

5V DC-DC step-up board with 1500mAh Li-poly battery

By www.nuelectronics.com



Features -

- On-board 3.7V 1500mAh Li-Poly battery
- Internal 5V DC-DC step-up circuit
- Internal high accuracy charging circuits of Li-Poly battery
- Internal protection circuits for overcharge, over-discharge, over-current.
- Can be charged from on-board mini-USB socket, or from external source, such as solar panel
- Ideal for projects, experiments, such as the Arduino project.

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This 5V DC-DC step-up board is a compact, versatile power supply board for many applications. It also provide high accurate charging circuits with protection for overcharge, over-discharge, and over-current of the Lithium Polymer (Li-Poly) battery. Measuring at 78.7mm x 56.1mm and with on-board 3.7V 1500mAh Li-Poly battery, it can be used in numerous projects, experiments, generating power for models, lights etc.

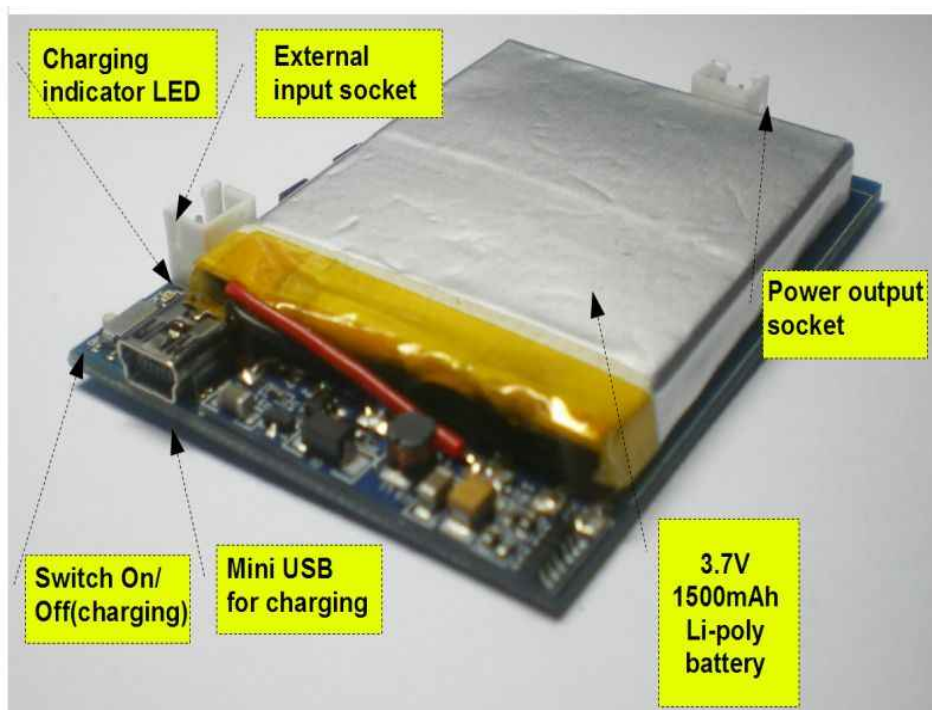
Specification -

Remark	Condition	Min	Typ.	Max	Unit
Physical size	Length	-	78.7	-	mm
	Width	-	56.1	-	mm
	Thickness (including battery)	-	7.85	-	mm
DC-DC step-up	Step-up voltage	4.88	5	5.12	V
	Output current	-	-	500	mA
Charge	Input charging voltage	4.25	-	6.5	V
	Input charging current	-	500	-	mA
Battery Overcharge protection	Overcharge detection voltage	4.25	4.3	4.35	V
	Overcharge release voltage	4.05	4.1	4.15	V
Discharge protection	Discharge protection voltage	2.3	2.4	2.5	V
	Discharge release voltage	2.9	3	3.1	V
Current	Quiescent current	2	-	6	uA
	Overcurrent detection	2	-	6	A
Temperature	Operating Temperature	-40	-	85	°C
	Storage Temperature	-40	-	125	°C

Control & Connections -

As shown in the following picture, there are a number of switch, LED and connectors on board -

- Switch (SW1) – for selecting output mode / charging mode
- LED (D1) – for indicating charging status (ON when charging, OFF when disconnected or the battery is full).
- mini USB (S1) – for charging battery via PC USB port, when SW1 is in charging mode.
- External input socket (S2) – for charging through external source (4.25V – 6.5V) , such as solar panels
- Power output socket (S3) – for outputting 5V voltage, when SW1 is in output mode; or for charging battery , when the SW1 is in charging mode.



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Package Contents -

The 5V DC-DC step-up board supplied with a package (as shown in the following picture) include -

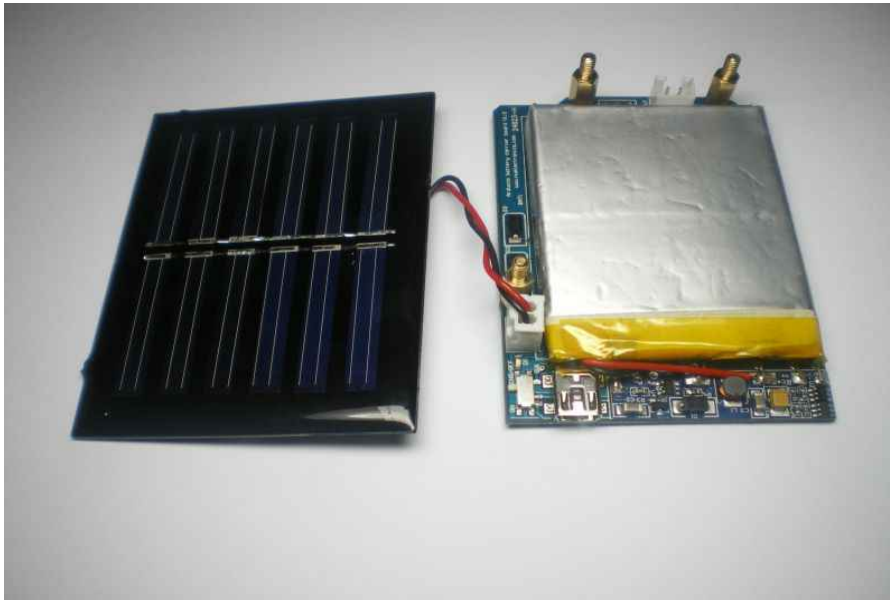
- 1x 5V DC-DC step-up board with 1500mAh Li-Poly battery
- 3x 10mm Copper spacers with screws and nuts for easy fixing on Arduino board
- 1x 2way output cable
- 1x USB mini cable



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Connection examples -

The following picture shows a 0.25W monocrystalline solar panel , which is also available from [nuelectronics shop](http://nuelectronics.com), connected to the battery board.



The following picture shows the Arduino Diecimila board is powered by the battery board beneath.

