

LiBAT5V2A

infinityPV ApS offers this evaluation board to complement solar battery chargers in your solar-powered projects. LiBAT5V2A gives a stable 5V output with up to 2A from Lithium rechargeable batteries.

The board is presented as multiplatform boost, because is intended to be used as battery shield for the main open-source electronic prototyping platforms, i.e., Raspberry, Arduino or Photon.

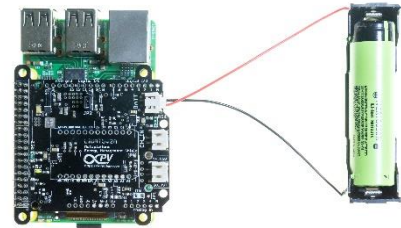


Figure 1 LiBAT5V2A attached to a Raspberry Pi 2

Key highlights:

infinityPV LiBAT5V2A includes these capabilities:

- High efficiency Step-up conversion based in the IC TPS61320 (up to 92%).
- 5V stable output capable of delivering output currents up to 2A.
- Connectors for the chosen prototyping platform.
- Battery charging input (JST-2 connector), compatible with most of solar battery chargers, e.g. OPV3W60V.
- Battery external connector (JST-2 connector).
- Extra 5V/2A output through JST-2 or USB connector, to power your preferred USB devices
- Input and output energy monitoring option through the I2C lines. The board can be supplied with two energy monitors (INA233) placed at the battery charging input and 5V consumption points. The board includes also a controlled power switch (TPS27081A) that allows to switch on/off safely the extra 5V/2A output from a GPIO configured as digital output.

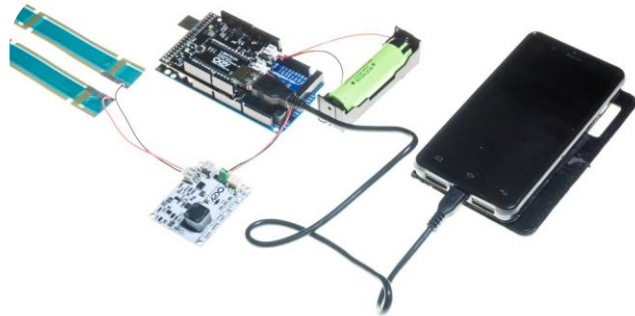


Figure 2 Smart solar phone charger using the LiBAT5V2A

Service and support:

The board is sold in its basic option for advanced DIY designers, without the monitoring components and with the connectors unsoldered. But we offer the service of soldering connectors and components if you feel not comfortable with electronic soldering.

We also offer advice to choose the right option for you and for checking if your specific model of prototyping platform is compatible with LiBAT5V2A.

Our application note LiBAT5V2A V2.0 describes in much more detail the specifications and how to configure the LiBAT5V2A for your application.

LiBAT5V2A Selection Guide

There are two options when you buy the infinityPV LiBAT5V2A:

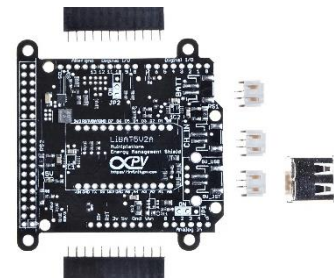
- BASIC (recommended for DIY advanced in electronics soldering): the board including the boost converter with the connectors (not soldered) for your selected prototyping platform: Raspberry, Arduino or Photon).



LiBAT5V2A for Arduino



LiBAT5V2A for Raspberry



LiBAT5V2A for Photon

- MONITORING: like BASIC but including all the monitoring components and the soldered connectors



LiBAT5V2A for Arduino



LiBAT5V2A for Raspberry



LiBAT5V2A for Photon