



# PV String Inverters Brochure

More Perferable PV Solutions

# “ Company Profile

# » Contents

”



**04 DC1500V High Power String Inverter**  
(250K)

**06 Utility PV Inverter**  
(50K/70K/80K/125K)

**08 Commercial High Power Inverter**  
(36K/40K/50K/60K/70K/75K/100K/110K)

**10 Commercial Medium Power Inverter**  
(10K/12K/15K/17K/20K/22K/25K/30K/33K)

**12 Residential PV Inverter**  
(5K/6K/8K)

**14 Communication Solution**

**18 Project Cases**



# DC1500V High Power String Inverter



**High Efficiency**

Maximum efficiency 99.01%, Europe efficiency 98.52%.  
12 MPPT, higher power generation. Supporting high-power bifacial modules. Integrated PID function to increase system power generation. High-precision intelligent string detection.



**Reliable**

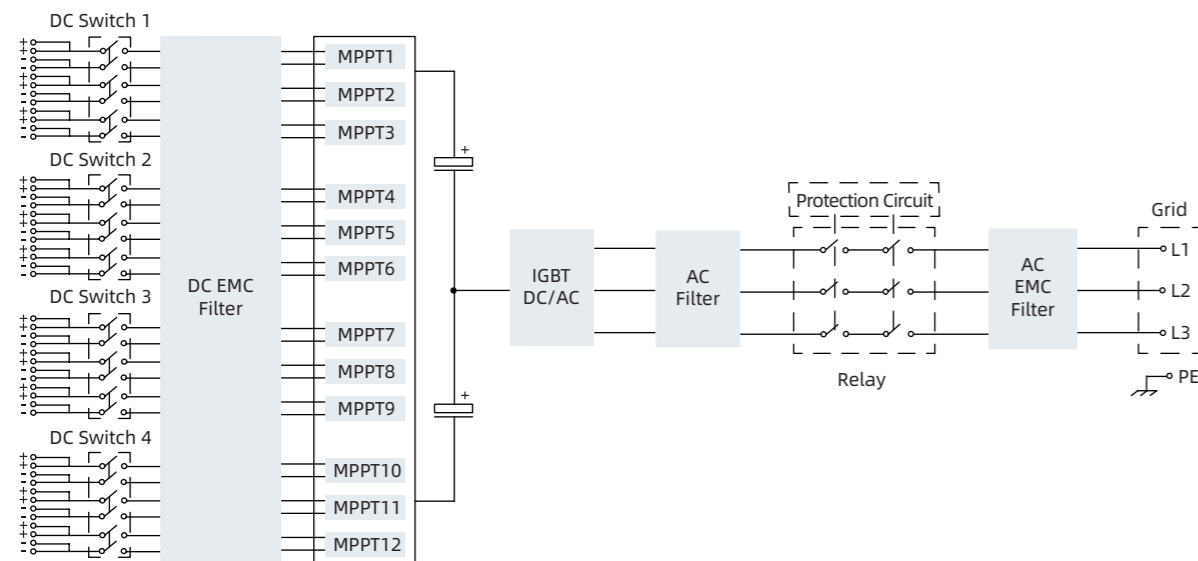
Built-in AC and DC lightning protection module. No fuse, IP66 protection. Intelligent fan cooling, low temperature rising and long life.



**Friendly**

Supporting PLC (power carrier communication technology), reducing the costs of the communication cable. Aluminum wire access, saving AC cable costs. Supporting IV diagnosis. AC and DC redundant power supply, 24-hour real-time monitoring. Night SVG function. Supporting DC 2 in 1 connection.

## Topological Graph



## Technical Parameters

Model		PWR250KTL
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
	Number of DC Inputs / MPPT	24 / 12
AC Output	AC Output Power	200kW@50°C / 225kW@40°C / 255kW@25°C
	Max. Active Power (cosθ=1)	255kW
	Rated Output Voltage	800V
	Operating Voltage Range	680V ~ 880V
	Rated Output Current	162.4A
	Max. Output Current	184A
	Rated Grid Frequency	50Hz / 60Hz
	Power Factor	0.8(Leading) ~ 0.8(Lagging)
	THD	<3%
	System Parameters	Max. Efficiency
MPPT Tracking Efficiency		Steady>99.9%, Dynamic>99.0%
AC/DC SPD		Support
Insulation Impedance Detection		Support
Residual Leakage Current Detection		Support
PV String Fault Detection		Support
Output Overcurrent Protection		Support
Protection Level		IP66
Operating Temperature Range		-40°C ~ +60°C
Cooling System		Smart Air Cooling
Standby Power Consumption		<5W
Topology Structure		Transformerless
Operating Altitude		5000m (Derating above 4000m)
Display		LED Indicator
Communication		RS485 / PCL
Certification		IEC62109 / IEC61000 / IEC62116 / IEC61727 / CQC / CGC
Mechanical Parameters		Dimensions (W*H*D)
	Weight	<105kg

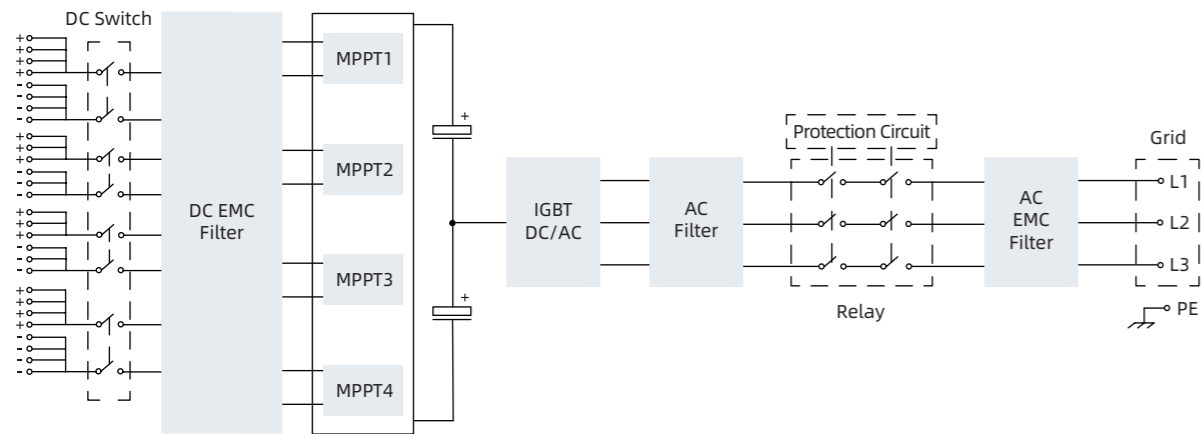
# Utility PV Inverter



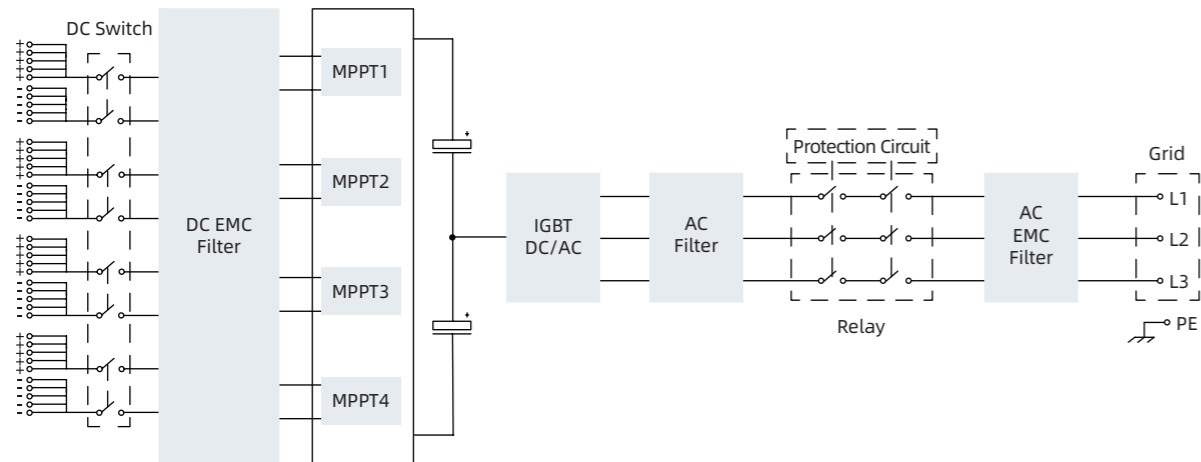
- 
**High Efficiency**  
 Max. DC voltage 1100V.  
 Max. efficiency 99.04%.  
 3/4 channels MPPT.  
 High precision & intelligent string detection.
- 
**Reliable**  
 50K ~ 125K smart cooling.  
 Compatible with bifacial PV modules.  
 Built-in AC and DC lightning protection module and provide full range of lightning protection.  
 Build-in PID module.
- 
**Friendly**  
 Active and reactive power regulation.  
 Support LVRT/ZVRT/HVRT.  
 AC and DC redundant power supply, 24-hour real-time monitoring.  
 Support mobile phone APP and view inverter status information.

## Topological Graph

80K



125K



## Technical Parameters

Model		PWR 50KTL-M	PWR 70KTL-M	PWR 80KTL-M	PWR 125KTL-M
DC Input	Max. DC Voltage	1100V			
	MPPT Voltage Range	250V ~ 1000V			
	Max. Input Current of Each MPPT	26A/39A	39A	39A / 52A	65A
	Number of DC Inputs	8	12	14	20
	MPPT Number	3	4		
AC Output	Rated Output Power	50kW	70kW	80kW	125kW
	Max. Active Power (cosθ=1)	55kW	77kW	88kW	137.5kW
	Rated Output Voltage	500V (Three Phase)			
	Operating Voltage Range	500V±10%			
	Rated Output Current	57.7A	80.8A	92.4A	144A
	Max. Output Current	63.5A	88.9A	101.6A	158.8A
	Rated Grid Frequency	50Hz / 60Hz			
	Power Factor	0.8 (Leading) ~ 0.8 (Lagging)			
	THD	<3%			
	System Parameters	Max. Efficiency	98.99%	99.01%	99.03%
European Efficiency		98.51%	98.52%	98.53%	98.54%
AC/DC SPD		Support			
Insulation Impedance Detection		Support			
Residual Leakage Current Detection		Support			
PV String Fault Detection		Support			
Output Overcurrent Protection		Support			
Protection Level		IP65			
Operating Temperature Range		-25°C ~ +60°C			-40°C ~ +60°C
Cooling System		Smart Air Cooled			
Standby Power Consumption		<5W			
Topology Structure		Transformerless			
Operating Altitude		5000m (Derating above 4000m)			
Display		LED Indicator + APP			
Communication		RS485 / WiFi / GPRS			
Certification	IEC62109 / IEC61000 / IEC62116 / IEC61727 / EN50549 / CQC / CGC				
Mechanical Parameters	Dimensions (W*H*D)	705*650*283mm			800*680*330mm
	Weight	<65kg	<75kg	<95kg	

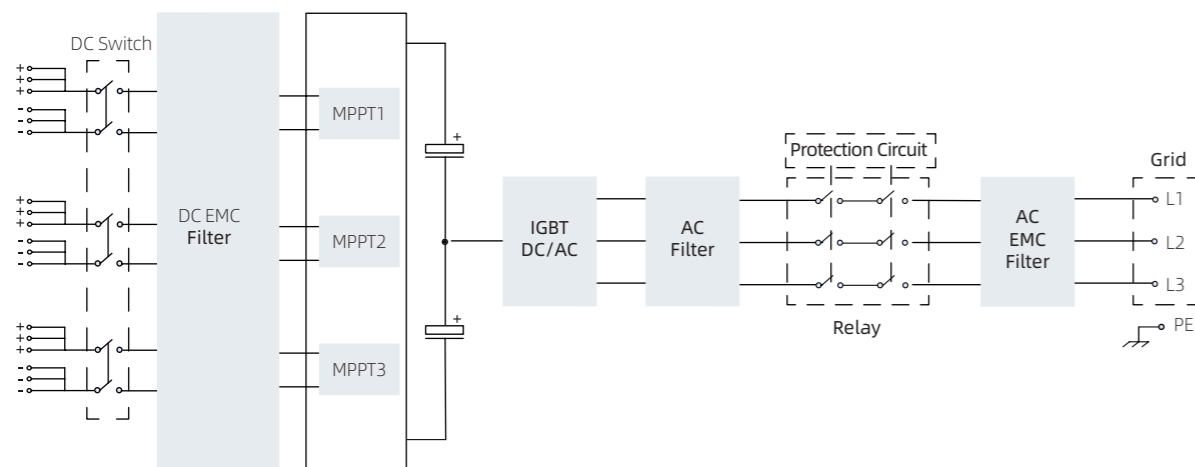
# Commercial High Power Inverter



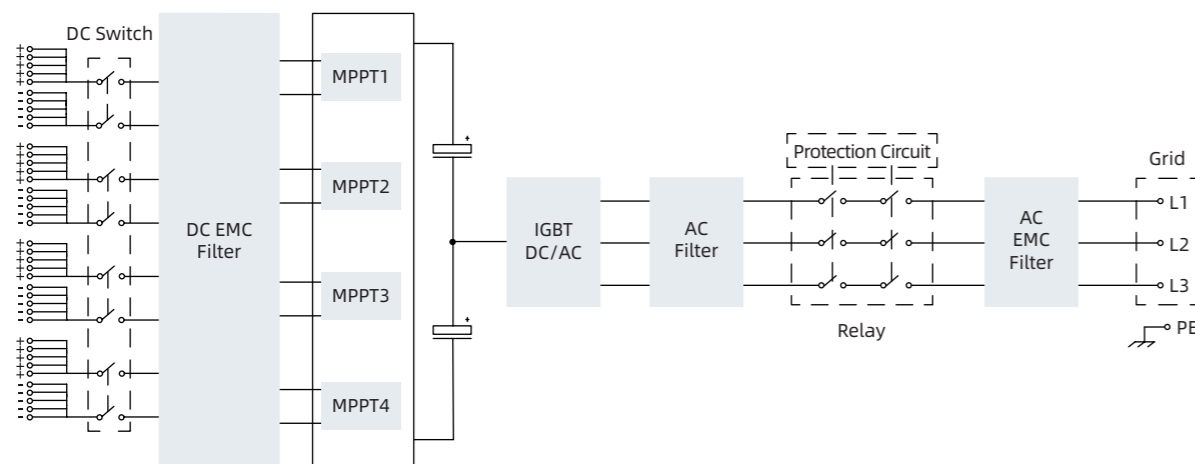
- High Efficiency**  
 Max. DC voltage 1100V.  
 Max. efficiency 99.03%.  
 High precision & intelligent string detection.
- Reliable**  
 36K~110K smart air cooling.  
 Built-in AC and DC SPD protection module and provide full range of lightning protection.  
 Night PID module.
- Friendly**  
 Active and reactive power regulation. Support mobile phone APP and check the status information of status.

## Topological Graph

36~40K



50~70K



## Technical Parameters

Model	PWR 36KTL	PWR 40KTL	PWR 50KTL	PWR 60KTL	PWR 70KTL	PWR 75KTL	PWR 100KTL	PWR 110KTL									
DC Input	Max. DC Voltage								1100V								
	Starting Voltage								250V								
	MPPT Voltage Range								250V ~ 1000V								
	MPPT Range Full Load								540V ~ 880V								
	Max Current / MPPT		26A / 39A		39A		44A/44A/55A/55A										
	Number of DC Inputs		8		9		12		18	20							
	MPPT Number		3		3		4										
AC Output	Rated Output Power								36kW	40kW	50kW	60kW	70kW	75kW	100kW	110kW	
	Max. Active Power								39.6kW	44kW	55kW	66kW	77kW	82.5kW	110kW	121kW	
	Rated Output Voltage								400V (Three Phase)								
	AC Voltage Range								400V±20%								
	Rated Output Current		52.0A		57.7A		72.2A		86.5A		101A		108.2A		145A	159.5A	
	Max. Output Current		57.2A		63.5A		79.4A		95.3A		111A		119A		158.8A	174.6A	
	Rated Grid Frequency								50Hz / 60Hz								
	Power Factor								0.8 (Leading) ~ 0.8 (Lagging)								
	THD								<3%								
	System Parameters	Max. Efficiency								98.97%	98.95%	99.03%	98.85%	99.00%	99.02%	99.01%	99.01%
European Efficiency								98.45%		98.51%		98.51%		98.52%		98.52%	
AC/DC SPD								Support									
PV String Fault Detection								Support									
RCD								Support									
AC Overcurrent Protection								Support									
Cooling System								Smart Air Cooling									
Operating Temperature								-40°C ~ +60°C									
Protection Level								IP65									
Standby Power Consumption								<1W				<5W					
Topology Structure								Transformerless									
Operating Altitude								5000m (Derating above 4000m)									
Display								LED + APP									
Communication								RS485 / WiFi / GPRS									
DC Terminator								MC4									
AC Terminator		OT / DT (MAX 50mm <sup>2</sup> )		OT / DT (MAX 95mm <sup>2</sup> )		OT / DT (MAX 300mm <sup>2</sup> )											
Certification								IEC62109 / IEC61000 / IEC62116 / IEC61727 / CQC / CGC									
Dimensions (W*H*D)								705*650*283mm				800*672*315mm					
Mechanical Parameters	Weight								<65kg		<75kg		<85kg				

# Commercial Medium Power Inverter



**High Efficiency**

Max. DC voltage 1100V.  
Max efficiency 99.0%.  
Double channels of MPPT.  
High precision & intelligent string detection.

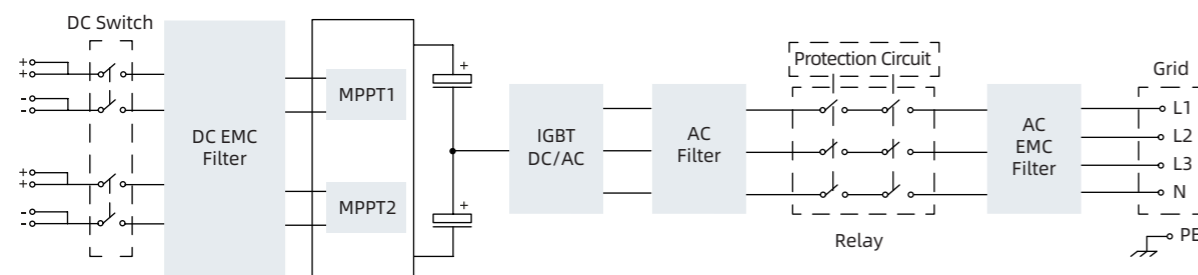


**Reliable**

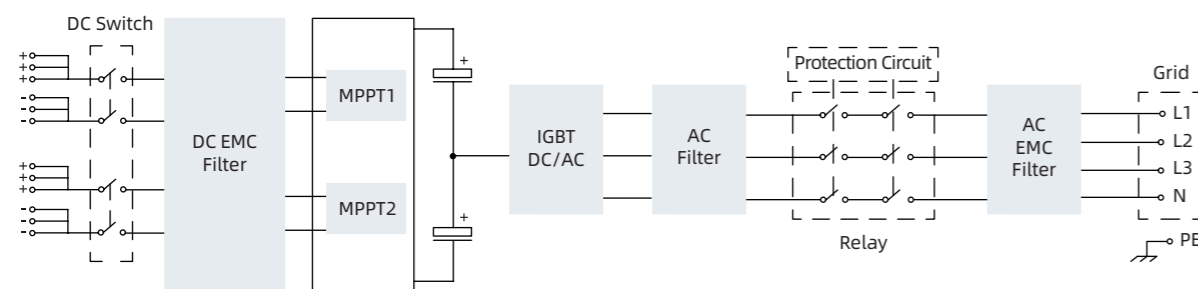
10K~22K natural cooling, 25K~33K smart air cooling.  
Compact structure, easy for installation and maintenance.  
Reliable under/over voltage protection, anti-islanding.  
Built-in AC and DC lightning protection module and provide full range of lightning protection.  
Mobile phone APP and check the status information of inverter.

## Topological Graph

10~22K



25~33K



## Technical Parameters

Model		PWR 10KTL	PWR 12KTL	PWR 15KTL	PWR 17KTL	PWR 20KTL	PWR 22KTL	PWR 25KTL	PWR 30KTL	PWR 33KTL
DC Input	Max. DC Voltage	1100V								
	MPPT Voltage Range	250V ~ 1000V								
	Max. Input Current of Each MPPT	13A	26A / 13A		26A		39A			
	Number of DC Inputs	2	3		4		6			
	MPPT Number	2								
AC Output	Rated Output Power	10kW	12kW	15kW	17kW	20kW	22kW	25kW	30kW	33kW
	Max. Active Power (cosθ=1)	11kW	13.2kW	16.5kW	18.7kW	22kW	24.2kW	27.5kW	33kW	36.3kW
	Rated Output Voltage	400V (Three Phase)								
	Operating Voltage Range	400V±20%								
	Rated Output Current	14.4A	17.3A	21.7A	24.5A	29A	32A	36A	43.3A	47.6A
	Max. Output Current	15.8A	19.1A	23.8A	27A	32A	35A	39.7A	47.6A	
	Rated Grid Frequency	50Hz / 60Hz								
	Power Factor	0.8 (Leading) ~ 0.8 (Lagging)								
	THD	<3%								
	Max. Efficiency	98.60%	98.61%	98.62%	98.63%	98.65%	98.94%	99.00%	98.80%	
European Efficiency	98.30%						98.26%	98.50%	98.26%	
AC/DC SPD	Support									
Insulation Impedance Detection	Support									
Residual Leakage Current Detection	Support									
PV String Fault Detection	Support									
Output Overcurrent Protection	Support									
Protection Level	IP65									
Operating Temperature Range	-40°C ~ +60°C									
Cooling System	Natural Cooling						Smart Air Cooled			
Standby Power Consumption	<1W									
Topology Structure	Transformerless									
Operating Altitude	5000m (Derating above 4000m)									
Display	LED Indicator + APP									
Communication	RS485 / WiFi / GPRS									
Certification	IEC62109 / IEC61000 / IEC62116 / IEC61727 / CQC / CGC									
Mechanical Parameters	Dimensions (W*H*D)	485*485*266mm								
	Weight	<30kg						<35kg		

# Residential PV Inverter



**High Efficiency**

- Max. DC voltage 550V.
- Max efficiency 98.59%.
- Double channels MPPT.
- High precision & intelligent string detection.

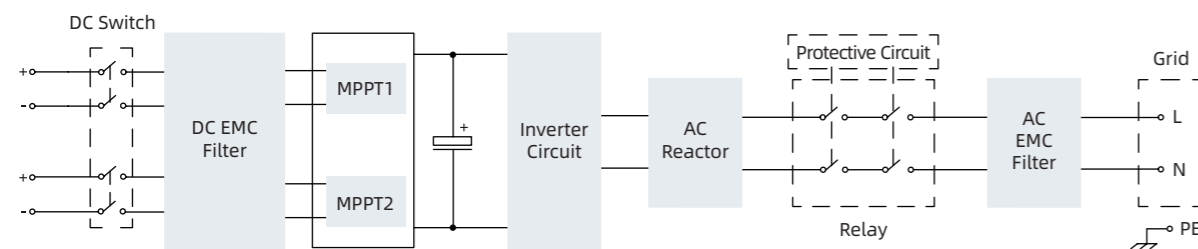
---

**Reliable**

- Compact structure, easy for installation and maintenance.
- IP65 waterproof.
- Mobile phone APP and check the status information of inverter.

## Topological Graph

5/6K



## Technical Parameters

Model		PWR 5KTL	PWR 6KTL	PWR 8KTL
DC Input	Max. DC Voltage	550V		
	MPPT Voltage Range	90V ~ 500V		
	Max. Input Current of Each MPPT	13A	26A / 13A	
	Number of DC Inputs	2		3
	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	176V ~ 276V		
	Max. Output Current	25A	30A	38.2A
	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	98.0%		
System Parameters	AC/DC SPD	Support		
	Insulation Impedance Detection	Support		
	Residual Leakage Current Detection	Support		
	PV String Fault Detection	Support		
	Output Overcurrent Protection	Support		
	Protection Level	IP65		
	Operating Temperature Range	-20°C ~ +60°C		
	Cooling System	Natural Cooling		
	Standby Power Consumption	<1W		
	Topology Structure	Transformerless		
	Operating Altitude	4000m (Derating above 3000m)		
	Display	LED Indicator + APP		
	Communication	RS485 / WiFi / GPRS		
	Certification	IEC62109 / IEC61000 / IEC62116 / IEC61727 / EN50549 / INMETRO		
	Mechanical Parameters	Dimensions (W*H*D)	325*380*177mm	
Weight		<14kg		

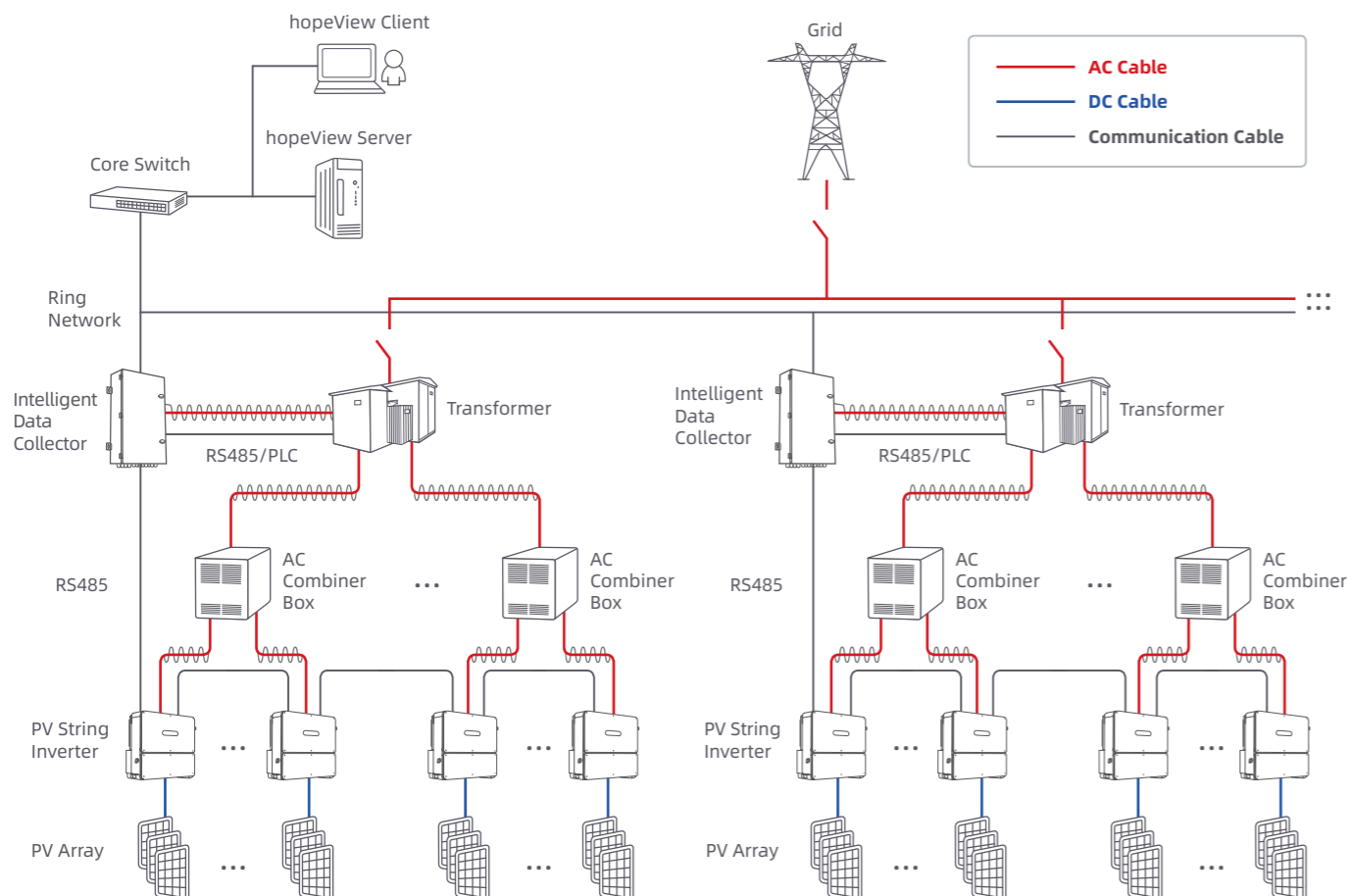
# Communication Solution-Intelligent Data Collector

## Product Description

The Intelligent Data Collector is mainly used for the photovoltaic network communication in the large-scale ground power plant. It integrates the functions of remote monitoring, data processing, equipment access, protocol conversion, and intelligent control and it is a powerful data maintenance and acquisition device. The device and the inverter establish efficient data interaction to implement network debugging, remote monitoring, and centralized monitoring functions.



## Large Ground PV Station



## Performance Characteristics

### Excellent Performance

- Linux Embedded Operating System
- 32-bit ARM-iMX25 series microprocessor
- Memory DDR2 64MB

### Interface

- 8 DI (dry contact and isolated DI input), 4 DO interfaces (relay)
- 6 AI/AO interfaces (4 current, 2 voltage)
- 2 PT100 temperature detection, 2 CAN communication interfaces, 1 high-speed SD
- USB 2.0 high-speed interface, maximum speed 480Mbps (optional)

### Communication

- PLC, RS485, Ethernet, optical fiber, etc.
- Optional wireless transmission methods such as GPRS, WiFi, ZigBee, 3G, 4G
- Communication protocols such as IEC60870-5-103, IEC60870-5-104, Modbus-RTU, Modbus-TCP, CDT

### Function

- Full-featured configuration debugging tool, friendly interface, easy to use, configuration and debugging of data collector communication management, including interface configuration, protocol configuration, forwarding configuration, message monitoring, data viewing, data storage, etc.

## Technical Parameters

Model		HPCB2000-S
Communication Interface	Data collector	8 RS485, maximum 256 devices to be managed
	Fiber Switch	2 optical 2 electrical fiber switches
	Fiber Optic Terminal Box	4 in 24 out SC single mode fiber optic terminal box
System parameters	Operating temperature	-40°C ~ +60°C
	Storage temperature	-40°C ~ +70°C
	Humidity	5% ~ 95%, No condensation
	Altitude	≤5000m
	Protection degree	IP65
	Display	Support
	Power supply	AC220V, 50/60Hz
	Inlet and outlet	Down inlet and down outlet
	Inlet specifications	AC220V: 1.0mm outdoor UV-proof wire
	Optical cable	Single-mode fiber optic cable with diameter ≤14mm
Mechanical parameter	Size (W*H*D)	410*700*175mm
	Weight	≤15kg



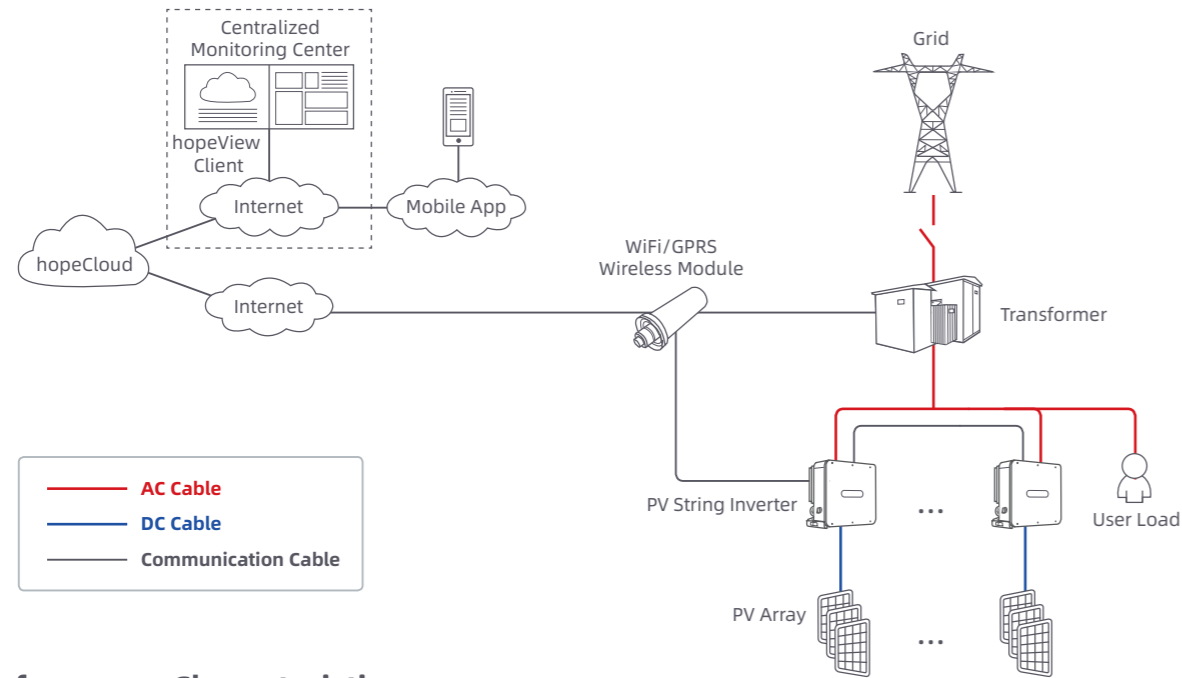
# Communication Solution-WiFi/GPRS Wireless Module

## Product Description

The WiFi/GPRS wireless 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	GPRS Module
External Interface	Power Port	Power input: 5 ~ 24VDC
	Data Input Mode	RS485 (9600bps)
	Data Output Mode	GPRS
	Acquisition Baud Rate	9600 (default)
	Data Acquisition Interval	5 minutes
GPRS Parameter	Operating Frequency	GSM850 / EGSM900 / DCS1800 / PCS1900
	Antenna Gain	2.5dBi
	Maximum Transmission Rate	85.6Kbps
	Flow Card	Standardized GPRS Nano card (Including One-year usage)
Software Parameter	Application Layer Protocol	Modbus-RTU
	Network Layer Protocol	Modbus-TCP
	Parameter Setting	Remote server
General Parameters	Protection Level	IP65
	Installation Mode	Aviation connector installation
	Operating Temperature	-30°C ~ +85°C
	Model	WiFi Module
External Interface	Docking Mode	DB9 / Aviation connector / RJ45 / 4Pin Socket
	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



POWER ELEKTRONİK SAN VE TİC A.Ş.  
Armağan evler mh. diriliş cd. ipekçi sk. No:12 Ümraniye-İstanbul  
+902164816699 [www.powerelektronik.com.tr](http://www.powerelektronik.com.tr)