

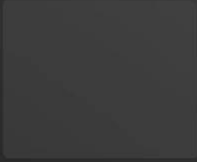
I-Panda New 20A-60A off-grid system MPPT solar charge controller



[Explorer-M](#) develops solar field vision, making nature more beautiful and more efficient

A new generation of MPPT solar intelligent digital controller

- 1, self-heating, waterproof rating IP43
- 2, beautiful design, touch buttons, internal and external repair
- 3, four-stage charging to extend battery life
- 4, tracking efficiency as high as 99.8%
- 5, perfect protection function
- 6, can expand APP, host computer, and unlimited parallel
- 7, can monitor the entire system status, determine system matching, etc.



PV

BAT
vF

DC
500m

S

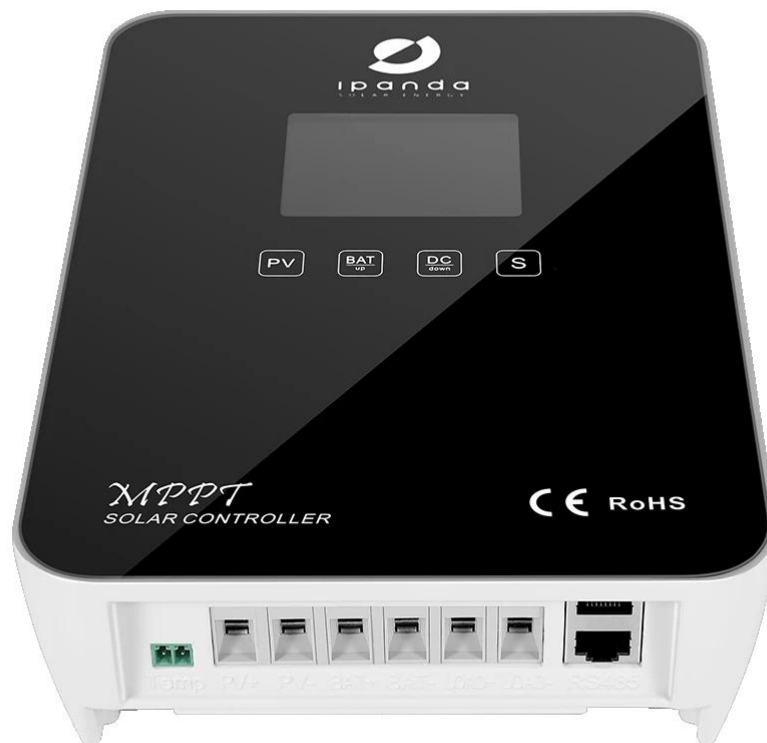
MPPT
SOLAR CONTROLLER

CE RoHS





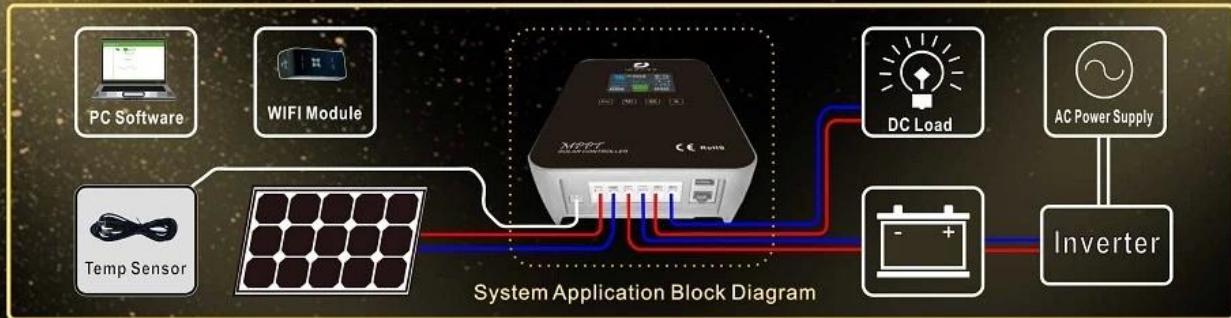




Characteristics

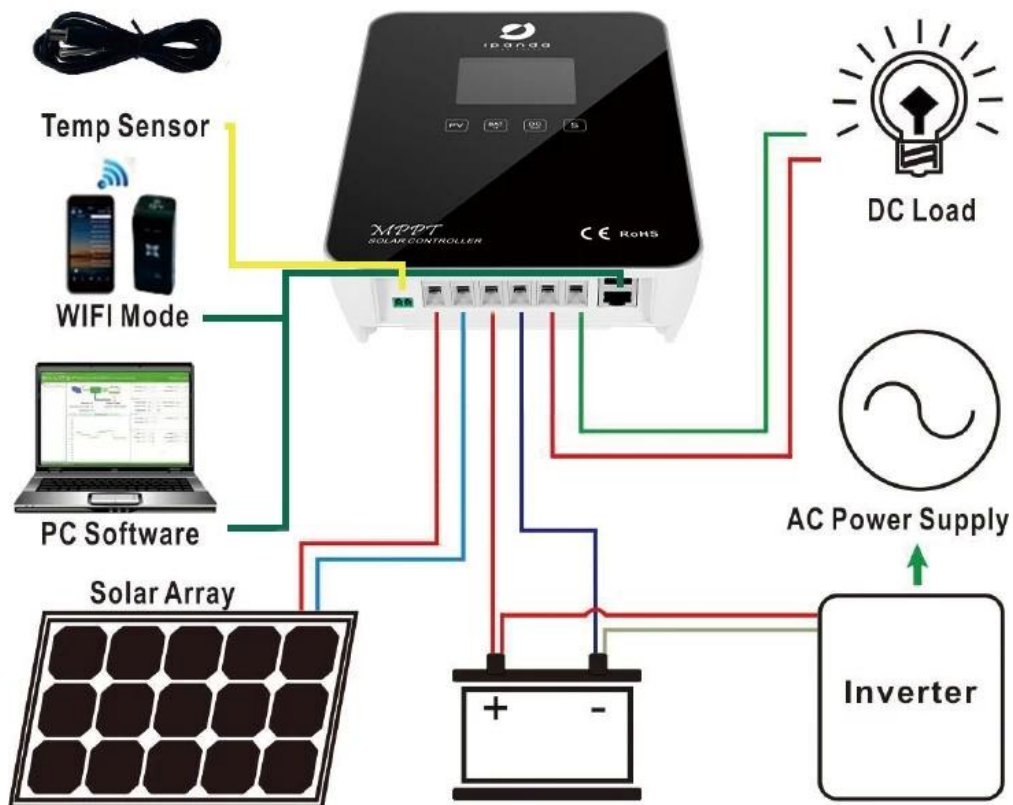
- * High-efficient MPPT algorithm, MPPT efficiency $\geq 99.5\%$.
- * Support Seal/Gel/Flooded battery and customized batteries.
- * Four types of load mode selection: ON/OFF, PV voltage control, Dual Time control, PV+Time control.
- * All-in-one integrated design, high stability and reliability.
- * Current-limited charging function.
- * IP43 protection, natural-cooling.
- * High definition LCD segment display.
- * Intelligent interaction experience.
- * Dual RS485 communication ports, support for parallel communication.
- * Support PC and APP (Android & iOS) monitoring.
- * CE, RoHS, FCC certifications approved.

parameter



| | Model | EM2420 | EM2430 | EM2440 | EM2450 | EM2460 |
|-------------------------------|------------------------------------|--|--------------------------|-------------|------------|------------|
| Product Category | MPPT efficiency | ≥ 99.5% | | | | |
| | Standby consumption | 0.5W~1.2W | | | | |
| | Heat-dissipating method | Natural-Cooling | | | | |
| | Battery system voltage range | 12V system | 9VDC~15VDC(Lead acid) | | | |
| 24V system | | 18VDC~30VDC(Lead acid) | | | | |
| Li-ion | | 8VDC~30VDC(Default), ≤30VDC(Optional activation function) | | | | |
| Input Characteristics | Max. PV input voltage(Voc) | 100VDC(Default), DC 150V(Optional) | | | | |
| | Min. Vmpp Voltage | Battery voltage + 2V | | | | |
| | Start-up charging voltage | Battery voltage + 3V | | | | |
| | Low input voltage protection | Battery voltage + 2V | | | | |
| | Over voltage protection /Recovery | 100VDC/95VDC(Default), 150VDC/145VDC(Optional) | | | | |
| | Rated PV Power | 12V system | 260W | 390W | 520W | 650W |
| 24V system | | 520W | 780W | 1040W | 1300W | 1560W |
| Li-ion | | 252W~504W | 378W~756W | 504W~1008W | 630W~1260W | 756W~1512W |
| Charge Characteristics | Activation for lithium battery | Optional | | | | |
| | Battery types(Default Gel battery) | Sealed(SEL), Gel(GEL), Flooded(FLD), User-defined(USE), Li-ion(Lit) | | | | |
| | Rated charge current | 20A | 30A | 40A | 50A | 60A |
| | Temperature compensation | -3mV/C/2V (default) | | | | |
| | Charge method | 3-stages: CC(Constant Current), CV(Constant Voltage), CF(Floating Charge) | | | | |
| LOAD Characteristics | Output voltage stability accuracy | ± 0.2V | | | | |
| | Load voltage | Same as battery voltage. | | | | |
| | Rated load current | 20A | | 30A | | |
| | Load control mode | On/Off mode, PV voltage control mode, Dual-time control mode, PV + Time control mode | | | | |
| | Low voltage protection | 10.5V(default), 11V(restored), settable | | | | |
| Display & Communication | Setting method | PC software / APP / Controller | | | | |
| | Display | High-definition LCD segment code backlight display | | | | |
| Other Parameters | Communication | Dual RJ45 port / RS485 protocol / PC (via RS485-USB Cable) & APP (via Wi-Fi module) / Centralized monitoring (via parallel connection and RS485-USB cable) | | | | |
| | Protection | Input & output over-volt / low-voltage protection, reverse polarity protection, over-heating protection, battery shedding protection etc. | | | | |
| | Operating ambient temperature | -20°C~+50°C | | | | |
| | Storage temperature | -40°C~+75°C | | | | |
| | IP(Ingress protection) | IP43 | | | | |
| | Noise | ≤10dB | | | | |
| | Altitude | 0~3000m | | | | |
| | Max. Wiring size | 28mm ² | | | | |
| | Recommended breaker | ≥ 40A | ≥ 63A | ≥ 63A | ≥ 100A | ≥ 100A |
| | N. weight (kg) / G. weight (kg) | 1.65 / 1.98 | | 2.35 / 2.78 | | |
| Product size/Packing size(mm) | 220×148×58.5/289×212×105 | | 245×170×63.5/334×255×123 | | | |

System connection diagram



Remarks:

1. The above is the standard parameters of the company. If there are any changes, please check our official website;
2. Our company can customize non-conventional MPPT controllers for customers and provide OEM and ODM services;
3. [[Click to download the specification](#)]