Micro:bit Mate a Mini & Thin Expansion Board

Overview

Micro: Mate is a tiny micro: bit I/O expansion board for learning electronics and building DIY projects.

Micro:Mate expands the microbit to 6 sets of 3-pin I/O interfaces, which is capable of connecting DFRobot Gravity series modules, servo motors, sensors and jumper wires. Additionally, Pin 8, 12, 16 support voltage switch between 3V-5V, allowing up to 5V 2A digital (PWM) output.

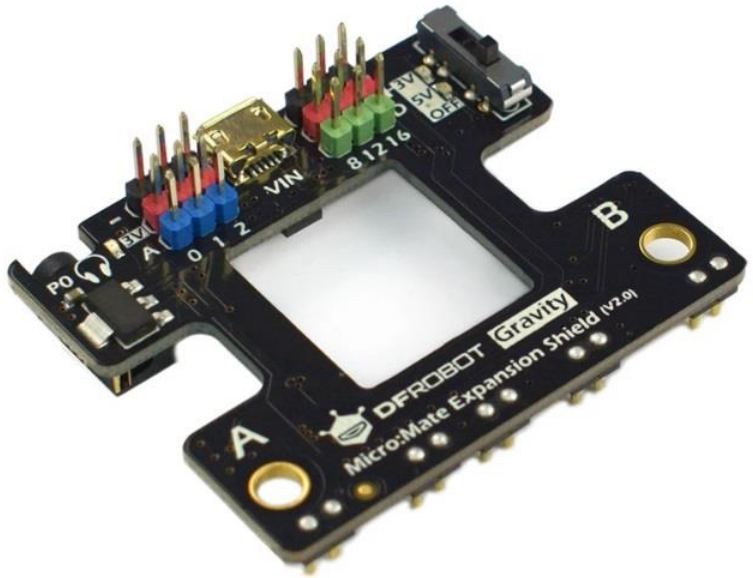
Micro:Mate is in the same dimension of micro: bit. It connects to micro: bit through contact pins (spring loaded), ensuring easy, compact and secure connection. The rubber bumpers and the 3.5mm audio jack on the back side keep the expansion installed stably on the board, with creating a reversed connection.

NOTE

The mounting screws should be well tightened to ensure a secure connection.

Micro: Mate only supports 3V (3.3V) analog input from Pin 0, 1, 2. The Micro USB Power port on Micro: Mate cannot be used for data transmission.

Components with large power consumption should be connected to Pin 8, 12, 16, with 5V power supply.



Order Code

Order Code	Brand	Description
E04004-001	DFRobot	Micro:bit Mate a Mini & Thin Expansion Board

Micro:bit Mate a Mini & Thin Expansion Board

Specification

- Interface: 6 x Gravity 3Pin
- Operating Voltage: 5V/3.3V
- Input Power: <10W
- Measuring Range: 0-3.3V (Analog), 0-5V (Digital):
- Dimension: 68.5 * 53.3mm
- Weight: 22.8g

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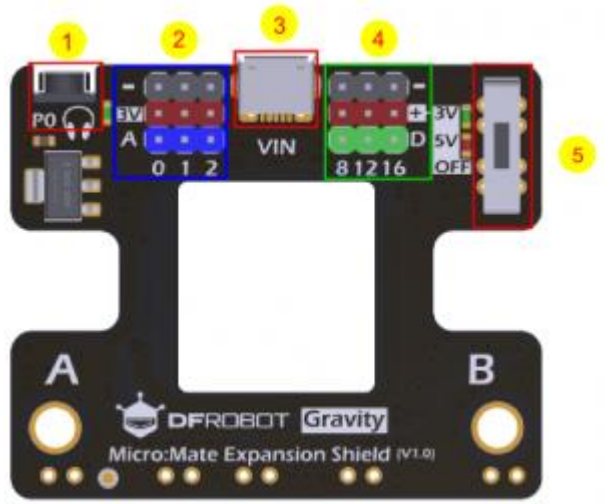
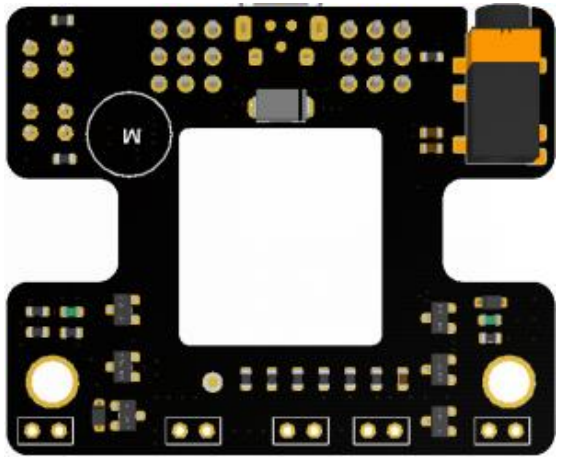
Board Overview

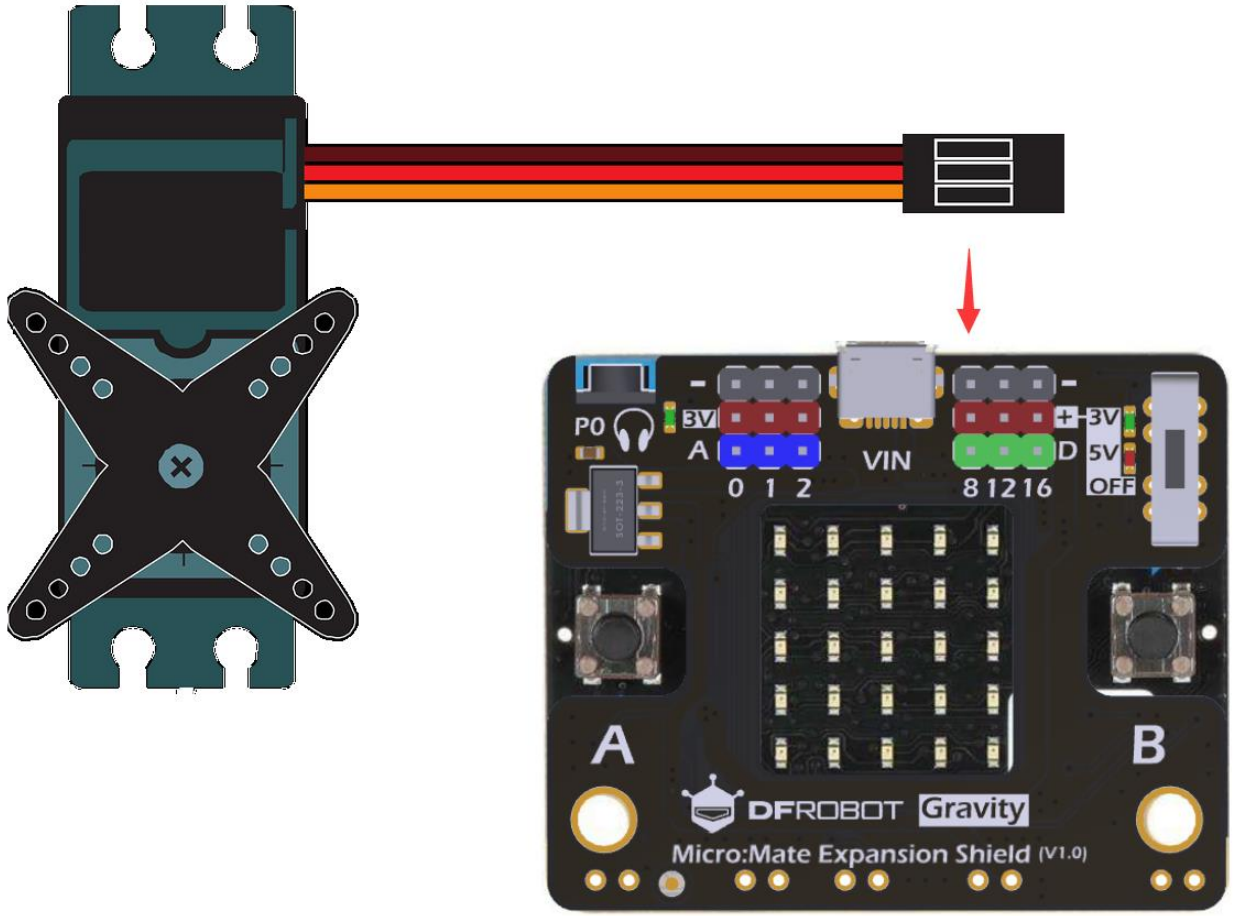




Number	Name	Description
1	Audio Jack	3.5mm Audio Jack
2	I/O Pin	Gravity series compatiable (3V only)
3	External USB power port	External power supply, does not support program uploading
4	I/O Pin	Gravity series compatiable (3V and 5V)
5	Voltage switch	Switch between 3V, 5V(Pin 8,12,16 only) and OFF

Servo control tutorial

- MakeCode Block Editor/ JavaScript Editor / BXY Python Editor
- Expected Results: The Servo turns back and forth from 0-180 degrees every 4 seconds



Servo control tutorial

- Microsoft MakeCode Editor

Servo control tutorial

- Microsoft MakeCode JavaScript Editor

```
basic.forever(() => {
    basic.pause(1000)
    pins.servoWritePin(AnalogPin.P8, 0)
    basic.pause(1000)
    pins.servoWritePin(AnalogPin.P8, 90)
    basic.pause(1000)
    pins.servoWritePin(AnalogPin.P8, 180)
    basic.pause(1000)
    pins.servoWritePin(AnalogPin.P8, 90)
})
```

Servo control tutorial

- BXY micro:bit Python editor

```
 #http://docs.dfrobot.com.cn/bxy/examples/servo.html
from microbit import *
import Servo
sv=Servo(pin8)
while True:
  sv.angle(0)
  sleep(1000)
  sv.angle(90)
  sleep(1000)
  sv.angle(180)
  sleep(1000)
  sv.angle(90)
  sleep(1000)
```

Revision History

Date	Revision	Change description
30/10/2025	1.0	Initial release