



# PV String Inverters

Brochure

# “ Company Profile

Shenzhen Hopewind Electric Co., LTD. (Stock Code: 603063) focuses on the R&D, manufacturing, sales and service of renewable energy and electric drive products and the main products are wind power converter, PV inverter as well as the industry drive (variable frequency drive). Furthermore, Hopewind owns independent development & testing platforms of integrated high-power electric equipment and monitoring system. By innovation in technology and service, Hopewind continuously creates value for customers, and has become one of the most competitive enterprises in renewable energy field.

In the field of photovoltaic (PV) grid power generation, Hopewind offers competitive overall solutions, including string type small/medium power photovoltaic power generation system and centralized/C&D power photovoltaic system.

String PV inverters include residential 5kW ~ 8kW single-phase models, commercial 8kW ~ 33kW small-power models, 36kW ~ 50kW medium-power models, 60kW ~ 125kW high-power models and DC1500V 225kW high-power models. At the same time, we also provide the corresponding WiFi/GPRS/4G modules, as well as the data collector modules in large-scale power plants to meet the requirement of the system remote monitoring, operation and maintenance management.

The centralized solution includes 500kW, 630kW, and 800kW grid-connected inverters for 1100V system and 1250kW, 1562.5kW, 2500kW, and 3125kW grid-connected inverters for 1500V system, as well as integration solution combination products such as inverter-transformer integrated containers.

The C&D solution includes 1000kW and 1250kW grid-connected inverters for 1100V system, and 1MW, 1.25MW, 2MW, 2.5MW, 4MW and 5MW inverter containers and inverter-transformer integrated containers.

In the field of C&I BESS, we provide 60kW ~ 120kW outdoor energy storage integrated machine (100kWh/200kWh batteries are optional), to meet the peak load shifting and off-grid application in the case of power limit in factories.



Headquarter and R&D Base: Shenzhen  
 6 Manufacturers & Factories: Shenzhen, Suzhou, Dongguan, Yancheng, Xian, Heyuan  
 30 Services Base: Russia, Vietnam, Brazil, Korea, Turkey, Ukraine, etc.

# » Contents



- 04 **Residential PV Inverter**  
(5K/6K/8K)
- 06 **Commercial Small Power Inverter**  
(8K/10K/12K/15K/17K/20K/22K/25K/30K/33K)
- 08 **Commercial Medium Power Inverter**  
(36K/40K/50K)
- 10 **Commercial High Power Inverter**  
(60K/70K/75K/100K/110K/125K)
- 12 **DC1500V High Power String Inverter**  
(250K)
- 14 **Communication Solution**
- 19 **Anti-backflow Solution**
- 22 **Project Cases**



# Residential PV Inverter



**High Efficiency**

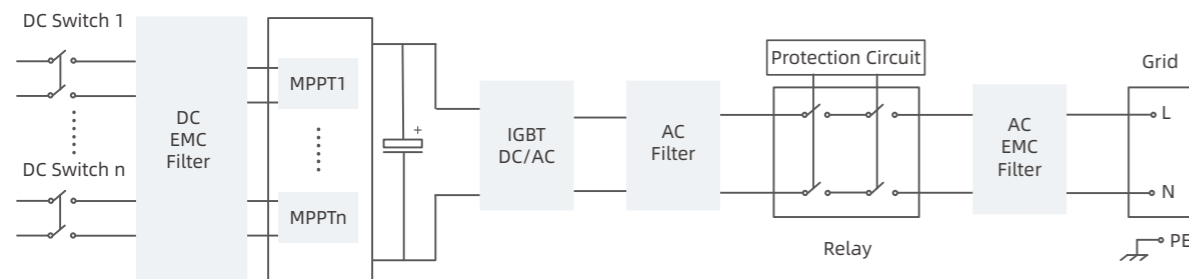
Max. DC voltage 550V.  
Max efficiency 98.59%.  
2 MPPTs.  
High precision & intelligent string detection.



**Reliable**

Compact structure, easy for installation and maintenance.  
IP65 waterproof.  
Support mobile APP monitoring.

## Topological Graph





## Technical Parameters


Model		hopeSun 5KTL	hopeSun 6KTL	hopeSun 8KTL
DC Input	Max. DC Voltage	550V		
	Starting Voltage	140V		
	MPPT Voltage Range	90V~500V		
	MPPT Range Full Load	200V~480V	240V~480V	220V~480V
	Max. Input Current of Each MPPT	13A / 13A		25A / 13A
	Max. short-circuit current	19A / 19A		38A / 19A
	Number of DC Inputs	1 / 1		2 / 1
	MPPT Number	2		
AC Output	Rated Output Power	5kW	6kW	8kW
	Max. Active Power (cosθ=1)	5.5kW	6.6kW	8.8kW
	Rated Output Voltage	220V / 230V (Single-phase)		
	Operating Voltage Range	172.5V~276V		
	Max. Output Current	25A	30A	40A
	Rated Grid Frequency	50Hz / 60Hz		
	Power Factor	0.8 (Leading) ~ 0.8 (Lagging)		
	THD	<3%		
	Max. Efficiency	98.47%	98.55%	98.59%
	European Efficiency	98.00%		
System Parameters	AC/DC SPD	Yes		
	Anti-Islanding Protection	Yes		
	Insulation Impedance Detection	Yes		
	Residual Leakage Current Detection	Yes		
	PV String Fault Detection	Yes		
	Output Overcurrent Protection	Yes		
	Protection Degree	IP65		
	Operating Temperature Range	-25°C ~ +60°C		
	Cooling System	Natural Cooling		
	Standby Power Consumption	<1W		
	Topology	Transformerless		
	Operating Altitude	4000m (Derating above 3000m)		
	Display	LED Indicator + APP		
	Communication	WiFi / GPRS / 4G		
	Certification	IEC61683 / IEC62109 / IEC61000 / IEC62116 / IEC61727 / iNMETRO		
Mechanical Parameters	Dimensions (W*H*D)	325*380*177mm		
	Weight	≤14kg		

# Commercial Small Power Inverter



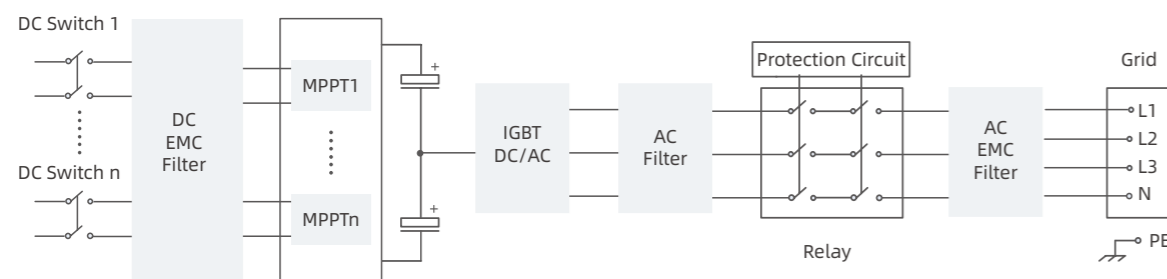
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**High Efficiency**  
 Max efficiency 99.0%.  
 2 MPPTs.  
 Max. 20A DC input current.  
 High precision & intelligent string detection.
- 

**Reliable**  
 8K~17K natural cooling, 20K~33K smart air cooling.  
 Compact structure, easy for installation and maintenance.  
 Reliable under/over voltage protection, anti-islanding.  
 Built-in AC and DC SPD protection module.
- 

**Friendly**  
 Support Stand-alone Anti-backflow interface.  
 Support mobile APP monitoring.  
 100%Pn under 45°C.

## Topological Graph



## Technical Parameters

Model	hopeSun 8KTL	hopeSun 10KTL	hopeSun 12KTL	hopeSun 15KTL	hopeSun 17KTL	hopeSun 20KTL	hopeSun 22KTL	hopeSun 25KTL	hopeSun 30KTL	hopeSun 33KTL																
DC Input	Max. DC Voltage										1100V															
	Starting Voltage										200V															
	MPPT Voltage Range										200V~1000V															
	MPPT Range Full Load										370V~850V			450V~850V			425V~850V									
	Max. Input Current of Each MPPT										20A / 20A		26A / 20A		30A / 30A		40A / 40A									
	Max. short-circuit current										30A / 30A		39A / 30A		45A / 45A		60A / 60A									
	Number of DC Inputs										1 / 1		2 / 1		2 / 2		3 / 3									
	MPPT Number										2															
AC Output	Rated Output Power										8kW	10kW	12kW	15kW	17kW	20kW	22kW	25kW	30kW	33kW						
	Max. Active Power (cosθ=1)										8.8kW	11kW	13.2kW	16.5kW	18.7kW	22kW	24.2kW	27.5kW	33kW	36.3kW						
	Rated Output Voltage										400V (Three-phase) (380V optional)															
	Operating Voltage Range										300V~520V															
	Rated Output Current										11.6A	14.5A	17.4A	21.7A	24.6A	28.9A	31.8A	36.1A	43.5A	47.6A						
	Max. Output Current										12.7A	16.0A	19.1A	23.9A	27.0A	31.8A	35.0A	39.7A	47.6A	52.4A						
	Rated Grid Frequency										50Hz / 60Hz															
	Power Factor										0.8 (Leading)~0.8 (Lagging)															
	THD										<3%															
	System Parameters	Max. Efficiency										98.60%		98.61%		98.62%		98.63%		98.65%		98.94%		99.00%		98.80%
European Efficiency										98.40%		98.41%		98.42%		98.43%		98.45%		98.74%		98.80%		98.60%		
AC/DC SPD										Yes																
Anti-Islanding Protection										Yes																
Insulation Impedance Detection										Yes																
Residual Leakage Current Detection										Yes																
PV String Fault Detection										Yes																
Output Overcurrent Protection										Yes																
Protection Degree										IP65																
Operating Temperature Range										-25°C~+60°C																
Cooling System										Natural Cooling					Smart Air Cooling											
Standby Power Consumption										<1W																
Topology										Transformerless																
Operating Altitude										5000m (Derating above 4000m)																
Display										LED Indicator + APP																
Communication										WiFi / GPRS / 4G																
DC & AC Terminator										OT / DT																
Certification										EN50549 / IEC61683 / IEC62109 / IEC61000 / IEC62116 / IEC61727 / CQC / CGC																
Optional										WiFi&GPRS Module / Anti-PID Module / Anti-Reversed Module																
Mechanical Parameters		Dimensions (W*H*D)										380*400*247mm					380*450*247mm									
	Weight										≤22kg					≤25kg		≤30kg		≤35kg						

# Commercial Medium Power Inverter



Max. efficiency 99.03%.  
Max. 20A DC input current.  
High precision & intelligent string detection.

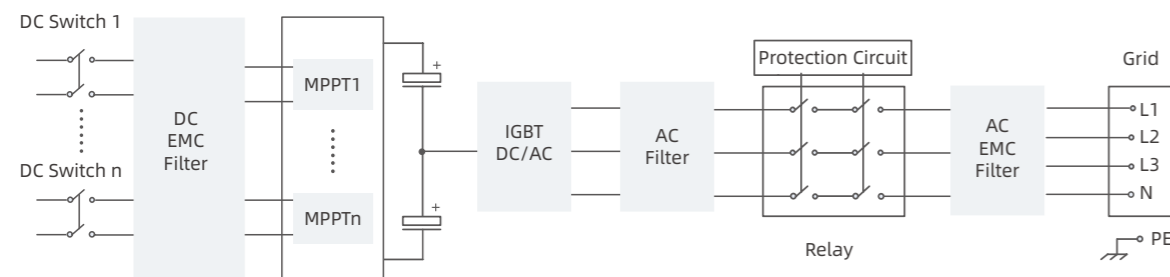


36K~110K smart air cooling.  
Built-in AC and DC SPD protection module.  
Night PID module.  
Compatible with 182/210 PV panels



100Pn under 45°C  
Support single-machine anti-backflow interface.  
Support mobile APP monitoring.

## Topological Graph



## Technical Parameters

	Model	hopeSun 36KTL	hopeSun 40KTL	hopeSun 50KTL
DC Input	Max. DC Voltage	1100V		
	Starting Voltage	200V		
	MPPT Voltage Range	200V~1000V		
	MPPT Range Full Load	375V~850V		450V~850V
	Max Current / MPPT	45A / 45A	54A / 54A	60A / 60A
	Max. short-circuit current	67.5A / 67.5A	81A / 81A	90A / 90A
	Number of DC Inputs	3 / 3	5 / 4	
	MPPT Number	2		
AC Output	Rated Output Power	36kW	40kW	50kW
	Max. Active Power	39.6kW	44kW	55kW
	Rated Output Voltage	400V (Three-phase) (380V optional)		
	AC Voltage Range	300V~520V		
	Rated Output Current	52.0A	57.7A	72.2A
	Max. Output Current	57.2A	63.5A	79.4A
	Rated Grid Frequency	50Hz / 60Hz		
	Power Factor	0.8 (Leading)~0.8 (Lagging)		
	THD	<3%		
		Max. Efficiency	98.97%	98.95%
	European Efficiency	98.45%		98.51%
	AC/DC SPD	Yes		
	Anti-Islanding Protection	Yes		
	PV String Fault Detection	Yes		
	RCD	Yes		
	AC Overcurrent Protection	Yes		
	Cooling System	Smart Air Cooling		
	Operating Temperature	-25°C~+60°C		
	Protection Degree	IP65		
	Standby Power Consumption	<1W		
	Topology	Transformerless		
	Operating Altitude	5000m (Derating above 4000m)		
	Display	LED Indicator + APP		
	Communication	RS485 / WiFi / GPRS/ 4G		
	DC & AC Terminator	OT / DT		
	Certification	IEC61683 / IEC62109 / IEC61000 / IEC62116 / IEC61727 / CQC / CGC		
	Optional	WiFi&GPRS&4G Module / Anti-PID Module		
Mechanical Parameters	Dimensions (W*H*D)	520*520*265mm		
	Weight	≤44kg		

# Commercial High Power Inverter



**High Efficiency**  
 Max. efficiency 99.00%.  
 4 MPPTs.  
 High precision & intelligent string detection.  
 Max. 20A DC input current.

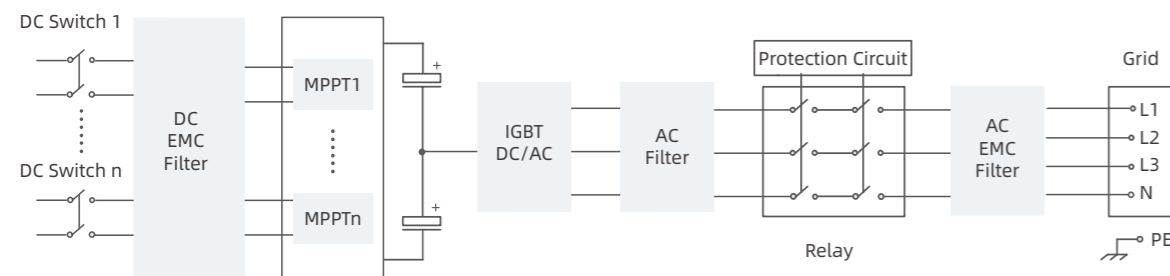
**Reliable**  
 Smart air cooling.  
 Integrated PID repair function.  
 Built-in AC and DC SPD protection module.

**Friendly**  
 Support single-machine anti-backflow interface.  
 Support night SVG function.  
 AC and DC redundant power supply,  
 24-hour real-time monitoring.  
 Support mobile APP monitoring.  
 100%Pn under 45°C.

## Technical Parameters


Model		hopeSun 60KTL	hopeSun 70KTL	hopeSun 75KTL	hopeSun 100KTL	hopeSun 110KTL	hopeSun 125KTL-M	
DC Input	Max. DC Voltage	1100V						
	Start Voltage	200V						
	MPPT Voltage Range	200V~1000V						
	100Pn% MPPT Range	520V~850V		600V~850V		550V~850V		600V~850V
	Max. Input Current of Each MPPT	45A / 45A / 45A / 45A				65A / 65A / 65A / 65A		
	Max. short-circuit current	60A / 60A / 60A / 60A				100A / 100A / 100A / 100A		
	Number of DC Inputs	3 / 3 / 3 / 3			4 / 3 / 3 / 4		5 / 5 / 5 / 5	
	MPPT Number	4						
AC Output	Rated Output Power	60kW	70kW	75kW	100kW	110kW	125kW	
	Max. Active Power (cosθ=1)	66kW	77kW	82.5kW	110kW	121kW	137.5kW	
	Rated Output Voltage	400V (Three-phase) (380V optional)					500V (Three-phase)	
	Operating Voltage Range	300V~520V					425V~550V	
	Rated Output Current	86.5A	101A	108.3A	144A	158.8A	144A	
	Max. Output Current	95.3A	111A	119A	158.8A	174.7A	158.8A	
	Rated Grid Frequency	50Hz / 60Hz						
	Power Factor	0.8 (Leading)~0.8 (Lagging)						
	THD	<3%						
	Max. Efficiency	98.85%	99.00%					
	European Efficiency	98.51%	98.52%					
	AC/DC SPD	Yes						
Anti-Islanding Protection	Yes							
Insulation Impedance Detection	Yes							
Residual Leakage Current Detection	Yes							
PV String Fault Detection	Yes							
Output Overcurrent Protection	Yes							
Protection Degree	IP65							
Operating Temperature Range	-25°C~+60°C							
Cooling System	Smart Air Cooling							
Standby Power Consumption	<1W			<5W				
Topology	Transformerless							
Operating Altitude	5000m (Derating above 4000m)							
Display	LED Indicator + APP							
Communication	RS485 / WiFi / GPRS / 4G							
DC & AC Terminator	OT / DT							
Certificates	IEC61683 / IEC62109 / IEC61000 / IEC62116 / IEC61727 / CQC / CGC							
Optional	WiFi&GPRS&4G Module / Anti-PID Module							
Mechanical Parameters	Dimensions (W*H*D)	705*650*285mm				800*680*330mm		
	Weight	≤75kg				≤89kg		


## Topological Graph




# DC1500V High Power String Inverter



 Maximum efficiency 99.01%, Europe efficiency 98.52%. 12 MPPTs.  
**High Efficiency** Supporting high-power bifacial modules. High-precision intelligent string detection.

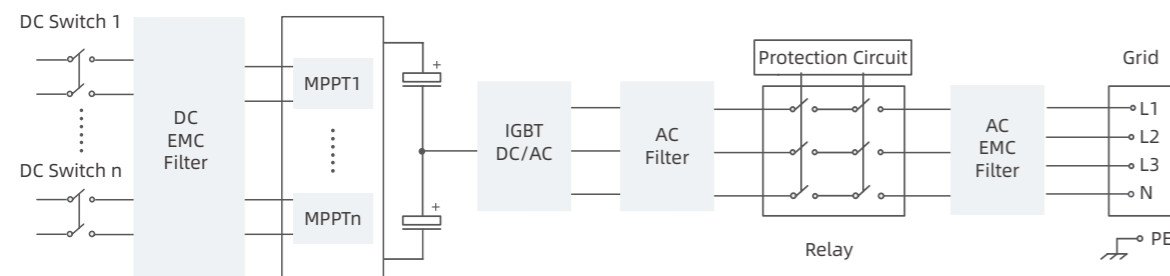
 Built-in AC and DC SPD protection. No fuse, IP66 protection. Intelligent fan cooling, low temperature rising and long life.  
**Reliable**

 Support PLC and save construction cost. Support IV diagnosis. Night SVG function. Support DC 2 in 1 connection.  
**Friendly**

## Technical Parameters

Model		hopeSunHV 250KTL	
DC Input	Max. DC Voltage	1500V	
	MPPT Voltage Range	500V~1500V	
	MPPT Voltage Range Full Load	820V~1320V	
	Max. Input Current of Each MPPT	30A / 40A	
	Max. short-circuit current	50A / 60A	
	Number of DC Inputs / MPPT	24 / 12 / 18 / 9	
AC Output	AC Output Power	225kW@50°C / 235kW@40°C / 250kW@30°C	
	Max. Active Power (cosθ=1)	250kW	
	Rated Output Voltage	800V	
	Operating Voltage Range	680V~800V	
	Max. Output Current	180.4A	
	Rated Grid Frequency	50Hz / 60Hz	
	Power Factor	0.8 (Leading)~0.8 (Lagging)	
	THD	<3%	
	System Parameters	Max. Efficiency	99.01% / 98.52%
		MPPT Tracking Efficiency	Steady>99.9%, Dynamic>99.0%
AC/DC SPD		Yes	
Anti-Islanding Protection		Yes	
Insulation Impedance Detection		Yes	
Residual Leakage Current Detection		Yes	
PV String Fault Detection		Yes	
Output Overcurrent Protection		Yes	
Protection Degree		IP66	
Operating Temperature Range		-25°C~+60°C	
Cooling System		Smart Air Cooling	
Standby Power Consumption		<5W	
Topology		Transformerless	
Operating Altitude		5000m (Derating above 4000m)	
Display		LED Indicator	
Communication		RS485 / PCL	
Certification		IEC61683 / IEC62109 / IEC61000 / IEC62116 / IEC61727 / CQC / CGC	
Mechanical Parameters		Dimensions (W*H*D)	1000*727*317mm
	Weight	≤105kg	

## Topological Graph



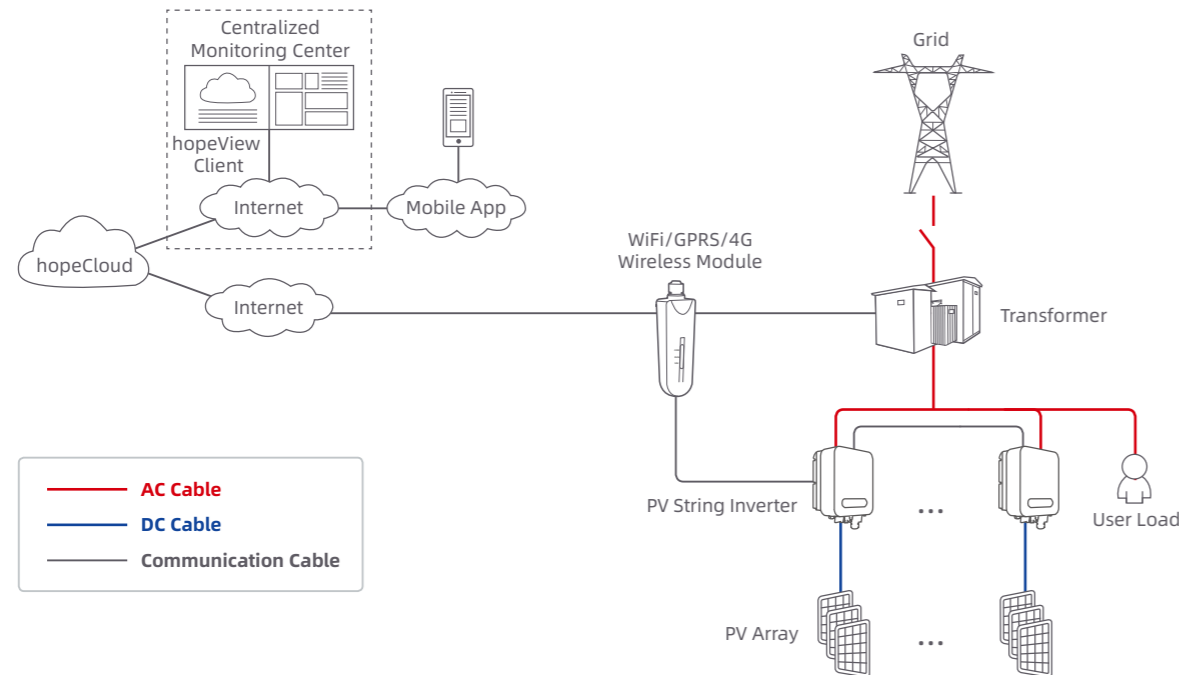
# Communication Solution-WiFi/GPRS Wireless/4G Module

## Product Description

The WiFi/GPRS wireless/4G module is used to extend the WiFi data transmission channel of the device. It supports mobile phone APP connection, monitoring, parameter settings.



## For Small Household



## Performance Characteristics



### Easy to Use

- Support RS485 port connections, plug and play.
- Support cloud platform monitoring services.
- Support remote modification of local parameters, support remote firmware upgrade.



### Flexible

- Support multiple data formats.
- Support fast adaptation of all kinds of equipment.



### Stable

- Industrial components and designs, can work at high temperatures.
- Under voltage protection and built-in hardware watchdog, the system automatically restarts when fault happens.
- Real-time detection of online status, the device will never be dropped.

## Technical Parameters

Model		WiFi Module	
External Interface	Docking Mode	Aviation connector	
	Working Indicator	Power supply, networking, data transmission, data reception	
WiFi Parameter	Operating Frequency	2.412GHz~2.484GHz	
	Wireless Standard	802.11 b/g/n	
	Antenna Gain	2.5dBi (external)	
	Data Rate	11Mbps@11b, 54Mbps@11g, 72Mbps@11n	
	Hardware Encryption	WEP, WPA / WPA2	
	Communication Distance	100m (open environment)	
	Working Mode	AP + STA (coexistence mode)	
Software Parameter	Supported Device Protocol	Modbus-RTU, Modbus-TCP	
	Data Upload Cycle	5 minutes (default)	
	Parameter Configuration Mode	APP	
	Number of Clients in AP Mode	1 (preemptive)	
Hardware Parameter	Data Input Mode	RS485 (9600bps)	
	Data Output Mode	WiFi	
Model		GPRS Module	4G Module
External Interface	Power Port	Power input: 5~24VDC	Power input: 8~15VDC
	Data Input Mode	RS485 (9600bps)	
	Data Output Mode	GPRS	4G
	Acquisition Baud Rate	9600 (default)	
GPRS Parameter	Data Acquisition Interval	5 minutes	
	Operating Frequency	GSM850 / EGSM900 / DCS1800 / PCS1900	EGSM900 / DCS1800 / PCS1900 / IMT2100
	Antenna Gain	2.5dBi	824~960MHz 0.5dBi / 1710~2690MHz 1dBi
	Maximum Transmission Rate	85.6Kbps	10M
	SIM Card	Standardized GPRS Nano card (Including 5 year usage)	m2m / Sim card (Including 5 year usage)
Software Parameter	Application Layer Protocol	Modbus-RTU	
	Network Layer Protocol	Modbus-TCP	
	Parameter Setting	Remote server	
General Parameters	Protection Degree	IP65	IP66
	Installation Mode	Aviation connector installation	
	Operating Temperature	-30°C~+85°C	



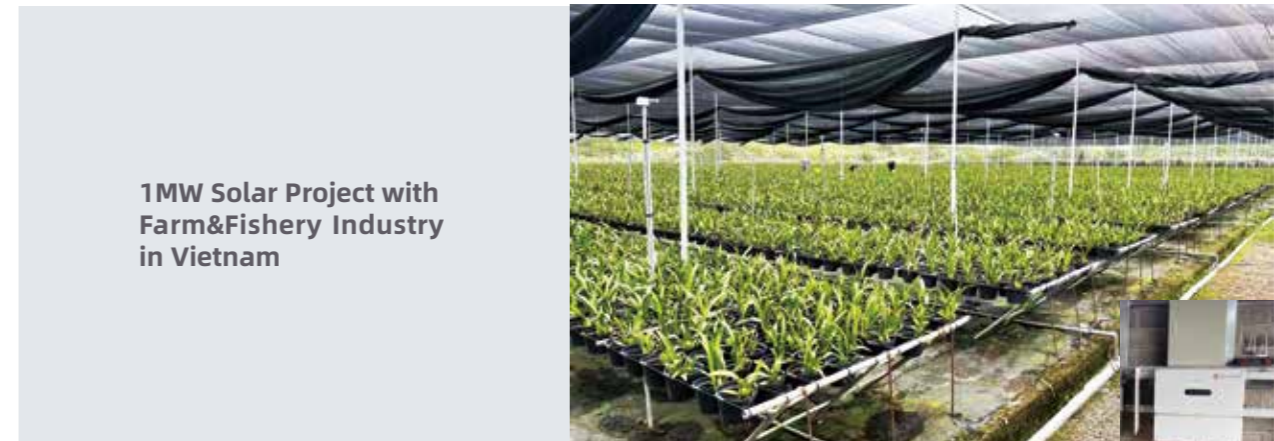
## Project Cases



**200MW hopeSunHV250KTL Utility Project in Ningxia, China**



**Operation of hopeSun100KTL In Vietnam**



**550kW Solar Plant in South Korea**



**Residential PV Project in Vietnam**

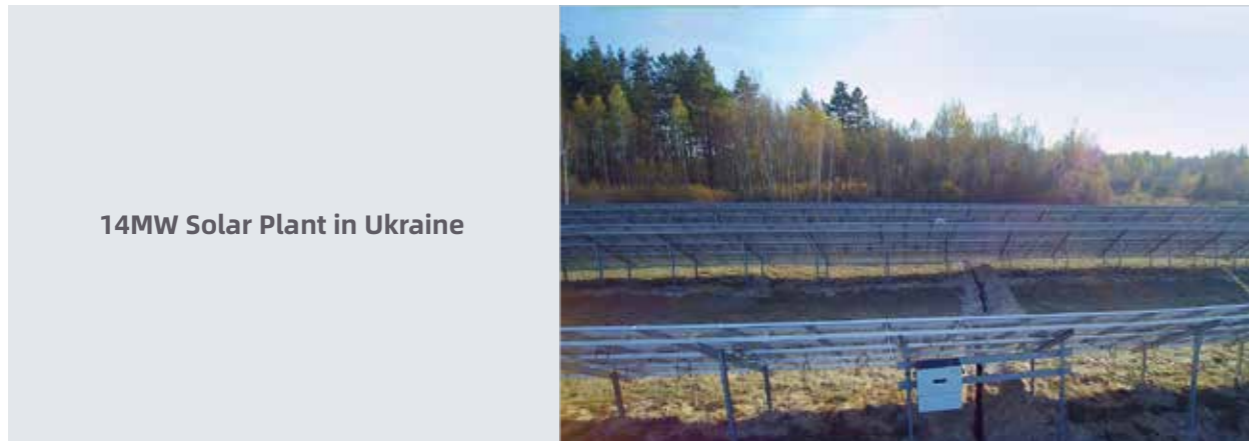
## Project Cases



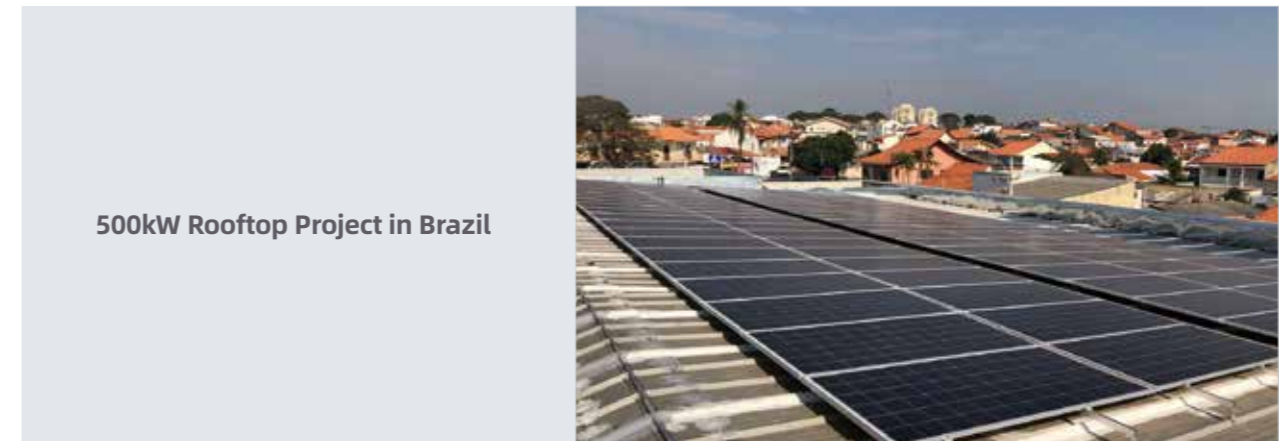
Operation of hopeSun50KTL  
in South Korea



Poverty Alleviation PV Project in Hebei, China



14MW Solar Plant in Ukraine



500kW Rooftop Project in Brazil



Residential PV Project in China



Rooftop PV Project in Hunan, China

## Project Cases



Rooftop PV Project in Shandong, China



Solar Power Project in Jiangxi, China



**The Village-level 21.48MW Solar Poverty Alleviation Power Station Project in Hebei, China**



**Solar Poverty Alleviation Power Station Project in Henan, China**



Rui'neng Solar Power Rooftop Project in Sichuan, China



Rooftop PV Project in Jiangsu, China

## Project Cases



Operation of 50kW String Inverter



Roof-top Project in Jiangsu, China



Roof-top PV Project in Anhui, China



Street-usage PV Station in Shandong, China



Solar Renewable Project in Anqiu, China



CNNC 2.8MW PV Project in Shandong, China



Grinding Project in Shandong, China



12MW Dalian Roof-top PV Project in China