

# L298P Motor Shield

L298P Shield DC motor driver use high-power motor driver dedicated chip L298P, can directly drive 2 DC motors, the drive current up to 2A. The motor output interfaces use 8 high-speed Schottky diodes as protect. It can be directly plugged into the Arduino.

L298P Shield DC motor driver with PWM speed control mode and the PLL mode, using jumper to switch.

## Parameters:

Logical input voltage  $V_D$ : 5V

Drive input voltage:  $V_{IN}$  6.5 - 12V, PWR IN 4.8 - 24V

Logical working current  $I_{SS}$ :  $\leq 36\text{mA}$

Drive working current  $I_O$ :  $\leq 2\text{A}$

Maximum power dissipation: 25W ( $T=75^\circ\text{C}$ )

Control signal input electric level:

High level:  $2.3\text{V} \leq V_{in} \leq 5\text{V}$

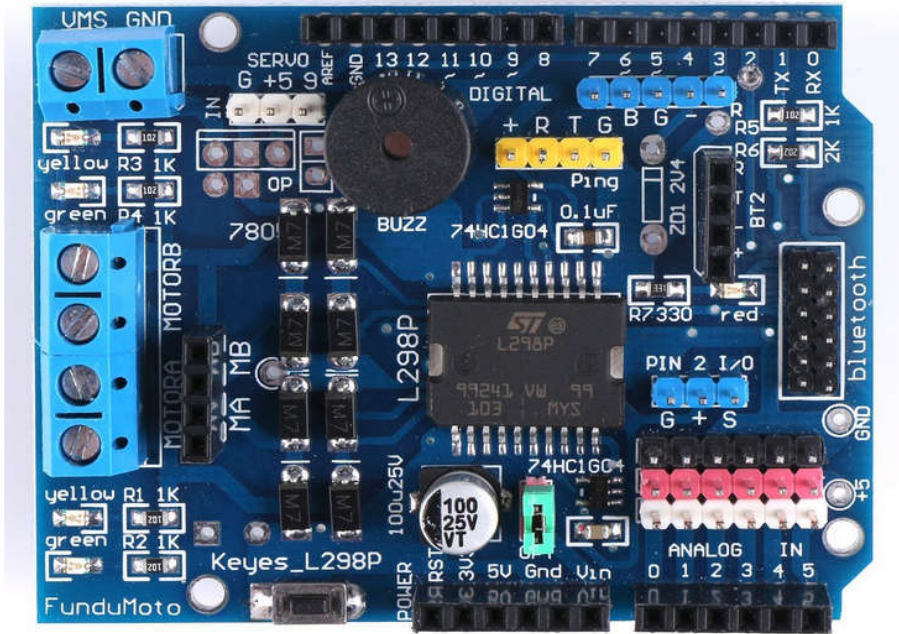
Low level:  $-0.3\text{V} \leq V_{in} \leq 15\text{V}$

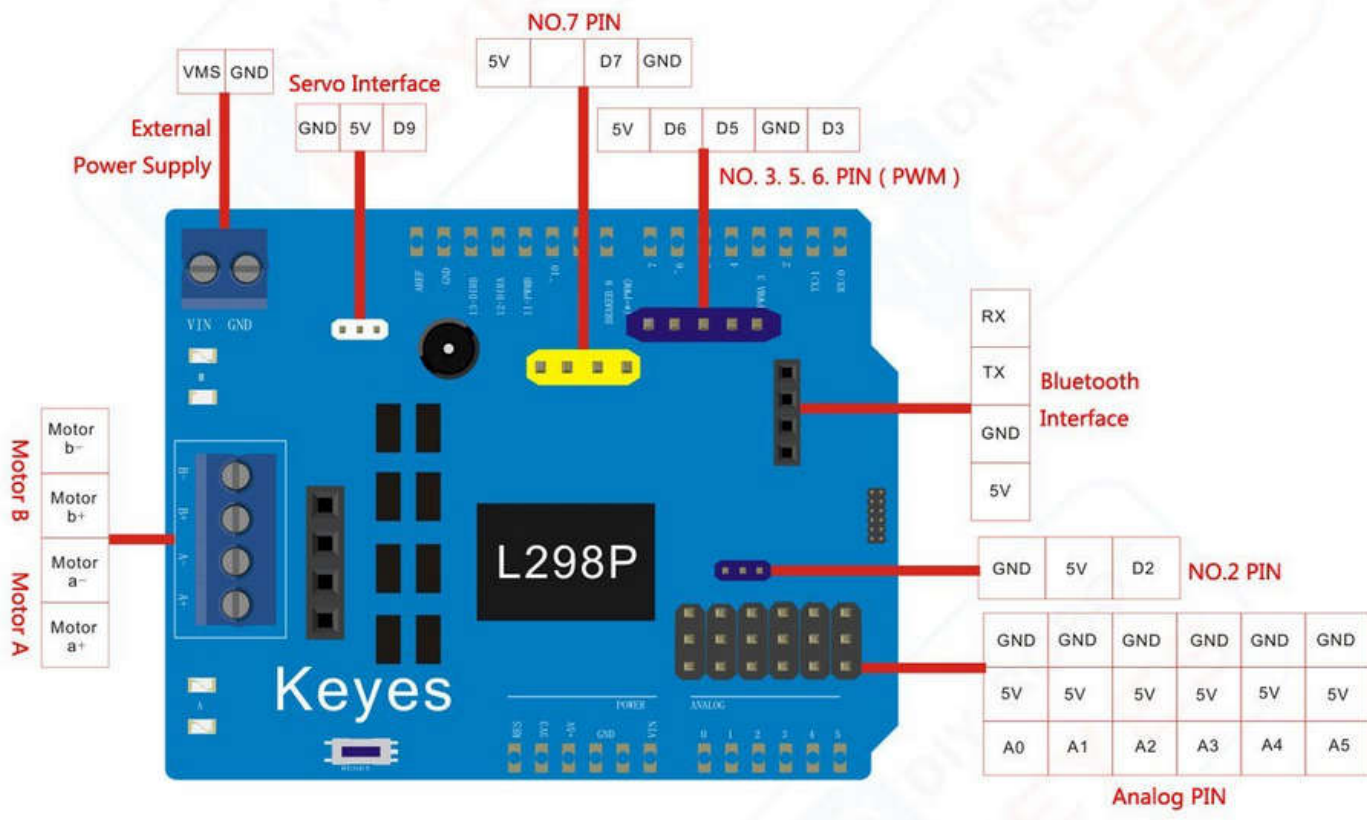
Operating temperature:  $-25^\circ\text{C} \sim +130^\circ\text{C}$

## Features:

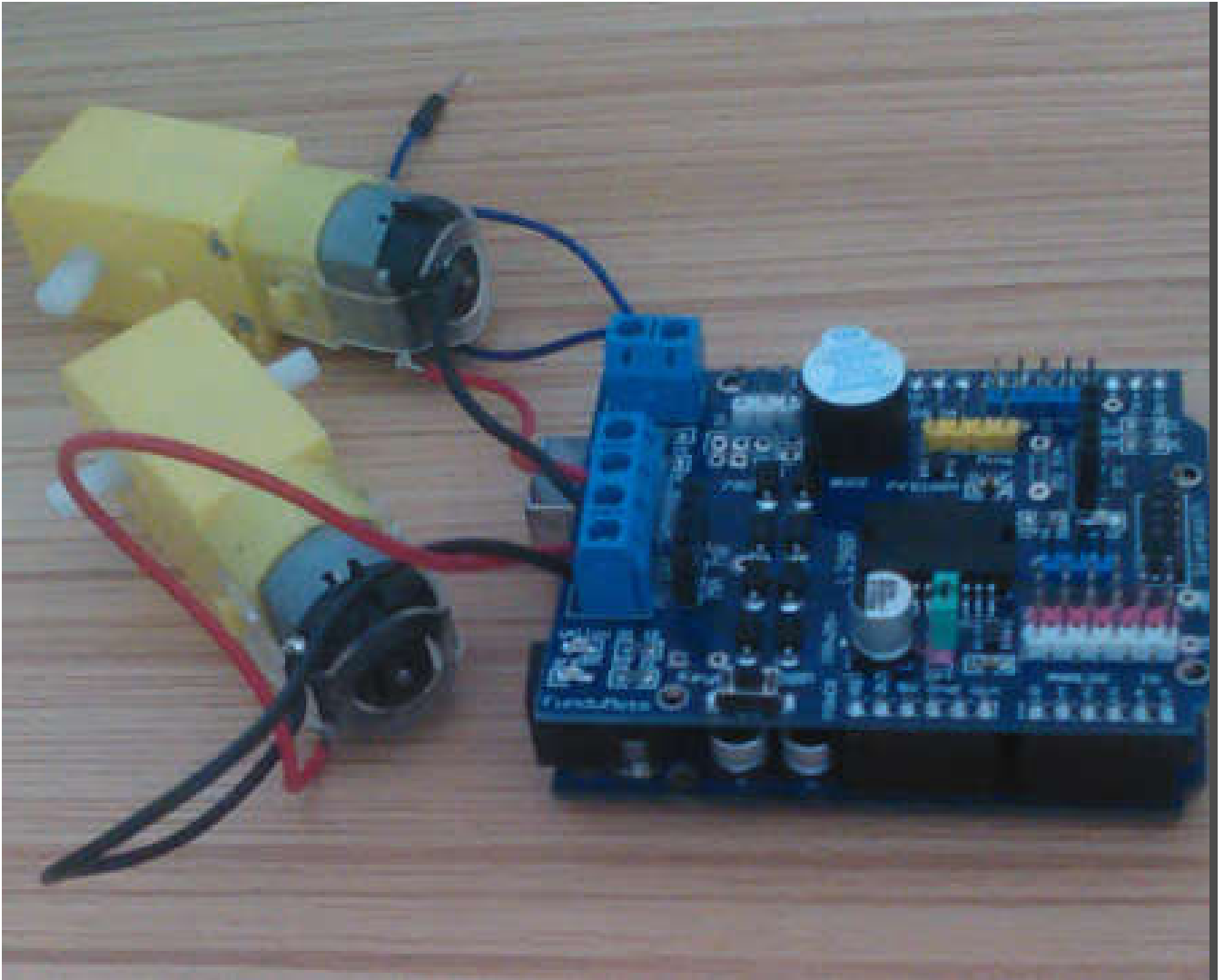
1. There is L298P motor driver chip on the board so that you can use digital IO interface(D .D10. D11. D12) without cumbersome wiring connection.
2. Onboard buzzer (D4), you can set the alarm ringtone.
3. Convenient motor interface can be two routes motor output.
4. Two-way bluetooth interface requires no wiring and you can plug directly.
5. It has seven digital interface that are not occupied(including D 2 , D 3 , D 5 , D 6 , D 7 , D 9 , D).
6. It has six analog interfaces(A0, A1, A2, A3, A4, A5).
7. It has indicator for forward and backward changing direction .

# Interfaces:





## Testing:



With wiring as the image shows, we can control forward rotation, reverse rotation, stop and the PWM speed of the two DC motors.

The E1, E2 pins on the 2 motors's control chip with speed control function are connected with the 10,11 interfaces, And M1, M2 pins with direction control function are connected with the 12,13 interfaces.

## Code:

```
int E1 = 10;
int M1 = 12;
int E2 = 11;
int M2 = 13;

void setup()
{
  pinMode(M1, OUTPUT);
  pinMode(M2, OUTPUT);
}

void loop()
{
  { int value;
  for(value = 0 ; value <= 255; value+=5)
  {
    digitalWrite(M1,HIGH);
    digitalWrite(M2, HIGH);
    analogWrite(E1, value);
    analogWrite(E2, value);
    delay(30);
  }
  delay(1000);}
  { int value;
  for(value = 0 ; value <= 255; value+=5)
  {
    digitalWrite(M1,LOW);
    digitalWrite(M2, LOW);
    analogWrite(E1, value);
    analogWrite(E2, value);
    delay(30);
  }
  delay(1000);}
}
```