Feature:
1.MPPT charge mode,conversion efficiency up to 99%,can save 30%~60% of the power than traditional controller.
2.With high efficient MPPT operation scheme and adopting TI28035 chip,make the Solar panels utilization rate up to 99%.
Intelligent design,the device can be upgraded online,customers enjoy the lifelong upgrade service.
4.Compliance with the 2002/95/EC environment protecting demand, doesn't include the Cadmium, hydride and fluoride
5.Adopting the well-known brand components,the devices can suffer the temperature not less than 105℃.The service life is designed to extend to 10 years in theory.
6.Charge mode: three stages (fast charge,constant charge,floating charge)
7.12V/24V/48V/96V system auto recognize for easy control.
8. 12V/24V/48V/96V system maximum solar input is DC 300V ;
9.Connected Battery Type choosing: Sealed lead acid, vented, Gel, NiCd battery. Other types of the batteries can also be defined.
10. LCD and LEDs show all kinds of parameter like products model, PV input voltage,battery voltage,charge current,charge power,work condition,and also can add customers'company name and website.
11. Communication Port.RS232 communication can provide communication protocol, This make the unified and integrated management more convenient to customers.
12. With providing a Microsoft by connecting with PC that can show the working state and all parameters in 7 languages.
13. Extensible LAN remote control.
14.Equipment integrity: controller+CD-ROM(microcomputer software) +temperature sensing wire+ communication wire+Anderson terminals;
15.CE,ROHS,FCC,PSE certifications approved.The device also can support to pass the other certifications.
16. 2 years warranty. And 3~10 years extended warranty service also can be provided.

Model: I-P-MSC-DC12V/24V/48V/96V-series		20A	30A
Charge Mode	Maximum Power Point Tracking		
Method	3 stages: fast charge(MPPT),constant voltage,floating charge		
System Type	DC12V/24V/48V/96V	Automatic recognition	
System Voltage	12V system	DC9V~DC15V	
	24V system	DC18V~DC30V	
	48Vsystem	DC36V~DC60V	
	96Vsystem	DC72V~DC120V	
Soft Start Time	12V/24V/48V/96V	≤10S	
Dynamic Response Recovery Time	12V/24V/48V/96V	500us	
Conversion Efficiency	12V/24V/48V/96V	≥96.5%,≤99%	
PV Modules Utilization Rate	12V/24V/48V/96V	≥99%	
Input Characteristics			
MPPT Working Voltage and Range	12V system	DC18V~DC150V	
	24V system	DC34~DC150V	
	48V system	DC65~DC150V	
	96Vsystem	DC125~DC300V	
Low Voltage Input Protection Point	12V system	DC16V	
	24V system	DC30V	
	48V system	DC60V	
	96Vsystem	DC120V	
Low Voltage Input Recovery Point	12V system	DC22V	
	24V system	DC34V	
	48V system	DC65V	
	96Vsystem	DC125V	
Max DC Voltage	12V/24V/48V system	DC160V	
	96Vsystem	DC300V	
Input Overvoltage Protection Point	12V/24V/48V system	DC150	
	96Vsystem	DC300V	

Input Overvoltage Recovery Point	12V/24V/48V system	DC145V	
	96Vsystem	DC295V	
Max. PV Power	12V system	280W	450W
	24V system	560W	850W
	48V system	1120W	1700W
	96Vsystem	2240W	3400W
Output Characteristics			
Selectable Battery Types (Default type is GEL battery)	12V/24V/48V/96Vsystem	Sealed lead acid, vented, Gel, NiCd battery (Other types of the batteries also can be defined)	
Constant Voltage	12V/24V/48V/96Vsystem	Please check the charge voltage according to the battery type form.	
Floating Charge Voltage	12V/24V/48V/96Vsystem		
Over Charge Protection Voltage	12V system	14.6V	
	24V system	29.2V	
	48V system	58.4V	
	96V system	116.8V	
Rated Output Current	12V/24V/48V/96Vsystem	20A	30A
Current-limiting Protection	12V/24V/48V/96Vsystem	25A	35A
Temperature Factor	12V/24V/48V/96Vsystem	±0.02%/℃	
Temperature Compensation	12V/24V/48V/96Vsystem	14.2V-(The highest temperature-25℃)*0.3	
Output Ripples(peak)	12V/24V/48V/96Vsystem	200mV	
Output Voltage Stability Precision	12V/24V/48V/96Vsystem	≤±1.5%	
Display			
LCD display		Input,output parameter and output power etc (check the LCD display instruction)	
LED display		3 LEDs indicates:Fault indicate light,charge indicate light, power source indicate light(check the LED instruction)	
Software Control through PC(communication port)		RS232 (matching) or LAN(optional)	
Protection			
Input Low Voltage Protection		Check the input characteristics	
Input Overvoltage Protection		Check the input characteristics	
Input Polarity Reversal Protection		yes	
Output Overvoltage Protection		Check the output characteristics	
Output Polarity Reversal Protection		yes	
Short-circuit Protection		Recover after eliminating the Short-circuit fault,no problem for long term Short-circuit	
Temperature Protection		95℃	
Temperature protection		Above 85℃,decrease the output power,decrease 3A per degree.	
Other Parameters			
Noise		≤40dB	
Thermal methods		Forced air cooling,fan speed rate regulated by temperature,when inner temperature is too low,fan ran slowly or stop; when controller stop working,fan also stop ran.	
Components		World brand raw materials. Compliance with EU standards. All rated temperature of electrolytic capacitors not less than 105℃	
Smell		No peculiar smell and and toxic substances.	
Environment Protection		Meet the 2002/95/EC,no cadmium hydride and fluoride	
Physical			
Measurement DxWxH(mm)		270*185*90	
N.G(kg)		3	
G.N(kg)		3.6	
Color		Blue/Green (optional)	
Safety		CE,RoHS, PSE,FCC	
EMC		EN61000	
Type of Mechanical Protection		IP21	
Environment			
Humidity		0~90%RH (no condense)	
Altitude		0~3000m	
Operating Temperature		-20℃ ~ +40℃	
Storage Temperature		-40℃ ~ +75℃	
Atmospheric Pressure		70~106kPa	

The Figures of the PC Firmware and Testing Software

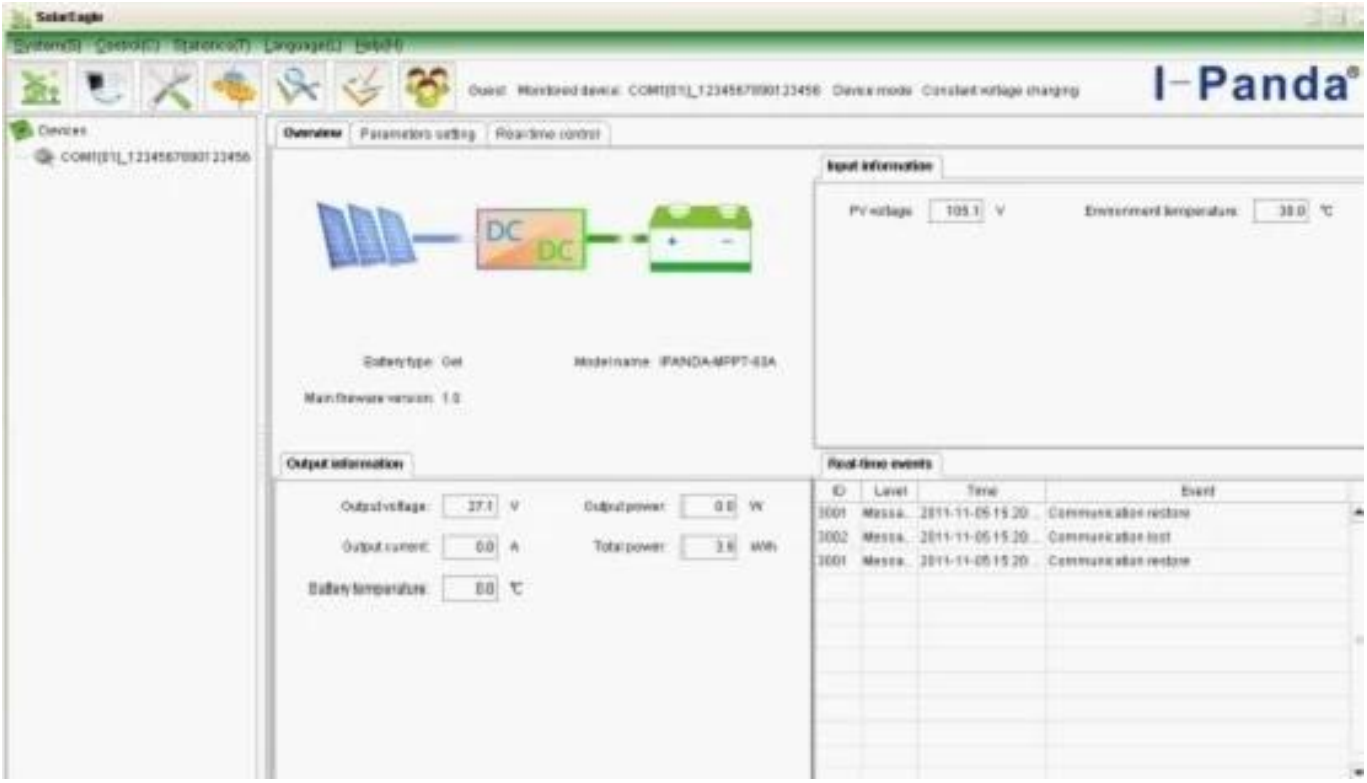

Figure 1: PC Firmware

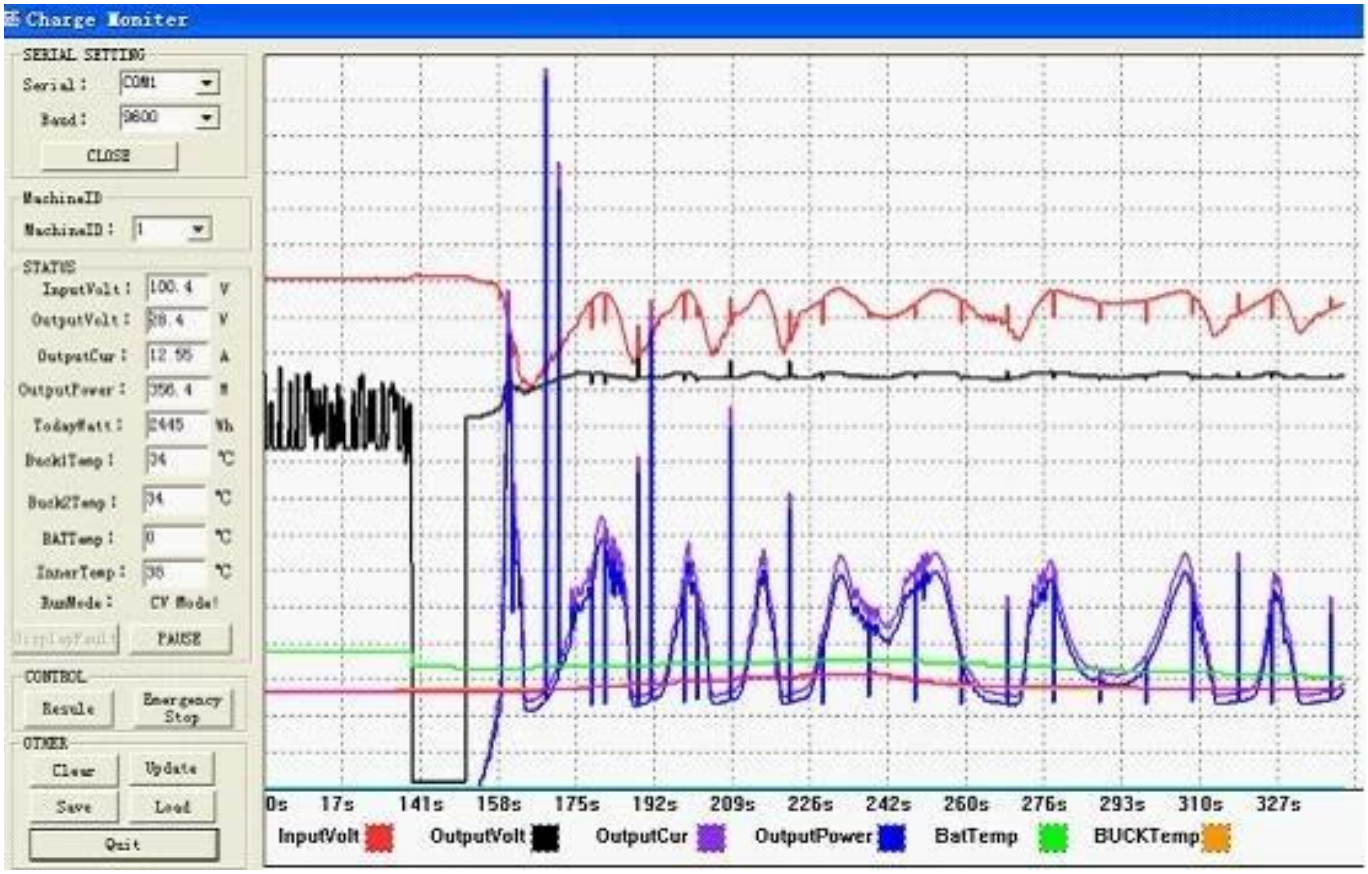

Figure: Testing Software

System