

Plug and Play Power Systems for Remote IoT Devices

Features

- ⊕ Fast mounting
- ⊕ Waterproof LiFePO4 battery
- ⊕ Integrated MPPT charge controller
- ⊕ High efficiency solar panel
- ⊕ 5, 12V and PoE output options
- ⊕ Multiple data monitoring options

Applications

- Cellular Router
- Repeater Networks
- Air Quality Monitors
- Security Cameras
- Irrigation Systems
- LoRa Gateway
- Edge Computing
- Traffic Systems
- Seismic Sensors
- Remote Lighting

System Options Summary

SKU	Panel Power (W)	Battery Capacity (Ah)	Battery Voltage Options	Mass (kg)
K-P152-V102	25	18	12.8-14.4V, 5V	5
K-P150-V102	50	18	12.8-14.4V, 5V, PoE+	7
K-P150-V107	50	60	12.8-14.4V Unregulated, 5V, PoE+	13
K-P151-V107	100	60	12.8-14.4V Unregulated, 5V, PoE+	19
K-P151-V103	100	100	12.8-14.4V Unregulated, 5V, PoE+	26
K-2XP151-V107	200	60	12.8-14.4V Unregulated, 5V, PoE+	26
K-2XP151-V103	200	100	12.8-14.4V Unregulated, 5V, PoE+	33

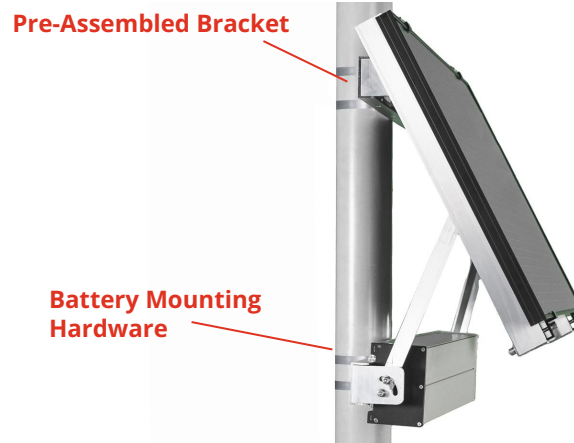
Description

Voltaic's CORE Solar Power Systems are easy to install, long-lasting and lower cost than traditional lead-acid systems. The systems are pre-assembled and include mounting hardware.

The waterproof battery uses long life LiFePO4 (LFP) cells and has an integrated MPPT charge controller. This design eliminates the need for a large enclosure and further reduces weight and complexity.

Solar panel and battery size can be adjusted to match the available power to the system load.

Battery health can be monitored from raw battery voltage, an optional RS feed or Voltaic IoT module.



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Battery Inputs and Outputs

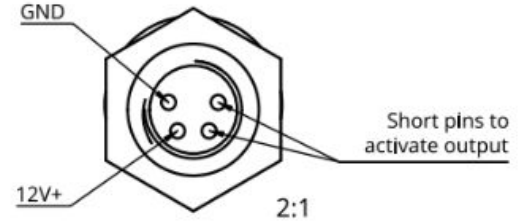
MC4 Solar Panel Inputs

M16 Output
(M16 to Bare Lead Cable is Included by Default)

LED Indicators

Vent

Mounting Rails



M16 Standard Output
12V Unregulated

Battery Specifications

Battery	V102	V107	V103
Nominal Capacity	18Ah / 230Wh	60Ah / 768 Wh	96Ah / 1229Wh
Max Input Current	10A	15A	15A
Dimensions	104 x 147 x 262mm	104 x 147 x 538mm	104 x 147 x 728mm
Cell Configuration	4S 3P LFP 32700	4S 10P LFP 32700	4S 16P LFP 32700
Mass	3kg	9kg	16kg
Charge Controller	Maximum Power Point Tracking (MPPT) - 6mA self consumption, up to 97% efficient		
Input Connectors	MC4		
Standard Output Connector	LLT M16 4-Pin Cable		
Input Voltage Range	14.5V - 25V		
Output Temperature Range	-20 - 60°C		
Input Temperature Range	0 - 45°C		
Standard Output Voltage Range	12.4V - 14.6V		
Optional Output SKU	C304 5V Regulator	C304 5V Regulator C403 48V PoE Injector	C304 5V Regulator C403 48V PoE Injector
Protections	Short Circuit, Over Discharge, Over Temperature, Under Temperature		

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Solar Panel Specifications

Panel	P152	P150	P151
Wp - Maximum Power	28.5W	56.7W	113W
Vp - Voltage at Max Power	17.7V	17.7V	17.7V
Voc - Open-Circuit Voltage	20.7V	20.7V	20.7V
Ip - Current at Max Power	1.53A	3.2A	6.42A
Isc - Short-Circuit Current	1.69A	3.37A	6.75A
Solar Cell Efficiency	22.8%	22.8%	22.8%
Number of Cells	30	30	30
Dimensions	307 x 507 x 30mm	586 x 507 x 30mm	586 x 980 x 30mm
Mass	2kg	3.4kg	6.8kg
Wire Length	500mm including connectors		
Connector Type	MC4		
Temperature Range	-40 - 85°C		

Data Monitoring

Option	Unregulated Voltage	RS 485 Feed	IoT Module
SKU		C404	C401 Cat-1 North America C406 Cat-1 Global
Physical Connection	M16 4 Pin	M8 4 Pin	-
Incremental Self Consumption	0mA	0mA	<3Wh per day
Data Available	Battery Voltage	Battery voltage, battery current, load voltage, load current, solar voltage, solar current, temperature, daily charging capacity	Battery voltage, battery current, load voltage, load current, solar voltage, solar current, temperature, daily charging capacity
Notes		Must be specified in advance of purchase	Must be specified in advance of purchase

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Mounting Configurations

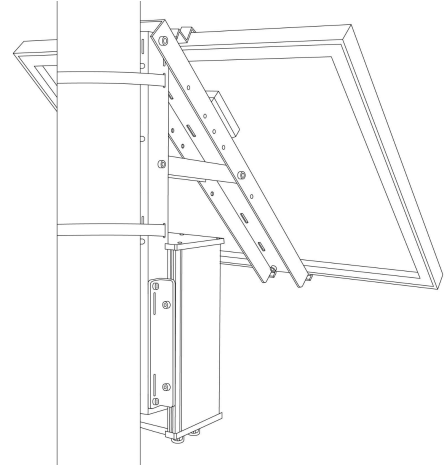
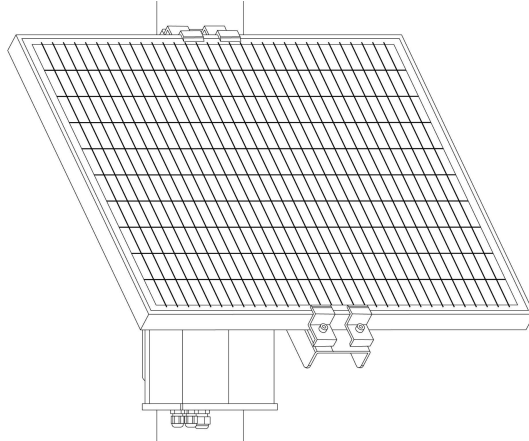
Steel straps are recommended for pole mounts. Steel anchors are recommended for most wall mounts. This hardware is not included.

K-P151-V102

K-P150-V102

K-P150-V107

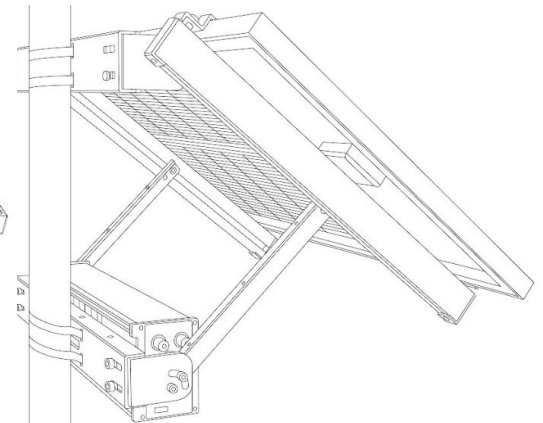
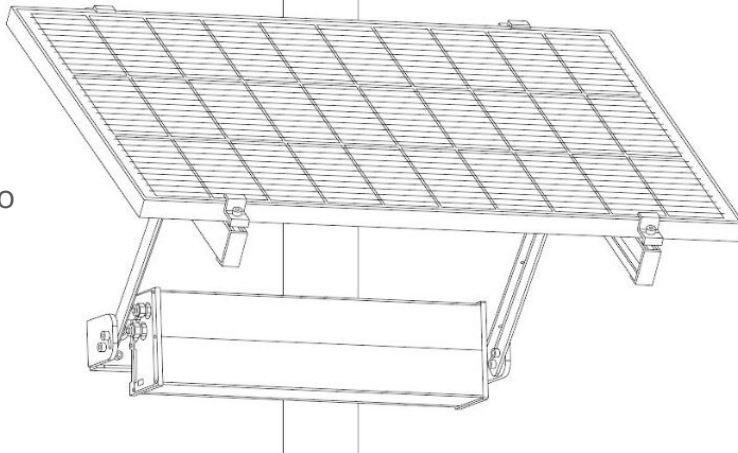
Battery mounts to
Bracket.



K-P151-V107

K-P151X2-V107

Battery mounts to
bracket.



K-P151-V103

K-P151X2-V103

Battery mounts
to pole or wall.

