



## **Base Station Solar Storage Integrated System Solution**

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## ABOUT US

Founded in 2011, headquartered in Shenzhen, China, It is a national high-tech enterprise and specialized and new enterprise focusing on the development, production, sales and service of photovoltaic power supply products. The company's technical team is strong, with technical personnel accounting for more than 45%, and the core R & D personnel are all from Huawei, ZTE, Siemens and other well-known enterprises. Committed to providing users with the most reliable smart photovoltaic power application system solutions.

At present, Ipandee's products have successfully entered many national markets in the world, and become the designated brand partner of telecom operators in many countries. At the same time, our solutions have been awarded the technology innovation and application awards by the global photovoltaic industry authority for many years.

Ipandee's products and solutions are widely used in:

Communication field | wisdom city | natural disaster monitoring | wisdom transportation | hydraulic hydraulic | oilfield | island | frontier | automotive ship | photovoltaic energy storage | photovoltaic power station | photovoltaic hydrogen production of the people's livelihood security | zero carbon family.....



High-tech and  
innovative  
enterprises



Research, production  
and marketin  
Annual sales of  
**100,000+**



Export countrie  
**170+**



RESEARCH and  
development staff  
**46%**



Patent  
**120+**



Project experienc  
**3000+**

\*Any change in size and parameters, subject to the latest information without notice.

\* Products shall refer to the physical object



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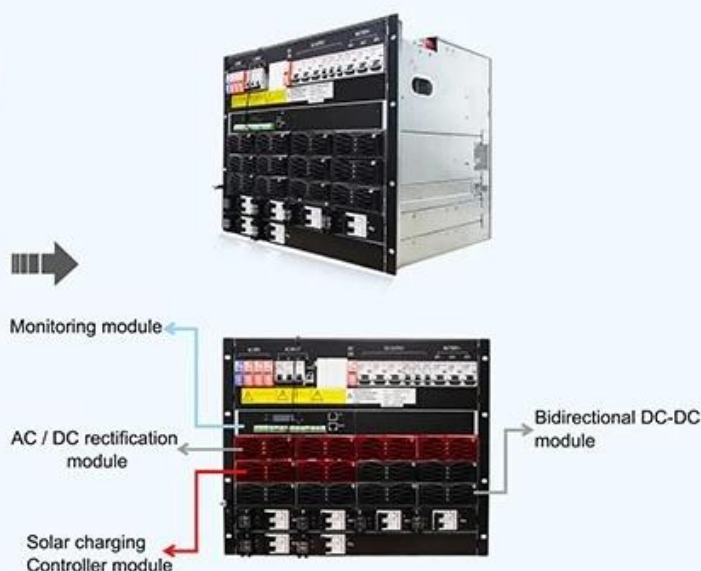
# Base station light storage integrated system solution



IPD-48600



IPD-48600  
Communication power supply system



The IPD-48600 communication power supply system

## Product Feature

- **Minimal deployment**
  - Minimalist architecture, no need to add equipment room, no need to change cables, no AC, no need to change air conditioning
- **Intelligent power consumption**
  - Intelligent peak shift, save electricity
- **Intelligent light stacking**
  - Intelligent light stacking, save electricity, reduce carbon emissions
  - Intelligent operation and maintenance: Operation and maintenance is extremely safe, visible and manageable
- **Light oil storage hybrid power supply:**
  - Unstable mains "0" fuel consumption, no mains reduces battery configuration

## Application Scenarios

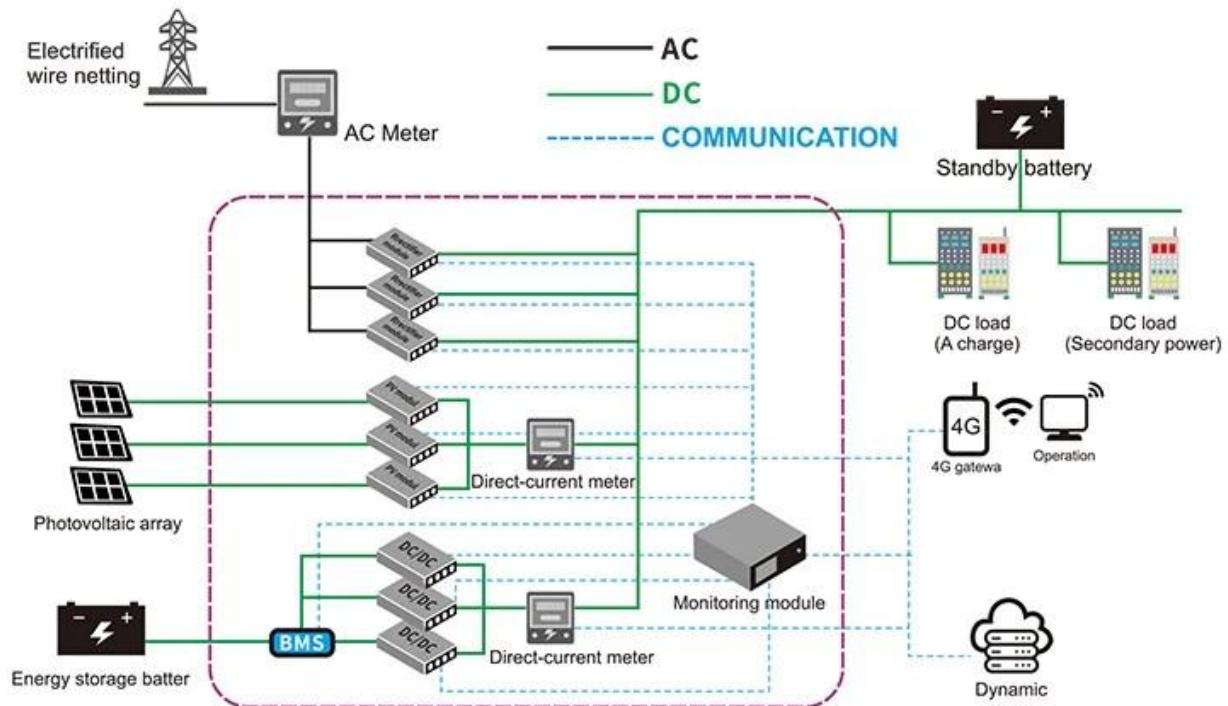
- Base station DC lamination
- Base station energy storage
- Glossy hybrid base station
- Communication base station emergency backup power
- Base station off-peak power consumption
- Off-grid solar base station in no-power zone
- Solar green base station

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# Topology diagram of the optical reserve integrated system solution



## Technical parameter

Model:	IPD-48600
Input/output voltage:	53.5Vdc (40 to 60 Vdc-adjustable)
Design service life:	In 15 years
Single module power:	3kW / unit (supporting modules: PV module, rectifier module, two-way DC / DC module)
System expansion box power:	Standard plug box: 3kW * 8 modules, support for expansion (support modules: PV module, rectifier module, two-way DC / DC module)
System size:	19 inches, 6U
Battery management function:	EMS
Operating temperature range:	-30°C~60°C; -5°C~+45°C
System communication interface:	RS485, CAN
Way to instal	Subrak + outdoor cabinet installation

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## Product

- Small size, high power density (1U industrial design)
- Wide-range single-phase input: (120 Vdc-420 Vdc)
- Conversion efficiency is 97%
- With the MPPT function, the tracking efficiency is greater than 99%
- Intelligent control, support for RS485 communication and CAN commun
- High reliability and multiple protection functions



**BX 48D3000 Solar module specification parameters**

Maximum power input from photovoltaic	3300W
The PV input voltage range	120~420Vdc
PV input maximum current	18A
Output rated power	3000W
Rated output current	50A (max. 60A)
Peak conversion efficiency	≥97%
MPPT tracing efficiency	≥99%
Communication mode	RS485 /CAN
Output voltage: the nominal value	-57VDC
With the output voltage in an adjustable range	DC-40V~DC-60V is adjustable
Input the overvoltage protection and restore	Overvoltage 420V/recovery 410V
Output over current protection	have
Output short circuit protection	have
Output overvoltage protection and recovery	Overvoltage default 60V / restore 57V (adjustable)
Reverse discharge protection	have
Polarity backconnection protection	have
Overtemperature protection	have
Physical communication alarm interface (dry contact point)	Input set / output set (passive signal)
LED show	Red (fault) yellow (alarm) green (standby and running)
Working temperature	-20°C~+50°C
Relative humidity	No condensation 5~95%
Elevation requirements	0~4000m (for 100m, 000 ~ 4000 m)
Mode of connection	Hot plug
High-voltage insulation test	Input- -Output 2120 Vdc (leakage current less than 10 mA, no flying arc without breakdown)
	Input--ground, input--ground 1250Vdc (leakage current less than 10mA no arc no breakdown)
	Communication port-ground 500 Vdc (leakage current less than 10 mA no flying arc no breakdown)

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## Product

- The rectification module is a digital rectification mode with high efficiency and high power density Block, input voltage range 85~300Vac, rated output 53.5Vdc, with PFC active power factor correction. It has input over and under voltage protection, output over current protection, output over voltage protection, output short circuit protection, hot plug-in, automatic current equalization of parallel machines and other functions.



48V rectification module specification parameters

Power rating	3000W
The AC-input voltage range	90Vac~290Vac
Rated input voltage	230Vac
The AC input voltage frequency	44 Hz to 66 Hz (rated at 50Hz / 60Hz)
Power factor	≥0.97
Start the impact current	≤30A
Maximum input current	≤19A
Output voltage range	42Vdc-58Vdc
Rated output voltage	53.5Vdc
Rated output current	0-60A
Peak efficiency	≥95%
Stabilization accuracy	≤±0.6%*Vo
Telephone weight noise voltage	≤2mV
Input under-pressure protection	80±2Vac
Enter the under-voltage recovery point	85±2Vac
Input overpressure protection	290±2Vac
Enter the overvoltage protection recovery point	280±2Vac
Output overpressure protection	≥63Vdc
Short-circuit protection	Lock it down and restart the power to restore it
Overtemperature protection	70°C -75°C. The ambient temperature below 65°C can be recovered automatically
Insulation resistance	≥10MΩ@500Vdc
Working temperature	-40°C~+70°C
Storage temperature	-40°C~+75°C
Working humidity	5-95% (no frost)
Above sea level	≤5000m
Heat dissipation method	Forced air cooling (air blowing)

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## Product

- The DC / DC module is a digital bidirectional DC / DC module with high efficiency and high power density, with an input voltage range of 40 ~ 60 Vdc and a rated output of 53.5Vdc, which can automatically realize the pressure lifting function. With input over, undervoltage protection, output overcurrent protection, output overvoltage protection, output short circuit protection, hot plug, parallel machine automatic flow equalization and other functions.



**Bidirectional DC/DC module specification parameters**

Output rating	3000W
Input voltage range	40 Vdc ~ 60 Vdc (rated 53.5Vdc)
Maximum input current	≤65A
Output voltage range	40 Vdc ~ 60 Vdc (rated 53.5Vdc)
Output	0~60A
Productiveness	≥96%
Voltage setting accuracy	0.1V
Current setting accuracy	0.1A
Stabilization accuracy	±0.6%Vo
Anti-connection protection	Forward direction
Undervoltage protection	35Vdc
Under-voltage recovery point	40Vdc
Overvoltage crowbar	≥63Vdc
Overvoltage protection recovery point	60Vdc
Short-circuit protection	Both the positive and negative directions are automatically restored
Overtemperature protection	Overtemperature point 70°C – 75°C. The ambient temperature below 50°C can be restored automatically
Working temperature	-20°C~+45°C
Working humidity	5-95% (frost-free)
Above sea level	≤5000m
Heat dissipation method	Forced air cooling (air blowing)

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# Case study



## African Photovoltaic Base Station Project

About 3,000 independent photovoltaic communication base station projects of a telecom company in South Africa.



## Middle East oil and light complementary base station project

There are about 10,000 sets of photovoltaic communication base stations in a country in the Middle East.



## Domestic stack stack



## Domestic solar energy







To become the most trusted photovoltaic power  
supply system solutions for users



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