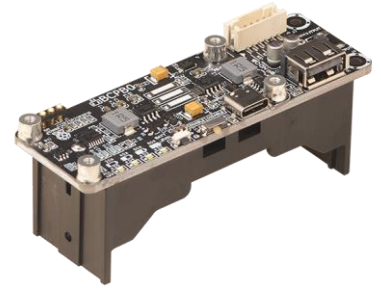


# Battery Charging and Protection Series

## 1S 26650 Lithium Battery Charging and Protection Board w 5V Boost Circuit-BCPB0 (PS-BC12114)



### Overview:

BCPB0 is a highly efficient and highly reliable lithium battery charging and protection board with 5V boost circuit integrated. It is designed for 1 piece 26650 Lithium Battery and can be used as a power bank for Mobile Phones and Raspberry Pi. Its palm size makes it suitable for portable DIY applications. With 5V boost circuit employed, when using BCPB0 to power Mobile Phones, the 5V USB discharge port can provide maximum current as 2A. Raspberry Pi can be easily and conveniently installed on BCPB0 through the pre-mounted standoffs and be powered by the direct contact of pogo pin on BCPB0 and POS4, 6 of 40 pin connectors of Raspberry Pi, without any occupation of 40 GPIO pin headers. Battery Level Indicators are equipped for visualized display.

BCPB0 is equipped with full protection circuit, such as overcurrent, over-temperature, short circuit and over/under voltage protection, ensuring the reliability.

### Distributors:



All Audio Amplifier boards are complied with ROHS and they are pre-tested with our power supply solution to comply with FCC and CE. We could provide FCC, CE and RoHS certifications for customers' convenience. The test reports will be provided upon requests by e-mails only for customers who apply for bulky purchase of MOV USD\$10,000 or MOQ 500pcs.

Ready for:



### Contact Info

• Email:  
info@wondom.com



### Applications:

- DIY Purpose
  - Raspberry Pi
  - Arduino DIY
- Power Bank for Mobile Devices

### Key Features:

- 5V USB Discharge Port
- Specially Designed for Powering Raspberry Pi
- LED Indicators for Battery Level
- Full Protection Circuit
- Charge and Discharge Synchronization

### Notes:

1. Sure Electronics does not provide technical support for any behavior of connecting the battery charger and balance protection board with power supply out of the recommended range. Warranty will be lost due to this.
2. Turn off the apparatus if it is disused for long time.
3. For the 1<sup>st</sup> time to charge this new battery board/make the board active, it is normal to take much longer time to make the board fully charged .
4. If your board goes into protection status or the battery has been re-installed, please recharge the board with 5V power adapter to make it active again.
5. Please check the battery polarity before installation.
6. Please be noted that this board is forbidden to be connected in parallel or in series.
7. It is normal that charge LED blinks when the charge time exceeds the recommended total time.

### Electrical Specifications

Specifications typical @ +25°C, unless otherwise noted. Specifications subject to change without notice.

Parameters	Conditions	Min.	Typ.	Max.	Units
Supply Voltage	-	4.75	5	5.25	VDC
Maximum discharge current	-	-	2	-	A
Typical charge current	-	1	1.5	2	A
Battery Capacity	-	Refer to Battery Parameters			
Overcharge detection voltage	-	-	4.235	-	V
Overcharge release voltage	-	-	4.18	-	V
Over-discharge detection voltage	-	-	2.8	-	V
Over-discharge release voltage	-	-	3.0	-	V
Operating Temperature	-	-	20	50	°C

### Charge and Discharge Time

Testing Results for Charging and Discharging using our 26650 5500mAh batteries is attached for reference.

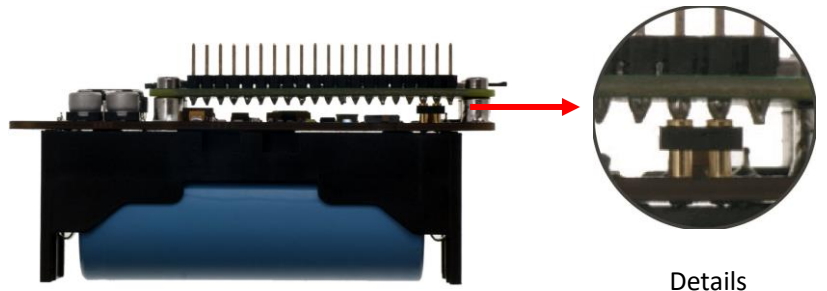
Charging Conditions	90% charged Time (Unit: h)	Discharging Conditions	Full-discharged Time (Unit: h)
5V 2A	4	5V 2A	2.5

## Designed for Powering Raspberry Pi

BCPB0 is specially designed for powering Raspberry Pi, offering a convenient power supply solution for DIYers. As is shown in the picture, after being installed on BCPB0 through four standoffs, Raspberry Pi is powered by the contact of pogo pin on BCPB0 and POS4, 6 of 40 pin connectors, leaving 40 GPIO pin headers for other applications.

### Note:

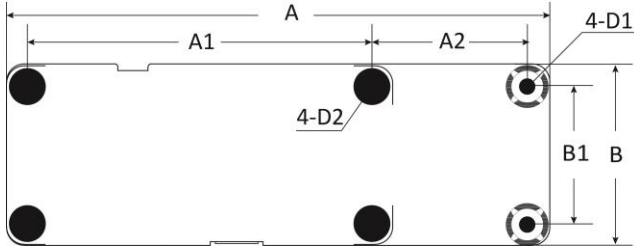
In order to prevent short circuit, please firstly install Raspberry Pi, then install the battery and activate it.



Details

Four spring washer are required for installation of Raspberry Pi.

## Dimensions



Dimensions	A (inch/mm)	A1 (inch/mm)	A2 (inch/mm)
		3.80/96.52	2.28/57.91
B	B1 (inch/mm)		
		1.20/30.48	0.91/23.11
D1	D2 (inch/mm)		
		0.11/2.79	0.17/4.32

### Notes:

- All dimensions are typical in inches/mm
- Tolerance x.xx =  $\pm 0.02(\pm 0.50)$
- Height: 1.4inch/36mm (Only BCPB0)

## Connections

### Charging:

- J2 DC 5V USB Type-C Port

### Discharging:

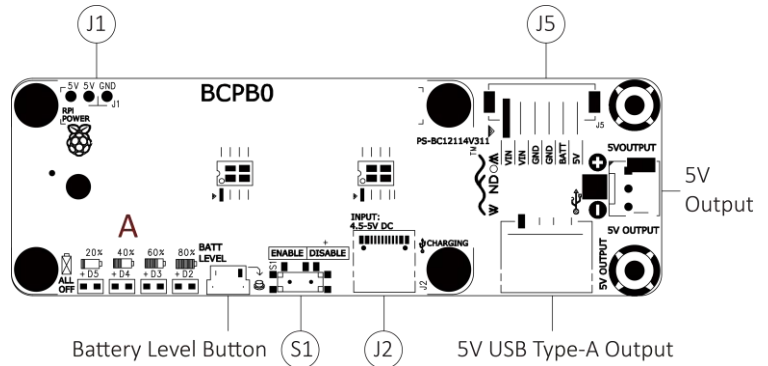
- DC5V USB Type-A Discharging Port
- DC5V Discharging Port
- J1 pogo pin-3POS-2.5mm for Powering Raspberry Pi

### Multi-Function Port:

- J5, JST PH-2mm-6Pos Port

for Charging, Discharging and 5V Output

Pin	Definition
1	VIN
2	VN
3	GND
4	GND
5	BATT
6	5V



### Discharging Control:

- S1

Status	Function
ENABLE	Enable Discharging
DISABLE	Stop Discharging

### LED Indicators (Position A) for Battery Level Status:

- Four LED indicators for battery level status
- Press Battery Level Button for checking battery level

When charging, corresponding LED indicator will be ON.



# Sure Electronics

**Make Your Audio Application Simple!**

NO.9, Weidi Road, Xianlin University City, Qixia District,  
Nanjing, Jiangsu Province, P.R.C

store.sure-electronics.com

www.wondom.com

Mail: store@sure-electronics.com

Skype: surewebstore