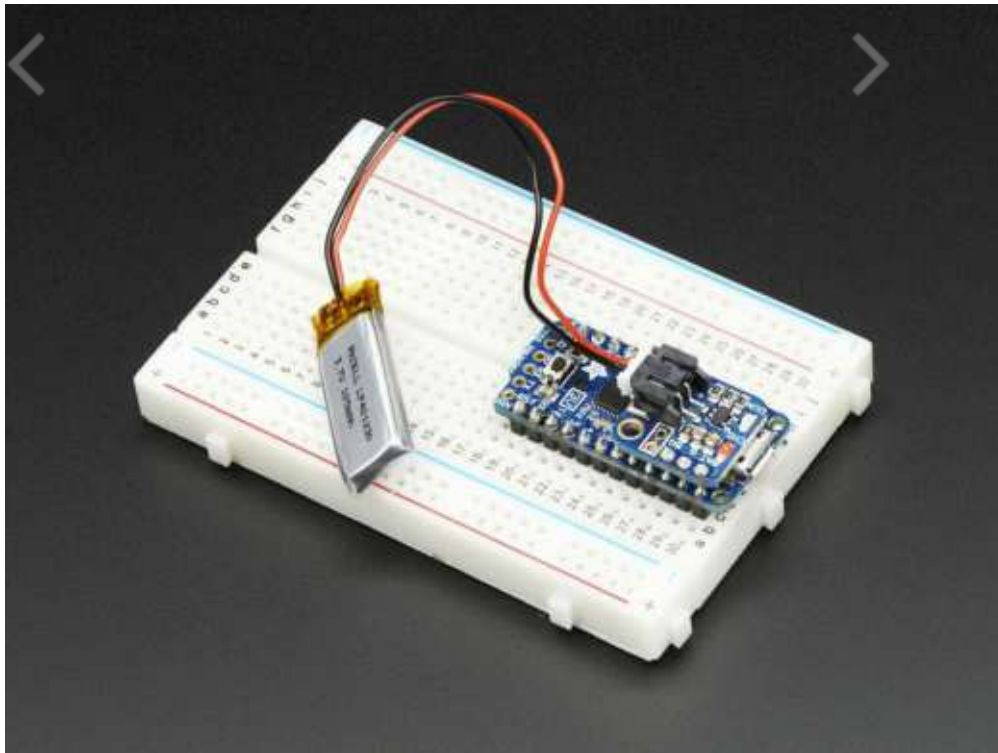




Adafruit Lilon/LiPoly Backpack Add-On for Pro Trinket/ItsyBitsy

PRODUCT ID: 2124

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1

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☐ Also include 1 x [Lithium Ion Polymer Battery - 3.7v 100mAh](#) ()

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1-9

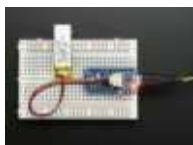
10-99

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DESCRIPTION

TECHNICAL DETAILS





DESCRIPTION

If you have an ItsyBitsy or Pro Trinket you probably know it's the perfect little size for a portable project. This LiPoly backpack makes it really easy to do! Instead of wiring 2 or 3 boards together to make a charging system, this little PCB sits on top of the PCB and allows a LiPoly/Lilon battery to plug in. When the Pro Trinket or ItsyBitsy USB port is powered, the battery is recharged automatically. Unplug the USB port and the microcontroller will switch over to the rechargeable battery.

Ideally, this backpack is for use with the 3.3V Pro Trinkets & ItsyBitsy, so that the battery voltage (3.7V-4.2V) will get regulated down to 3.3V on the board. However, many times, you can run a 5V microcontroller + accessories off of the ~4V from the LiPoly battery with no problem. (Technically its overclocking but we've never seen that affect the microcontroller itself, AVRs are happy to overclock without complaint).

Solder the backpack on with the extra long header so that it can still plug into a breadboard, or clip the long header leads short afterwards for a slim package. There are two LEDs - one red and one green. While charging, the red LED is lit. When the battery is fully charged and ready for use, the green LED turns on. Seriously, it could not get more easy.

If you want to add an On/Off switch, we also made that really easy. The two 0.1" holes with a box around them are the battery output line. Carefully cut the trace between them with a hobby knife and [replace with two wires from a switch like this slide switch](#), or [this pushbutton one](#), for example.

Charging is performed in three stages: first a preconditioning charge, then a constant-current fast charge and finally a constant-voltage trickle charge to keep the battery topped-up. The charge current is 100mA by default, so it will work with any size battery and USB port. If you want you can easily change it over to 500mA mode by soldering closed the jumper on the bottom, for when you'll only be charging batteries with 500mAh size or larger.

For use with Adafruit LiPoly/Lilon batteries only! Other batteries may have different voltage, chemistry, polarity or pinout.

- Comes assembled and tested
- Uses the 5V input via Micro-B USB connector on the Pro Trinket or ItsyBitsy
- For charging single Lithium Ion/Lithium Polymer 3.7/4.2v batteries (not for older 3.6/4.1v cells)
- 100mA charge current, adjustable to 500mA by soldering a jumper closed

[Batteries](#) and Pro Trinket or ItsyBitsy not included.

Note: You may get an off-white or a black JST connector. It's normal for the the red and green LED's to be very faintly glowing when the battery is attached but not charging, there is 500uA reverse-leakage current from the schottkey diode from the battery that backpowers the charger chip.



TECHNICAL DETAILS

Details:

- Dimensions: 15mm x 17mm x 2mm / 0.6" x 0.7" x 0.08"
- Height w/ JST: 7mm / 0.3"
- Weight: 1.3g
- [Datasheets](#), [PCB files](#) and [Fritzing](#) available in [tutorial page](#)



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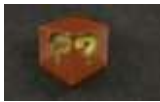
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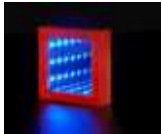
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MAY WE ALSO SUGGEST...



Adafruit Mini Lipo w/Mini-B



Adafruit ItsyBitsy M0



USB / DC / Solar Lithium



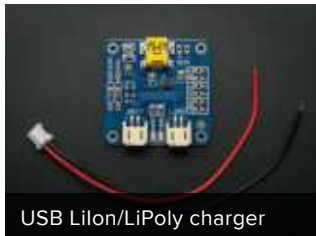
Lithium Ion Polymer Battery



Adafruit Pro Trinket - 3V



Adafruit ItsyBitsy 32u4 - 3V



USB LiIon/LiPoly charger



Lithium Ion Polymer Battery



Adafruit Pro Trinket - 5V



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Lithium Ion Polymer Battery



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