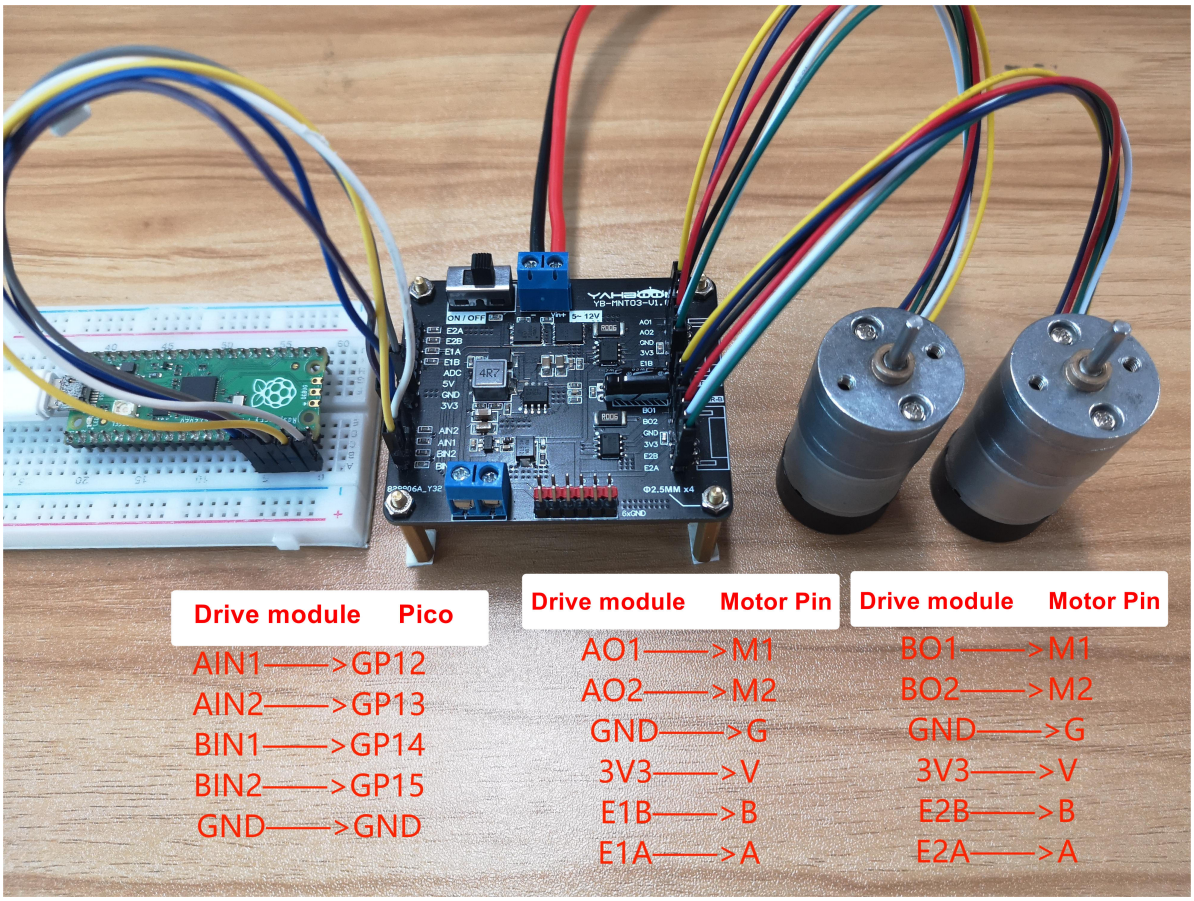
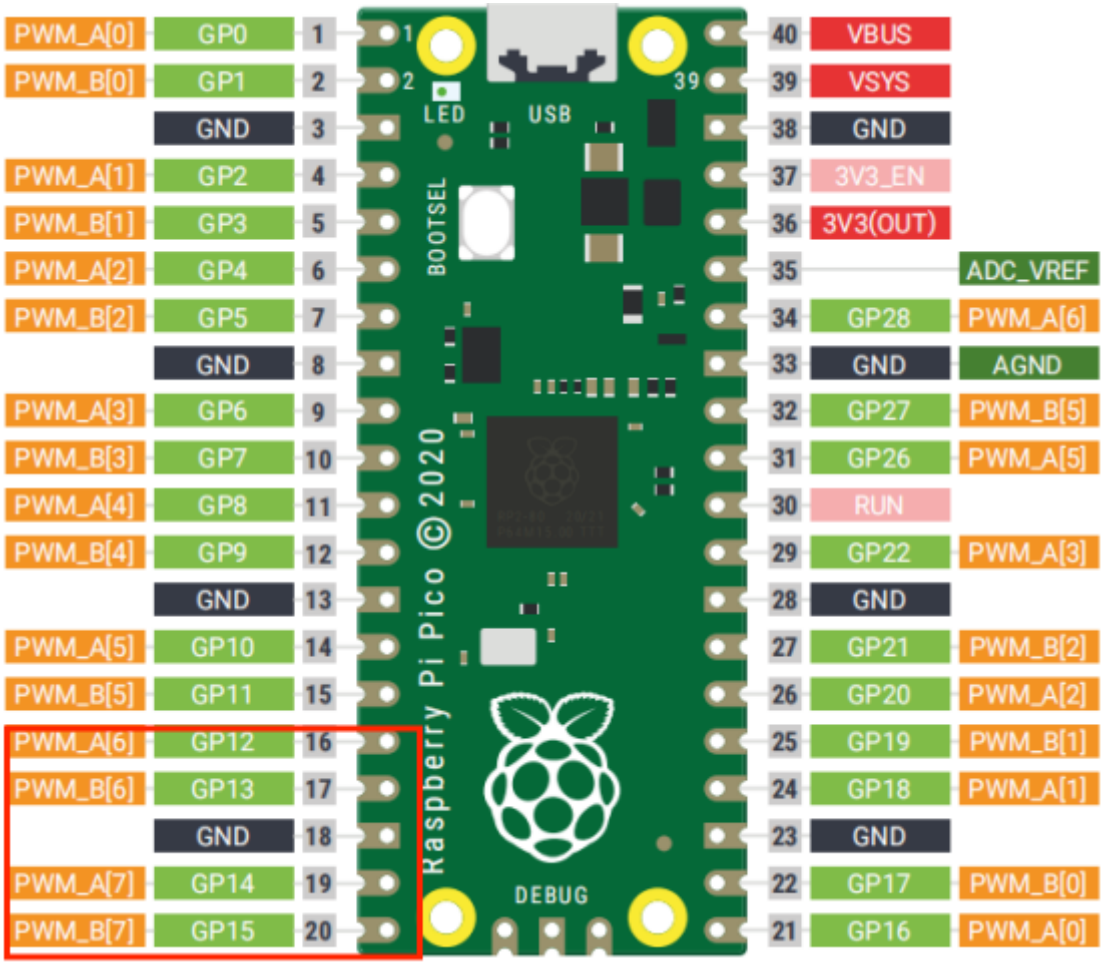
RaspberryPi Pico

1. Preparation

Connect the motor drive board and Raspberry Pi Pico 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 utime  #Import Library
from machine import Pin, PWM
AIN1 = PWM(Pin(12))  #Set pin
AIN2 = PWM(Pin(13))
BIN1 = PWM(Pin(14))
BIN2 = PWM(Pin(15))
AIN1.freq(500)#Set AIN1 frequency
AIN2.freq(500)#Set frequency
BIN1.freq(500)#Set frequency
BIN2.freq(500)#Set frequency
#Set duty cycle PWM_PulseWidth[i]/65535(i=0~4): 100%,75%,50%,25%,0%
#PWM_PulseWidth= [65535,49151,32767,16383,0]
def forward(i):
    AIN1.duty_u16(i)#The motor rotates according to the set duty ratio
    AIN2.duty_u16(0)
    BIN1.duty_u16(i)
    BIN2.duty_u16(0)
def stop():  #Motor stop
    AIN1.duty_u16(0)
    AIN2.duty_u16(0)
    BIN1.duty_u16(0)
    BIN2.duty_u16(0)
def test(): #Test function, set the duty cycle to 49151, that is, 75%. Customers
can set it according to their needs
    forward(49151)
    utime.sleep(4)
    stop()

test()#Run the test program, and the drive motor stops after 4s
```

3. Experimental result

Download the program to Raspberry Pi Pico. The motor starts to rotate for 4s, and then stops rotating.