

# Connection guide for Raspberry Pi and Arduino

Trieu An Do

November 24, 2025

BETTER FINISH IT BEFORE CHRISTMAS

## Contents

<b>1</b>	<b>Motor</b>	<b>2</b>
1.1	Connection with Raspberry Pi . . . . .	2
1.1.1	Material . . . . .	2
1.1.2	Connection scheme . . . . .	2
1.1.3	Real image . . . . .	2
1.1.4	Remark . . . . .	3
1.2	Connection with Arduino . . . . .	3
<b>2</b>	<b>NFC Reader(PN532 V3)</b>	<b>3</b>
<b>3</b>	<b>Sensor</b>	<b>3</b>
<b>4</b>	<b>Compressor</b>	<b>3</b>

# 1 Motor

## 1.1 Connection with Raspberry Pi

### 1.1.1 Material

Motor, Raspberry Pi, motor driver L298N and GPIO cables.

L298N Pinout:

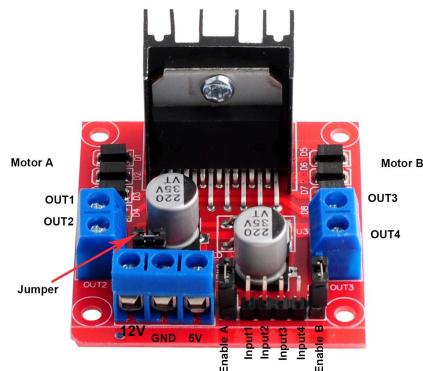


Figure 1: L298N Pin Layout

Input1 controls OUT1 and so on. Control by H-bridge:

Low	Low	Stop
High	Low	Clockwise/Anti-Clockwise
High	Low	Clockwise/Anti-Clockwise
High	High	Brake

### 1.1.2 Connection scheme

The connection scheme to connect motor to rbp using l298n

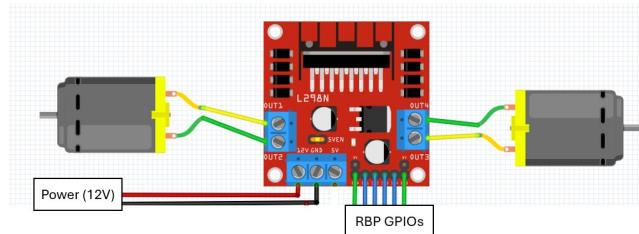


Figure 2: Connection scheme

### 1.1.3 Real image

The image of real connection

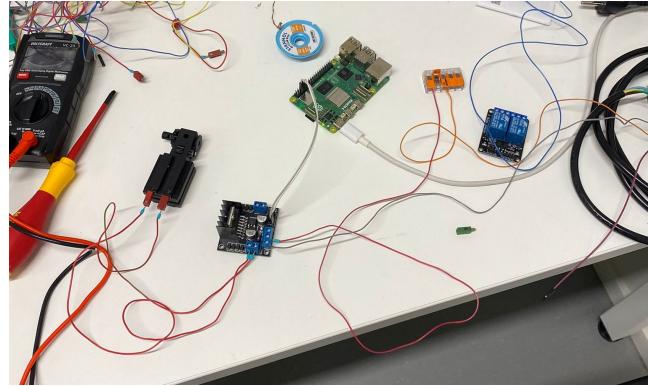


Figure 3: Real connection image

#### 1.1.4 Remark

Some remark about the connection:

- 1 L298N can controll maximum 2 independent motors.
- 1 L298N occupies at least 4 GPIOs on RBP (for 2 motors).
- L298N can be powered by RBP or external power source.

## 1.2 Connection with Arduino

### 2 NFC Reader(PN532 V3)

### 3 Sensor

### 4 Compressor