

## Introduction

This is a [solar charge controller](#) 20A ~30A that have automatic max. power point tracking function with high efficiency that almost 30%~60% higher than traditional charge controller. It also features the functions of system voltage auto recognition, wide range of PV input, charge for all kinds of battery, automatic discharge control, RS 232 / LAN communication function and so on. It is very high-end product for solar market with its best partner [I- P-TPI2 model Inverter/Charger/UPS.](#)

## Application

1. Industrial, commercial, household off grid solar energy generation system
2. Movable off grid solar energy generation system
3. Communication base stations
4. New energy education business
5. Solar Monitoring System
6. Solar Street Lighting System

## Reasons to choose

1. 30%-60% solar panels saved
  - 1) Conversion efficiency 95%-99%, take most from solar panels
  - 2) Charge for all kinds of batteries, 3 charge stage to protect battery. Reduce consumption, cost saved.
2. Data monitor and set. Parameters from solar panels like charge current/voltage and IP gate address, total generation power, etc can be showed. 4 kinds DC load control, automatically save energy both from human and solar.
3. Lan communication and RS232 port.
4. Software to monitor 100pcs equipments at the same time on one screen on a computer.

## Features

1. MPPT charge mode, conversion efficiency up to 99%
2. 12V/24V/48V system auto recognize;
3. Wide range of PV input with max. is DC150V.
4. Memory function, Save setting function: date, time, generating capacity record and so on .
5. Charge mode: 3 stages (fast charge, constant charge, floating charge) .It prolongs service life of the batteries .
6. Discharge mode: ON/OFF mode, double time control mode, PV voltage control mode, PV voltage+time delay mode and so on .
7. Selected battery types: sealed lead acid, vented, gel, NiCd battery. Other types of the batteries can also be defined.
8. Most information could be provide by LCD and LED like: model no., PV input voltage, battery type, battery voltage, charging current, charging power, working status and so on. Also customer's information like company name, website and logo can be added into Solar Eagle software.

9.RS232 and LAN communication port. IP and Gate address could be user define it satisfy global area.And communication protocol can be provided to manage all information.

10.The upper computer software is displayed in 11 languages, it could show work status and be set parameters of the discharge system.

11.With intelligent design,the device can be upgraded online lifelong.

12.Compliance with the 2002/95/EC environment protecting demand,doesn't include the Cadmium, hydride and fluoride etc material

13.Equipment integrity: controller + CD-ROM(microcomputer software) + communication wire + temperature sensing wire + Anderson terminals;

14.CE,ROHS certifications approved.

15.2 years warranty. The service life is designed to use for 10 years in theory. Extended 3~10 years warranty service also can be provided.

## Technical Specification:

MODEL:I-P-SMART2-20A/25A/30A-SERIES		20A	25A	30A
Charge Mode		Maximum Power Point Tracking		
Discharge Mode		Intelligent control		
System Type		12V 24V 48V Automatic recognition		
Soft Start Time		≤10S		
Dynamic Response Recovery Time		500us		
Conversion Efficiency		≥96.5%,≤99%		
PV Modules Utilization Rate		≥99%		
INPUT CHARACTERISTICS				
MPPT Working Voltage and Range	12V system	DC18V~DC150V		
	24V system	DC34~DC150V		
	48V system	DC65~DC150V		
Low Voltage Input Protection Point	12V system	DC16V		
	24V system	DC30V		
	48V system	DC60V		
Low Voltage Input Recovery Point	12V system	DC22V		
	24V system	DC34V		
	48V system	DC65V		
Max. DC Voltage		DC160V		
Input Overvoltage Protection Point		DC150		
Input Overvoltage Recovery Point		DC145V		
Max. PV Power	12V system	286W	357W	Max. PV Power
	24V system	572W	715W	
	48V system	1144W	1430W	
CHARGE CHARACTERISTICS				
Selectable Battery Types		Sealed lead acid, vented, Gel, NiCd battery(Default type is GEL battery)		
Other types of Battery Setting		Constant charge	User-defined constant/floating charge voltage range between DC10V~DC15 ( based on 1 pcs 12V battery )	
		Floating charge		
Battery Type Setting		12V/24V/48V SYS	Controller and upper monitor	

Charge Type	12V/24V/48V SYS	Three Stages :Fast charge/Constant charge/Floating charge	
Rated Output Current	20A	25A	30A
Current-limiting Protection	25A	30A	35A
Temperature Factor	$\pm 0.02\%/^{\circ}\text{C}$		
Temperature Compensation	14.2V-(The highest temperature-25°C)*0.3		
Output Ripples(peak)	200mV		
Output Voltage Stability Precision	$\leq \pm 1.5\%$		
Charge voltage Peak-Peak Ripple	200mV		
Charger voltage accuracy	$\leq \pm 1.5\%$		



Blue



Green

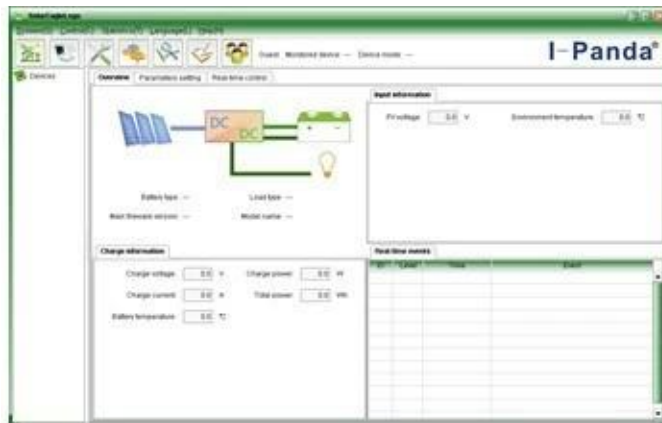


Upper Computer

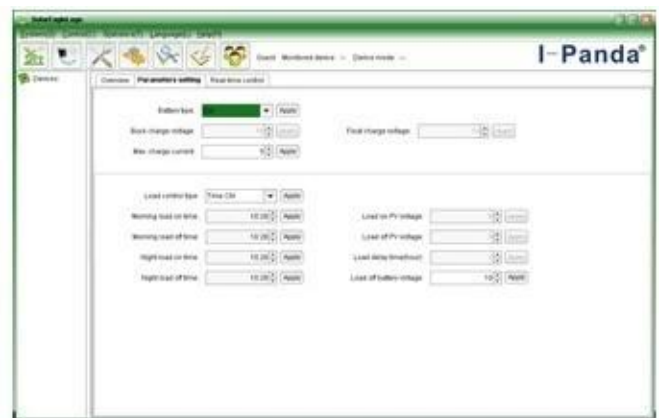


Package

#### Upper Computer Software and Test Software



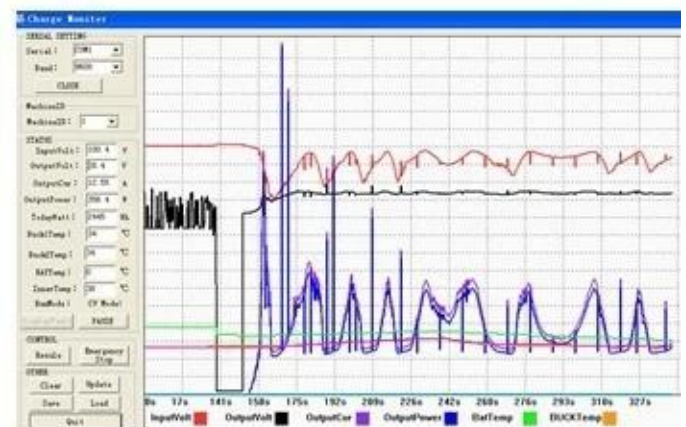
The interface of upper computer software working state



The interface of upper computer software parameter setting state



Upper computer software on/off interface and generating capacity record clean interface



The interface of test software working state

## MPPT Connection



## Certificates

[ISO2008](#)

[ISO2004](#)

[CE](#)

[FCC](#)

[ROHS](#)

## Service and Contact

### 1. Warranty

1.2 years warranty, lifelong technical assistance.

### 2. Conditions and Terms

2.1 The warranty starts from the delivery date from our factory.

2.2 During the warranty, any defective product will get repaired or replaced for free.

2.3 The warranty is unavailable for those products which are broken by the violence or the carelessness or repaired or altered without the authorization.

### 3. Lead Time

- 3.1 Sample orders will be delivered from our factory within 5-7 working days.
- 3.2 General orders will be delivered from our factory within 7-15 working days.
- 3.3 Big orders will be delivered from our factory within 25 working days at most.

#### **4. Shipment**

- 4.1 By EMS,DHL,FedEx or other express.
- 4.2 By our forwarding agent(by air or by sea).
- 4.3 By your own forwarding agent.

#### **5. OEM and ODM**

- 5.1 This page shows basic data, we can provide OEM, ODM service for you.