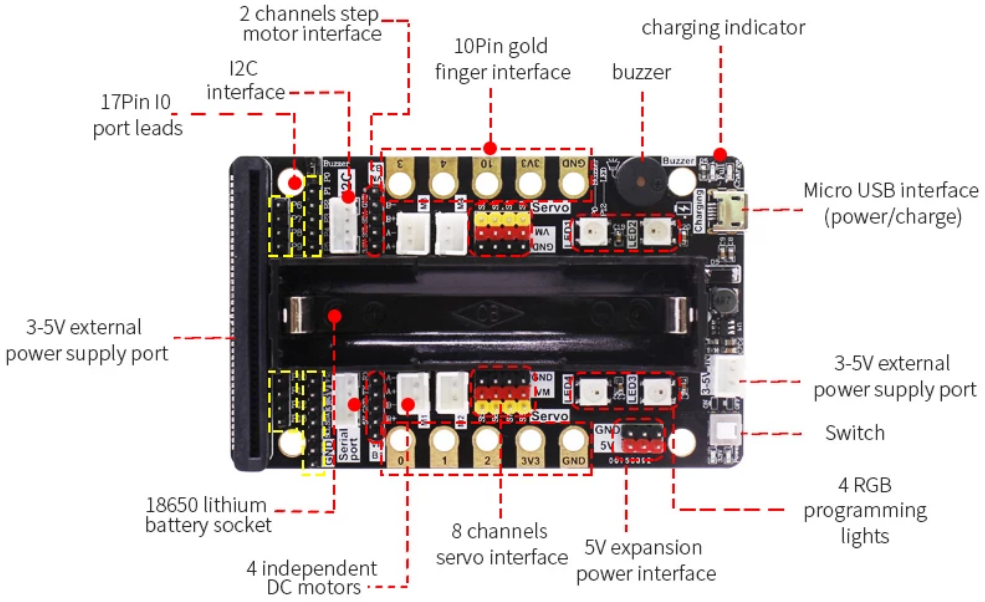
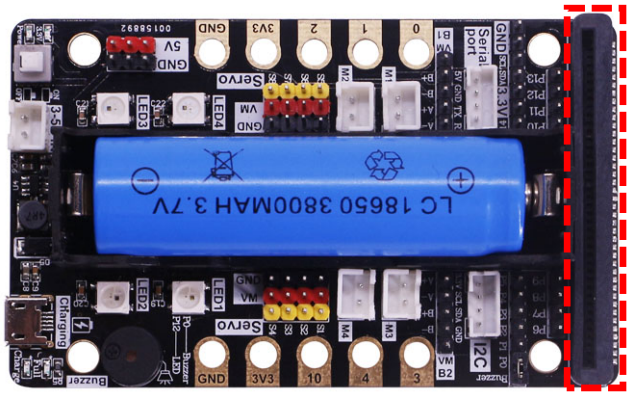
Introduction of Super:bit expansion board



MakeCode extension package: https://github.com/lzty634158/SuperBit

MakeCode extension package: https://github.com/lzty634158/Croco-Kit

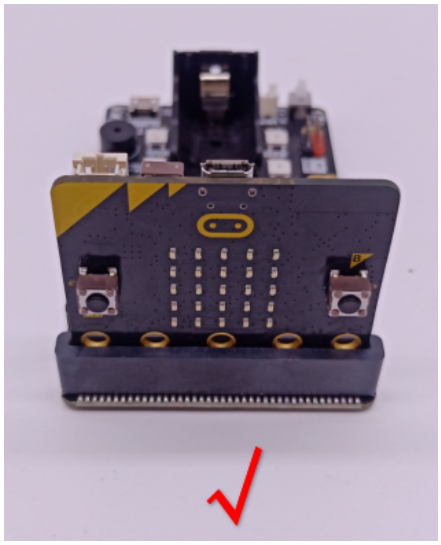
1. Micro:bit socket



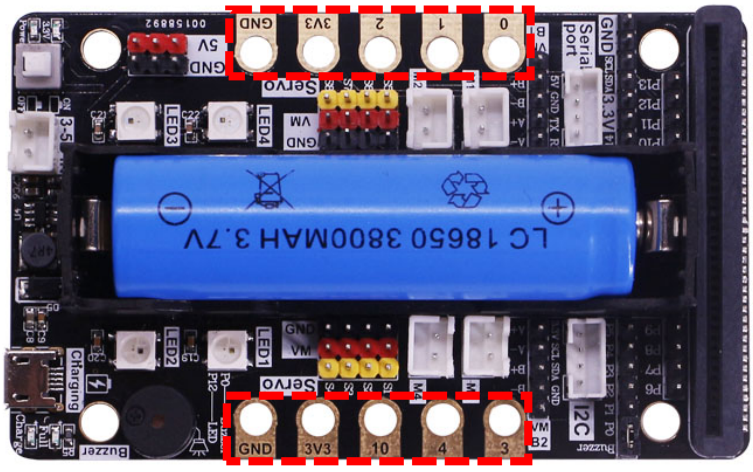
1-1 position

We can insert micro:bit board in here. As shown below.

！！！ Note: Direction of micro: bit board



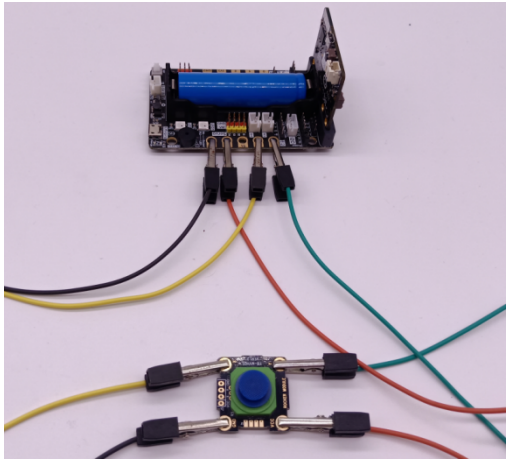
2. 10 pin gold finger interface



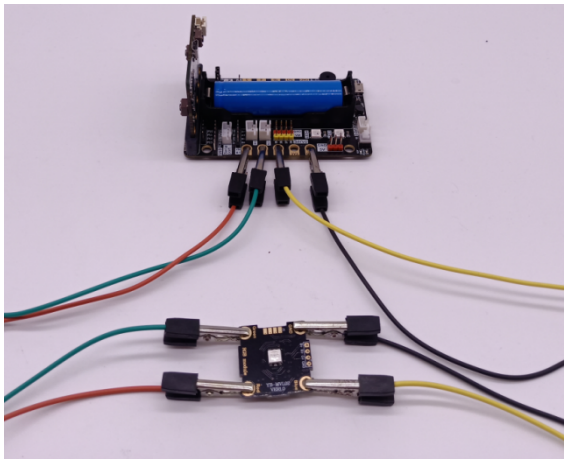
2-1 position

This crocodile clip interface is connect P0,P1,P2,P3,P4,P10,3.3V,GND.

We can connect some module with crocodile clip interface. As shown below(just for example)

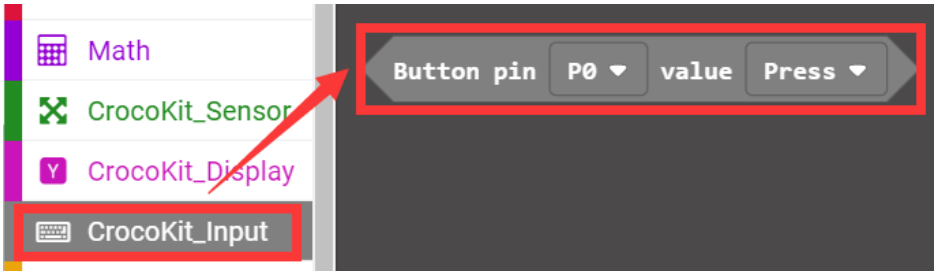


2-2 button module

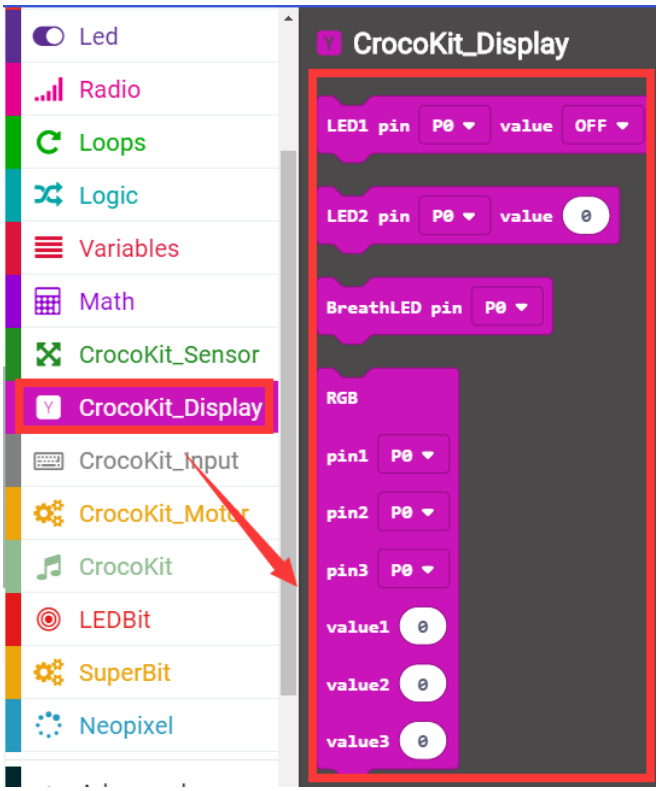


2-3 RGB light module

You need to add extension package: **https://github.com/lzty634158/Croco-Kit**, then you can use the following building blocks to control these modules.

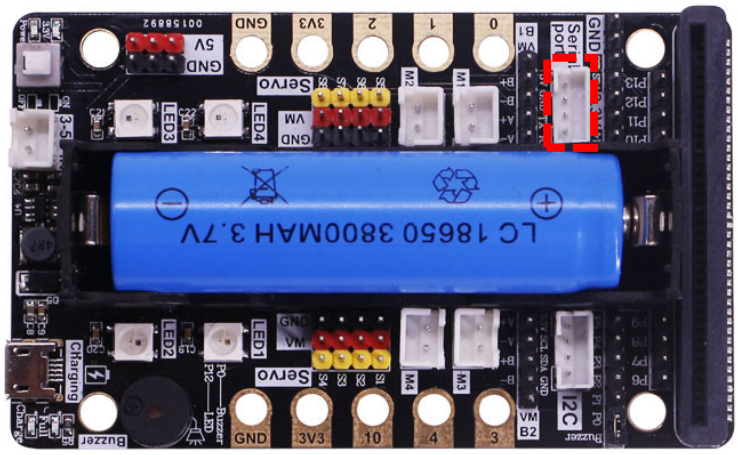


2-3-1 block



2-3-2 block

3. Serial Port

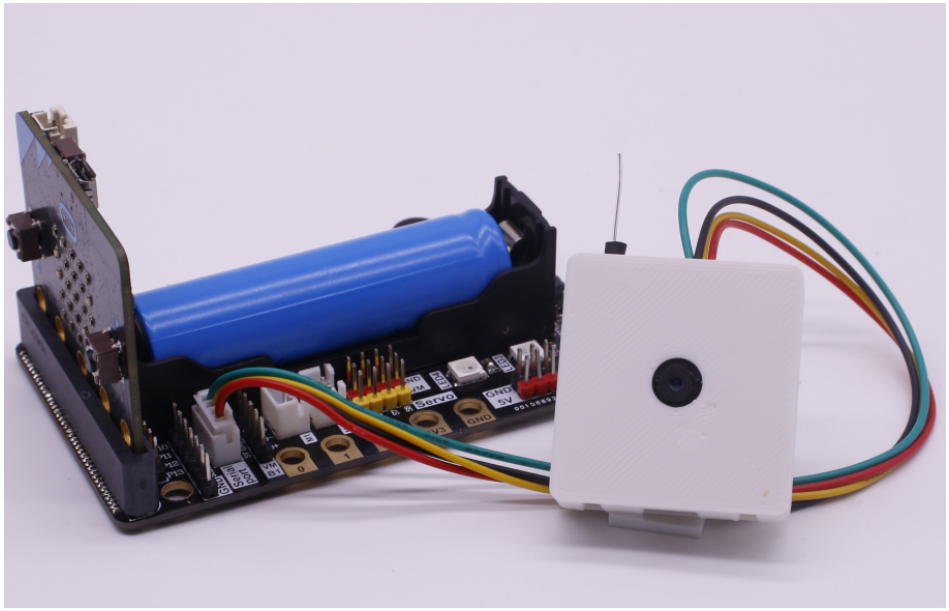


3-1 position

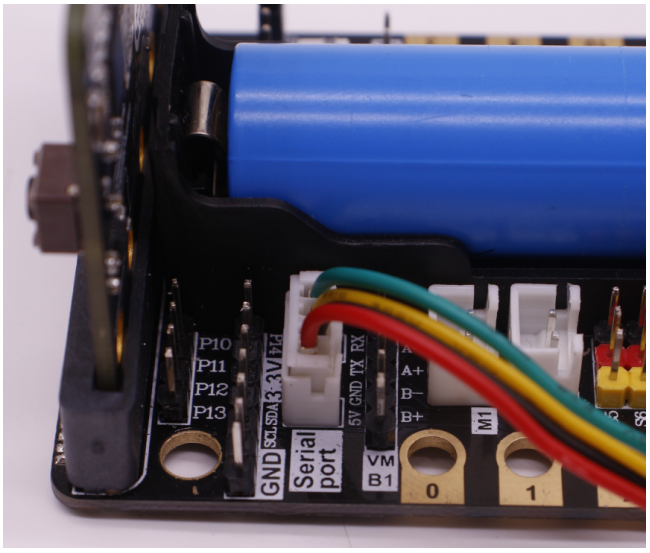
This interface possess 4 pin: 5v, GND, TX, RX. The type is PH2.0 4P.

You can connect some module with Serial port communication.(For example: Wifi camera)

As shown below.



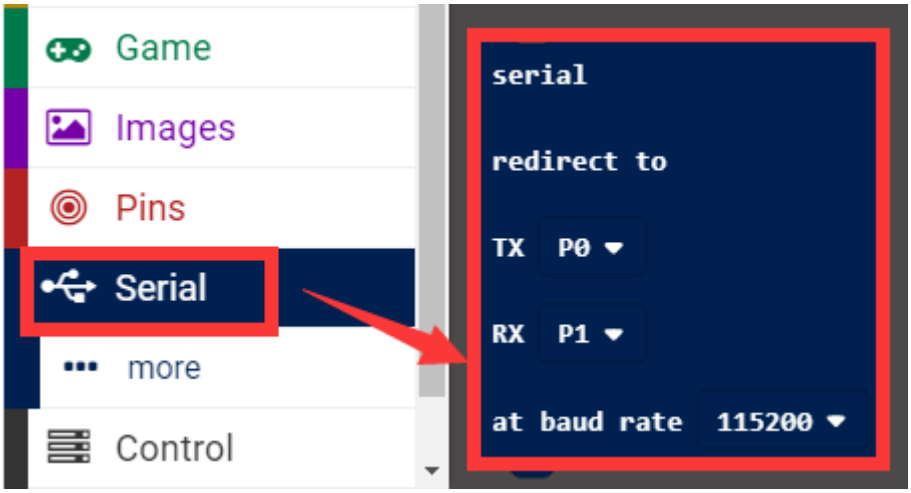
3-2-1 wiring



3-2-2 wiring

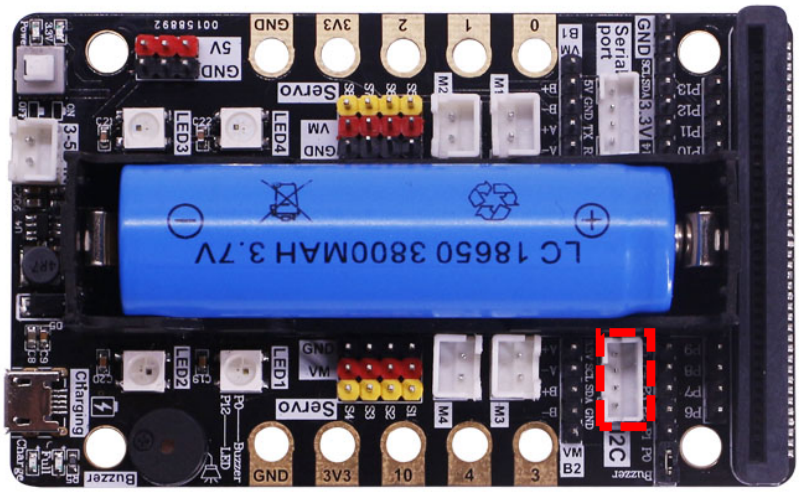
Micro:bit supports serial port redirection. If you want to use this serial port socket on the super:bit expansion board, Just set TX to P1 and RX to P2.

As shown below.



3-3 block

4. I2C Port

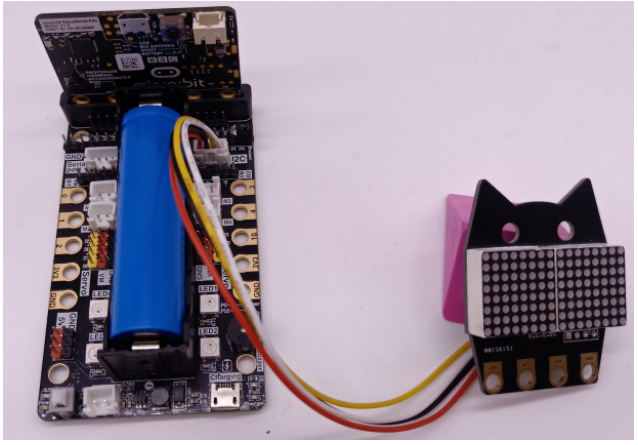


4-1 position

This interface possess 4 pin: 3.3v,SCL, SDA, GND. The type is PH2.0 4P.

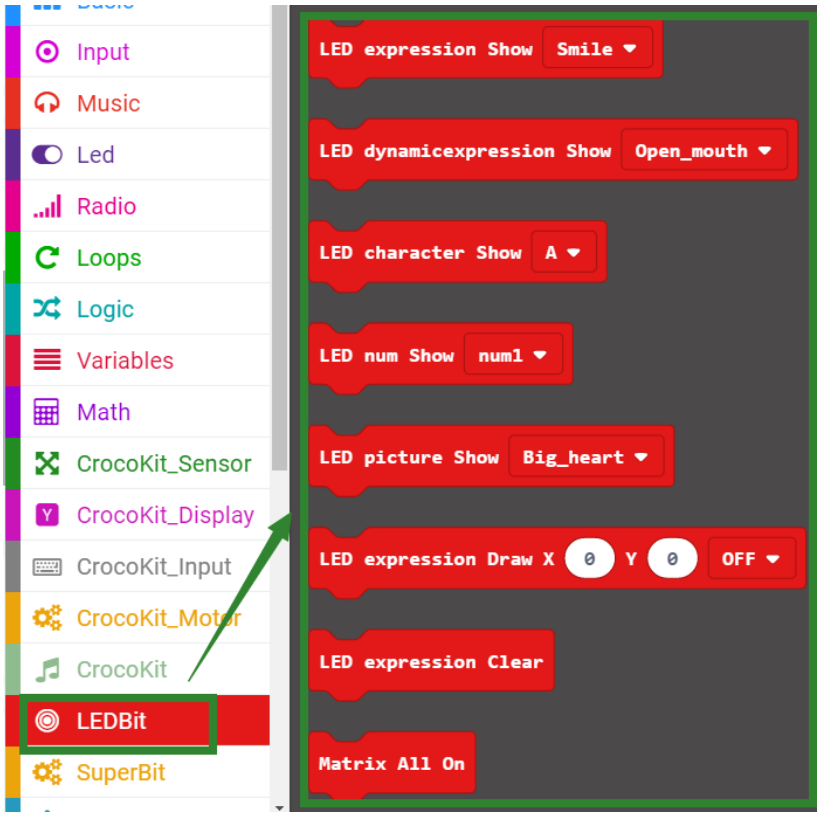
You can connect some module with I2C communication.

As shown below.



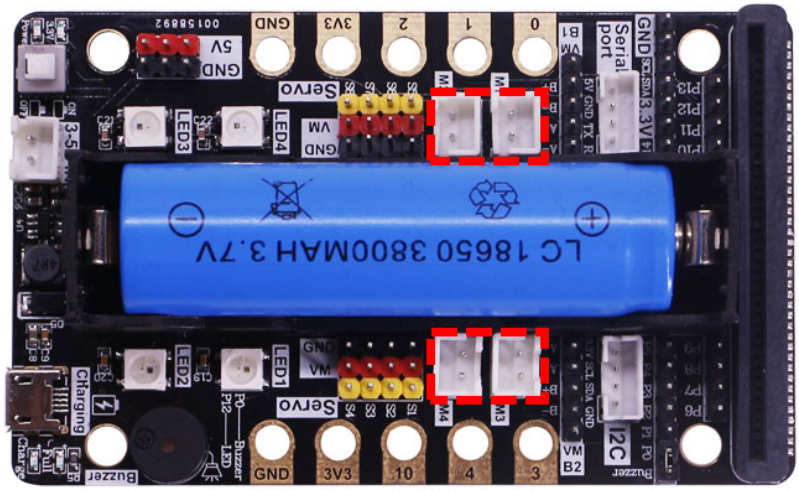
4-2 wiring

You need to add extension package: https://github.com/lzty634158/Croco-Kit, then you can use the following building blocks to control these modules.



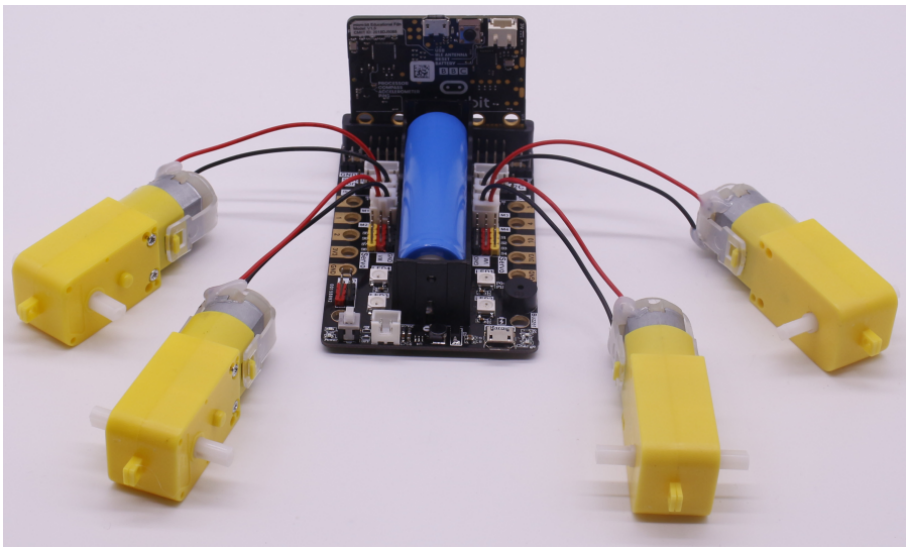
4-3 block

5. Motor interface

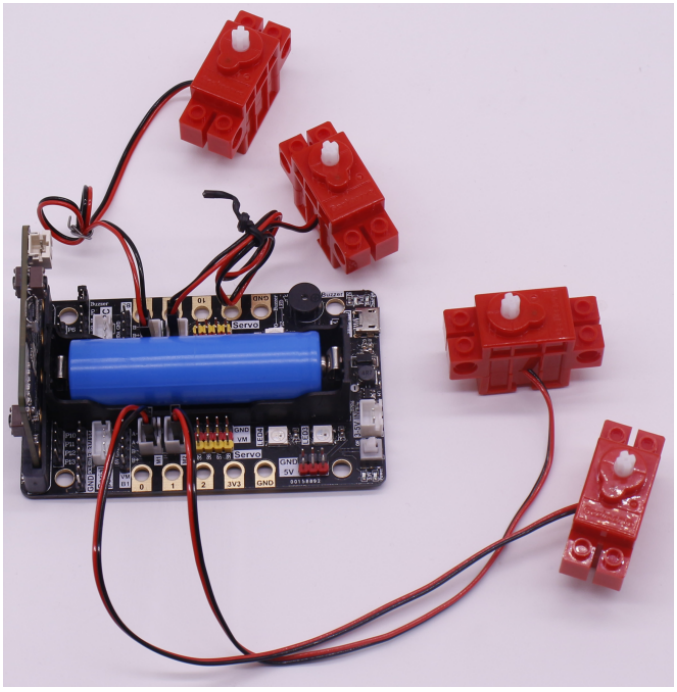


5-1 position

This interface can connect to TT DC motor or Building block motor.



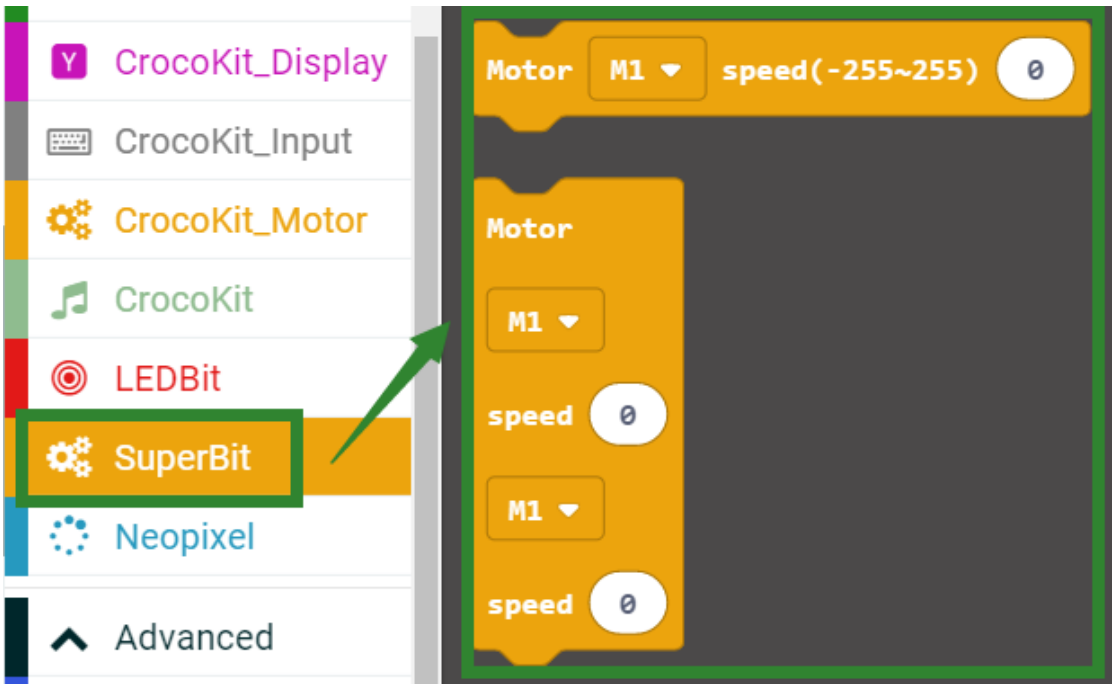
5-2-1 TT DC motor



5-2-2 building block motor

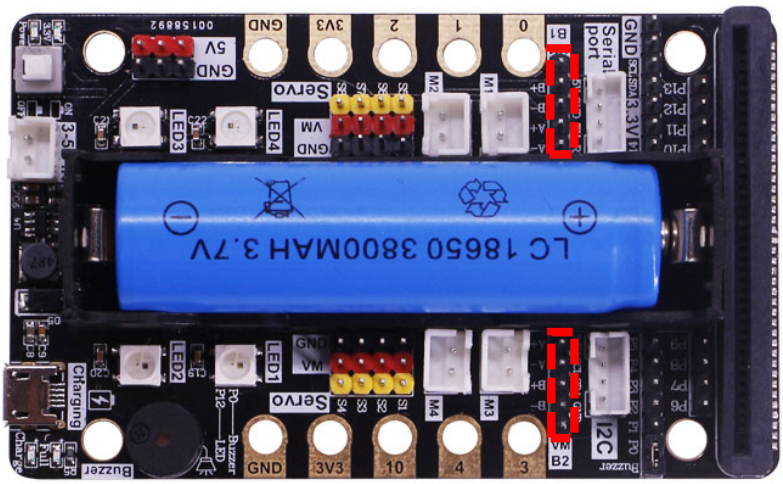
Note: The red line of the motor needs to be connected to +, The black line of the motor needs to be connected to -.

You need to add extension package: **https://github.com/lzty634158/SuperBit**, then you can use the following building blocks to control these motor.



5-3 block

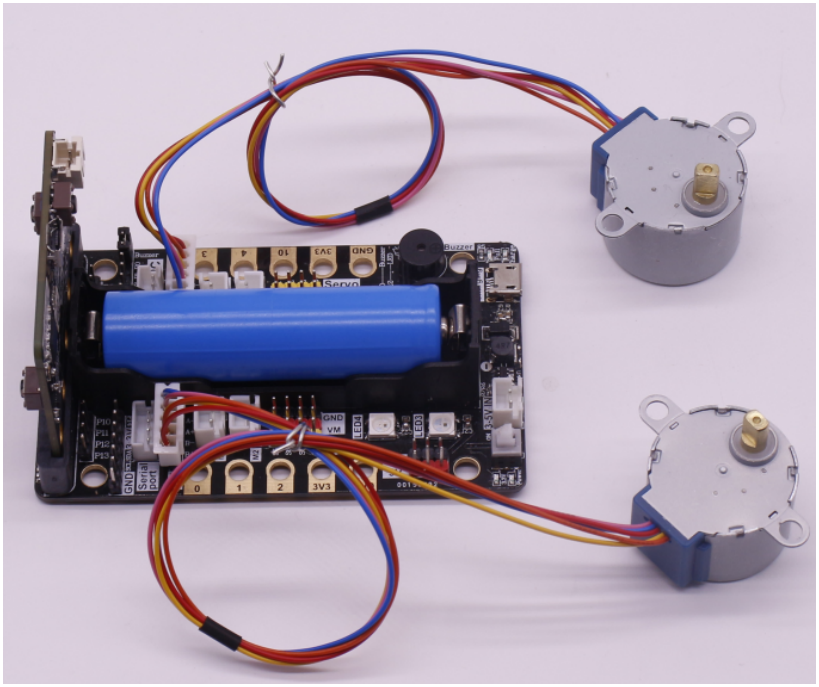
6. Stepper motor interface



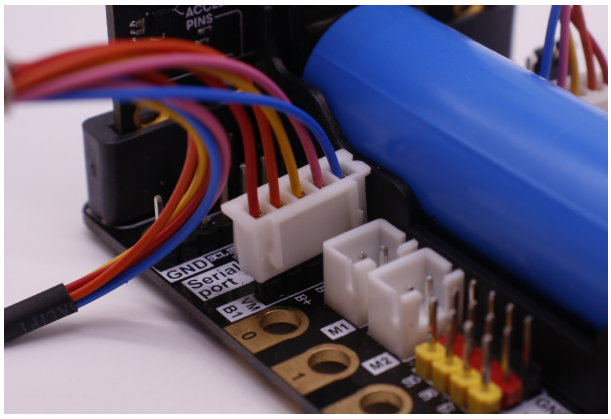
6-1 position

We can connect two stepper motor on this expansion board.

Note: Do not wire incorrectly.

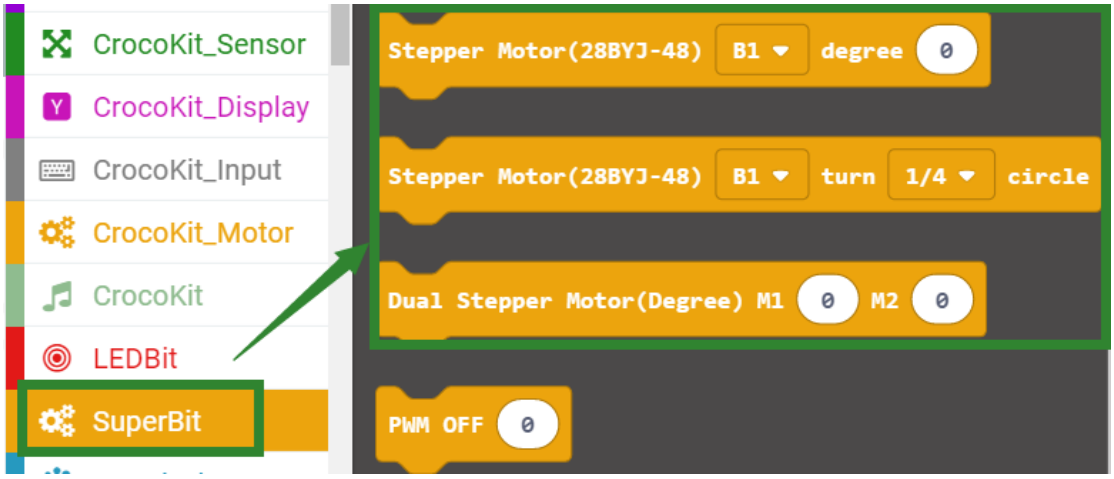


6-2-1 wiring



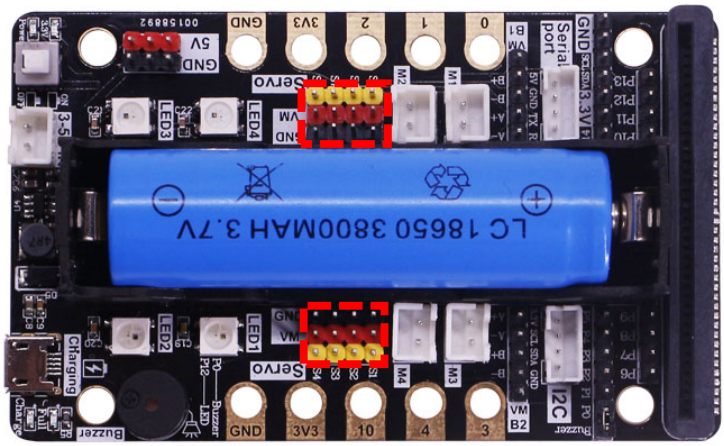
6-2-2 wiring

You need to add extension package: https://github.com/lzty634158/SuperBit, then you can use the following building blocks to control these stepper motor.



6-3 wiring

7. Servo interface



7-1 position

Super:bit expansion board possess 8 servo interfaces(3 pin) . It can connect servo or building block servo.

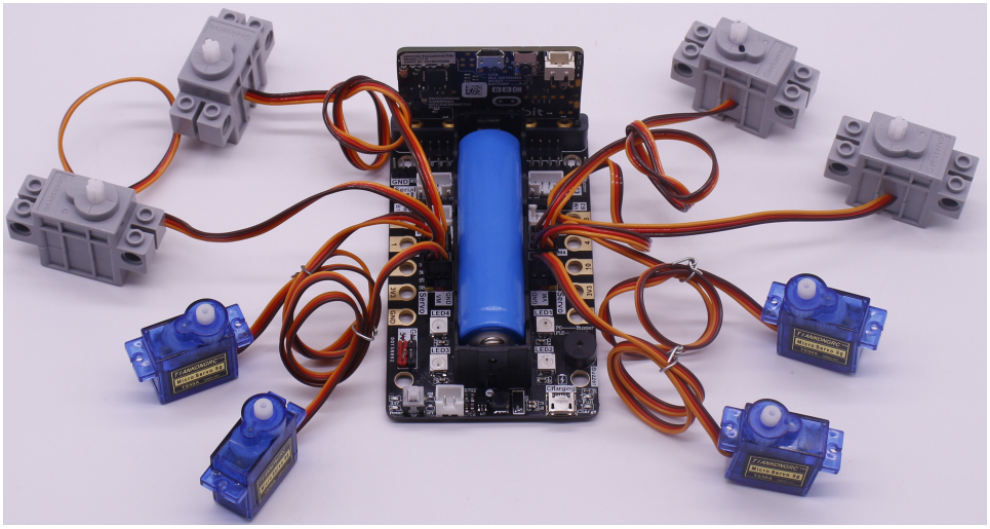
Note:

Red line of servo connect to red pin of servo interface on the super:bit expansion board.

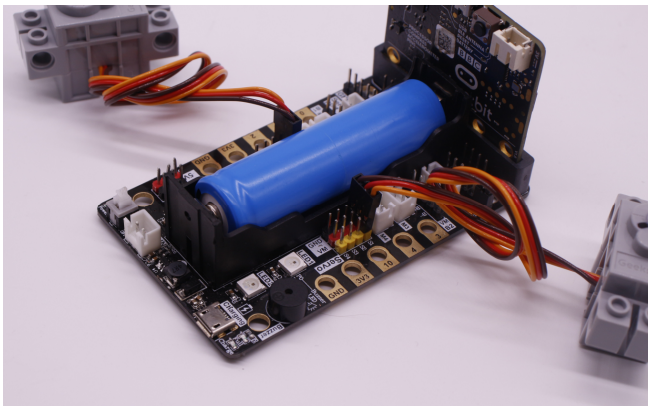
Orange line of servo connect to yellow pin of servo interface on the super:bit expansion board.

Brown line of servo connect to black pin of servo interface on the super:bit expansion board.

As shown below.

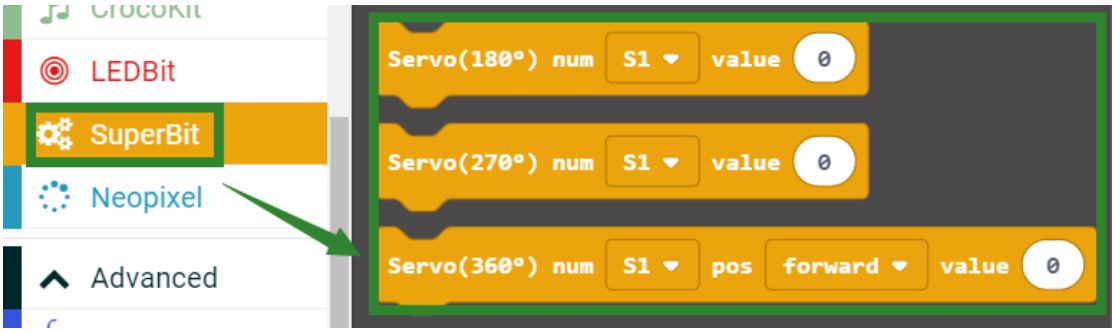


7-2-1 wiring



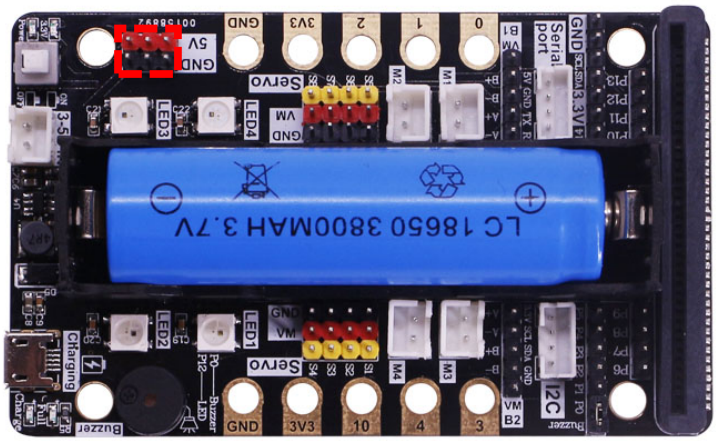
7-2-2 wiring

You need to add extension package: https://github.com/lzty634158/SuperBit, then you can use the following building blocks to control these servo.



7-3 block

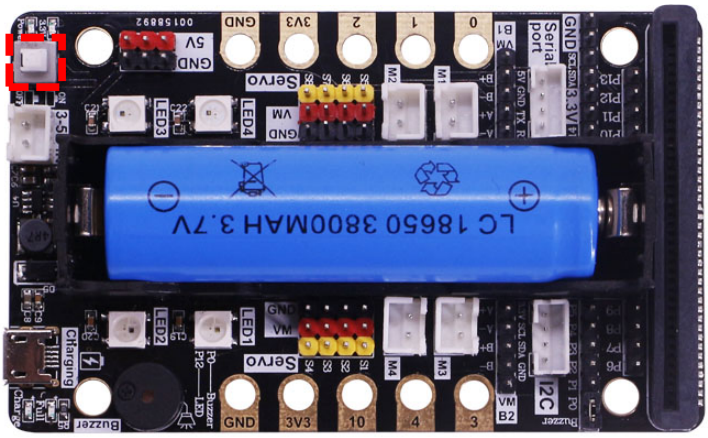
8. 5V/GND Pin header



8-1 position

This is 5v/GND interface, which can connect the DuPont line to power other sensor modules.

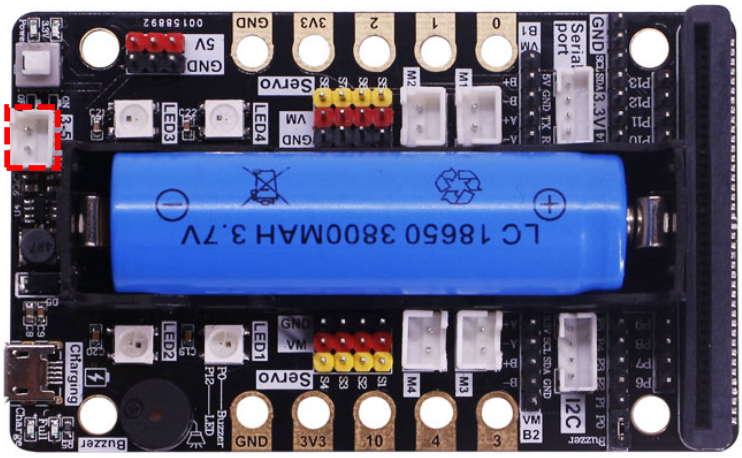
9. Power switch



9-1 position

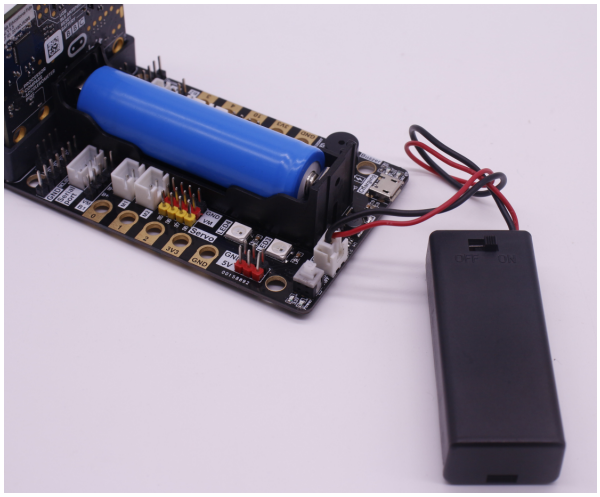
This is power switch of super:bit expansion board. When you want to use motor or servo, you must turn on this power switch to power supply .

10. 3V/5V external power supply port



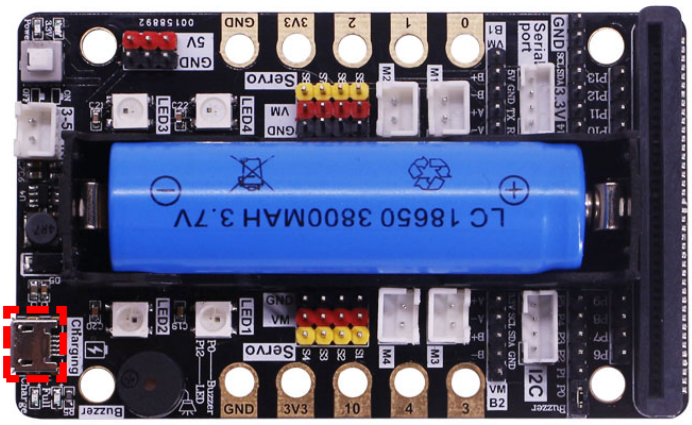
10-1 position

We can use this interface to power two AAA batteries.



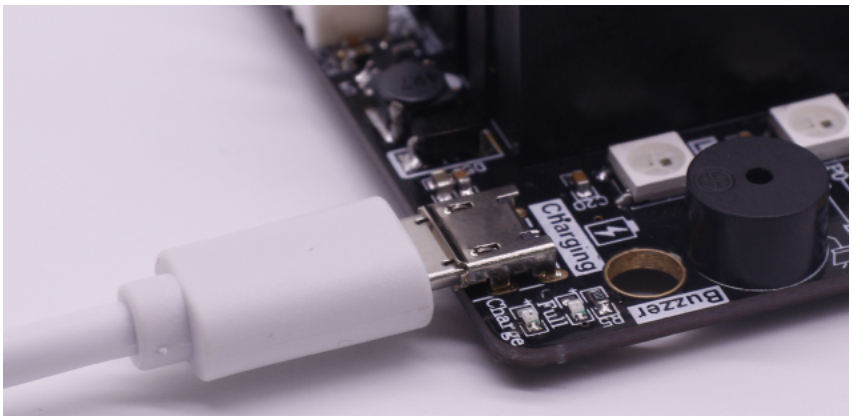
10-2 wiring

11. Charging port



11-1 position

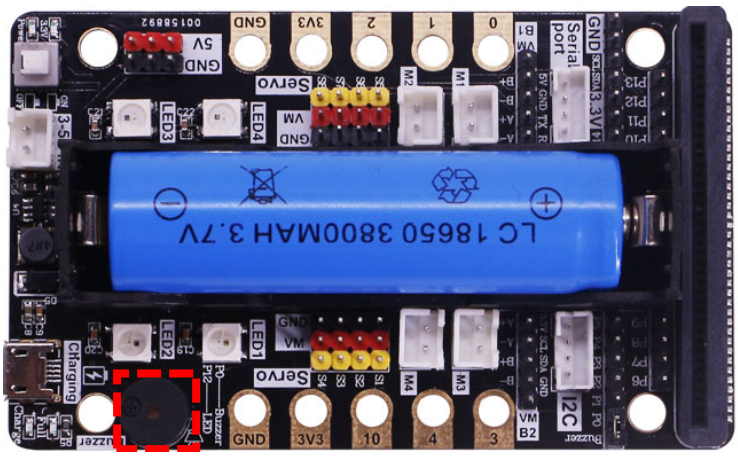
This is the interface for charging the 18650 battery. As shown below.



11-2 wiring

The other end of the charging cable needs to be connected to the USB interface of the computer.

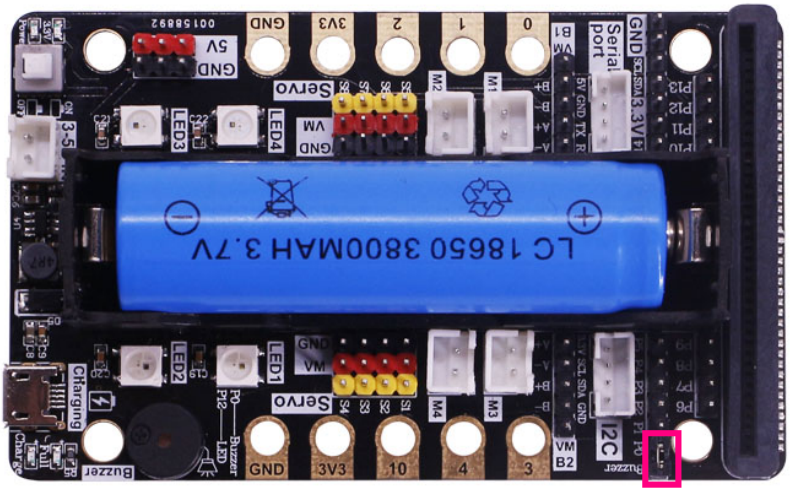
12. **Buzzer**



12-1 position

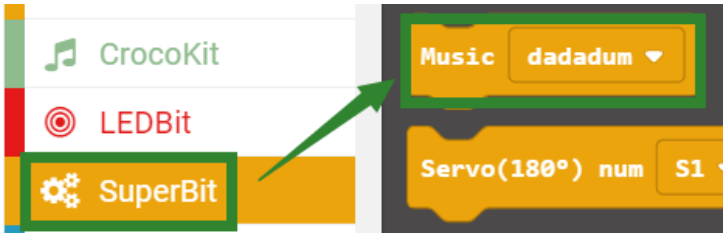
This is passive buzzer.

Note: If you want to use buzzer, you must connect this jumper cap. As shown below.



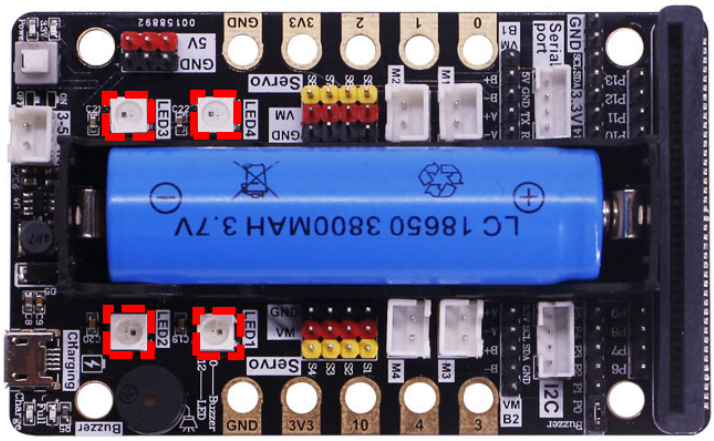
12-2 wiring

You need to add extension package: https://github.com/lzty634158/SuperBit, then you can make buzzer play music.



12-3 block

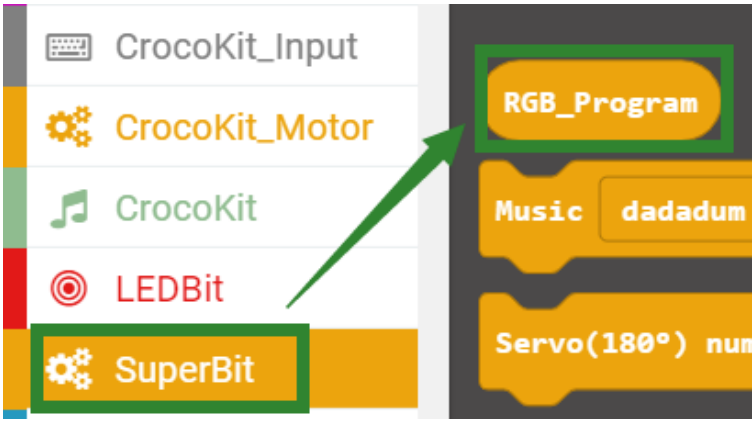
13. LED light



13-1 position

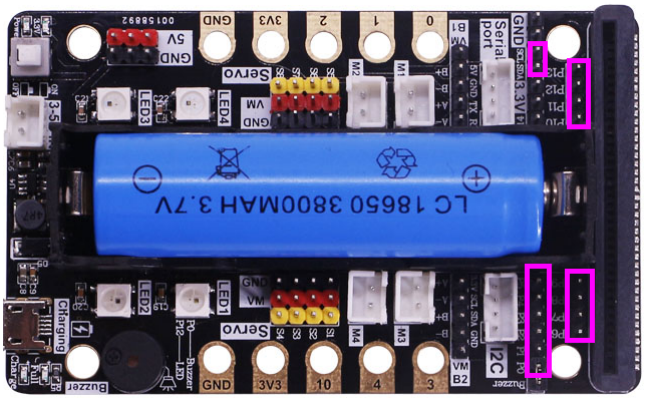
There are 4 LED light on the super:bit expansion board.

You need to add extension package: https://github.com/lzty634158/SuperBit, then you can control 4 LED light.



13-2 block

14. 17pin GPIO



14-1 position

We expand 17 pin header IO ports to support our sensor modules.

p0, p1,p2,p3,p4,p5,p6,p7,p8,p9,p10,p11,p12,p13,p14,SCL,SDA.