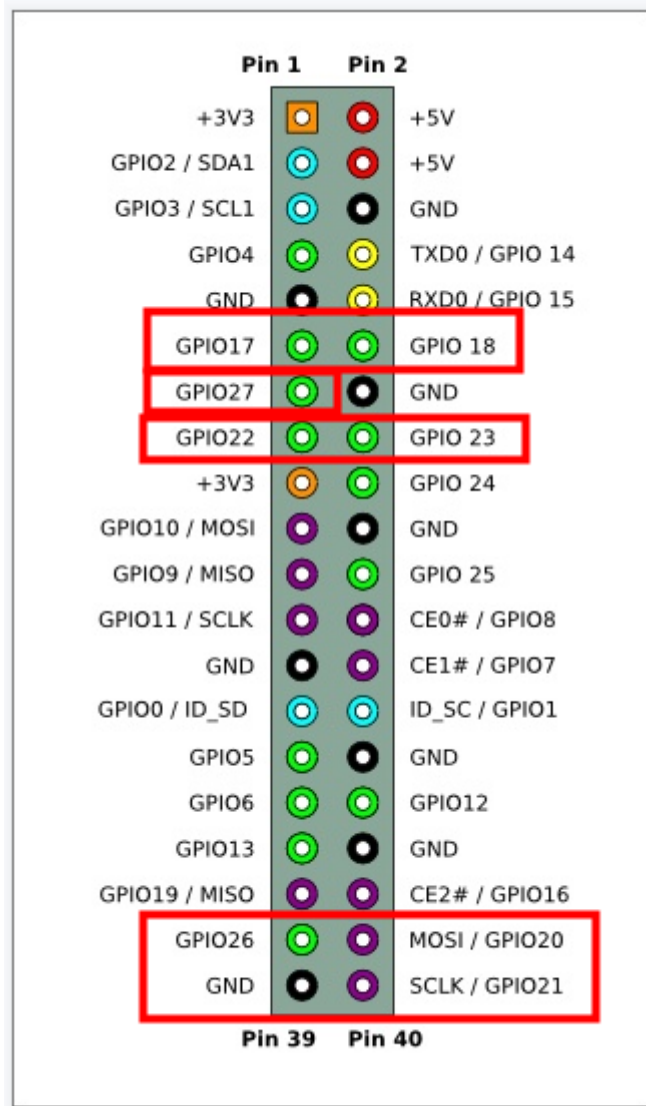


RaspberryPi

1. Preparation

Connect the motor drive board and Raspberry Pi according to the wiring diagram, connect the battery to the power input interface on motor drive module.



Note: The motor interface wire sequence of the dual motor drive board should correspond to the motor pin! Otherwise, the motor drive plate will be damaged.

Note: The motor interface wire sequence of the dual motor drive board.

Pin details					
Interface type	Pin name	Pin description	Interface type	Pin name	Pin description
MCU/ host interface	E1A	Motor 1 Hall signal A	Motor port	AO1	Motor 1 power supply+
	E1B	Motor 1 Hall signal B		AO2	Motor 1 power supply-
	E2A	Motor 2 Hall signal A		GND	GND
	E2B	Motor 2 Hall signal B		3V3	Motor 1 Hall power supply
	ADC	Collect VM input voltage		E1B	Motor 1 Hall signal B
	5V	Output 5V3A power supply		E1A	Motor 1 Hall signal A
	GND	GND		BO1	Motor 2 power supply+
	3V3	Output 3.3V voltage		BO2	Motor 2 power supply-
	AIN1	Motor 1 drive signal 1		GND	GND
	AIN2	Motor 1 drive signal 2		3V3	Motor 2 Hall power supply
	BIN1	Motor 2 drive signal 1		E2B	Motor 2 Hall signal B
	BIN2	Motor 2 drive signal 2		E2A	Motor 2 Hall signal A

2. Code

```
import RPi.GPIO as GPIO    #Import Library
import time

GPIO.setmode(GPIO.BCM)    #Set pin

AIN1 = 17
AIN2 = 18
BIN1 = 22
BIN2 = 23

GPIO.setwarnings(False)    #Remove warning
GPIO.setup(AIN1, GPIO.OUT)  #Pin set to output
p1 = GPIO.PWM(AIN1, 50)    #50 is the frequency of 50 Hz
p1.start(0)

GPIO.setup(AIN2, GPIO.OUT)
p2 = GPIO.PWM(AIN2, 50)
p2.start(0)

GPIO.setup(BIN1, GPIO.OUT)
p3 = GPIO.PWM(BIN1, 50)
p3.start(0)

GPIO.setup(BIN2, GPIO.OUT)
p4 = GPIO.PWM(BIN2, 50)
p4.start(0)
```

The rotation speed of the motor can be changed by changing the value in the brackets. The value range is 0~100

```
def forward(time_sleep): #Forward for a few seconds
```

```
    p1.start(0)
    p2.start(50)
    p3.start(0)
    p4.start(50)
    time.sleep(time_sleep)
```

```
def stop(): #Stop it
```

```
    p1.start(0)
    p2.start(0)
    p3.start(0)
    p4.start(0)
```

```
spin_count = 0
```

```
spin_count2 = 0
```

```
E1A = 20 #Set pin
```

```
E1B = 21
```

```
E2A=26
```

```
E2B=27
```

```
GPIO.setmode(GPIO.BCM)
```

```
GPIO.setup(E1B, GPIO.IN, pull_up_down=GPIO.PUD_UP)
```

```
GPIO.setup(E1A, GPIO.IN, pull_up_down=GPIO.PUD_UP)
```

```
GPIO.setup(E2B, GPIO.IN, pull_up_down=GPIO.PUD_UP)
```

```
GPIO.setup(E2A, GPIO.IN, pull_up_down=GPIO.PUD_UP)
```

```
def my_callback(channel): #Callback function
```

```
    global spin_count
```

```
    if GPIO.input(E1A):
```

```
        if not GPIO.input(E1B):
```

```
            spin_count += 1
```

```
        elif GPIO.input(E1B):
```

```
            spin_count -= 1
```

```
    print(spin_count)
```

```
def my_callback2(channel):
```

```
    global spin_count2
```

```
    if GPIO.input(E2A):
```

```
        if not GPIO.input(E2B):
```

```
            spin_count2 += 1
```

```
        elif GPIO.input(E2B):
```

```
            spin_count2 -= 1
```

```
    print(spin_count2)
```

```
GPIO.add_event_detect(E1A, GPIO.RISING, callback=my_callback)
```

```
GPIO.add_event_detect(E2A, GPIO.RISING, callback=my_callback2)
```

```
forward(5) #Forward rotation for 5s
```

```
stop() #Stop it
```

3. Experimental result

Run the program, the motor drive board drives the two-way motor to rotate for 5s, and the terminal prints the speed of the motor.