polarity Protection	Yes				
AC Short Circuit Protection	Yes				
DC Switch	Yes				
Surge Protection	PV-side & Grid-side				

#### General Data

Isolation Type	Transformer Isolation				
Ingress Protection	IP20				
Operating Temperature Range [ °C ]	- 25 ~ +50 (>45 Derating)				
Operating Humidity Range	0 ~ 100% ( No Condensation)				
Cooling Method	Smart Fan Cooling				
Max. Altitude [m]	5000 (>3000 Derating)				
Communication	CAN2.0 / RS485				
Display	LCD				
Certification	Electrical / Safety / Grid:EMC / IEC / VDE				



Off-grid control inverter integrated machine (1KW-5KW)



Portable power supply (300W-DC, AC output)



Three-dimensional modular photovoltaic controller-48V/220V



Single-phase off-grid inverter (3KW-10KW)



Three-phase off-grid inverter (10KW-1500KW)



Pumping inverter (0.75KW-150KW)



Household optical storage ALL in one (3KW-5KW)



Rack-mounted controller (50A-48V/220V)



CEEG provides you with comprehensive solutions for energy storage and usage scenario

