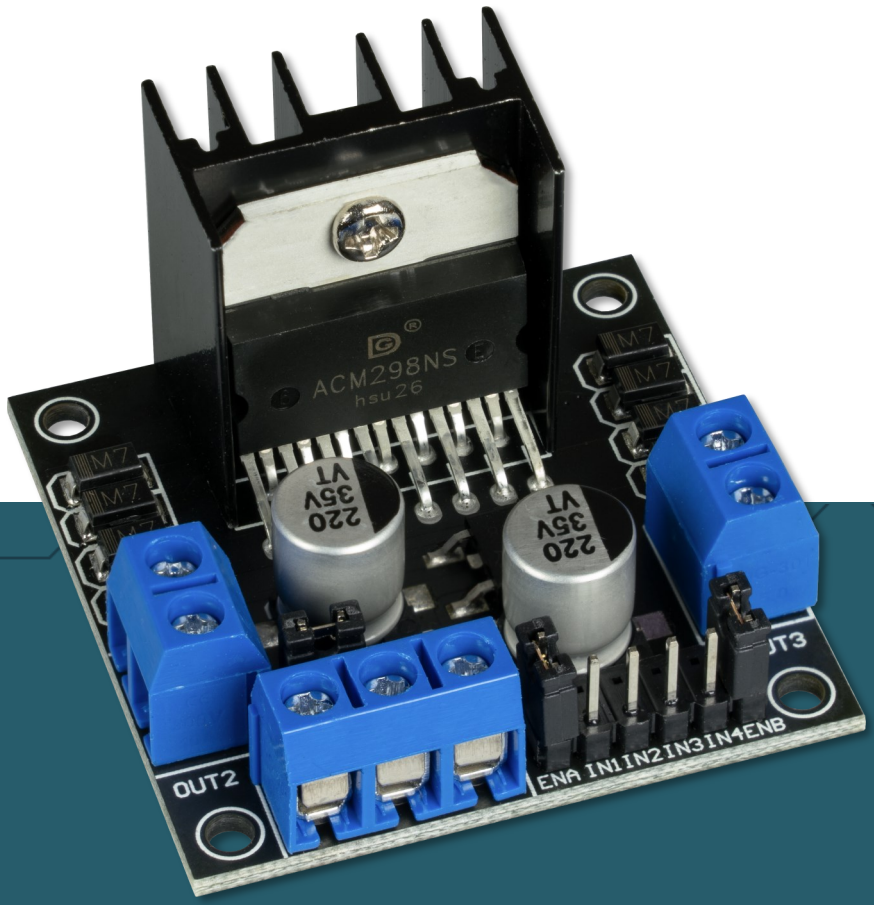
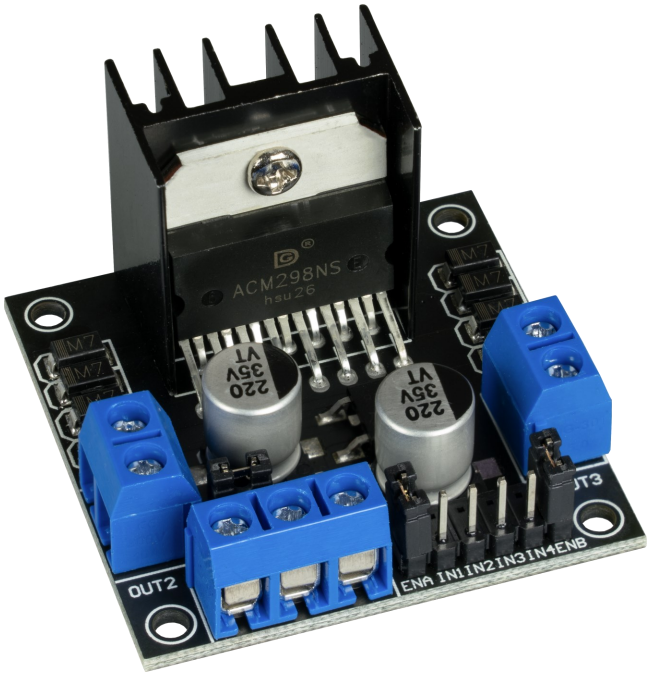


MOTORDRIVER-BOARD

SBC-MotoDriver2

MOTODRIVER-BOARD

SBC-MotoDriver2



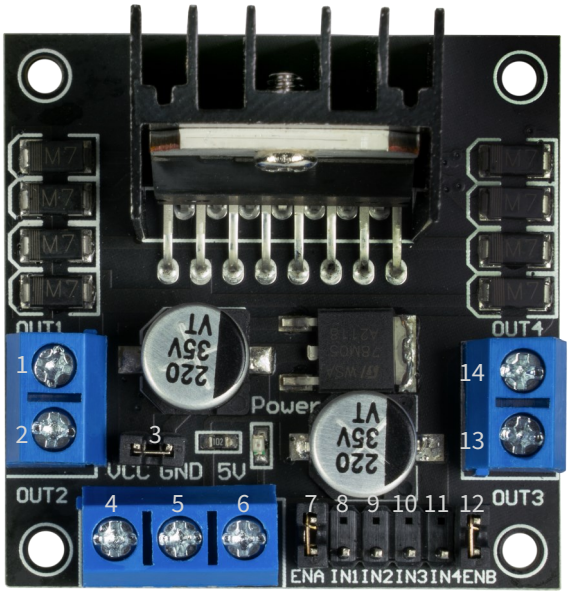
1. GENERAL INFORMATION

Dear customer,
thank you very much for choosing our product.
In the following, we will introduce you to what to observe while starting up and using this product.

Should you encounter any unexpected problems during use, please do not hesitate to contact us.

2. DEVICE OVERVIEW

The MotoDriver2 is an expansion board that enables the control and use of up to two DC motors. The DC motors can be controlled with a constant voltage between 5 V and 35 V.

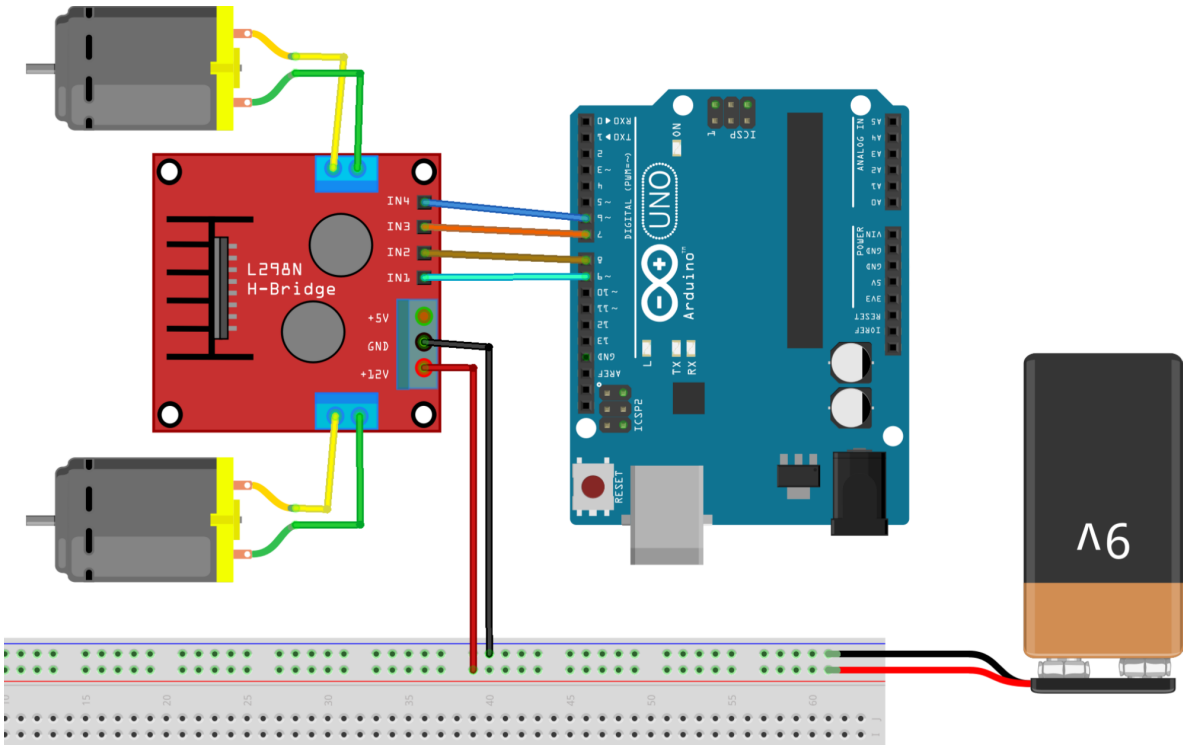


PIN	Assignment
1	DC Motor 1 / Stepper Motor +
2	DC Motor 1 / Stepper Motor GND
3	12V Jumper
4	Power Supply +
5	Power Supply GND
6	5V Output (If Jumper 3 is set)
7	DC Motor 1 Jumper
8	Input 1
9	Input 2
10	Input 3
11	Input 4
12	DC Motor 2 Jumper
13	DC Motor 2 / Stepper Motor +
14	DC Motor 2 / Stepper Motor GND

Note:

Up to an input voltage of 12 V, the board can provide a voltage of 5 V for your microcontroller via the 5V output using the integrated voltage converter. If you want to connect a voltage above 12 V, it is essential to remove the jumper at slot 3 to avoid damaging the voltage converter.

3. USE WITH THE ARDUINO



MotoDriver2	Arduino
IN1	9
IN2	8
IN3	7
IN4	6
GND	GND

The power supply for the MotoDriver2 (PIN 4) should be between 5 V and 35 V. This depends on your configuration and the used components. If the voltage is higher than 12 V, you have to remove the jumper at slot 3 to avoid damaging the integrated voltage converter. For voltages up to 12 V you can also supply your Arduino with power via the 5 V connector of the motor driver board.

To use the DC motors on the module, connect the motors, the module and your Arduino as shown in the previous picture. Transfer the following code example completely to your Arduino to test the functionality.

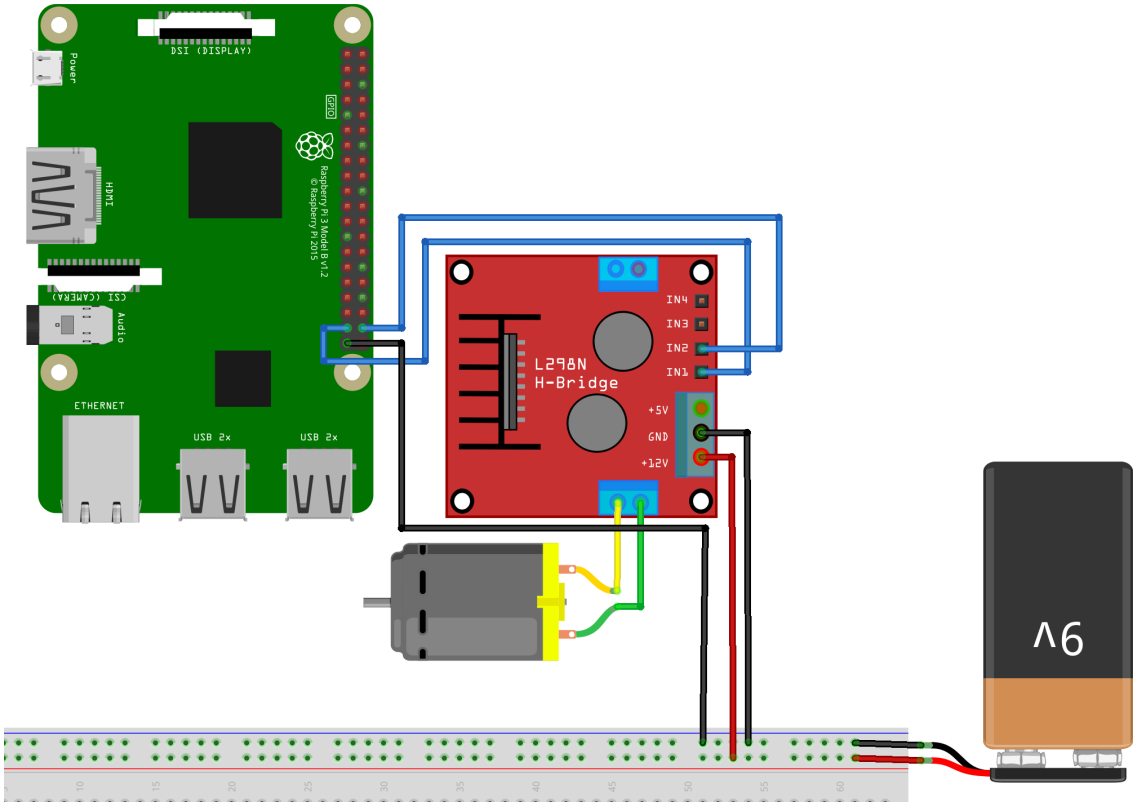
```
//Motor 1
const int motorPin1 = 9;
const int motorPin2 = 8;
//Motor 2
const int motorPin3 = 7;
const int motorPin4 = 6;
int speed = 180;

void setup(){
    //Set pins as outputs
    pinMode(motorPin1, OUTPUT);
    pinMode(motorPin2, OUTPUT);
    pinMode(motorPin3, OUTPUT);
    pinMode(motorPin4, OUTPUT);
    //Motor Control A in both directions
    analogWrite(motorPin1, speed);
    delay(2000);
    analogWrite(motorPin1, 0);
    delay(200);
    analogWrite(motorPin2, speed);
    delay(2000);
    analogWrite(motorPin2, 0);
    //Motor Control B in both directions
    analogWrite(motorPin3, speed);
    delay(2000);
    analogWrite(motorPin3, 0);
    delay(200);
    analogWrite(motorPin4, speed);
    delay(2000);
    analogWrite(motorPin4, 0);
}

void loop(){
}
```

4. USE WITH THE RASPBERRY PI

This guide was written under Raspberry Pi OS Bookworm for the Raspberry Pi 4 and 5. It has not been checked with newer operating systems or hardware.



MotoDriver2	Raspberry Pi
IN1	GPIO26
IN2	GPIO20
GND	GND

The power supply for the MotoDriver2 (PIN 4) should be between 5 V and 35 V. This depends on your configuration and the used components. If the voltage is higher than 12 V, you have to remove the jumper at slot 3 to avoid damaging the integrated voltage converter.

To use DC motors on the module, simply connect the motors, the module and your Raspberry Pi as shown in the previous picture. Transfer the following code example completely to your Raspberry Pi to test the functionality.

```
import sys
import time
from gpiozero import OutputDevice

# Define output devices
Forward = OutputDevice(26)  #pin26 for forward movement
Backward = OutputDevice(20)  #pin20 for backward movement

def forward(x):
    Forward.on()
    print("Moving Forward")
    time.sleep(x)
    Forward.off()

def reverse(x):
    Backward.on()
    print("Moving Backward")
    time.sleep(x)
    Backward.off()

try:
    while True:
        forward(5)  # Move forward for 5 seconds
        reverse(5)  # Move backward for 5 seconds
except KeyboardInterrupt:
    print("Program stopped")
```

4. ADDITIONAL INFORMATION

Our information and take-back obligations according to the Electrical and Electronic Equipment Act (ElektroG)

Symbol on electrical and electronic equipment:

This crossed-out dustbin means that electrical and electronic appliances do not belong in the household waste. You must return the old appliances to a collection point.

Before handing over waste batteries and accumulators that are not enclosed by waste equipment must be separated from it.

Return options:

As an end user, you can return your old device (which essentially fulfills the same function as the new device purchased from us) free of charge for disposal when you purchase a new device.

Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities independently of the purchase of a new appliance.

Possibility of return at our company location during opening hours:

SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn, Germany

Possibility of return in your area:

We will send you a parcel stamp with which you can return the device to us free of charge. Please contact us by email at Service@joy-it.net or by telephone.

Information on packaging:

If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

5. SUPPORT

If there are still any issues pending or problems arising after your purchase, we will support you by e-mail, telephone and with our ticket support system.

Email: **service@joy-it.net**
Ticket system: **http://support.joy-it.net**
Telephone: +49 (0)2845 9360-50 (Mon - Thur: 09:00 - 17:00 o‘clock CET, Fri: 09:00 - 14:30 o‘clock CET)

For further information please visit our website:
www.joy-it.net

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