

HOPEWIND

Stock Code: SSE-603063

TIER 1

BloombergNEF

Hopewind is ranked as
Tier 1 Solar Inverter Maker by BNEF



Residential Hybrid System Solution

www.hopewind.com

01



INTRODUCTION

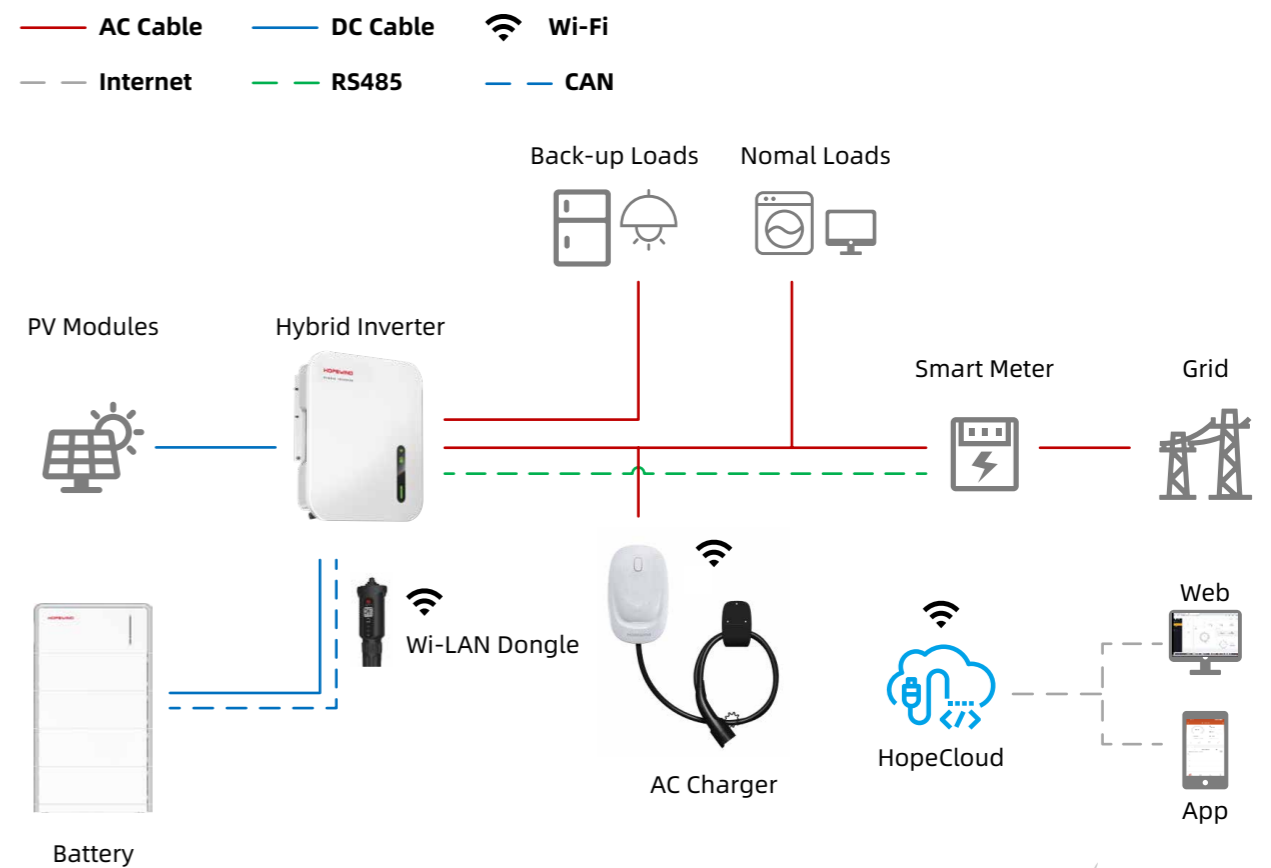
Hopewind provides an advanced solar energy storage solution designed specifically for residential applications, allowing homeowners to fully utilize the benefits of their solar energy systems. By integrating solar energy storage, homeowners can efficiently capture, and store excess energy generated by their solar panels during the day, ensuring its availability for later use during periods of low solar generation. It enables homeowners to optimize the consumption of clean and renewable energy, thereby maximizing the advantages of their solar investment and embrace a more sustainable lifestyle.



02

SYSTEM DIAGRAM

The **residential solar energy storage solution** includes products such as hybrid inverters, AC charging stations, energy storage batteries, cloud platforms, and smart meters. The entire system can be monitored and intelligently maintained in real-time through the hopeCloud platform, ensuring the safety and stability of home electricity and improving electricity efficiency.



03 PRODUCTS

3.1 Hybrid Inverter

Hopewind HYNV 5~12K-G01 are three phase, hybrid inverters with 2 MPPT and maximum efficiency up to 98.4%. The Inverter supports a maximum of 2 times overload output. In the event of a power grid failure, it seamlessly switches to backup power within 4ms, making it particularly friendly to inductive loads like air conditioners and refrigerators. It perfectly solves the problem of AC power interruption during peak electricity demand. It supports various operating modes, such as self-consumption and peak-valley price difference, maximizing user benefits.

FEATURES

- Input current up to 20A
- Supporting three-phase unbalanced output
- Using SiC to improve system performance
- 4ms backup mode switching time
- IP66 protection degree
- Natural cooling, fanless design, low noise



3.3.1 Datasheet of HYNV 5~12K-G01

Model	HYNV5K-G01	HYNV6K-G01	HYNV8K-G01	HYNV10K-G01	HYNV12K-G01
PV Input					
Recommended Max. PV Power	7.5 kW	9 kW	12 kW	15 kW	18 kW
Max. PV Input Voltage	1000 V				
Operating Voltage Range	140 – 950 V		200 – 950 V		
Startup Voltage	180 V		250 V		
Rated Input Voltage	600 V				
Number of MPPT Trackers	2				
Max. Input Number Per MPPT Tracker	20/20 A		27/20 A		
Max. Input Current Per MPPT	30/30 A		40.5/30 A		
Battery					
Battery Type	Lithium battery				
Battery Voltage	120 – 800 V				
Max. Charge / Discharge Current	30 A		37 A		
Max. Charge / Discharge Power	5 kW	6 kW	8 kW	10 kW	12 kW
Communication	CAN / RS485				
AC Output (Grid)					
Rated Output Power	5 kW	6 kW	8 kW	10 kW	12 kW
Max. Apparent Output Power	5.5 kVA	6.6 kVA	8.8 kVA	11 kVA	13.2 kVA
Rated Grid Voltage	380 V / 400 V (3P + N + PE)				
Rated Grid Frequency	50 Hz / 60 Hz				
Max. Output Current	8.4 A	10 A	13.3 A	16.7 A	20 A
Power Factor	>0.99 (0.8 leading – 0.8 lagging)				
THDi	<3% (at rated power)				
AC Output (Backup)					
Rated Output Power	5 kW	6 kW	8 kW	10 kW	12 kW
Max. Apparent Output Power	5.5 kVA	6.6 kVA	8.8 kVA	11 kVA	13.2 kVA
Back-up Switch Time	4 ms				
Rated Output Voltage	380 V / 400 V (3P + N + PE)				
Rated Frequency	50 Hz / 60 Hz				
THDv (Linear Load)	<3%				
AC Input (Grid)					
Max. Input Power	10 kW	12 kW	16 kW	20 kW	24 kW
Rated Input Current	15.2 A	18.2 A	24.2 A	30.3 A	36.4 A
Rated Input Voltage	380 V / 400 V (3P + N + PE)				
Rated Input Frequency	50 Hz / 60 Hz				
Efficiency					
Max. Efficiency	98.4%				
European Efficiency	96.5%	96.8%	97.3%	97.4%	97.5%
Protection & Function					
Grid Monitoring	Yes				
AC Short-circuit Protection	Yes				
DC Reverse Polarity Protection	Yes				
DC Overcurrent Protection (Battery)	Yes				
DC Switch (PV)	Yes				
Surge Protection	Yes				
Integrated AFCI	Optional				
General Data					
Topology (Solar / Battery)	Transformerless / transformerless				
Dimensions (W × H × D)	518 × 583 × 195 mm		518 × 583 × 205 mm		
Weight	23 kg		27 kg		
Degree of Protection	IP66				
Operating Temperature Range	-25 – +60 °C				
Operating Humidity Range	0 – 95% (non-condensing)				
Max. Operating Altitude	3000 m				
Cooling Method	Natural cooling				
Display	LED, APP, Web				
Communication	CAN / RS485				
DC Connection Type	MC4				
AC Connection Type	Plug and play connector				

3.2 Monitoring Platform

HopeCloud, an all-in-one comprehensive monitoring platform, provides real time monitoring and performance analysis to Hopewind products via web and APP. It aims to help energy enterprises establish digital energy operation base, realize the full life cycle management, visual monitoring and intelligent operation and maintenance (O&M) for energy projects and assets, to improve energy operation efficiency, accelerate the digital transformation of energy business, and create value.

3.3 Battery Selection

Hopewind hybrid inverter HYNV5~12K-G01 is to work with the following recommended battery brands and models, Batteries purchased from Hopewind or directly from third-party manufacturers are acceptable.

- Pylon, Force-H Series
- FEB, HY5120-S1
- Ampace, PR-S3
- Dyness, Tower

The battery match list is shown as below.

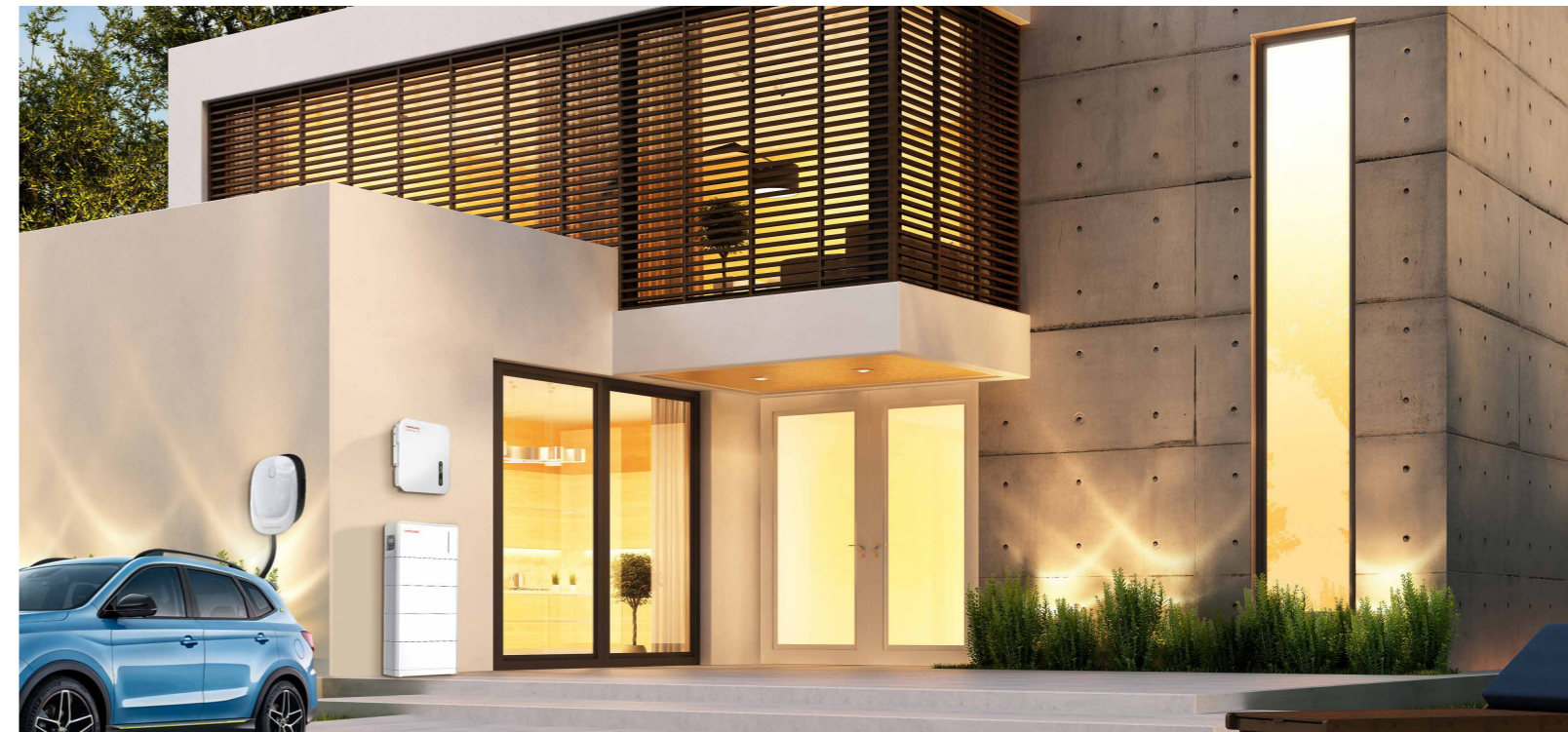
Inverter Model	Battery Brand	Battery Model	Battery Energy	Backup Time(h)
HYNV5K-G01	Ampace	PR-S3 2S	6.68kWh	1
		PR-S3 3S	10.03kWh	2
	Pylon	Force-H2-V2/192V	7.1kWh	1
		Force-H2-V2/288V	10.65kWh	2
	Far East Battery	HV5120-S1-2S	9.73kWh	2
	Dyness	Tower T7	7.1kWh	1
HYNV6K-G01	Ampace	PR-S3 2S	6.68kWh	1
		PR-S3 4S	13.37kWh	2
	Pylon	Force-H2-V2/192V	7.1kWh	1
		Force-H2-V2/288V	10.65kWh	2
	Dyness	Tower T10	10.66kWh	2
	HYNV8K-G01	Ampace	PR-S3 3S	10.03kWh
Pylon		Force-H2-V2/192V	7.1kWh	1
		Force-H2-V2/384V	14.21kWh	2
Far East Battery		HV5120-S1-3S	14.59kWh	2
Dyness		Tower T14	14.21kWh	2
		Tower T17	17.76kWh	2
HYNV10K-G01	Ampace	PR-S3 3S	10.03kWh	1
	Pylon	Force-H2-V2/288V	10.65kWh	1
		Force-H1-V2/288V	21.31kWh	2
	Far East Battery	HV5120-S1-2S	9.73kWh	1
		HV5120-S1-4S	19.46kWh	2
	Dyness	Tower T17	17.76kWh	2
HYNV12K-G01	Ampace	PR-S3 4S	13.37kWh	1
	Pylon	Force-H2-V2/384V	14.21kWh	1
		Force-H1-V2/288V	21.31kWh	2
	Far East Battery	HV5120-S1-3S	14.59kWh	1
		HV5120-S1-5S	24.32kWh	2
	Dyness	Tower T21	21.31kWh	2

3.4 Other batteries

Procedure for Compatibility with Non-Listed Battery Brands:

- Furnish comprehensive technical manuals and protocol map list documentation for the selected battery. Ensure that the battery pack supports CAN or MODBUS RS485 communication.
- Hopewind R&D team will conduct a thorough assessment based on the provided battery documentation.
- Upon confirmation of compatibility by our R&D team, necessary programming adjustments will be made to align the hybrid inverter with the battery specifications. This process will include testing, requiring customers to provide the communication version of the Battery Management System (BMS) for verification.
- Following the completion of R&D and successful testing, the updated program will be integrated into the hybrid inverter. A comprehensive test report will be generated, and customers will be promptly notified that the battery can be connected for operational use.

Hopewind is dedicated to providing residential and small commercial and industrial (C&I) storage solutions that utilize smart technologies and advanced expertise. Our goal is to protect users from escalating electricity costs and offer reliable solutions that maximize self-consumption, ensure power safety during outages, enable smart control of home power management, and ultimately achieve energy independence.



Shenzhen Hopewind Electric Co., Ltd. (Stock Code: 603063) focuses on the R&D, manufacturing, sales and services of renewable energy & electric drive products, including products for wind power generation, photovoltaic generation, energy storage, hydrogen production power supply, power quality and Variable-frequency Drive. Furthermore, Hopewind owns integrated independent R&D and testing platforms of high-power power electrical equipment and monitoring systems. Through innovation in technology and service, Hopewind continuously creates value for customers, and has become one of China's most competitive enterprises in the renewable energy field.



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