L9110 Fan Module
(000x0000 Article Number)
(TS2165)

DESIGN THE WORLD

Product Details

The TelePort L9110 fan module which can use the L9110 driving chip to control the rotation direction and speed of the motor. It can put out the fire within 20cm.

Features and Benefits

- Compatible with RJ11 6P6C OKdo TelePort Control boards and expansion shields.
- Based on the L9110 motor drive chip making it easy to control fan speed with precision.
- Ideal for use in aerial propelled vessels, cooling systems, a spinning machine or simply as a fan.

Technical Specifications

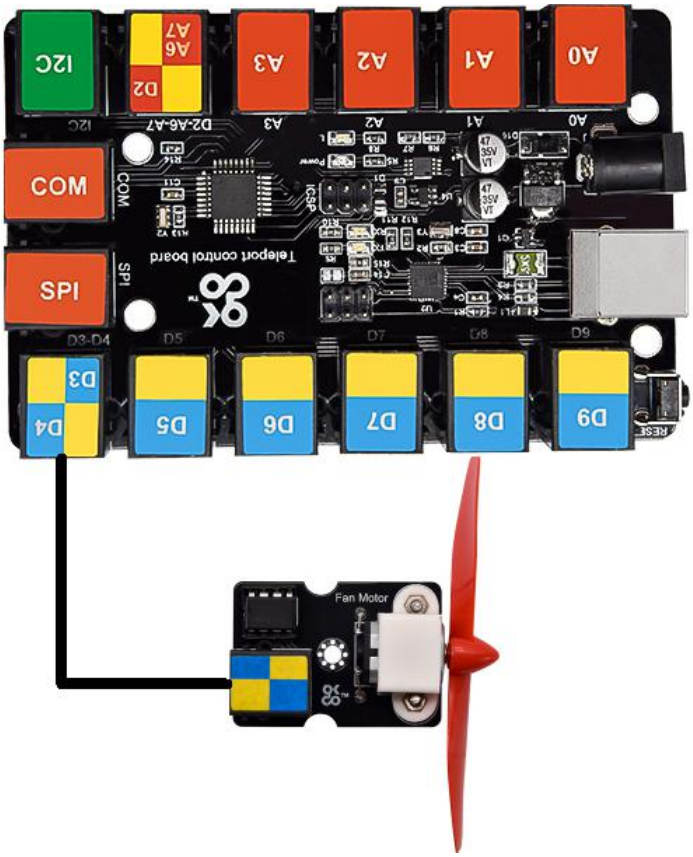
Sensor type	Digital output
Working voltage	3.3V-5V
Fan diameter	75mm
Interface	double digital
Dimensions	50mm*75mm*18mm
Weight	14.2g

Applications

- Extinguish robots
- Fans
- Airscrew

This module is compatible with the TS2180-Raspberry Pi shield, the TS2179-Micro:bit shield and the TS2178-TelePort main board.

➢ **Arduino Application、**



This module is compatible with the TS2178 TelePort control board.

Test Code

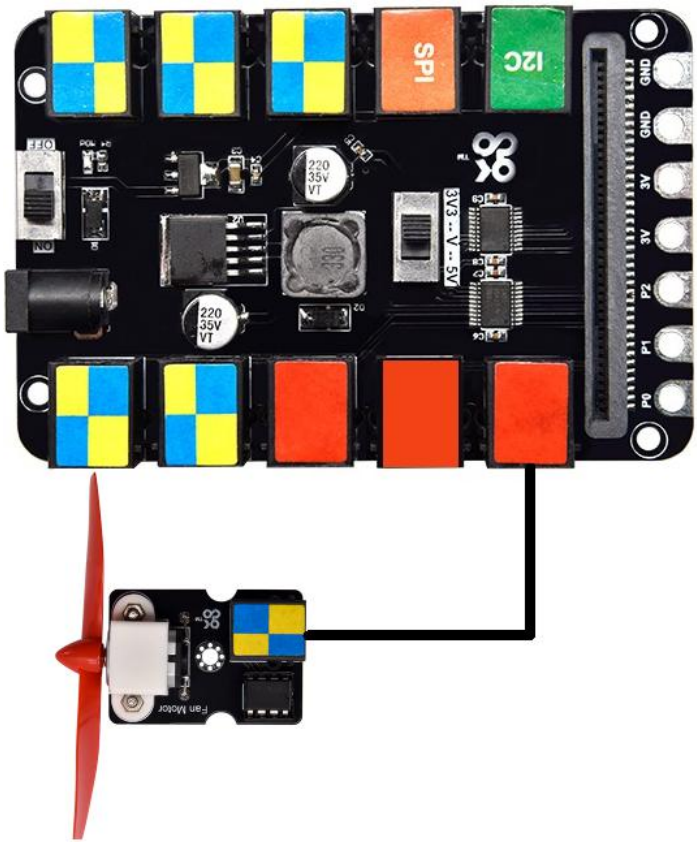
```
int INA = 3;
int INB = 4;
void setup()
{
pinMode(INA,OUTPUT);
pinMode(INB,OUTPUT);
}
void loop()
{
analogWrite(INA, 255);
digitalWrite(INB,LOW);
delay(5000);
digitalWrite(INA,LOW);
digitalWrite(INB,LOW);
delay(200);
digitalWrite(INA,LOW);
analogWrite(INB, 255);
delay(5000);
digitalWrite(INA,LOW);
digitalWrite(INB,LOW);
delay(200);
}
```

Test Result

Wire up, upload code and power it up.
Then the fan will rotate clockwise for 5s, stop for 0.2s, then counter-clockwise for 5s and stop for 0.2s; constantly

If you want to know more details about Arduino and the TelePort control board, you can refer to TS2178.

➢ Micro:bit Application



This module is compatible with the Micro:bit board and the TS2179 Micro:bit expansion board.

Test Code

.....①Run the "on start" block to boot the program
.....②the LED matrix of the Micro:bit is turned off
.....③use the subfunction forward speed1
.....④set P0 to low level(0)
.....⑤set the analog value of P1 to speed1
.....⑥use the subfunction reversal speed2
.....⑦set P1 to low level(0)
.....⑧set the analog value of P0 to speed2

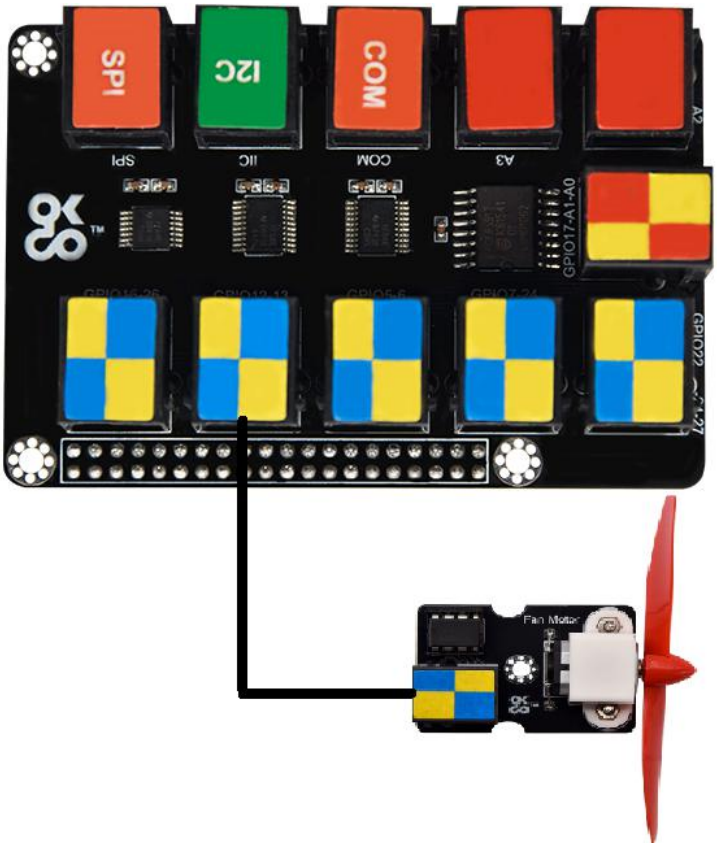
.....⑨ subfunction stop
.....⑩set P0 to low level
.....⑪set P1 to low level(0)
.....⑫The program is run circularly under the command of "forever" block
.....⑬use the subfunction forward, the speed is 800
.....⑭delay in 1000ms
.....⑬use the subfunction stop, stop
.....⑭delay in 2000ms
.....⑮use the subfunction reversal, speed is 500
.....⑯delay in 1000ms
.....⑰use the subfunction stop
.....⑱delay in 2000ms

Test Result

Wire up, insert the Micro:bit V2.0, upload test code and turn DIP switches to 5V and ON end and power it up. Then the fan will rotate clockwise for 1s, stop for 2s; anticlockwise for 1s and stop for 2s, circularly.

If you want to know more details about the Micro:bit board and Micro:bit shield, you can refer to TS2179.

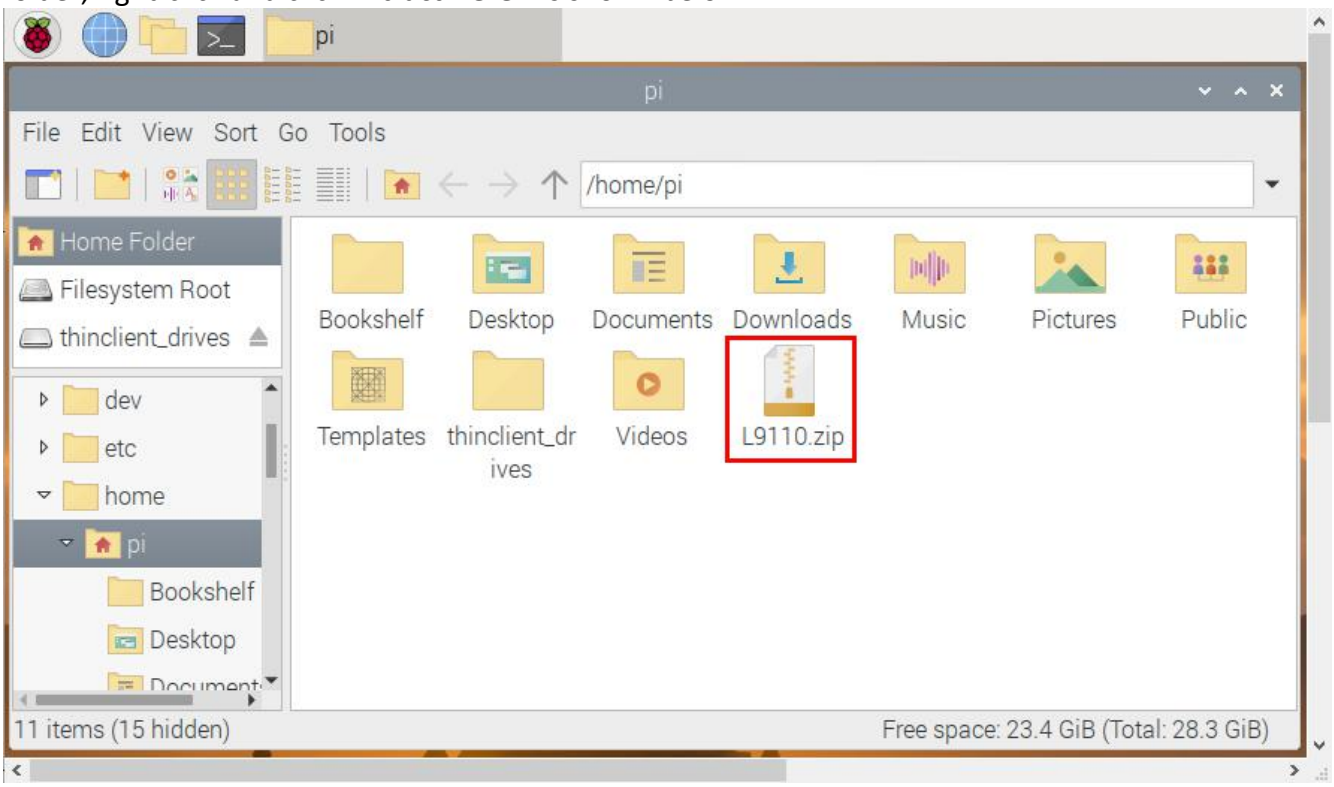
➢ **Raspberry Pi Application**

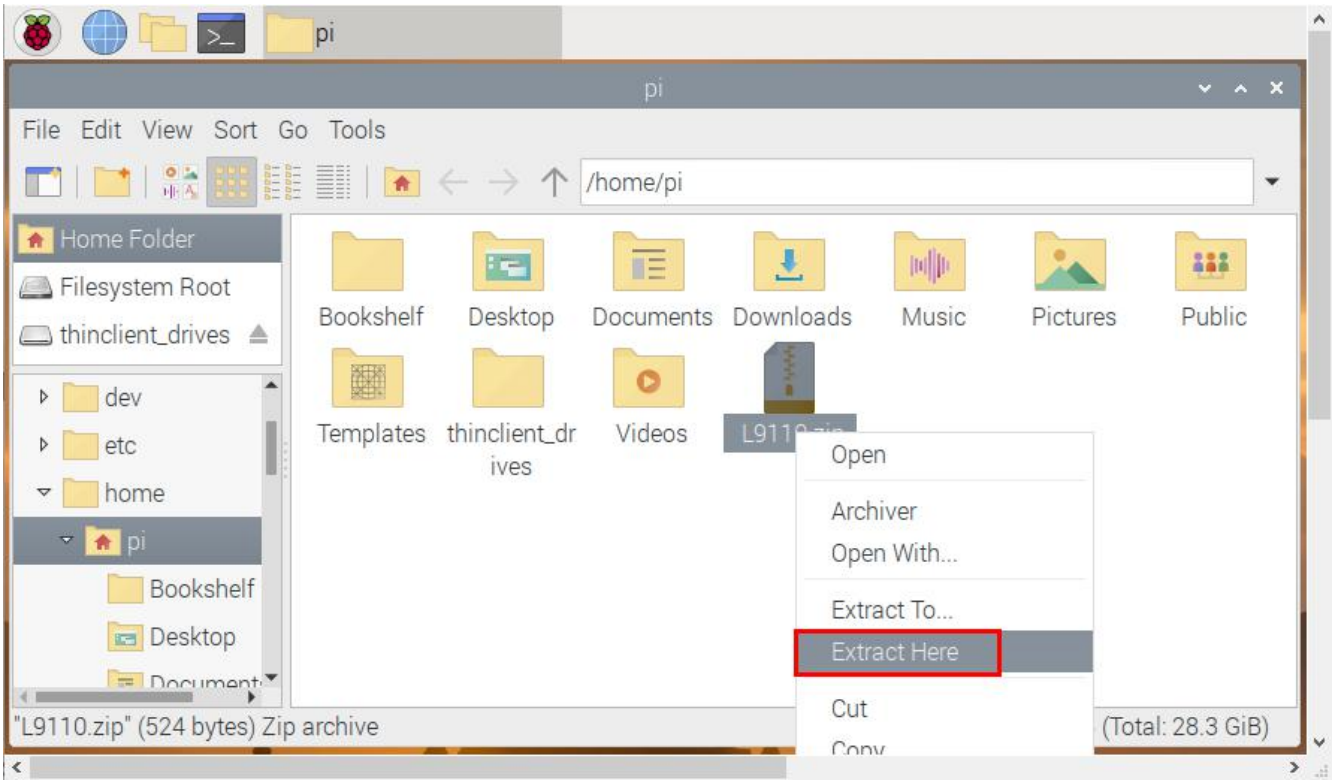


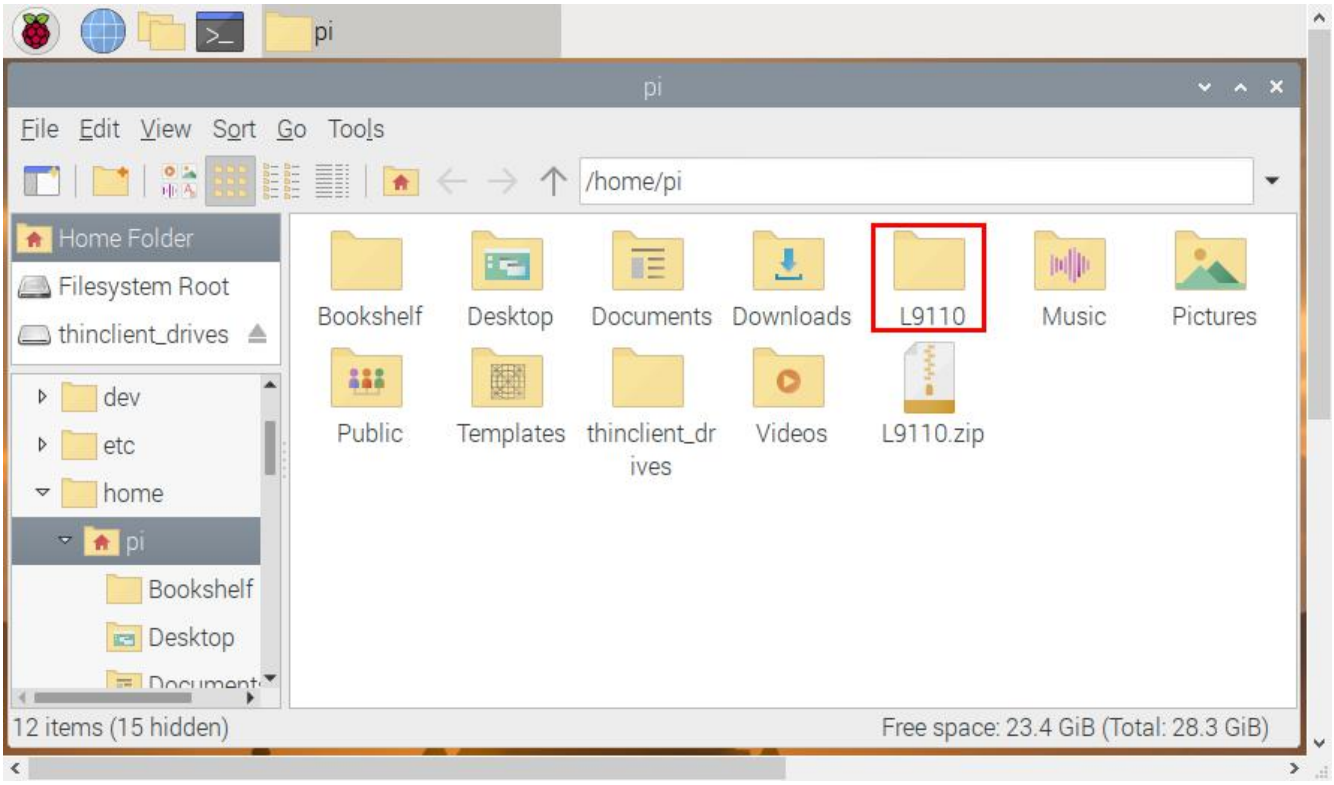
This module is compatible with the Raspberry Pi board and the TS2180 Raspberry Pi shield.

Copy the test code to Raspberry Pi system to run it

Save the test code in the **pi** folder of Raspberry Pi system. Then place the **L9110.zip** file we provide in the **pi** folder, right-click and click **Extract Here.** As shown below:







(1) Compile and run test code:

Input the following code and press“Enter”

```
cd /home/pi/L9110
gcc L9110.c -o L9110 -lwiringPi
sudo ./L9110
```

(3) Test Result：

Insert the shield into the Raspberry Pi board. After programming finishes, the fan will rotate clockwise for 5s, stop for 0.5s; counter-clockwise for 5s and stop for 0.5s; circularly.

Note: press Ctrl + C to exit code running

Test Code

File name: L9110.c

```
#include <wiringPi.h>
#include <stdio.h>

#define INA 26  // BCM GPIO 12
#define INB 23 // BCM GPIO 13

int main()
{
 wiringPiSetup();  //Initialize wiringPi

 pinMode(INA,OUTPUT);  //set the INA OUTPUT mode
 pinMode(INB,OUTPUT);  //set the INB OUTPUT mode

 while(1)
 {
     digitalWrite(INA,HIGH);
     digitalWrite(INB,LOW);
     delay(5000);      //delay 5s
     digitalWrite(INA,LOW);
     digitalWrite(INB,LOW);
     delay(500);
     digitalWrite(INA,LOW);
     digitalWrite(INB,HIGH);
     delay(5000);      //delay 5s
     digitalWrite(INA,LOW);
     digitalWrite(INB,LOW);
     delay(500);
 }
}
```

If you want to know how to utilize Raspberry Pi and the Raspberry Pi shield, you can refer to TS2180.

END