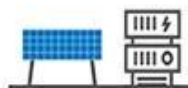


# COMMUNICATION BASE STATION PHOTOVOLTAIC SMART MPPT CONTROLLER

The image displays two IPANDEE PPT (Power over Ethernet) units. The top unit is white, and the bottom unit is silver. Both units feature a front panel with a digital display, several status LEDs, and various ports including RJ45, BNC, and power connectors. The units are designed for industrial or professional use, as indicated by the 'IPANDEE' branding and the 'PPT' label.

- EMPT series is a rack-mounted photovoltaic MPPT charging controller for -48V communication base stations independently developed by Ipandee: It supports project or develops and designs for customized usage scenario;
- Adopts 19 inch standard rack design, the maximum power of a single machine is 3.4kw~6.8kw, the volume is 2~4U, with excellent electrical performance, high reliability, easy maintenance and other advantages, suitable for small and compact space room, cabinet;
- Support multiple parallel machines, flexible configuration of full scene overlapping light, multi-channel photovoltaic input, easy installation, it have both the function of the bus box, do not need additional bus box;
- The modular redundant design enables the photovoltaic system to run stably for a long time while efficiently converting;
- Use RS485 communication to support the expansion of remote management, intelligent control of the entire system, greatly simplifying the difficulty of operation and maintenance, reduce operating costs.
- The maximum power point tracking accuracy is greater than 99%, and the conversion efficiency is up to 97%;
- Photovoltaic input wide voltage range: 65~250VDC;
- Support multiple parallel controller to meet the system's subsequent expansion of solar modules;
- Support man-machine interaction, parameter setting and data display function;
- Standard rack design, support multiple photovoltaic input (2~4 photovoltaic input);
- Output Voltage Regulated Accuracy and with self-regulating voltage function;
- Record photovoltaic daily, monthly, total electricity;
- Multiple protection: with lightning protection, anti-reflux, anti-surge, anti-reverse connection and other protection functions;
- Adopts standard Modbus protocol, RS485 communication, supports secondary integrated development, and can customize dry contact function;
- Support 4G remote monitoring.


 Macro base station  
 micro base station  
 4G, 5G base station, etc

 Independent solar power  
 system

 Photovoltaic superimposed  
 power system

 Solar - mains/oil engine  
 complementary power  
 system

Model number	EMPPT4860	EMPPT4880	EMPPT48100	EMPPT48120
MPPT efficiency	≥99%			
Whole machine conversion Efficiency	≥97%			
Installation	Cabinet Installation			
Heat dissipation method	Air cooling			
Input operating voltage range *	65~250VDC (Recommended 120V~250V)			
Start charging Vstart-pv	Vbat+3V			
Low voltage protection Vlow-pv	Vbat+2V			
Input Protection Voltage	250Vdc			
Input Protection Recovery Voltage	245Vdc			
Rated input power**	3360W	4480W	5600W	6720W
Component Access	Supports 2 equal accesses			
Output DC voltage range	Output range: 42V to 60VDC (Factory default output: 56VDC)			
Battery management	Output charging parameters and protection parameters can be set			
Output DC current	0~60A(Adjustable)	0~80A (Adjustable)	0~100A(Adjustable)	0~120A(Adjustable)
Output Voltage Setting	Setting of equalizing voltage, floating voltage			
Electricity measurement	1. Built-in DC meter function; 2. Controller comes with metering;			
Communication method	Standard Modbus protocol			
Monitoring Methods	Remote monitoring with 4G module or PC software			
Photovoltaic input protection	Input over-voltage and under-voltage protection, reverse connection protection, anti-reverse current protection			
Output protection	Voltage regulator protection, battery reverse connection protection, battery disconnection protection and over-under-voltage protection, etc.			
General Protection	Thermal over-temperature protection and over-temperature load reduction operation, environmental over-temperature protection, etc.			
Product Size	482*350*89mm (2U)			
Product weight (kg)	5.4	6.7		
Operating Temperature	-20℃~+50℃			
IP Protection Rating	IP21			
Altitude	≤3000m			