

**CHINT**

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Hybrid Solution

**CHINT Power Residential ESS Product**

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**01**

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# Chint Power

Scope of business: PV inverter, Storage converter, PV combiner box, C&I storage turnkey, Prefabricated PV system, Prefabricated ESS;

## 2009-2013

- Chint Power established in 2009
- First product released in 2010
- 13% China market share in 2012

## 2014-2019

- First US product released in 2014
- First time to achieve top US three-phase string inverter market share in 2015
- Set foot into storage area in 2016
- First storage project operated in 2017
- Top1 Korea PV market share in 2019

## 2020-2021

- World's largest output power string inverter 275kW released
- Obtained Tesla qualified supplier review
- Took US PV market top1 for 6 years in row
- Tibet 50MW PV+Storage project connected to grid
- Wenzhou Taihan 550MW Aisan biggest floating PV station

## 2022

- Ranked 5th inverter shipment among Chinese enterprises
- Bloomberg Global Inverter Financing ranked 4th
- World's biggest power density fan-cooling battery cabinet released

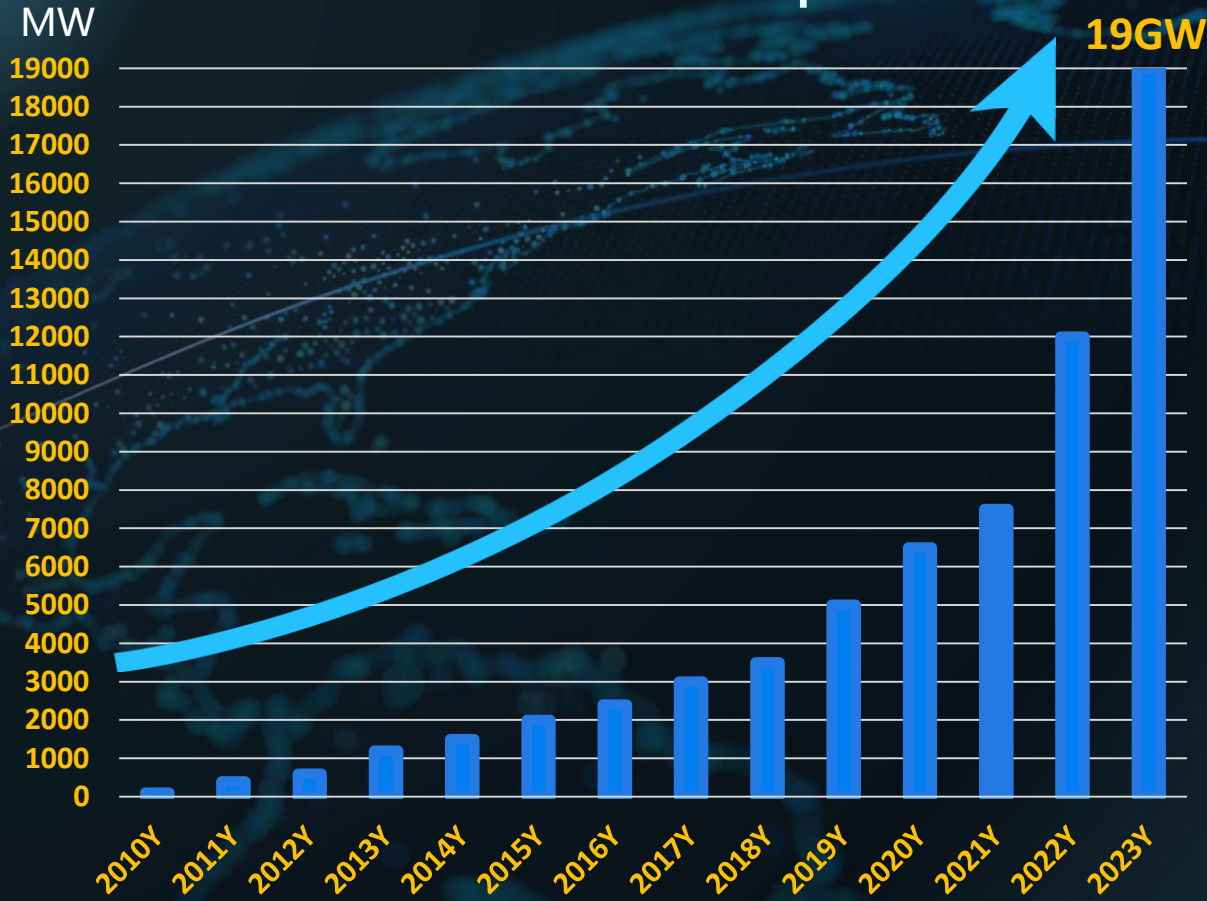


# Strong production and delivery capabilities

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## Chint Power- PV Inverter capabilities



**Shanghai Factory, Jiaxing Factory:**  
Whole series product manufacture, testing;



**Wenzhou Taishun Factory:**  
residential product manufacturing base;  
**Gansu Zhangye Factory:**  
storage product manufacturing base;



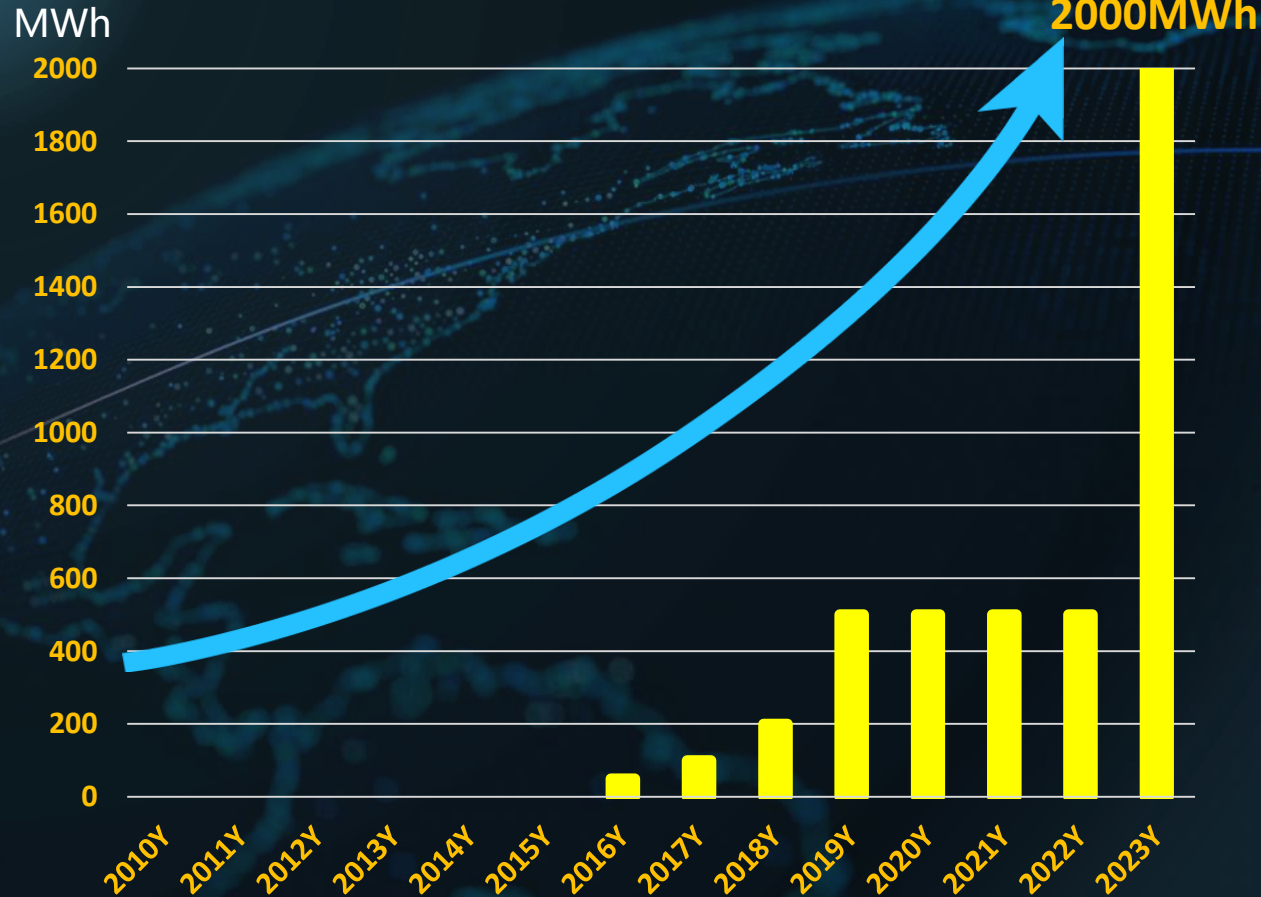
**Thailand Factory:**  
US product manufacturing base;

# Strong production and delivery capabilities

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## Chint Power- storage product capabilities



**Shanghai Factory, Jiaxing Factory:**  
Whole series product manufacture, testing;



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**Thailand Factory:**  
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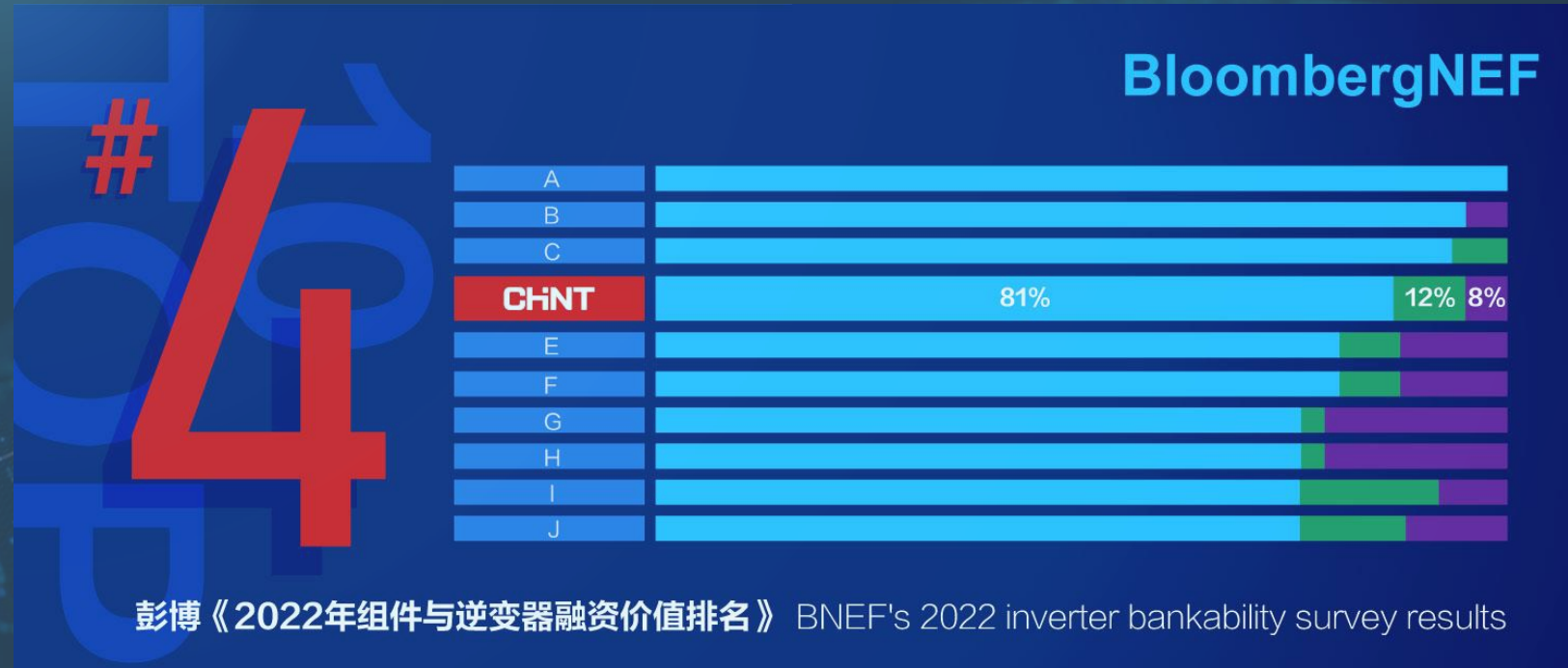


# 2022 Inverter performance in the global market

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## 2022 Inverter Bankability Ranking - Chint Power Ranked 4th in the world



彭博《2022年组件与逆变器融资价值排名》 BNEF's 2022 inverter bankability survey results

Data source : Bloomberg

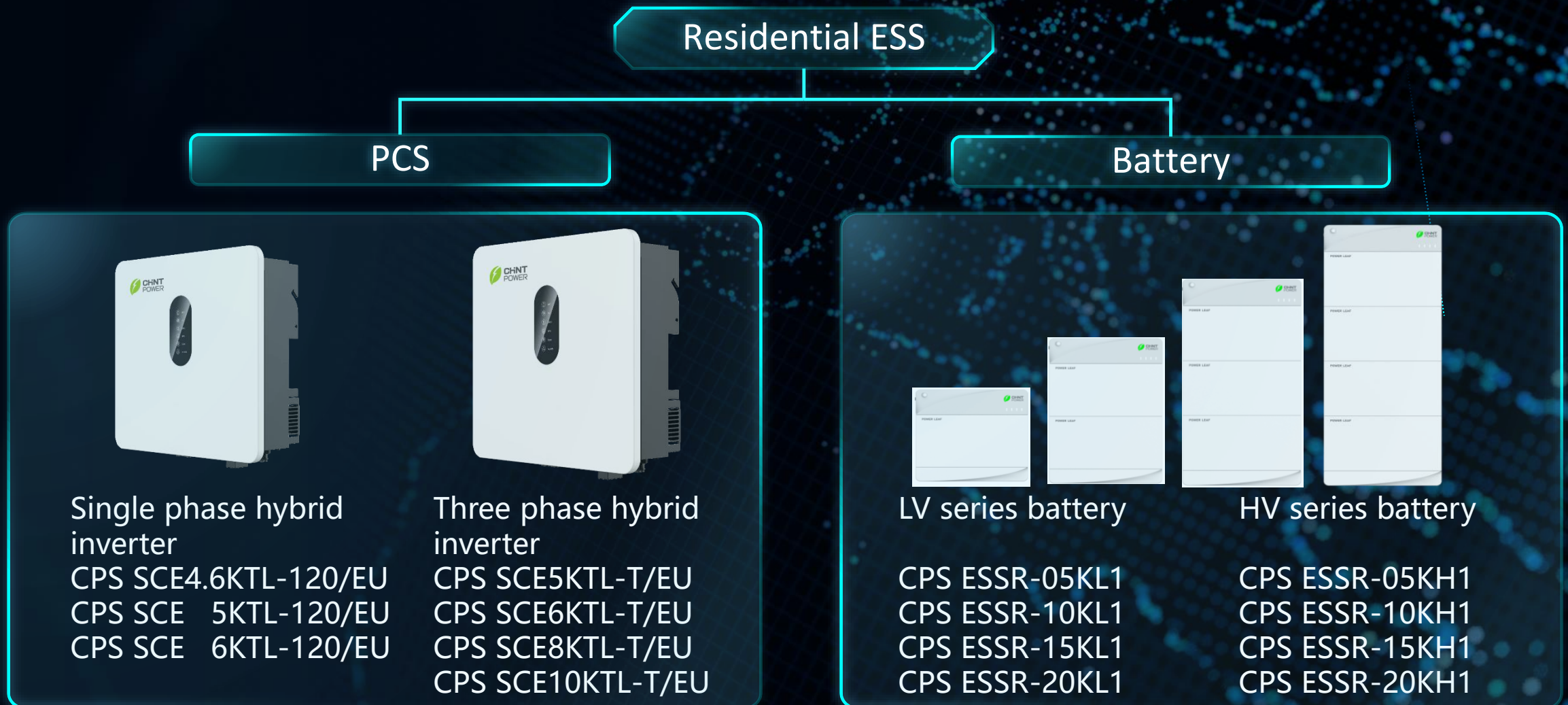
In BloombergNEF's 2022 Inverter Bankability Survey, the CPS inverter once again gained trusts from users, the brand ranked **No.4** among the global competitors, 4 ranks higher than last year.

02

# CPS ESS Residential Solution



# CPS ESS Residential Solution



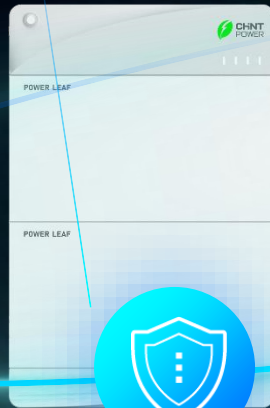


# Residential Low Voltage Battery ESSR 5~20KL1 Series



## Strong

- **IP65** Protection
- Natural cooling design



## Safe

- VDE 2510-50, IEC 63056
- LFP cell with maximum safety and life



## Flexible

- **2.5kW/5kWh** Pack, Standard Packs and control modules

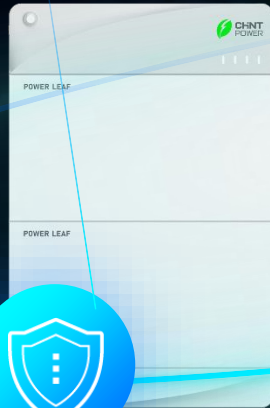


## Easy

- **Automatically assign** of BMS address

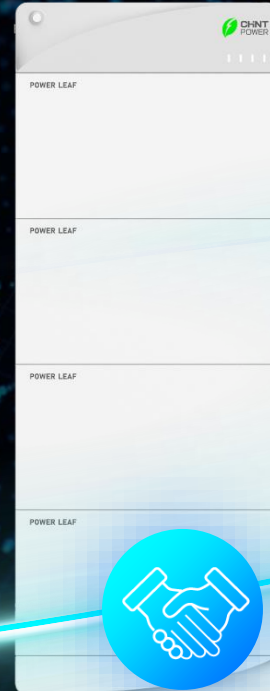


# Residential High Voltage Battery ESSR 5~20KH1 Series



**Strong**

- IP65 Protection
- Natural cooling design



**Self heating**

- Working below  $-10^{\circ}\text{C}$



**Powerful**

- C-rate up to **0.75**
- **3.7kW** for each battery pack. Get 10kW power from only 15kWh



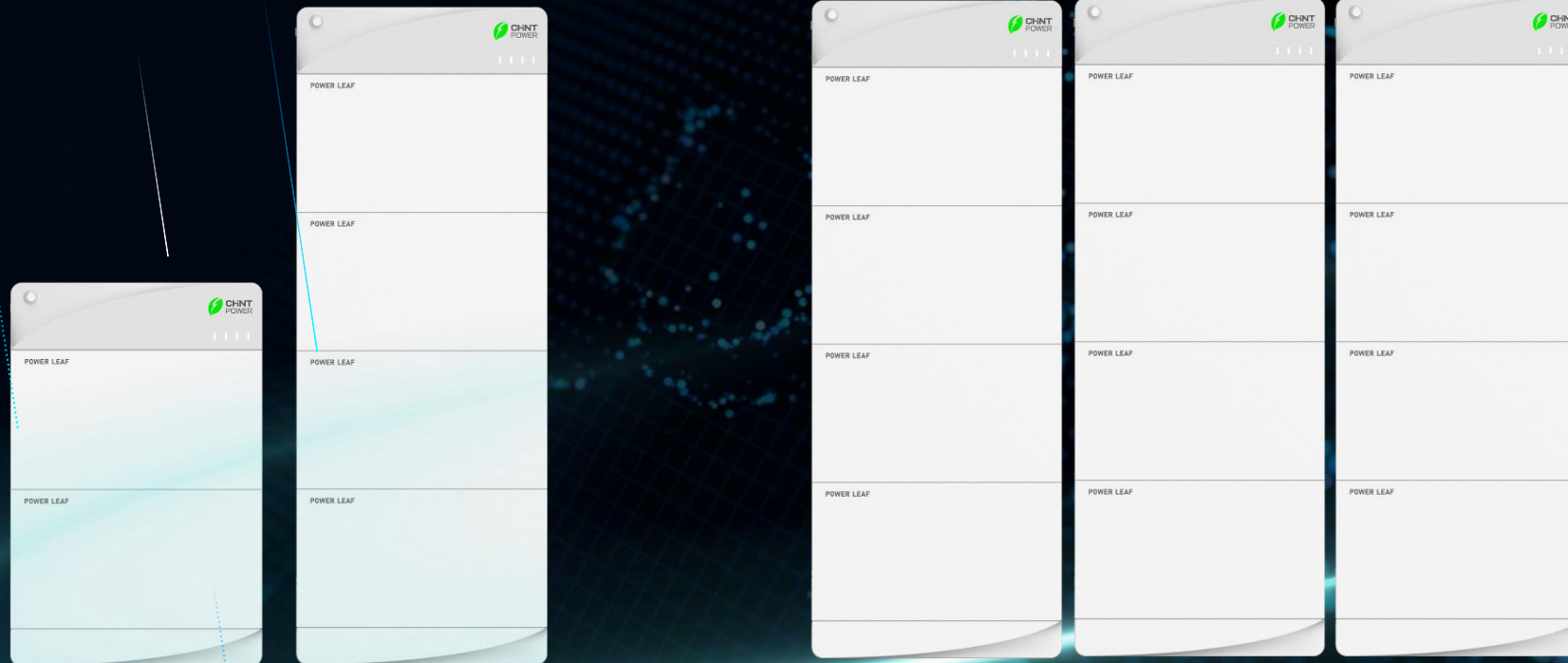
# Module connect



**The connection between modules have done entirely by the terminal**

**Non external cable connect required**

# Max support 60kWh operation

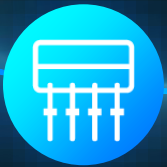
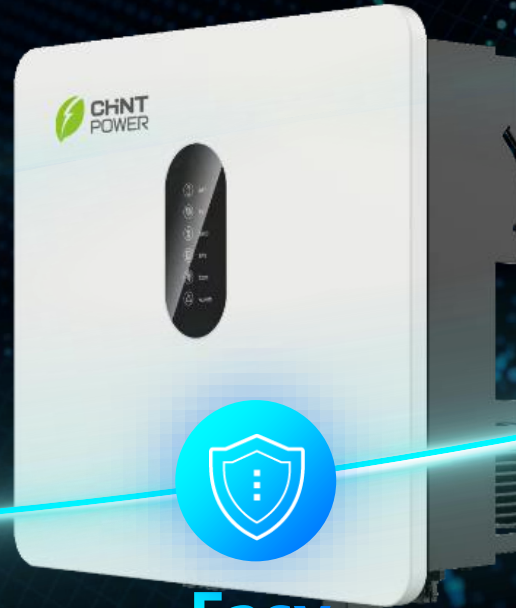


**Max 4 module in one rack  
20kWh**

**Max 3 rack in parallel  
60kWh**



# Residential Hybrid Inverter



## Strong

- Compatible with (500W+) modules



## Easy

- Remote configuration and upgrade
- APP Quick commissioning

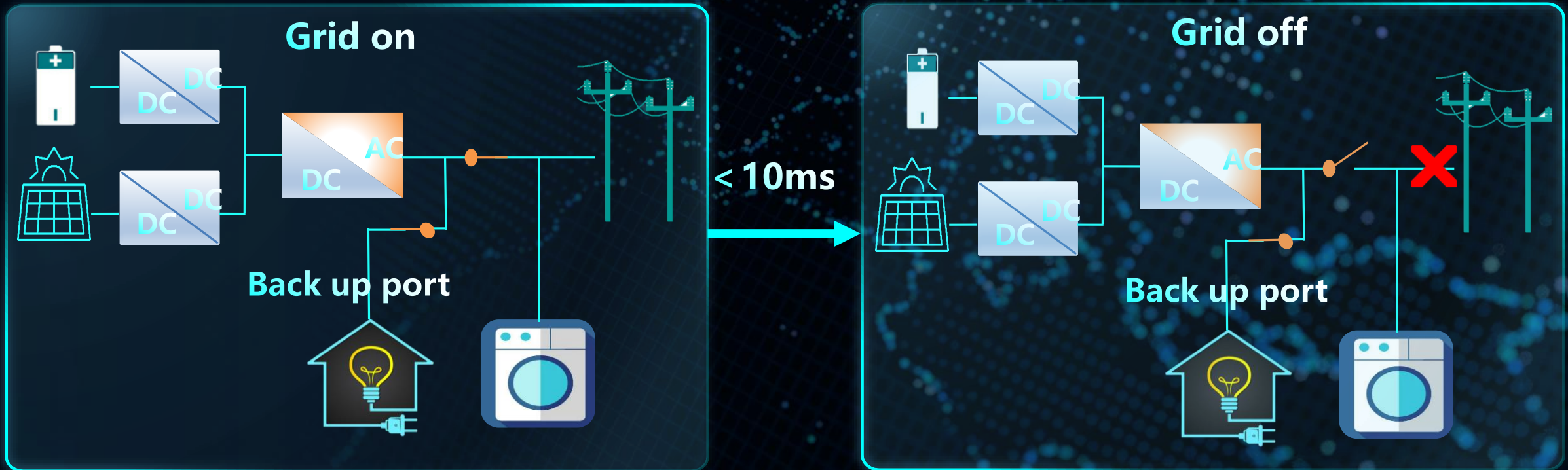


## Smart

- Self Used Mode
- Time of Use Mode,
- Feed-in Priority Mode
- Back-up Mode

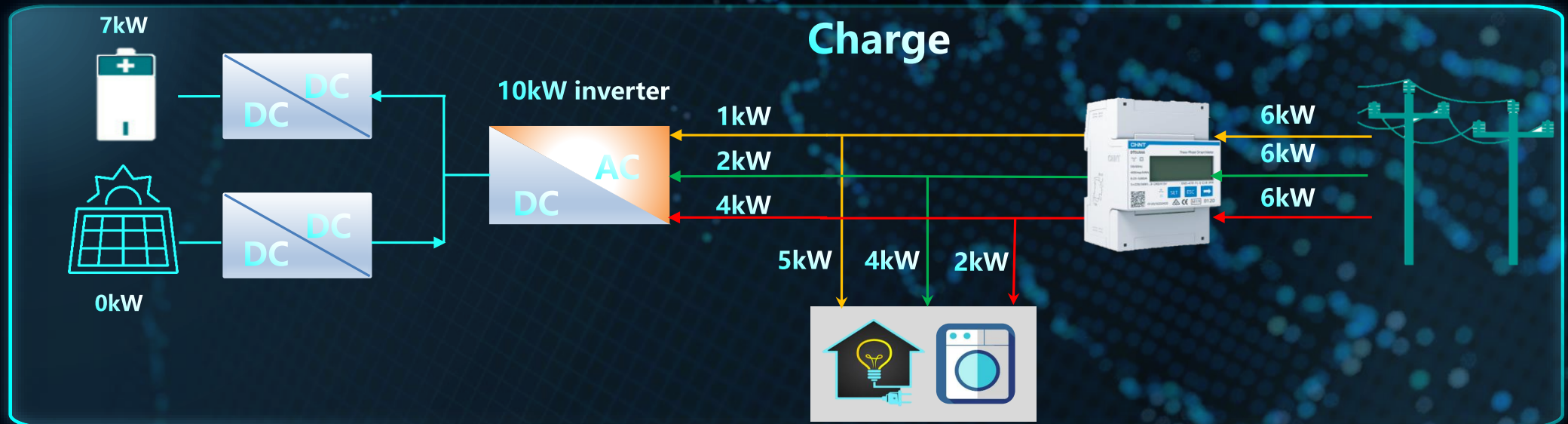
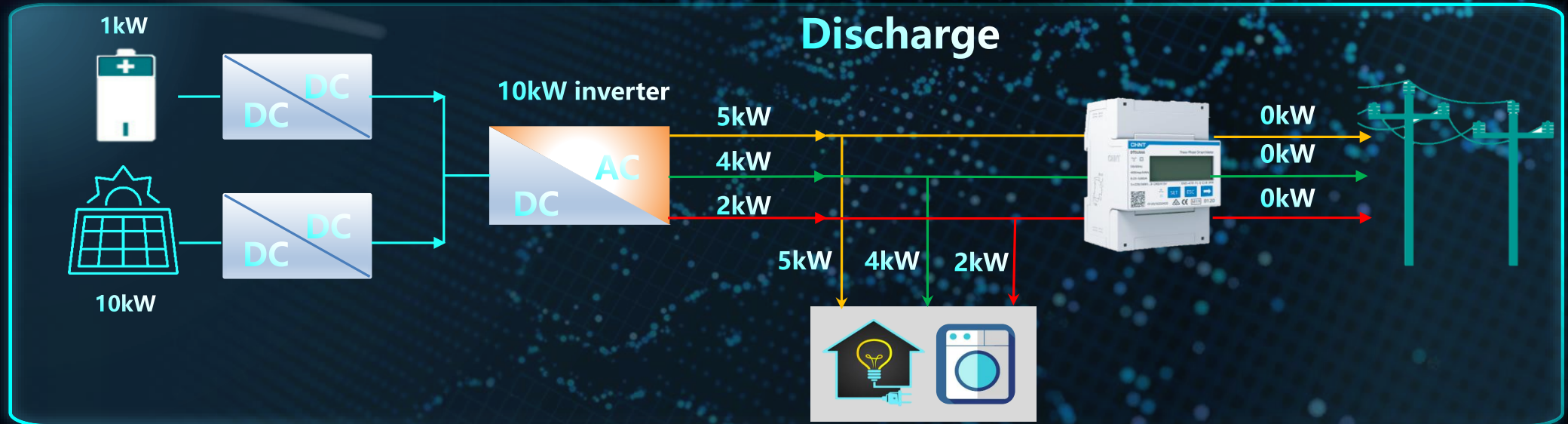
# UPS level off grid switch

Real hybrid inverter, integrated off grid function  
No external device required





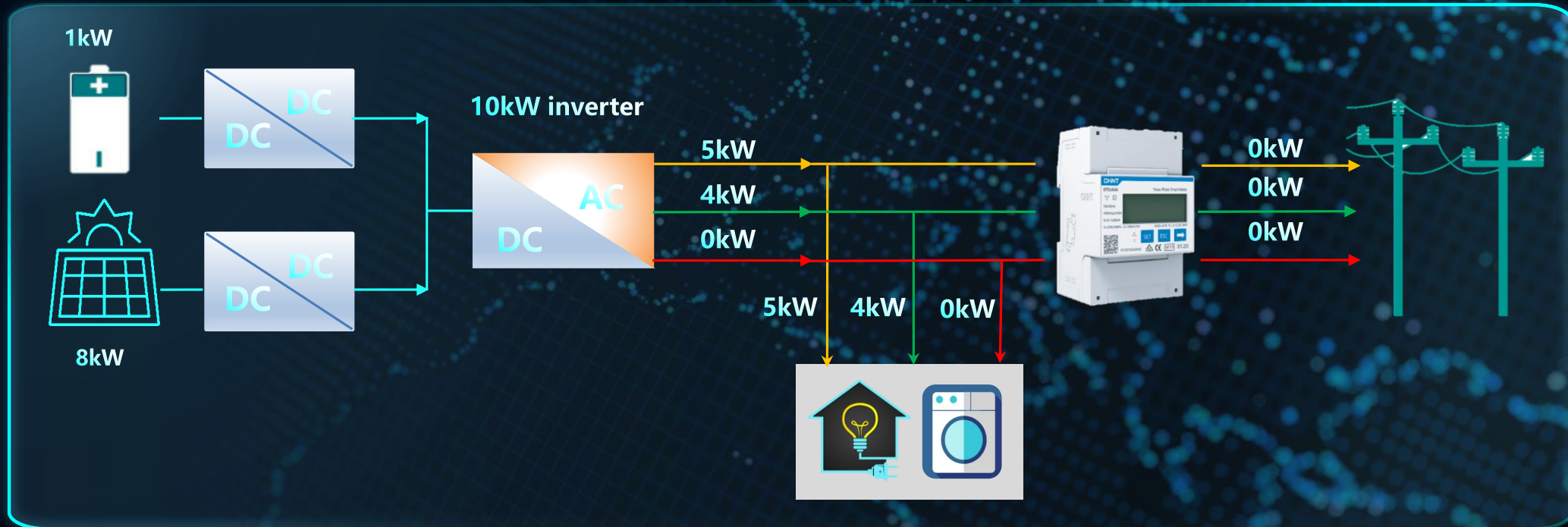
# Strong ability of unbalanced 3-Phase Output



50% power for one phase support

# Strong ability of unbalanced 3-Phase Output

## Off-grid mode



**100%** unbalance ability

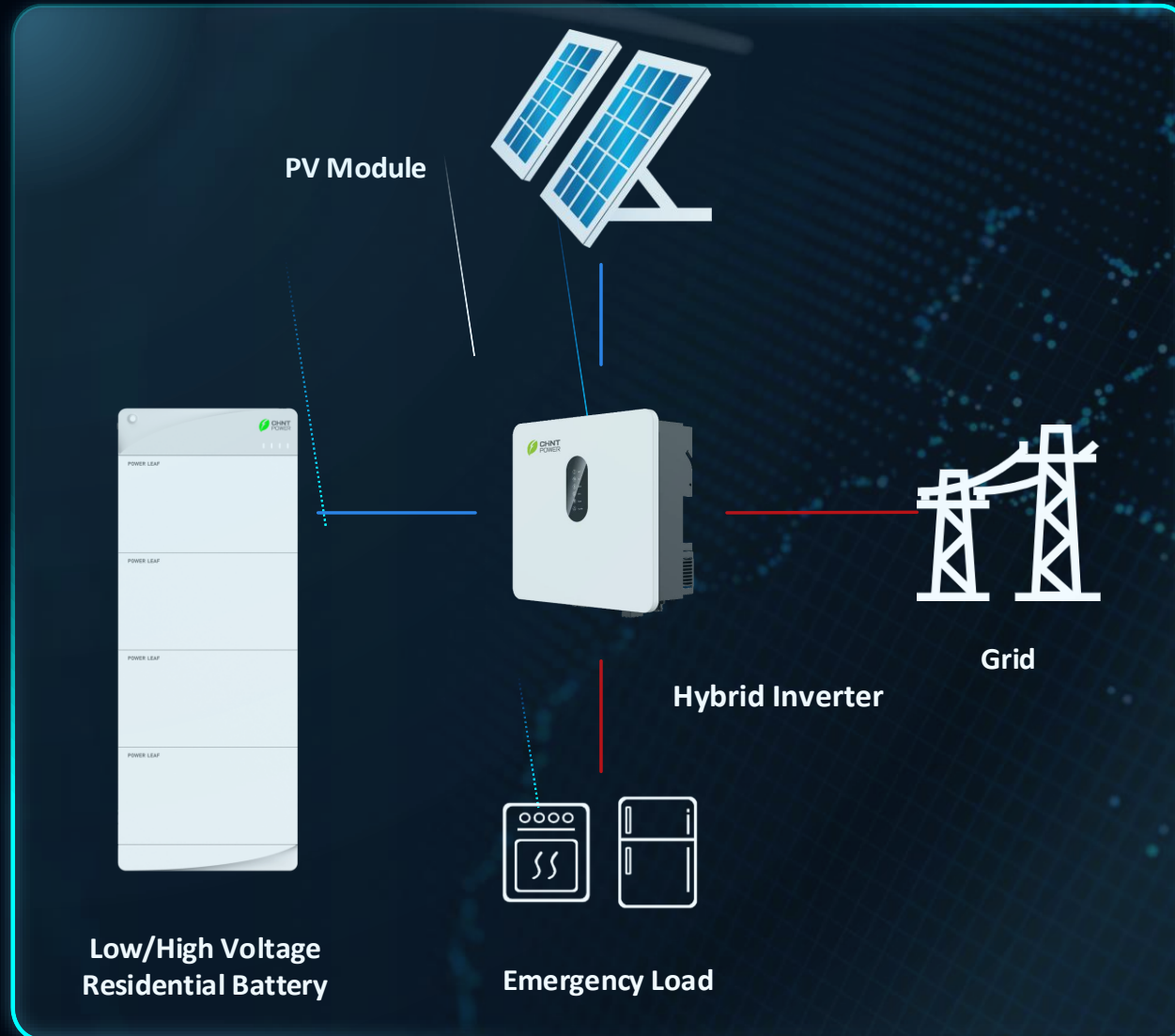
**50%** max power for one phase supported



03

# EMS Working Mode

# Intelligent work mode integrated in inverter



## Self use mode

- Energy priority : Load > Battery > Grid

## Force time use mode

- Charging energy priority: Battery > Load > Grid
- Discharging energy priority: Load > Battery > Grid

## Back up mode(off grid)

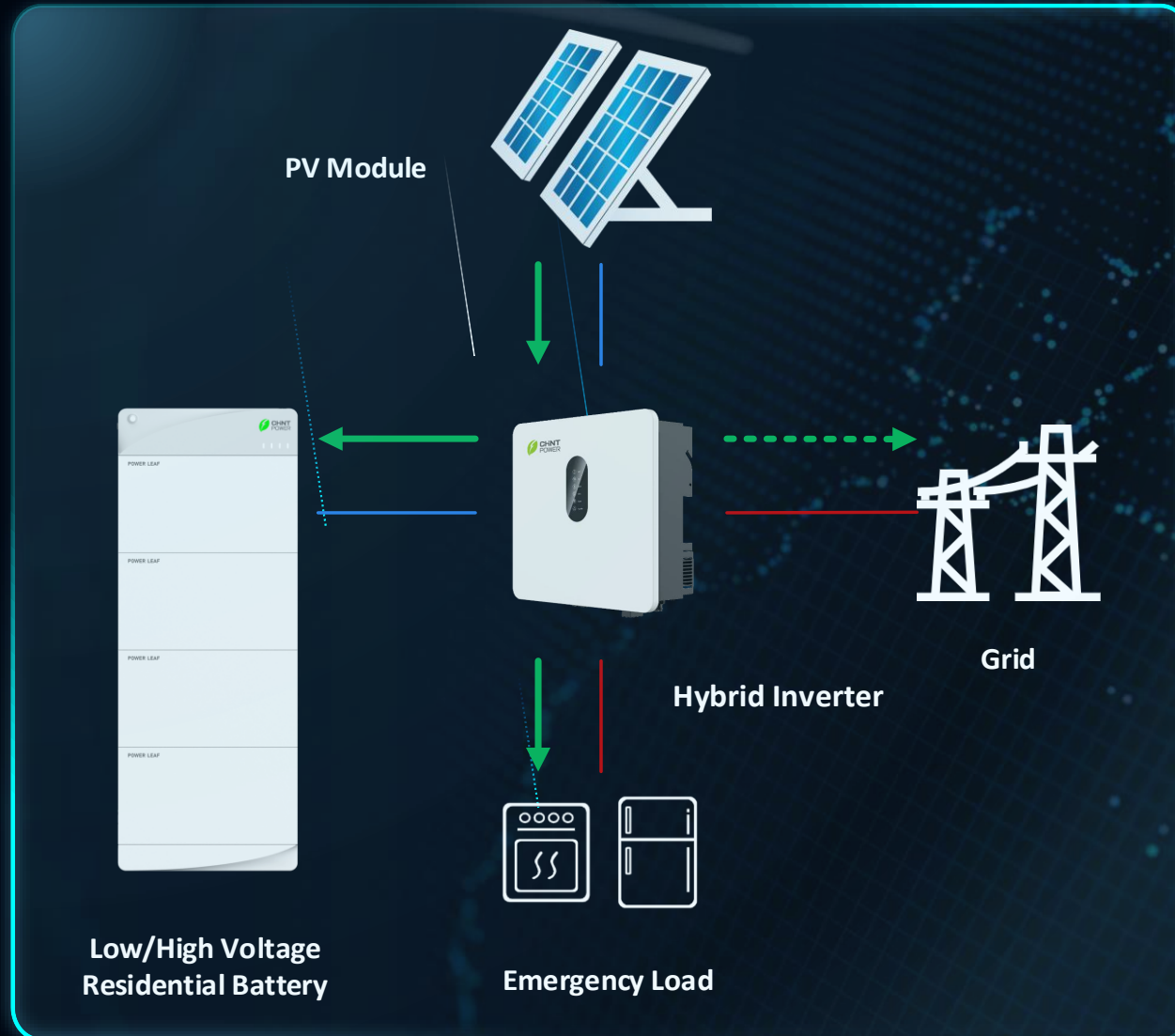
- Energy priority: Battery > Load > Grid

## Feed in priority mode

- Energy priority : Load > Grid > Battery



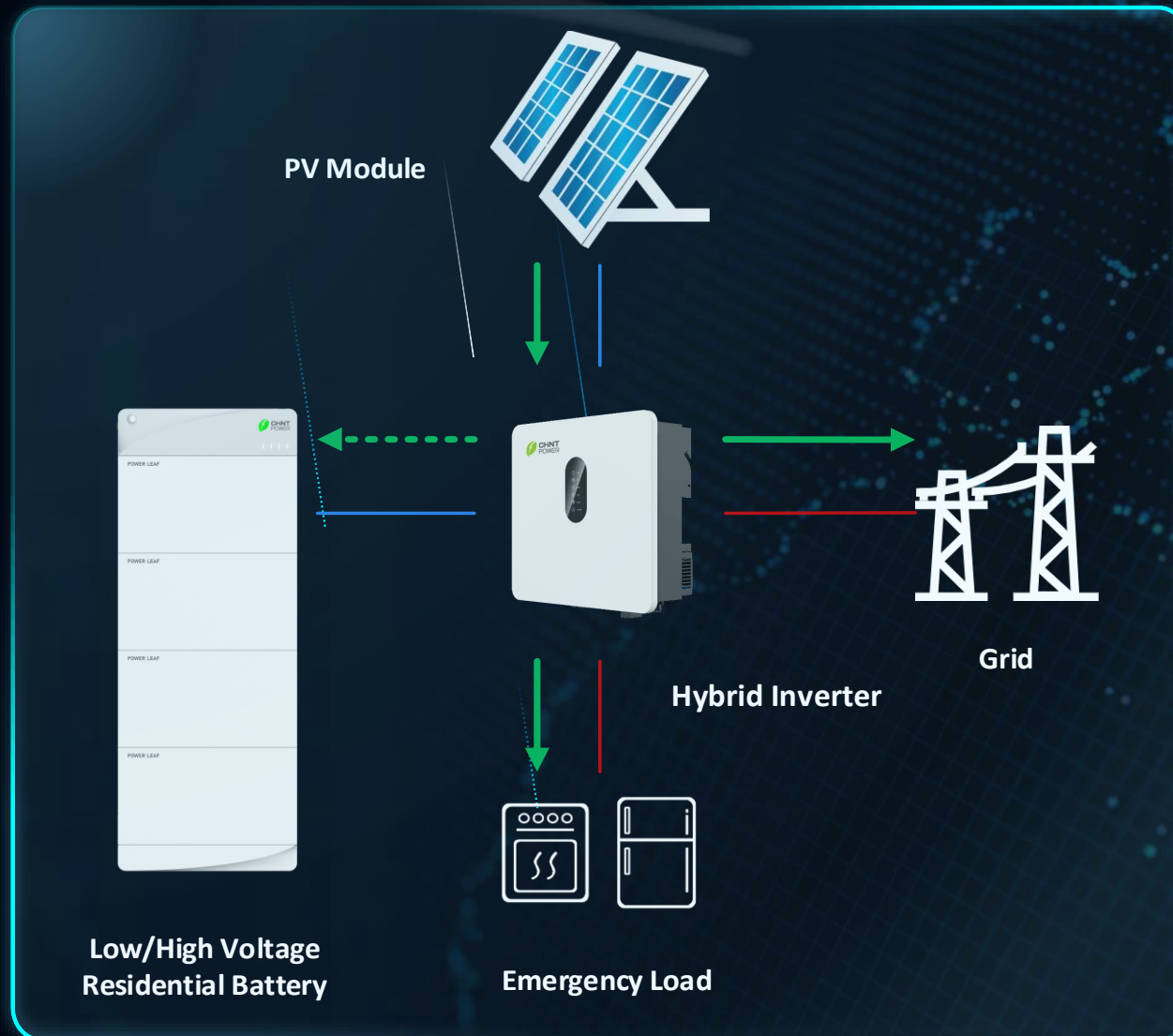
# Self use mode



## Self use mode

- Energy priority : Load > Battery > Grid
- This mode used in the area that low feed in tariff and high energy price.
- Switch on Power Limit function(need a smart meter) to limit power export to the grid.

# Feed in priority mode

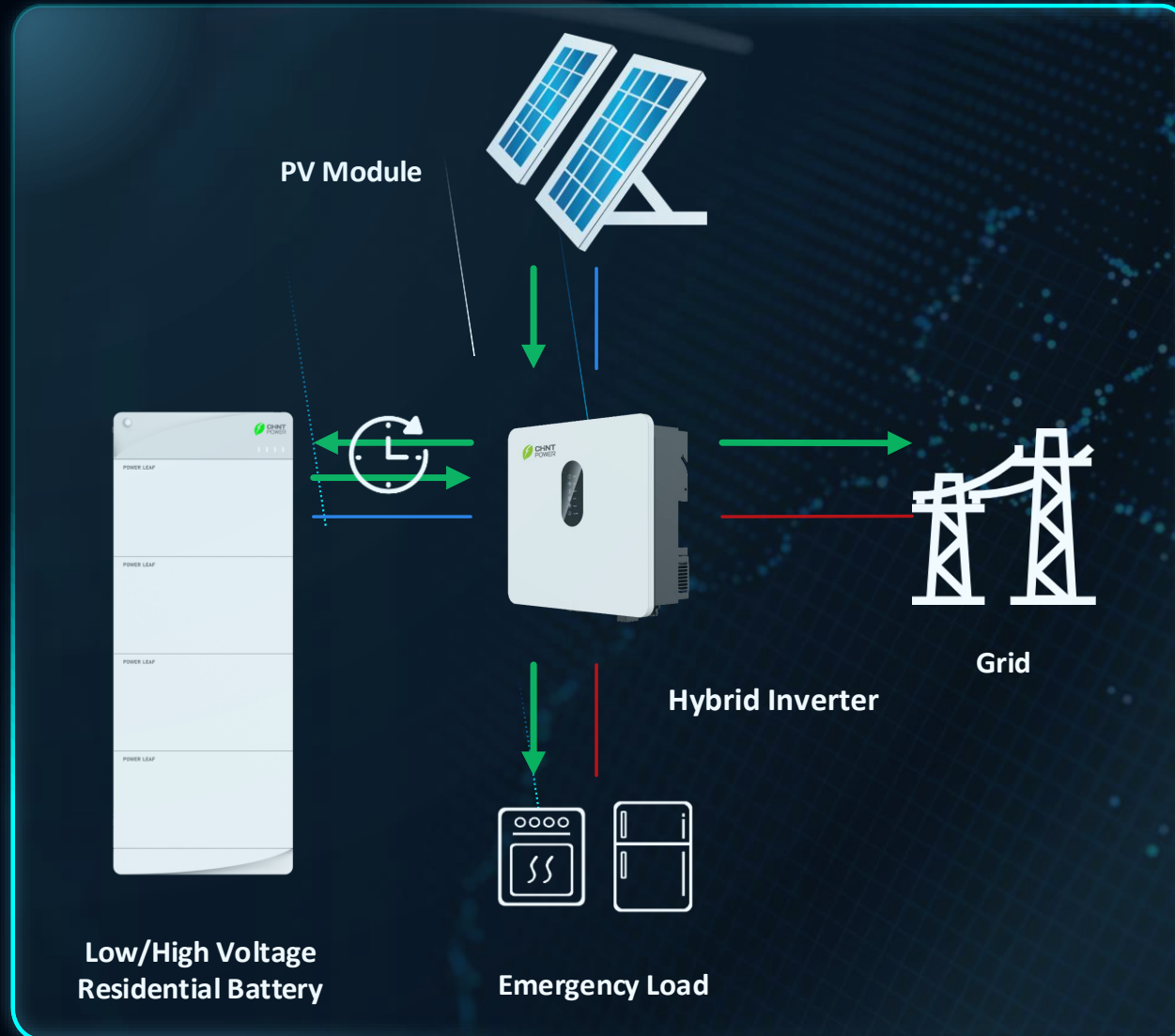


## Feed in priority mode

- Energy priority : Load > Grid > Battery
- This mode used in the area that energy can feed in grid.



# Force time use mode

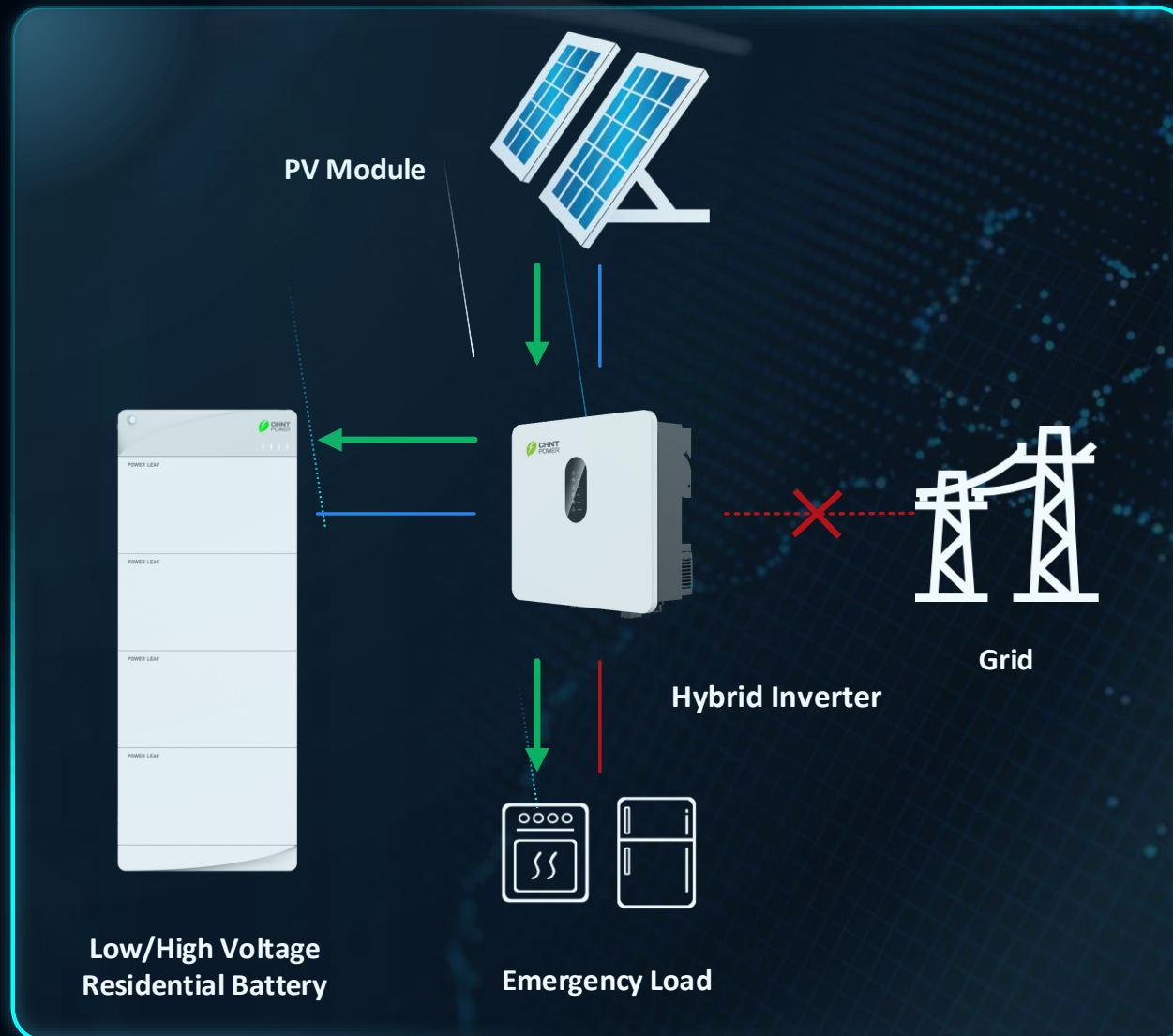


## Force time use mode

- Charging energy priority: Battery > Load > Grid
- Discharging energy priority: Load > Battery > Grid
- This mode used in the area that energy price between peak and valley.
- Charge and discharge time can be set flexible, also allows to choose whether charge battery from grid or not.
- Charge Current rate programmed



# Back up mode



## Back up mode

- Energy priority: **Battery > Load > Grid**
- This mode used in the area that grid system unstable.
- Choose whether charge battery from grid or not.
- In this mode, battery will not discharge until grid is lost.
- When the grid lost, the hybrid inverter will switch to off-grid mode and power the emergency load in less than 10ms



CHNT

正泰电源

Thank you