



PowerBoost is a DC/DC boost converter module that can run from 1.8V batteries or higher, and convert that voltage to 5.2V DC for running your 5V projects. With a beefy 4A DC/DC converter, it can give you 1A+ from as low as 2V.

The output has been tweaked to be 5.2V instead of 5.0V so that there's a little bit of 'headroom' for long cables, high draw, the addition of a diode on the output, etc. The 5.2V is safe for all 5V-powered electronics like Arduino, Raspberry Pi, or Beagle Bone while preventing icky brown-outs during high current draw because of USB cable resistance.

The PowerBoost 1000 has at the heart a TPS61030 boost converter from TI. This boost converter chip has some really nice extras such as low battery detection, 4A internal switch, synchronous conversion, excellent efficiency, and 700 KHz high-frequency operation.

- Synchronous operation means you can disconnect the output completely by connecting the Enable pin to ground. This will completely turn off the output
- 4A internal switch means you can get 1000mA+ from as low as 1.8V, 1500mA+ from 2 NiMH or Alkaline batteries, and at least 2000mA from a 3.7V LiPoly/Lilon battery or 3 NiMH/Alkalines. Just make sure your batteries can actually supply the required 2–4A.
- Low battery indicator LED lights up red when the voltage dips below 3.2V, optimized for the most common usage of LiPo/Lilon battery usage
- On-board 1000mA charge-rate 'Apple/iOS' data resistors. Solder in the included USB connector and you can plug in any iPhone or iPod for a speedy 1000mA charge rate. Works with iPads, both mini and 'classic' type.
- Full breakout for battery in, control pins and power out
- 90%+ operating efficiency in most cases, and low quiescent current: 5mA when enabled and power LED is on, 20 μ A when disabled (power and low battery LED are off)

Great for powering your robot, Arduino project, single-board-computer such as Raspberry Pi or BeagleBone! Each order comes with one fully assembled and tested PCB, a 2-PH JST jack, a 2-pin Terminal block and a USB A jack.

If you are powering your project from USB, solder the USB A jack in (a 3-minute soldering task). Then choose either JST for input (JST is often used for our Lilon batteries, but the connector is only rated for 2A) or a terminal block.

The 1000 version comes with a 2-pin terminal block so you can solder it to the output spot where the USB jack would go. Or don't solder any connectors in for a more compact power pack and go with 22AWG wires soldered directly in.

- Dimensions: 29mm x 23mm x 2mm / 1.1" x .9" x .1"
- Height w/ JST: 7.5mm / .30"
- Weight: 6.0g