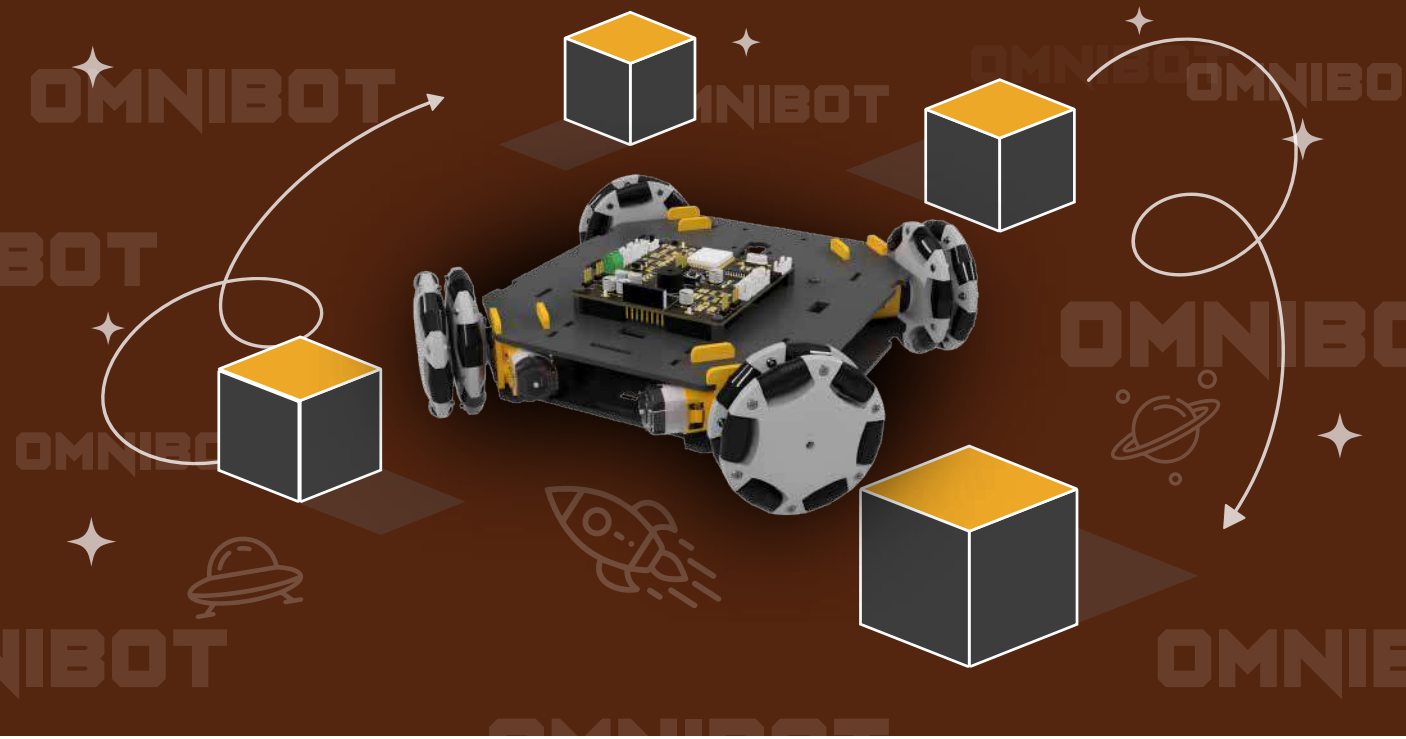


# OMNIBOT

## SETUP GUIDE



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# OmniBot

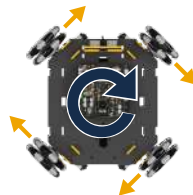
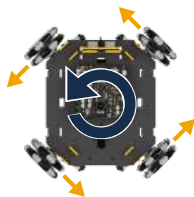
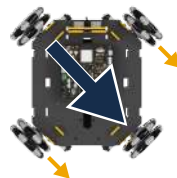
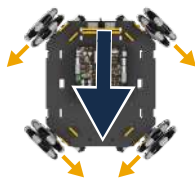
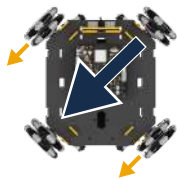
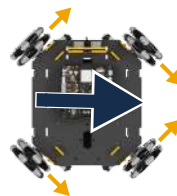
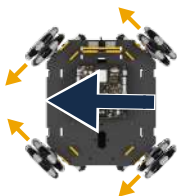
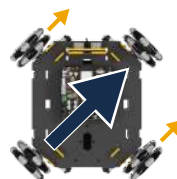
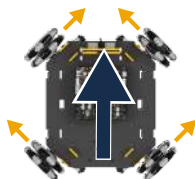
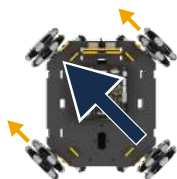
Unlike other REX robots, OmniBot uses specially designed omni wheels. These wheels provide 360° easy movement for the OmniBot. Thanks to the Omni Wheels, the OmniBot can move at any angle without turning.

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## How Does Omni Wheels Work?

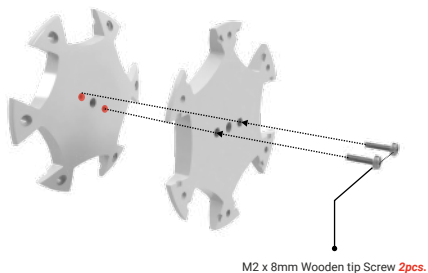
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OmniBot is a robot that uses 4 DC motors. For this, let's analyze how a robot using 4 omni wheels moves with the image below.

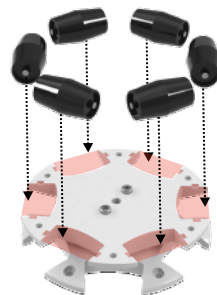


## The Installation Steps of The Omni Wheels

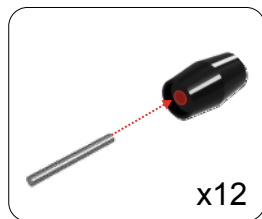
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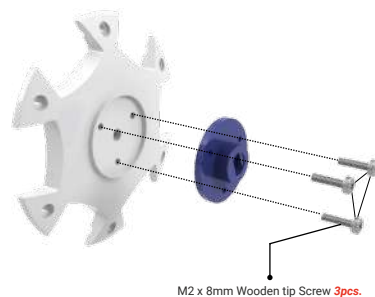
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②



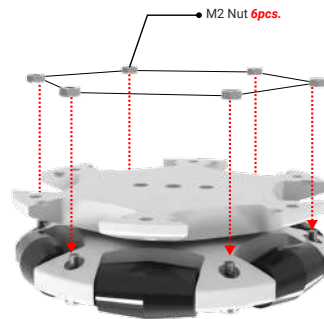
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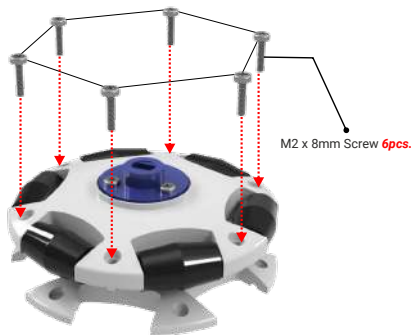
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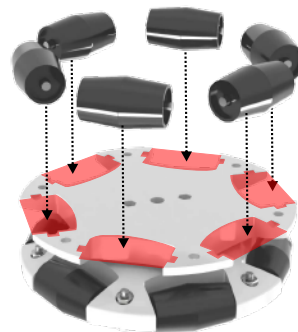
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⑥



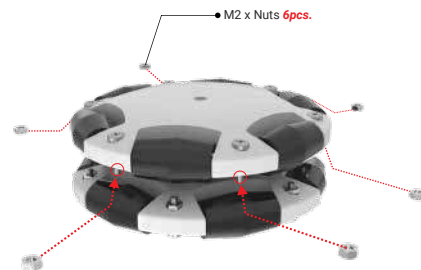
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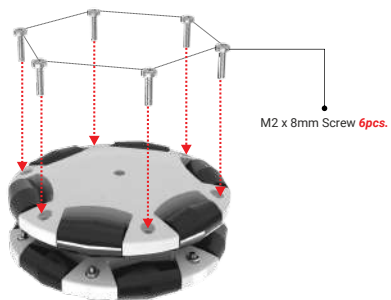
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⑦



⑥

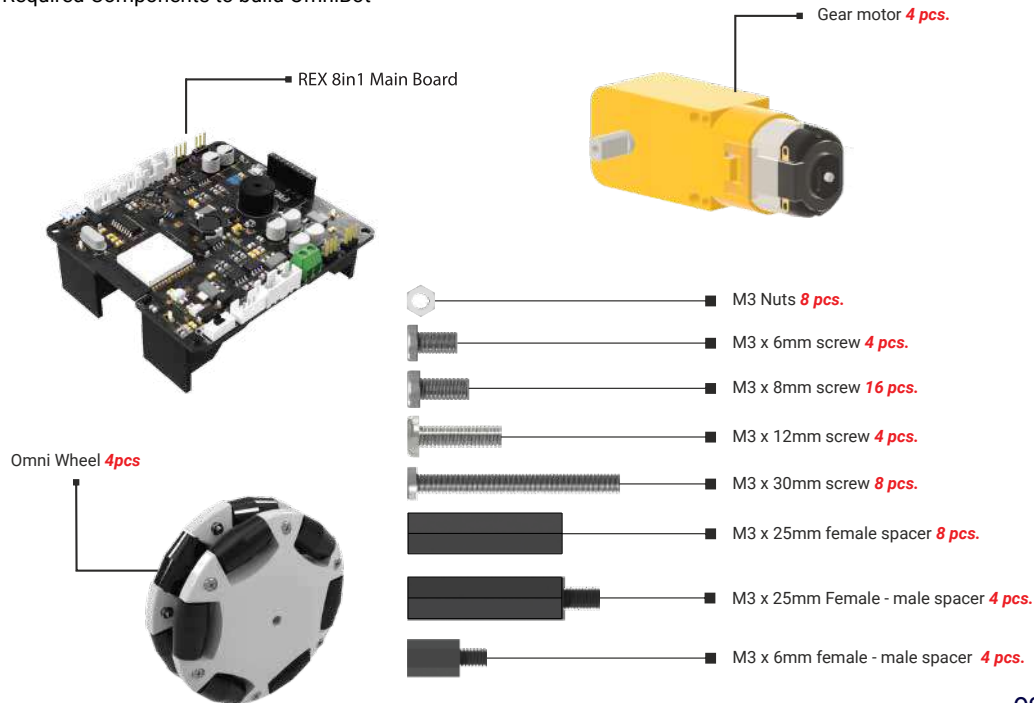


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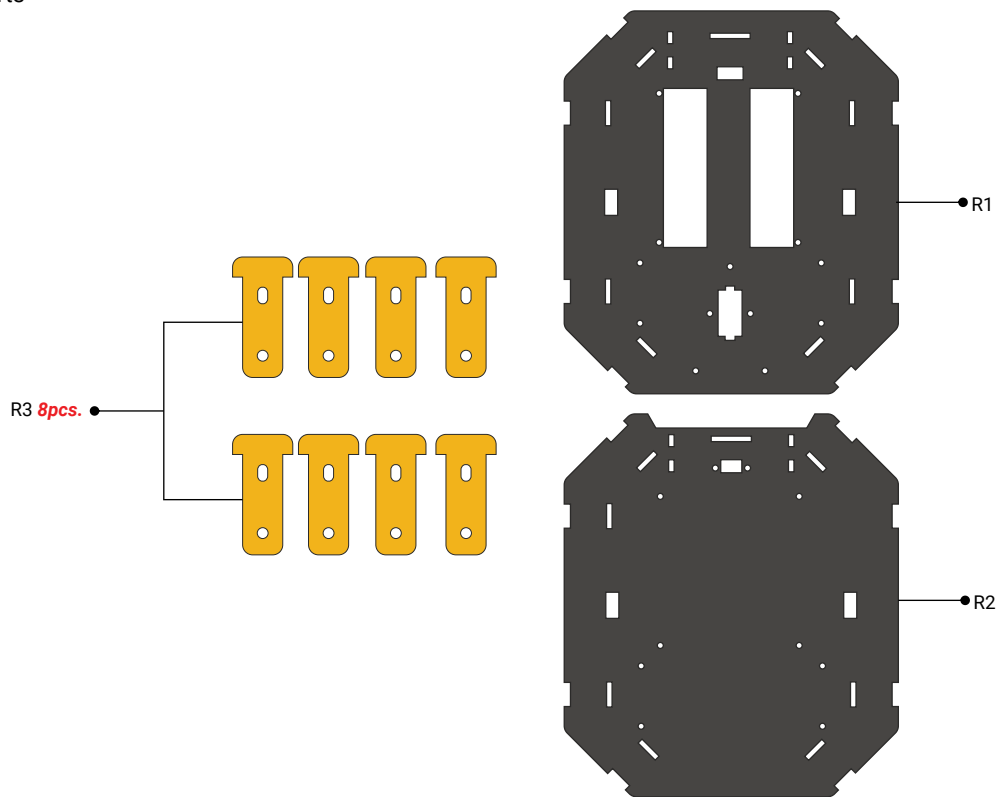
## The Installation Steps

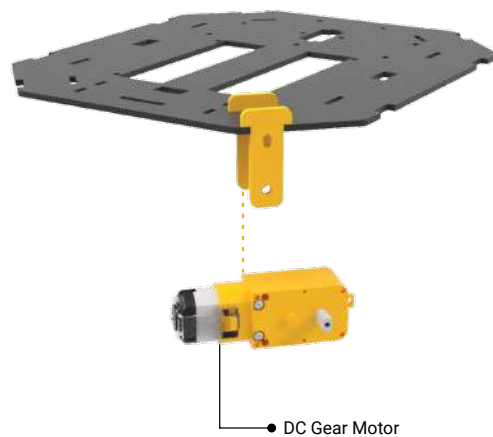
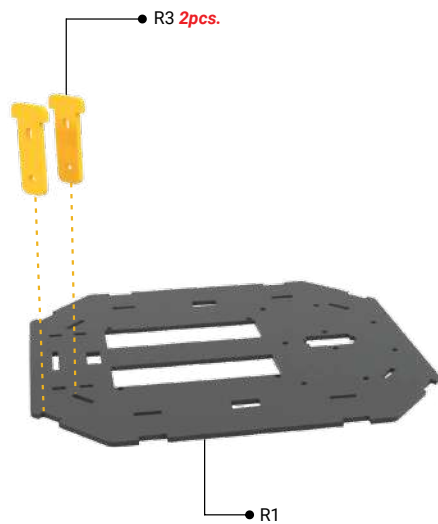
Required Components to build OmniBot

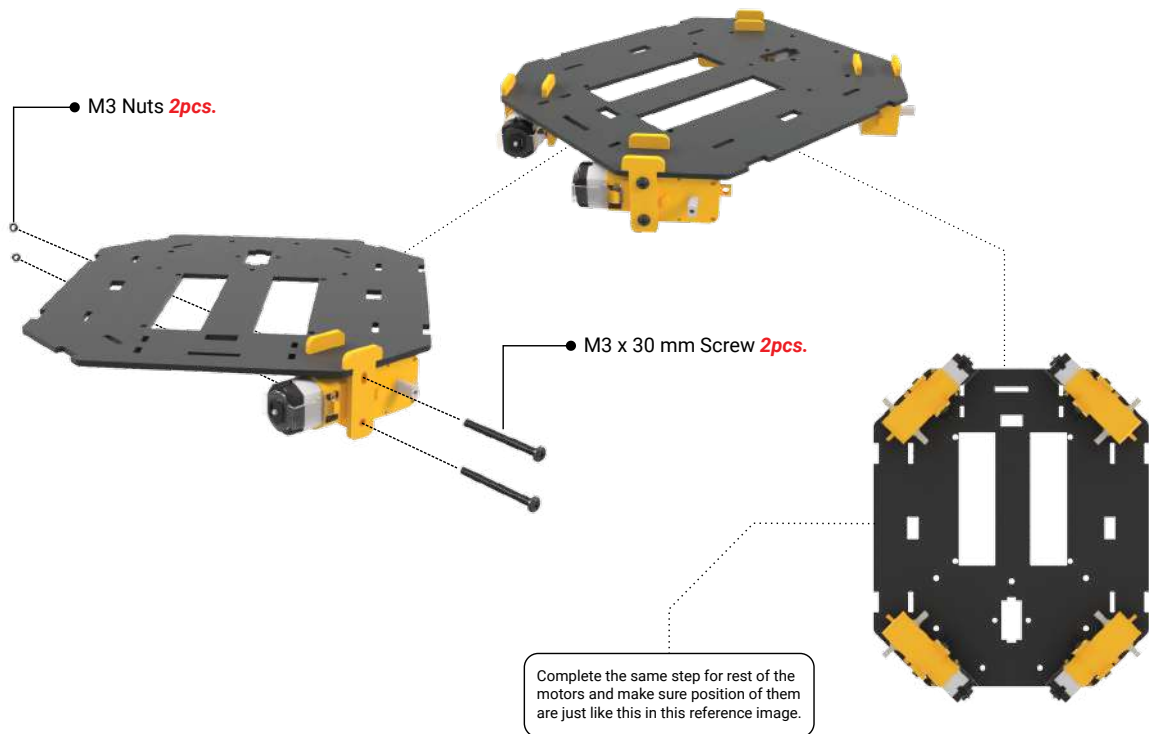


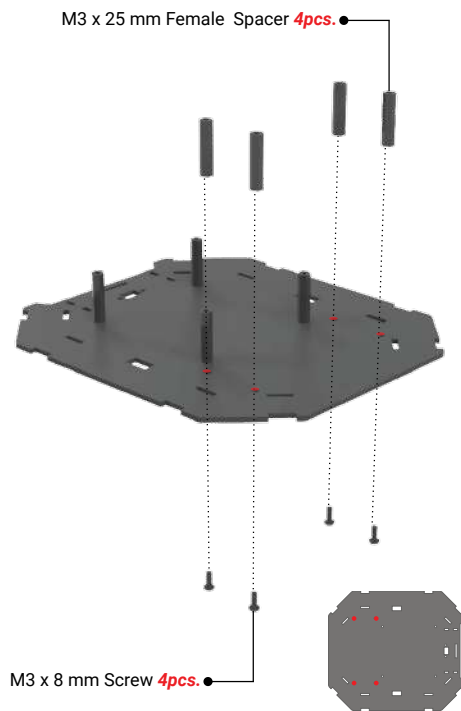
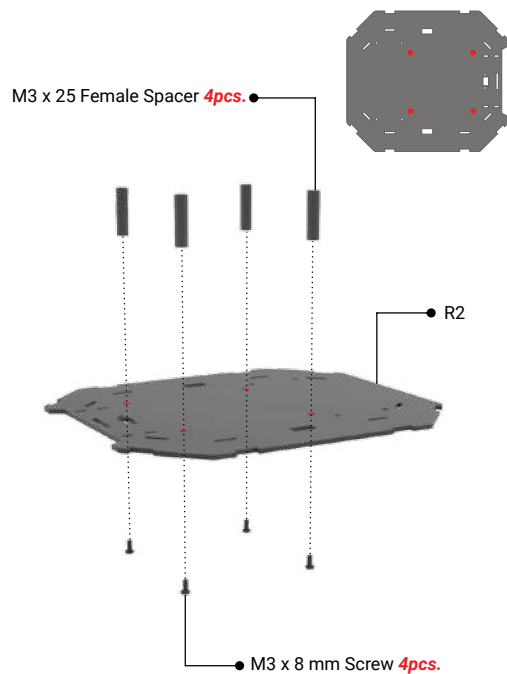


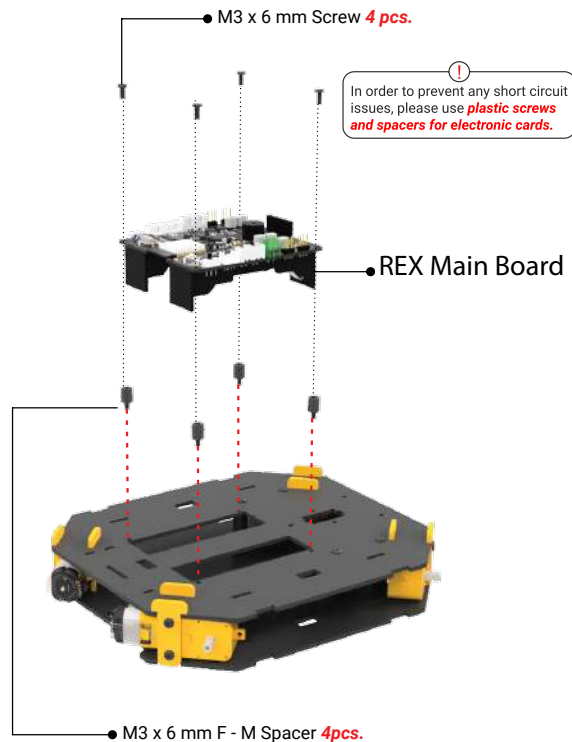
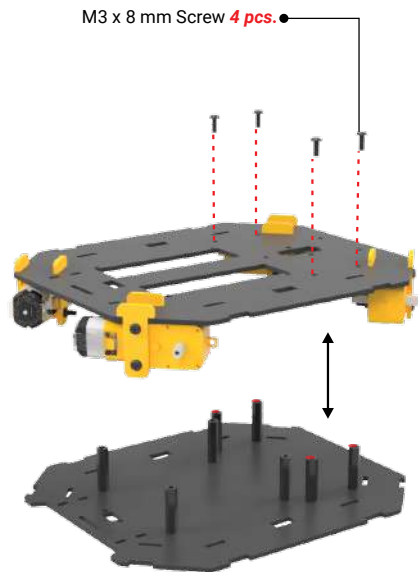
## Required Parts

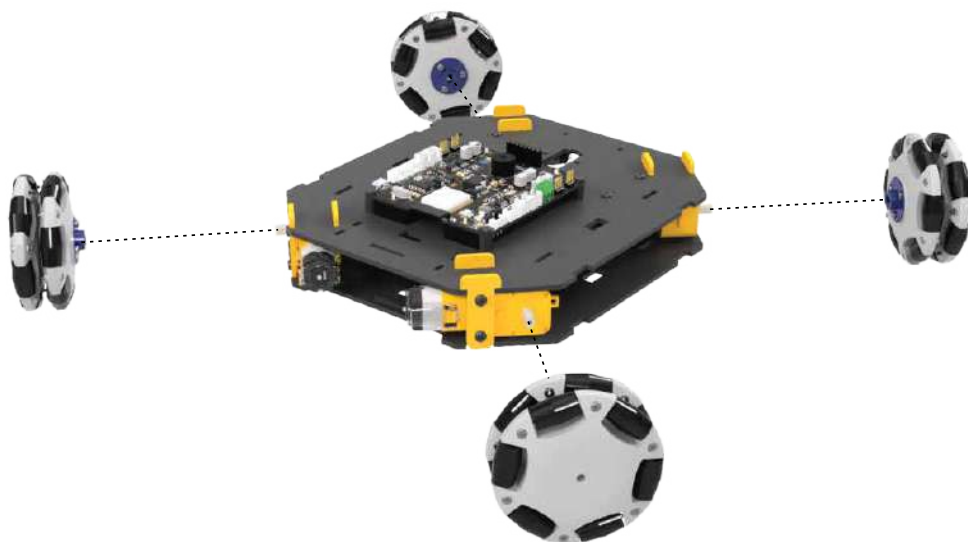


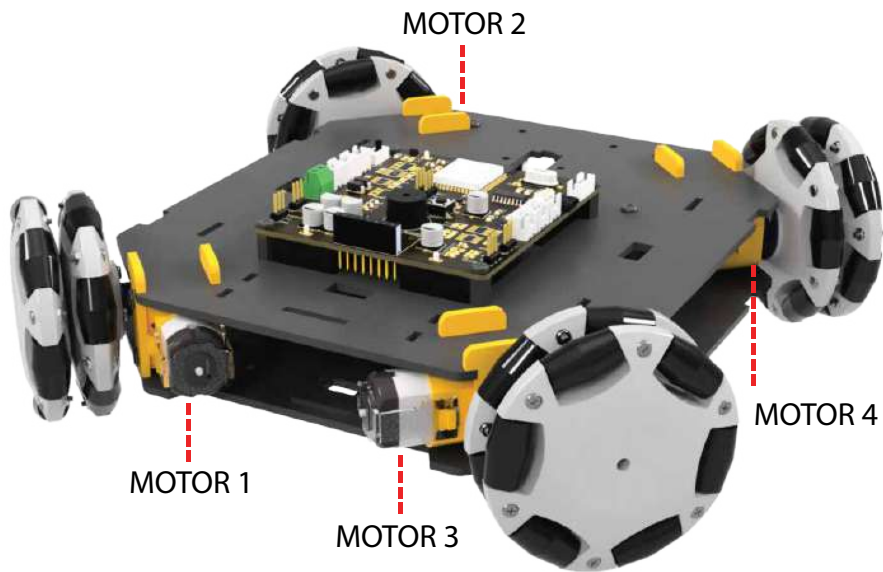




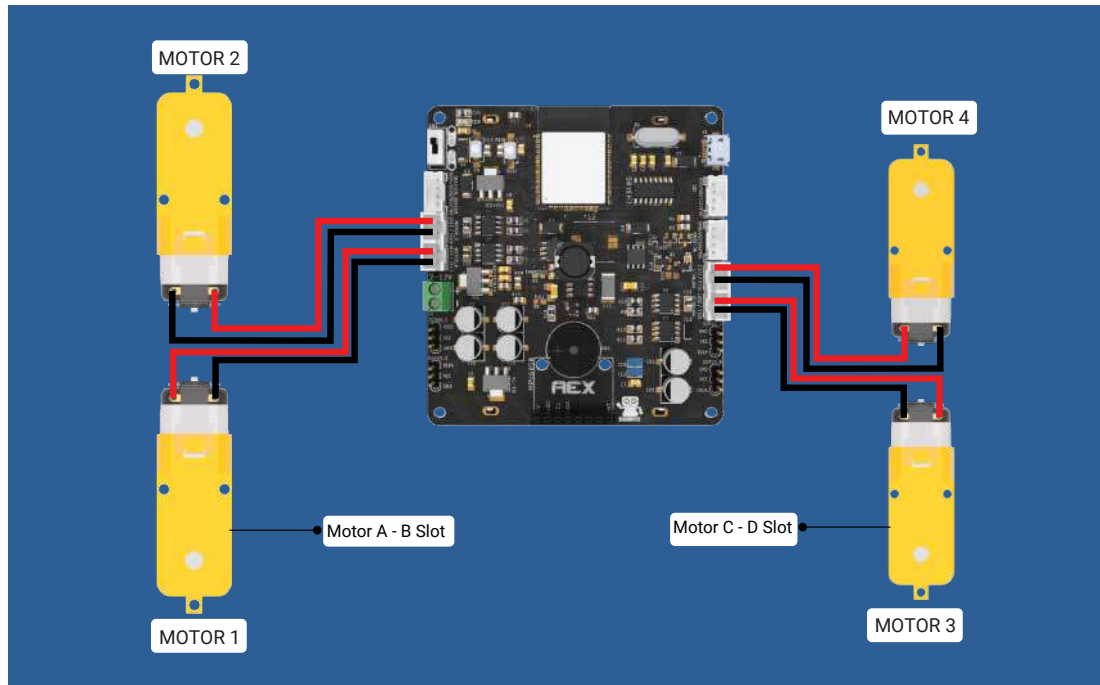






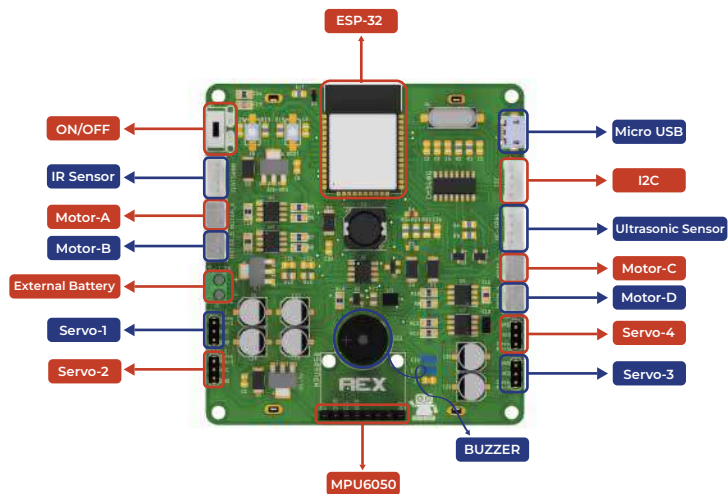


## The Circuit Diagram





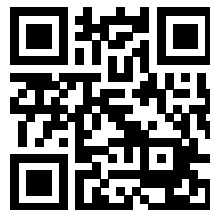
## REX Main Board Diagram



## Arduino Code

OmniBot.ino

```
1  //""REX Rnd Omni Bot""
2  //Check the web site for Robots https://rex-rdt.readthedocs.io/en/latest/
3
4  #define CUSTOM_SETTINGS
5  #define INCLUDE_GAEP40_MODULE
6
7  #include <DabbleESP32.h>
8  #include <Arduino.h>
9  #include <analogWrite.h>
10 #include <ESP32Servo.h>
11
12
13 //define pins of motors.
14 //DC Motor_1
15 #define MotorA1 23
16 #define MotorA2 15
17
18 //DC Motor_2
19 #define MotorB1 33
20 #define MotorB2 32
21
22 //DC Motor_3
23 #define MotorC1 16
24 #define MotorC2 17
25
26 //DC Motor_4
27 #define MotorD1 14
28 #define MotorD2 27
29 #define horn 2
30
31 #define low_s 100
32 #define mid_s 150
33 #define high_s 250
34
35 int i = 0 ;
36 void setup() {
37   //active pins which is defined
38
39   pinMode(horn, OUTPUT);
40
41   pinMode(MotorA1, OUTPUT);
42   pinMode(MotorA2, OUTPUT);
43 }
```



Scan the QR code to go to  
the whole code and the  
necessary libraries.





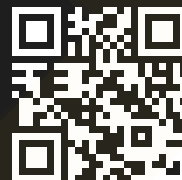
GitHub

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