

Mirobot 移动平台操作说明书

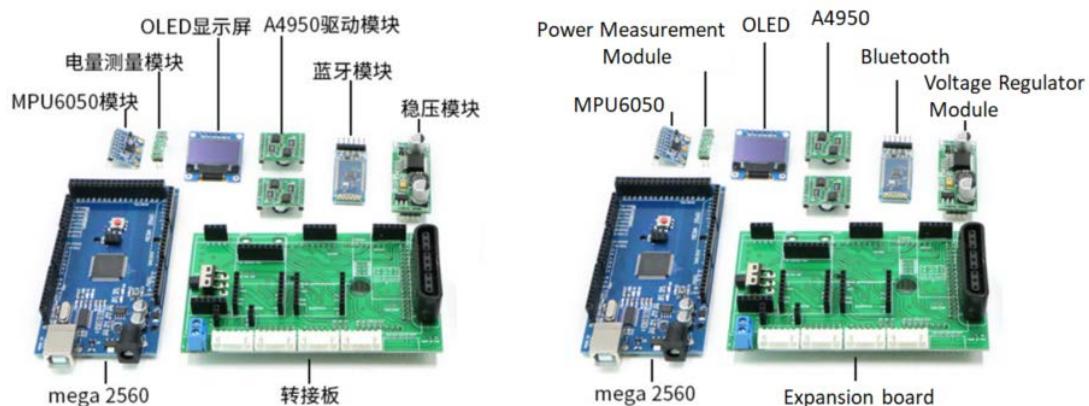
1 产品概述

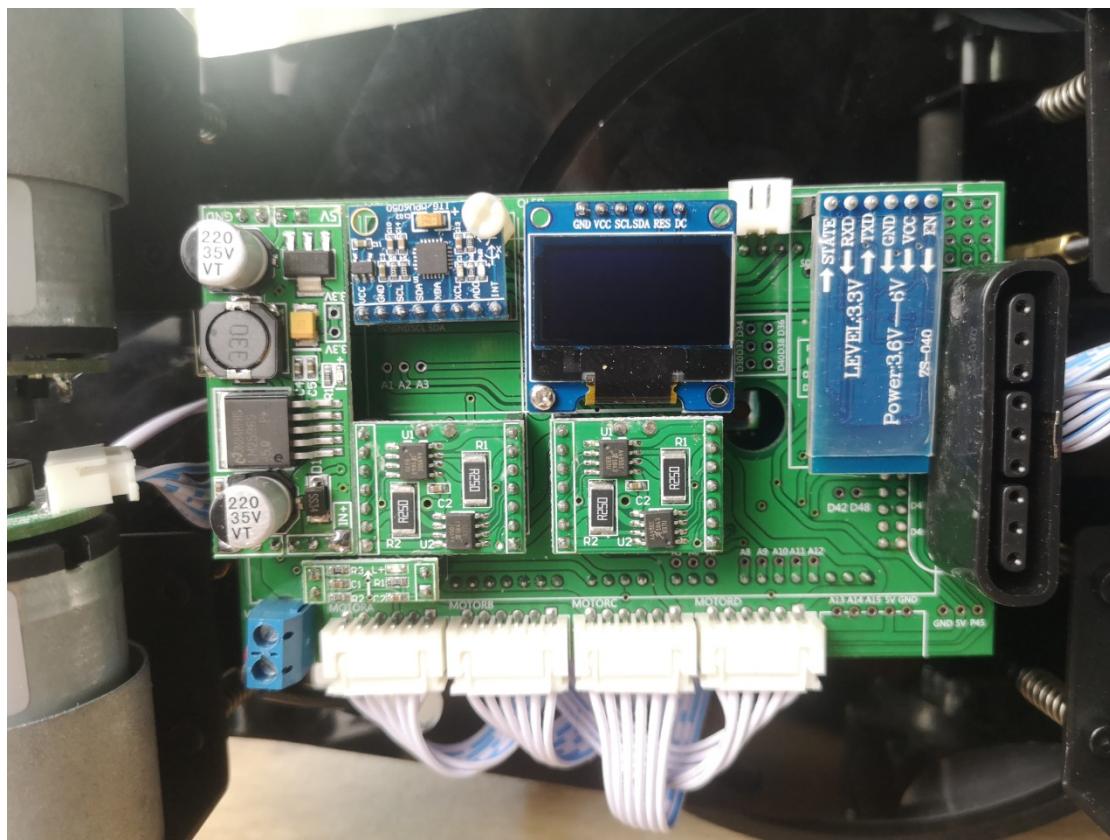
Mirobot 移动平台是一款基于麦克纳姆轮的四轮小车平台。小车平台可以搭载 Mirobot 完成更多场景任务。

2 参数说明

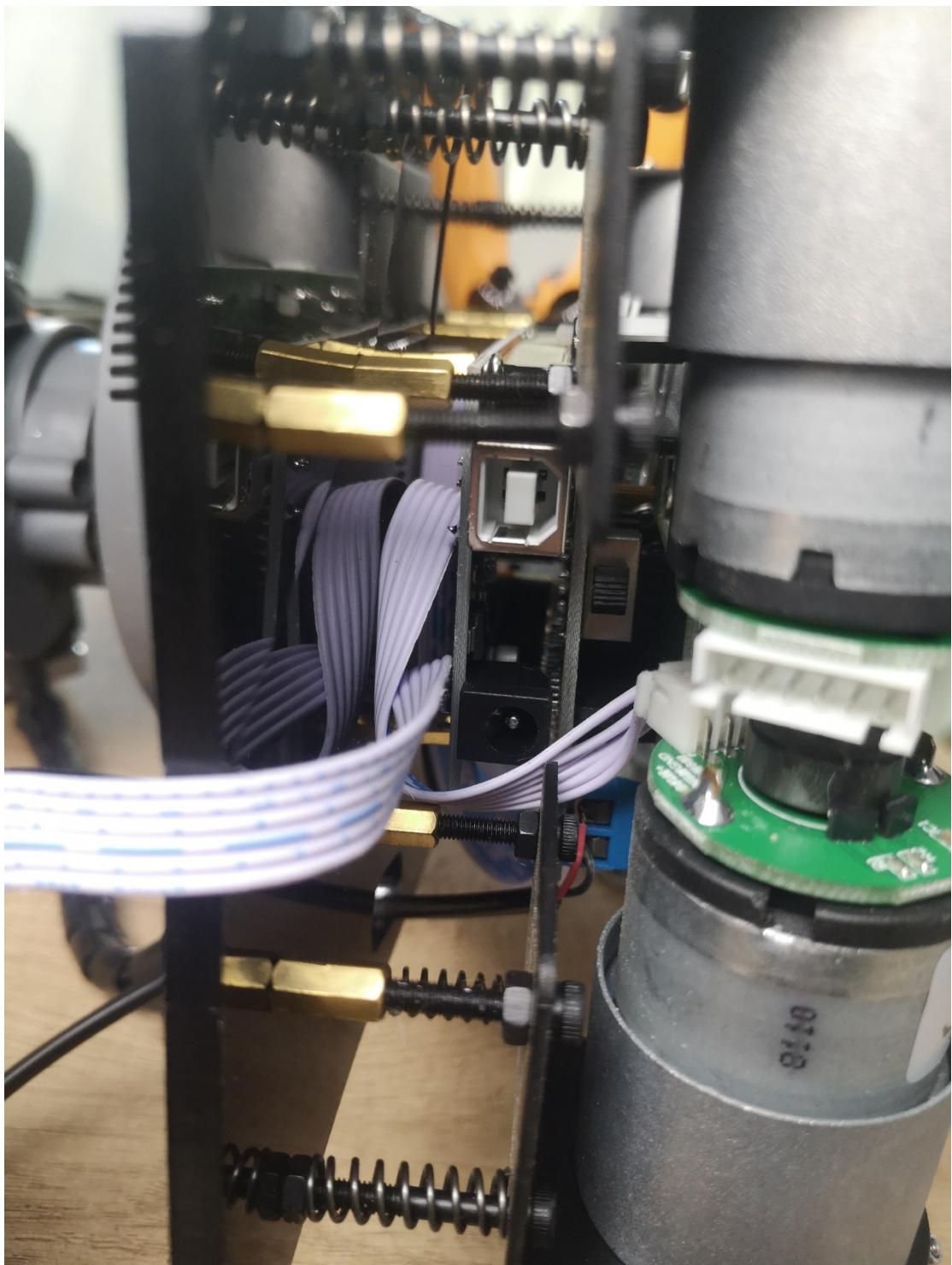
控制器	Arduino 2560
主频	16M
电池	3S 平衡充电器
IMU 传感器	配备 MPU6050
电机	4 个电机单独 PID 闭环
APP 控制	支持 (目前只支持 Android APP) IOS APP 将会尽快发布
二次开发	支持
是否开源	完全开源

3. 外设说明





(实拍图)



指令协议

指令示例：

左上 指令：“W7”	前进 指令：“W8”	右上 指令：“W9”
左移 指令：“W4”	停止 指令：“W0”	右移 指令：“W6”
左下 指令：“W1”	后退 指令：“W2”	右下 指令：“W3”

左旋转 指令：“W10”		右旋转 指令：“W11”
-----------------	--	-----------------

4 产品组装

第一步：将机械臂装到移动底盘上



将圆垫放到小车上

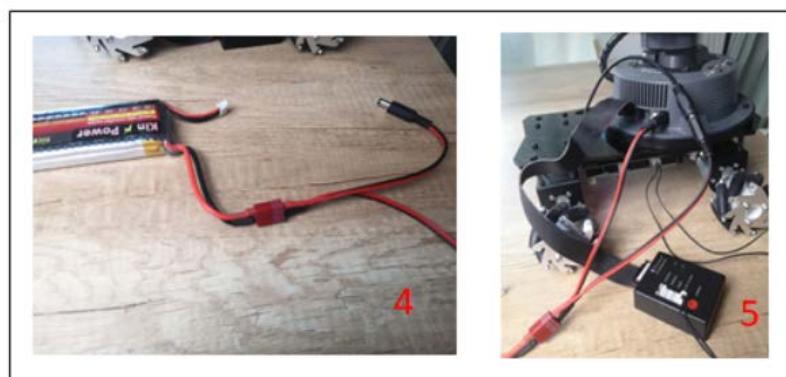
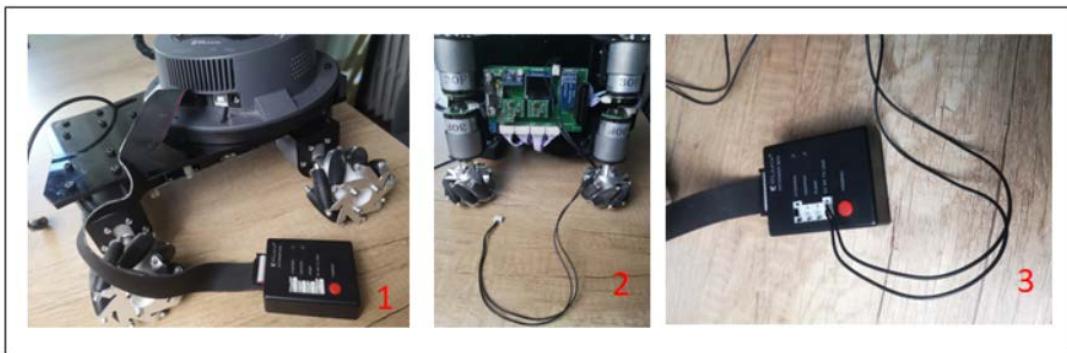
将机械臂放入圆垫

用螺钉将机械臂固定到小车上

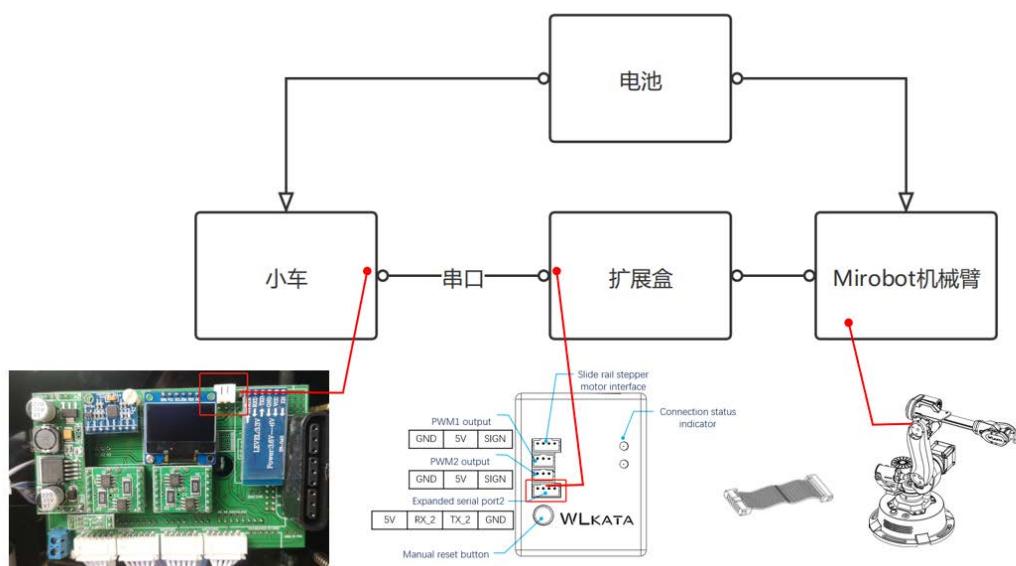


(第一步操作完后的状态)

第二步：连线



整体连线示意图：





(连接完成的状态)

第三步：装后托盘



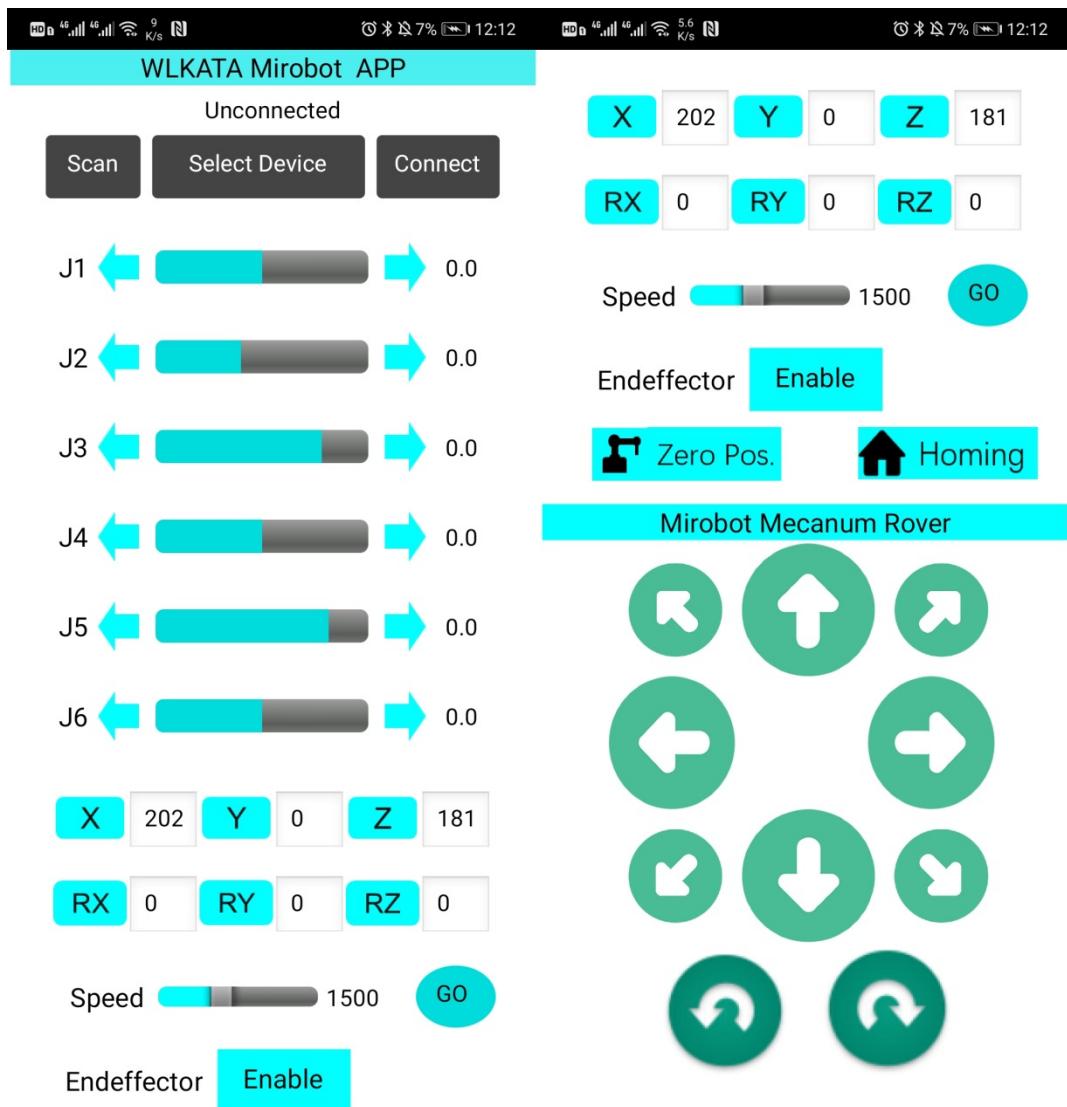
第四步：整理扩展模块，电池及线束

至此，完成装配



5 操作

目前 Mirobot 只支持安卓 APP（我们将会尽快上线 ios 版本 APP），你也可以自己二次开发设计 APP 控制，我们将会在后面实现 Blockly 编程控制。



APP 可以分为两大部分，机械臂控制部分和小车控制部分

如何操作？

第一步：搜索蓝牙 BT04-A，然后配对

第二步：打开 APP，点击 Select Device

第三步：选中 BT04-A

第四步：点击 Homing，对机械臂复位

第五步：开始操作小车和机械臂

Mirobot Rover Operating Instructions

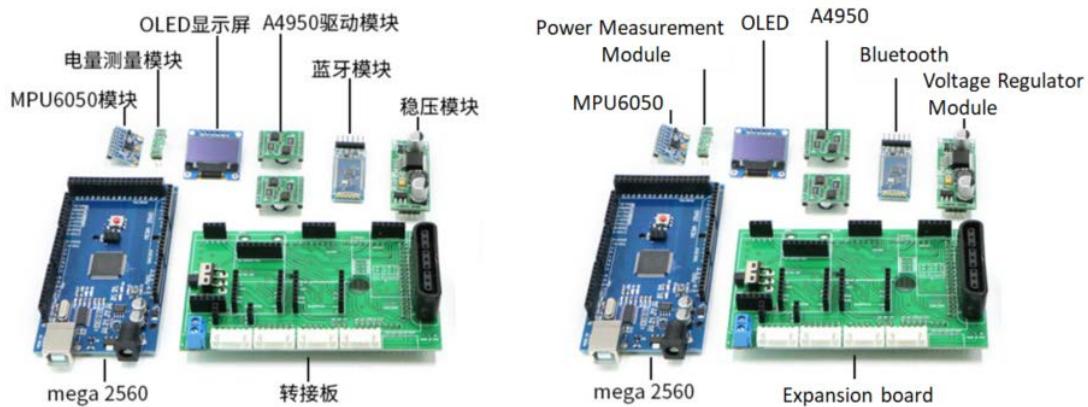
1 Product description

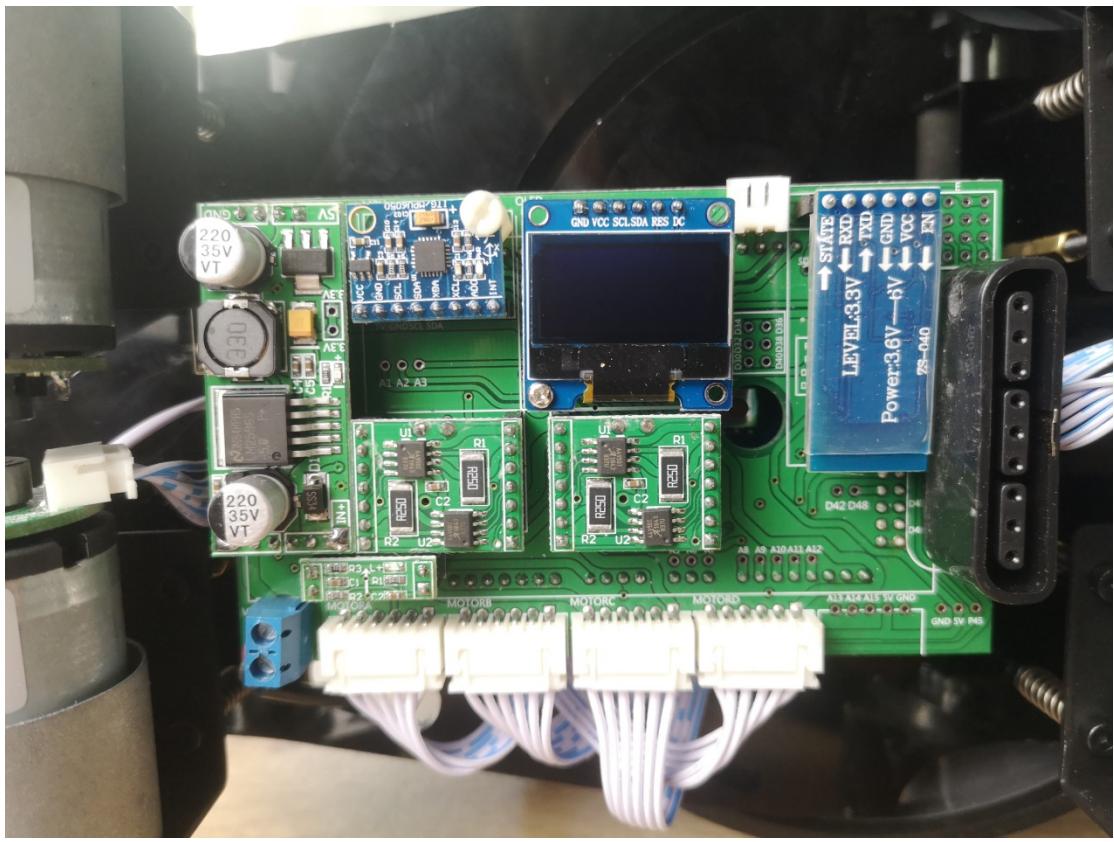
The Mirobot rover is a four-wheel trolley platform based on Mecanum wheels. The rover platform can carry Mirobot to complete more scene tasks.

2 Parameter description

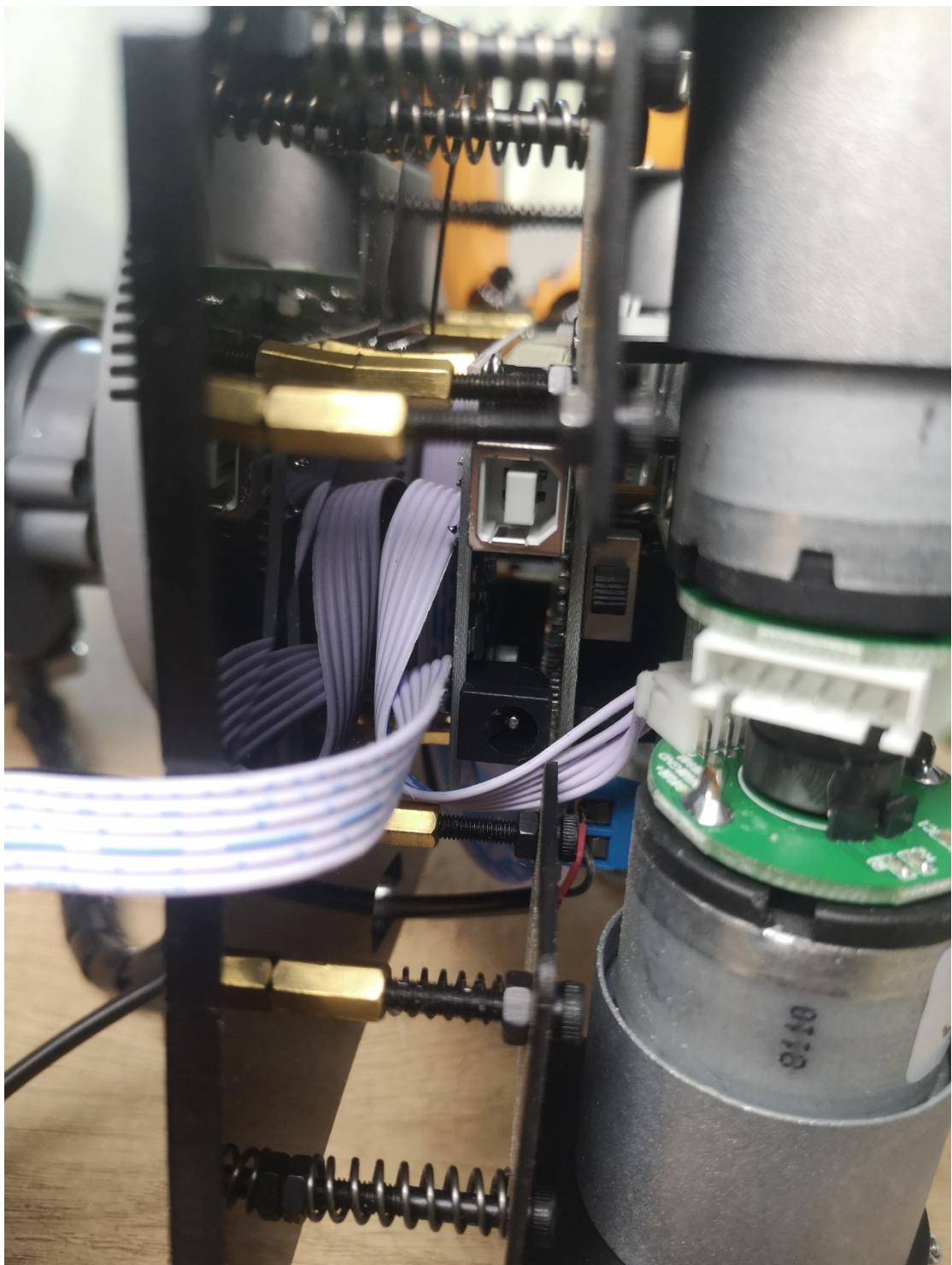
Microcontroller	Arduino 2560
Main frequency	16M
Battery	3S Balance Charger
IMU sensor	MPU6050
motor	4 motors with separate PID closed loop
APP control	Support (currently only supports Android APP) IOS APP will be released as soon as possible
Secondary development	Support
Whether open source	Fully open source

3. Peripheral description





(Real shot)



Instruction protocol

Instruction example:

Upper left Instruction: "W7"	go ahead Instruction: "W8"	Upper right Instruction: "W9"
Shift left Instruction: "W4"	Stop Instruction: "W0"	Shift right Instruction: "W6"
Bottom left Instruction: "W1"	Back Instruction: "W2"	Bottom right Instruction: "W3"

Rotate left Instruction: "W10"		Rotate right Instruction: "W11"
-----------------------------------	--	------------------------------------

4 Product assembly

Step 1: Install the robotic arm to the rover mobile chassis



Place the round pad on the rover

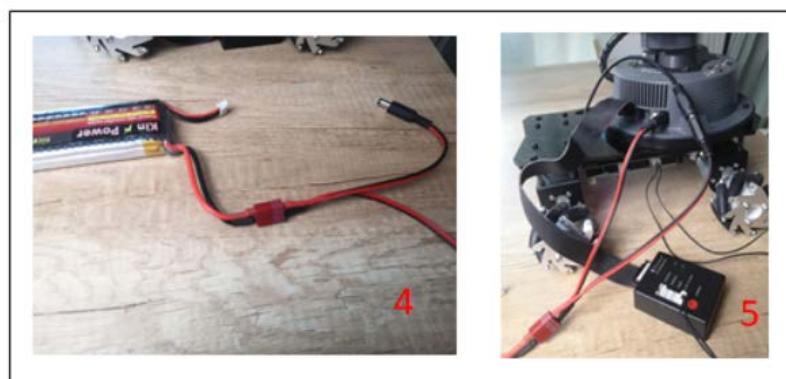
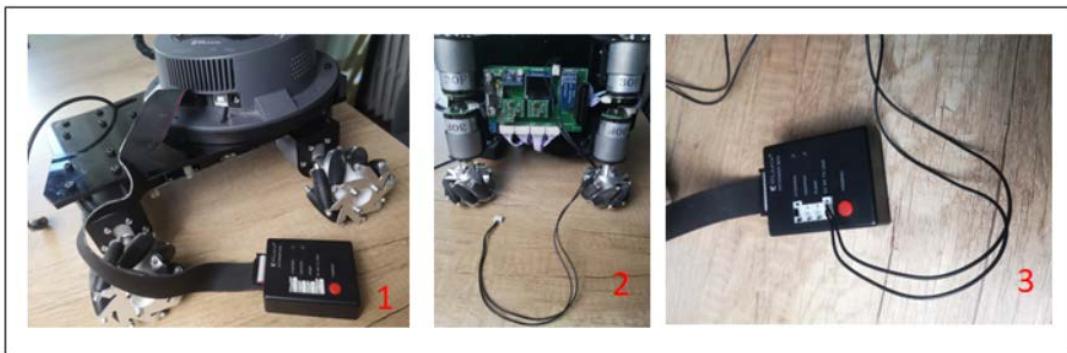
Put the robot arm into the round pad

Fix the robot arm to the rover with screws

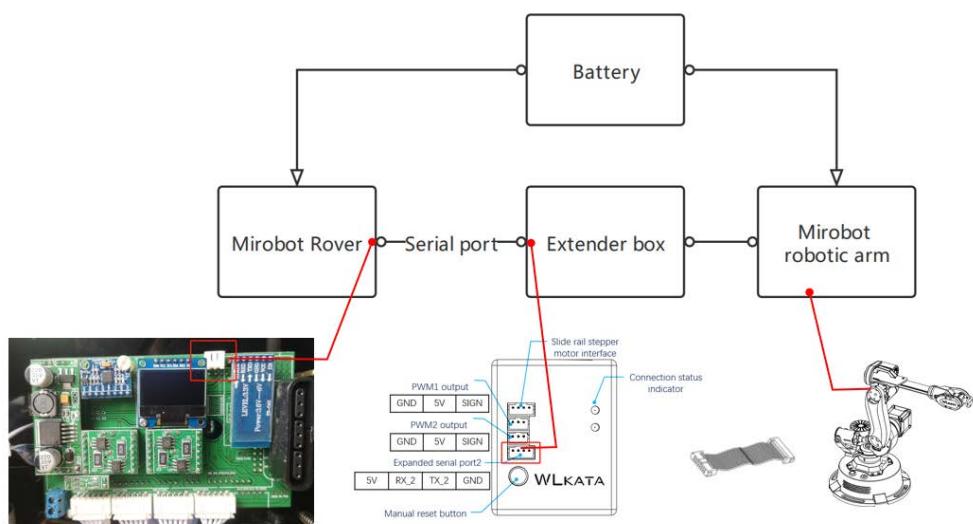


(The state after the step 1)

Step 2 : Connect the various parts



Overall wiring diagram:





(The state after the step 2)

Step 3 : Install the rear tray



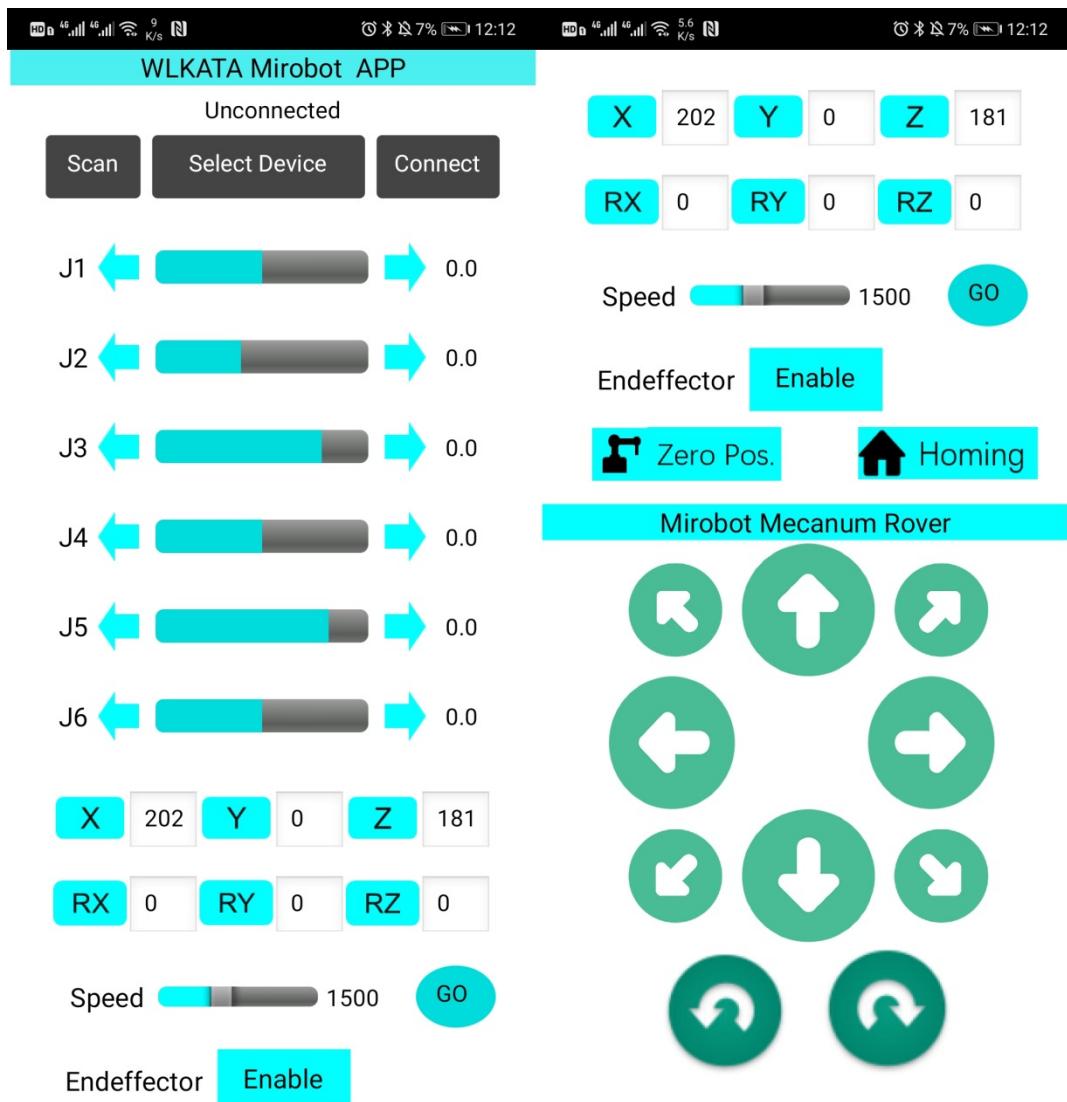
Step 4 : Organize the expansion box, battery and wiring harness

At this point, the assembly is complete



5 Operating

At present, Mirobot only supports Android APP (we will launch ios version APP as soon as possible), you can also develop and design APP control yourself, we will implement Blockly programming control later.



APP can be divided into two parts, the robotic arm control part and the rover control part.

How to operate and control?

Step 1 : Search for Bluetooth BT04-A, and then perform Bluetooth pairing

Step 2 : Open the APP and click Select Device

Step 3 : Select BT04-A

Step 4 : Click “Homing” to reset the robot arm

Step 5 : Start to operate rover and robotic arm