

makerPower Solar

KIT-18291

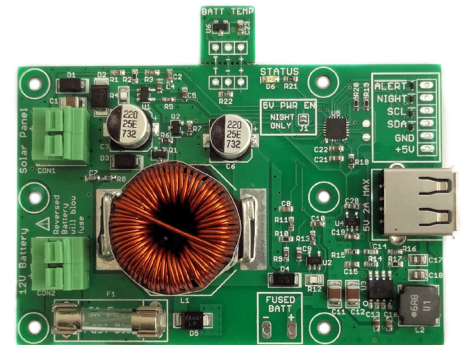
Product Overview

10-27-2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

The makerPower Solar from Crowd Supply is an intelligent solar power system ideal for Internet of Things (IoT) projects. The makerPower Solar combines a solar battery charger and a 5V power supply, enabling technical professionals and hobbyists to take their embedded systems and IoT devices off the grid and run them anywhere. The makerPower Solar can operate as a simple stand-alone power supply or as a peripheral capable of fully reporting power conditions. A true Maximum-Power Point (MPPT) algorithm extracts every joule of energy from all solar conditions.

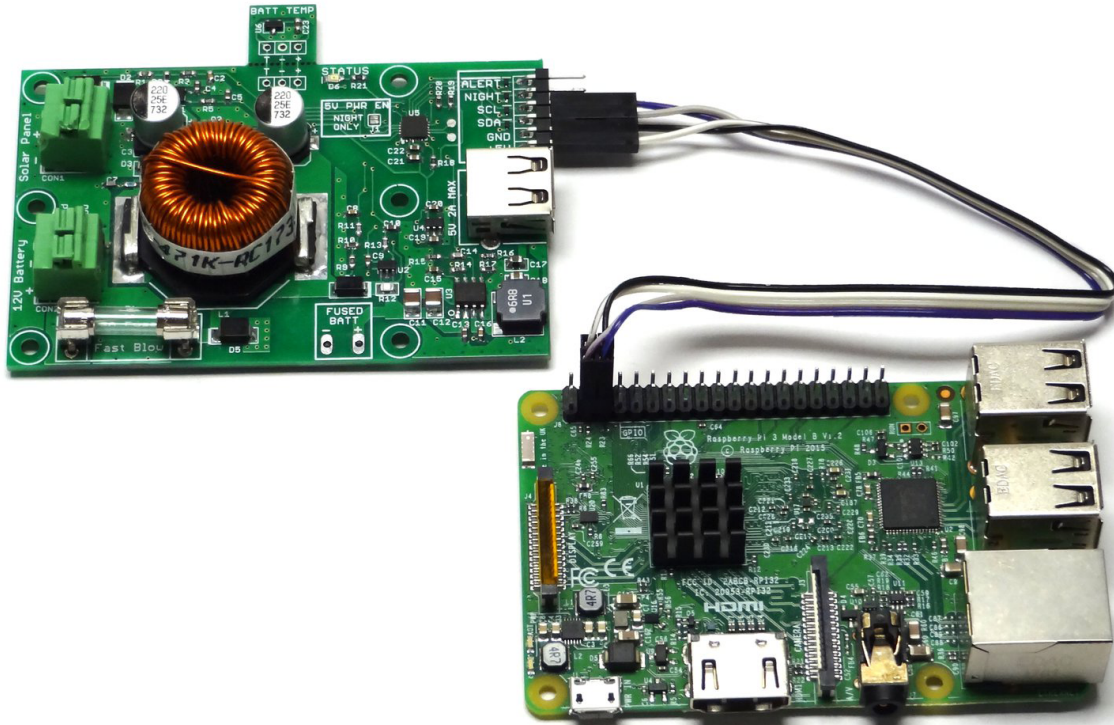


The FT231X kit operates at 3.3V maximum input that can operate down to 1.8V with external pull-ups and is also 5V tolerant. This breakout kit includes a 0.8m reversible USB-A to Micro-B cable and a 40-pin strip of male breakaway headers.

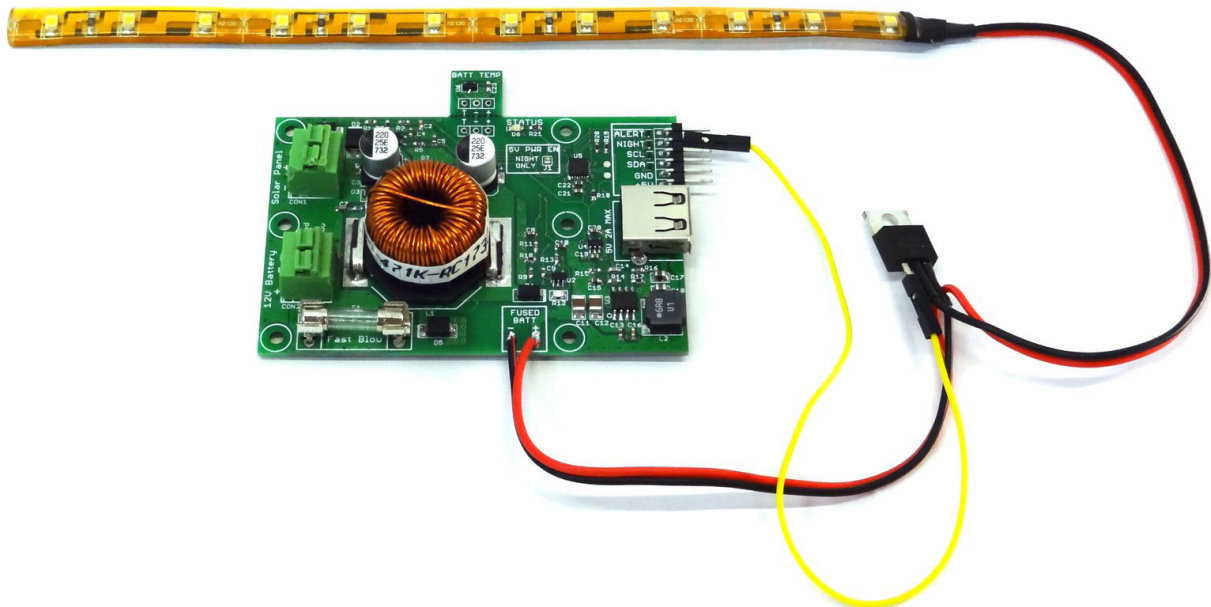
Specifications

- Dimensions:
 - 85mm x 56mm (same size as Raspberry Pi 3)
 - Mounting holes align with Raspberry Pi boards (including Pi Zero)
- 12V Operation
 - Designed for 36-cell solar panels (typ. 25W to 40W)
 - Works with sealed AGM lead-acid batteries (typ. 7Ah to 18Ah)
- 35W MPPT Charger
 - Dynamic Perturb and Observe algorithm
 - Three state charge: BULK, ABSORPTION, FLOAT
 - Temperature compensation
- Dual Outputs
 - 5V, 2A (10W) managed output available from USB Type-A socket for plug and play with many devices or from a 0.1" header for direct connection
 - Fused and current monitored 12V (3A maximum) battery output available from a header
- Digital Interface
 - I²C slave interface
 - Alert logic signal to notify of impending power-down
 - Night logic signal asserted when the solar panel is dark
- Detachable temperature sensor for battery temperature monitoring

Two Digital Interfaces



Power and data direct to a Raspberry Pi.

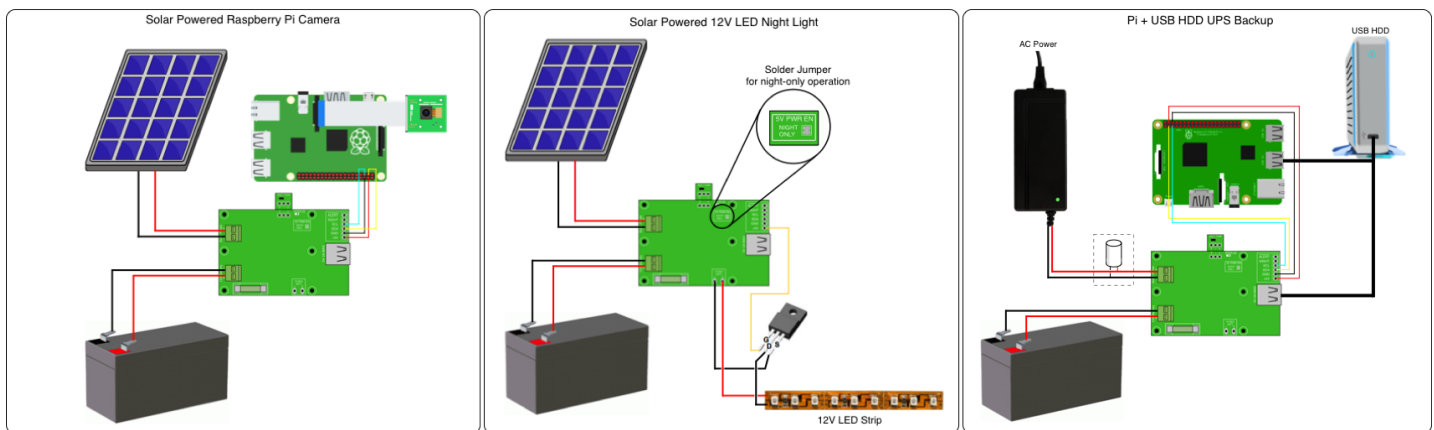


Simple switch for night-time LED lighting.

Applications

- Remote control and sense applications
- Solar powered web cams
- Night-time “critter” cams
- Solar-powered LED night lighting controllers
- Power supply with battery backup for Raspberry Pi Server or Router

Application Examples



Accessories

- Wiring Kit ([CS-MPSOLAR-02](#))
 - The Wiring Kit includes nine 20cm female-female Dupont wires, two 20cm battery wires, and a header to make a temp sensor remote

Mouser Part Numbers

[View all Parts](#)

To learn more, visit <https://www.mouser.com/new/crowd-supply/crowd-support-makerpower-solar/>