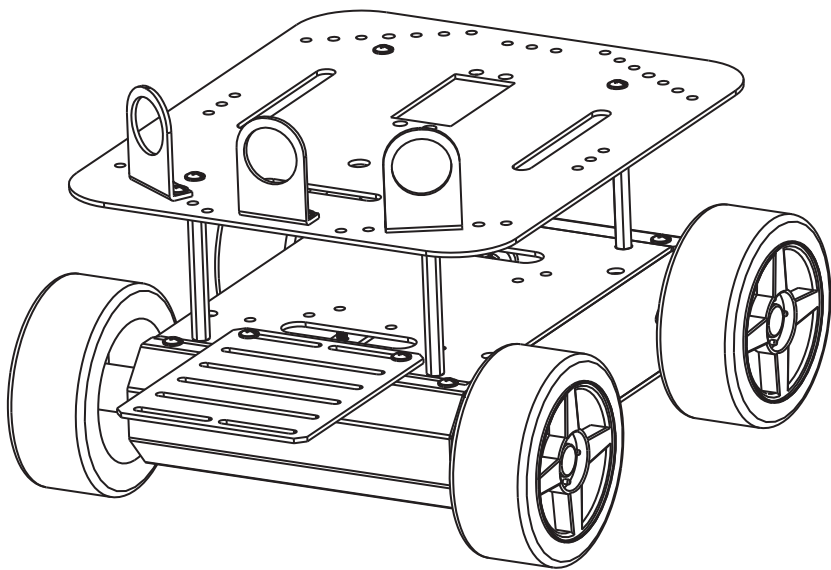


Instruction Manual

PIRATE - 4WD Mobile Platform

安装说明书



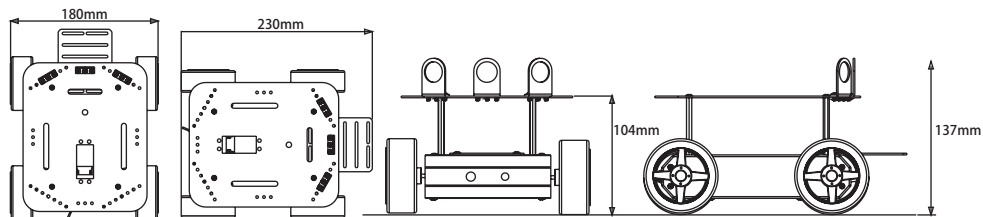
在使用PIRATE - 4WD Mobile Platform之前，请仔细阅读此说明书。
Read the manual carefully before using PIRATE - 4WD Mobile Platform.

Ver 1.1

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整机尺寸:



简介:

PIRATE-4WD Mobile Platform 四轮驱动机器人是DFRobot研制的机器人实验平台, 该平台不但可以用51控制、STC控制器、AVR控制器控制外, 更适合使用世界上广泛推广的Arduino控制器, Arduino开放平台拥有全球众多使用者, 有丰富的使用例子程序。机身采用高强度铝合金材料, 高速电机加优质橡胶轮运动灵活快速, 适合室内的平坦路面行进。使用Arduino控制器编程简单, 控制起来非常有趣。适合机器人比赛, 及其相关研究项目。本小车安装孔兼容多种传感器。

整机重量: 710g

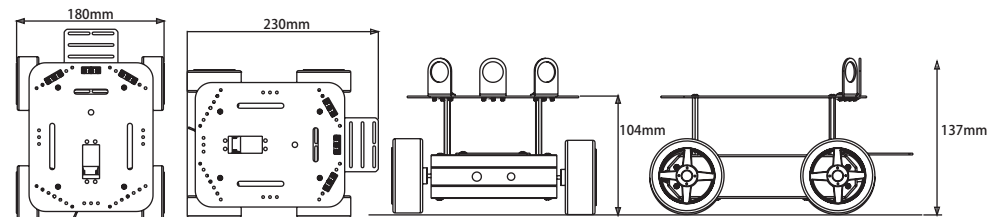
车轮直径: 65mm

最大行驶速度: 61cm/s

电机参数:

- 电机供电电压: 3-6V
- 堵转电流 (3V): 260mA
- 堵转电流 (6V): 470mA
- 减速比: 1:120
- 力矩 (3V): 1.2Kgcm
- 力矩 (6V): 1.92Kgcm
- 无负载转速 (3V): 90RPM
- 无负载转速 (6V): 160RPM
- 无负载运行电流 (3V): 140mA
- 重量: 45g
- 无负载运行电流 (6V): 170mA

Dimensions:



Introduction:

The Pirate four-wheel-drive robot is a DFRobot original design and widely used as a self-developed control panel for the Arduino platform. The platform can be controlled by a wide variety of microcontrollers including the widely popular Arduino. The Arduino platform has a large user base which provides a vast amount of resources and sample programs on the internet. The four different drives, powered by high-quality high-speed motors and flexible rubber wheels are mounted on a high-strength aluminum alloy body. This robotic platform is suitable for indoor use or flat road surfaces.

Complete Machine Weight: 710g

Wheel Diameter: 65mm

Highest Speed: 61cm/s

Motor Feature:

- Gear Ratio: 1:120
- No-load speed (3V): 90RPM
- No-load speed (6V): 160RPM
- No-load current (3V): 140mA
- No-load current (6V): 170mA
- Stall current (3V): 260mA
- Stall current (6V): 470mA
- Torque (3V): 1.2Kgcm
- Torque (6V): 1.92Kgcm
- Weight: 45g

以下设备不包括在ROB0003的部件清单内，用户需自行配备：

1. 5节AA电池。
2. 控制器以及电机驱动器。

您还需要准备以下工具，并参考零部件清单进行ROB0003的安装：

1. 十字螺丝刀（适用于M2.5，M3，M4的螺丝）。
2. 尖嘴钳。

* 本说明书不含电子部分安装，如需了解可输入网址或扫描二维码进入查看。

中文教程：[http://wiki.dfrobot.com.cn/index.php/\(SKU:ROB0003\)海盗船四轮机器人](http://wiki.dfrobot.com.cn/index.php/(SKU:ROB0003)海盗船四轮机器人)



The following parts below are not included in the Parts List, they are self-provided:

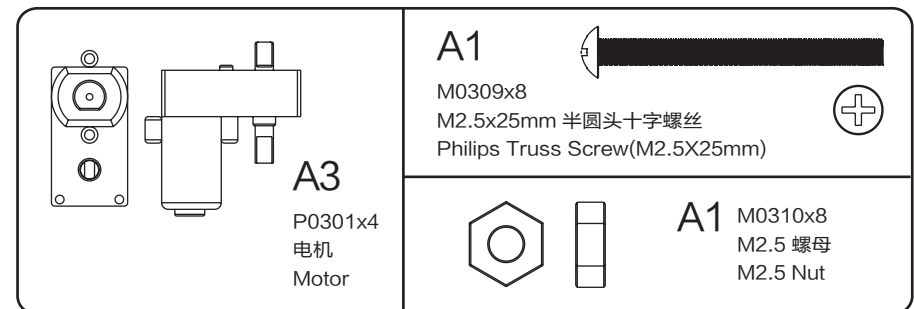
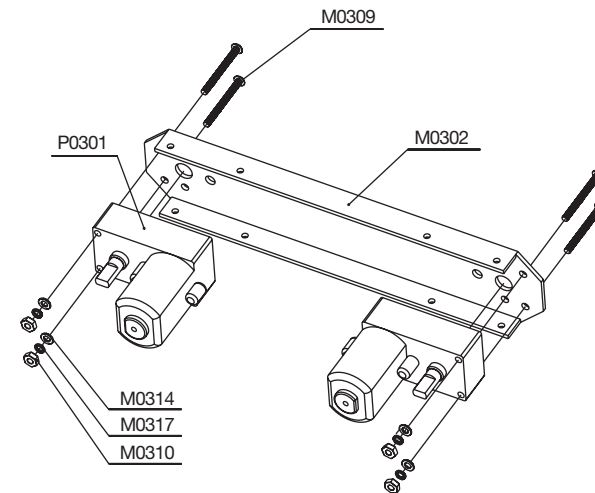
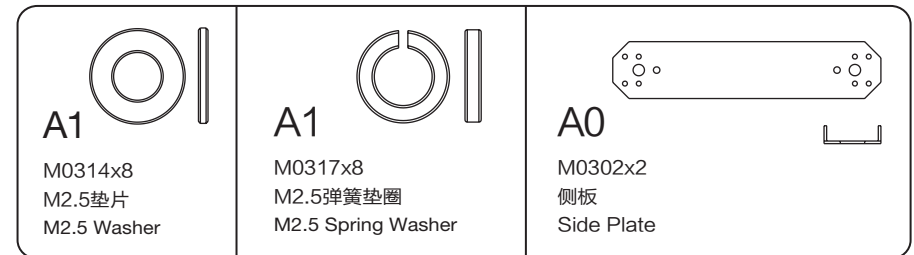
1. AA battery (5 pieces).
2. Micro-controller and Motor driver.



When starting assembly, prepare tools below and pick out the parts referring to the parts list:

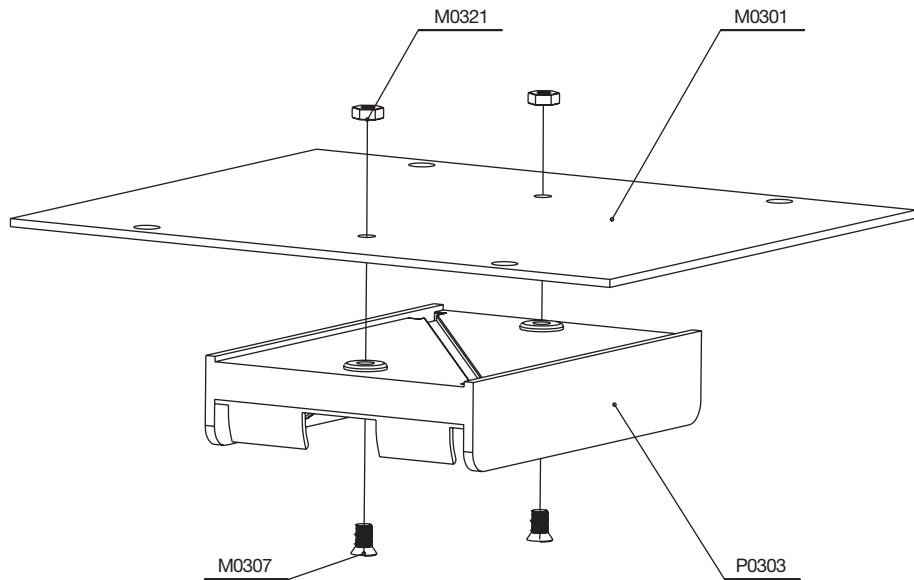
1. Phillips screwdriver（for screws M2.5，M3，M4）.
2. Needle noses pliers.

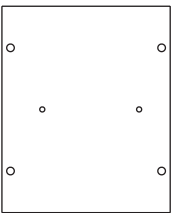
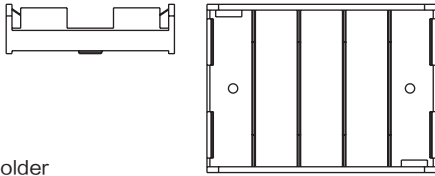
* Electronic installation is not included in this instruction;
If you need, please refer to tutorials on official website of DFRobot.



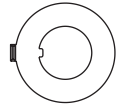
https://www.dfrobot.com/wiki/index.php?title=4WD_Mobile_Platform_SKU:ROB0003

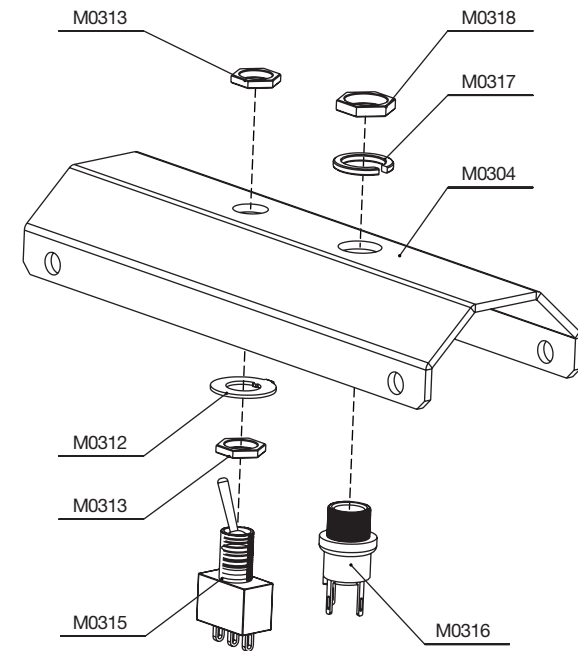


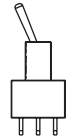

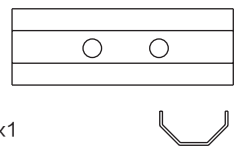

<p>A1</p> <p>M0307x2 M3x4mm 沉头十字螺丝 Philips Countersunk Screw(M3x4mm)</p> 	<p>A1</p> <p>M0321x2 M3 螺母 M3 Nut</p> 
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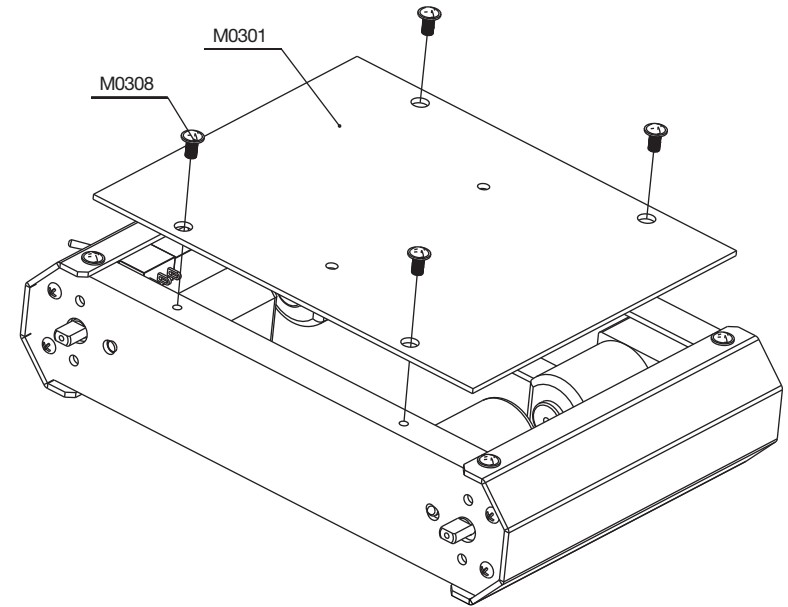
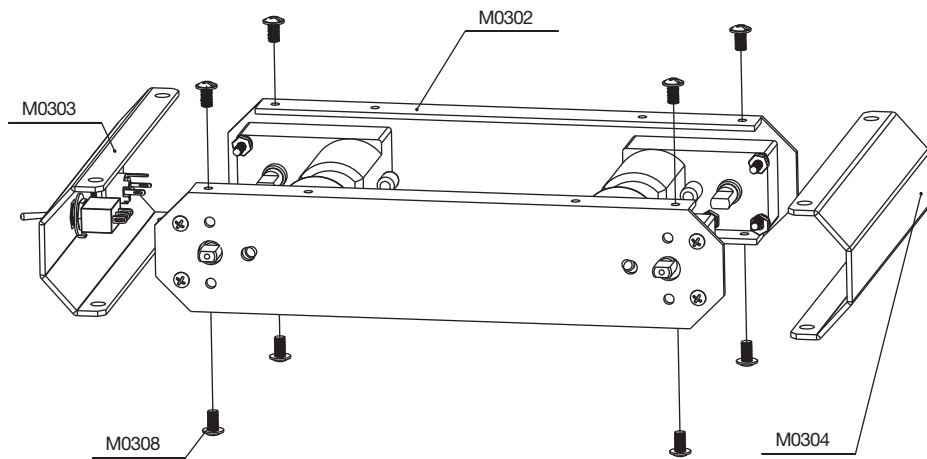


<p>A0</p> <p>M0301x1 底板 Base Plate</p> 	<p>A4</p> <p>P0303x1 电池盒 Battery Holder</p> 
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<p>A1</p> <p>M0317x1 M8 弹簧垫圈 M8 Spring Washer</p> 	<p>A1</p> <p>M0313x2 M6 螺母 M6 Nut</p> 	<p>A1</p> <p>M0312x1 M6 专用垫片 M6 Special Washer</p> 
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<p>A1</p> <p>M0315x1 电源开关 Power Switch</p> 	<p>A1</p> <p>M0316x1 电源插口 Power Jack</p> 	<p>A0</p> <p>M0304x1 后盖板 Rear Plate</p> 	<p>A1</p> <p>M0318x1 M8螺母 M8 Nut</p> 
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A1



M0308x8
M3x6mm平圆头十字带垫螺丝
Philips Flange Screw (M3x6)

A0



M0304x1
前盖板
Front Plate

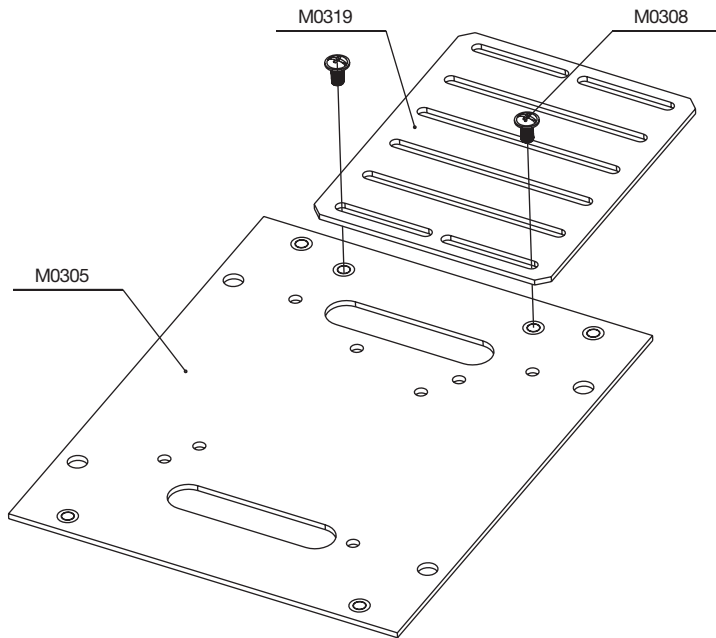
A1

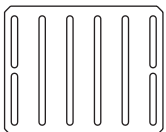
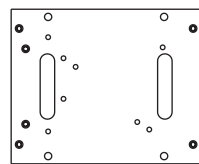


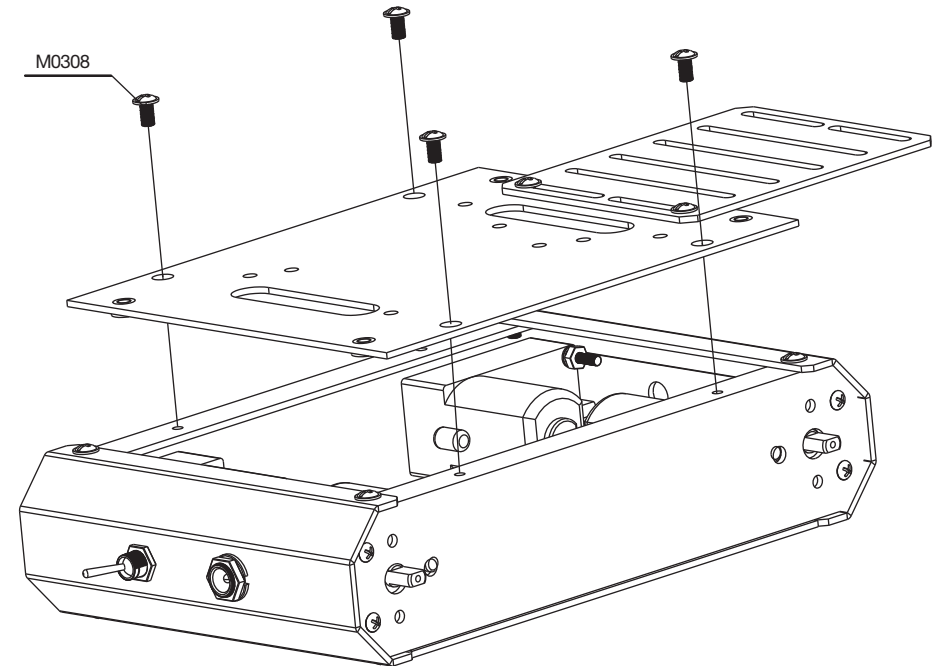
M0308x4
M3x6mm平圆头十字带垫螺丝
Philips Flange Screw (M3x6mm)

A1
 M0308x2
 M3x6mm平圆头十字带垫螺丝
 Philips Flange Screw (M3x6mm)





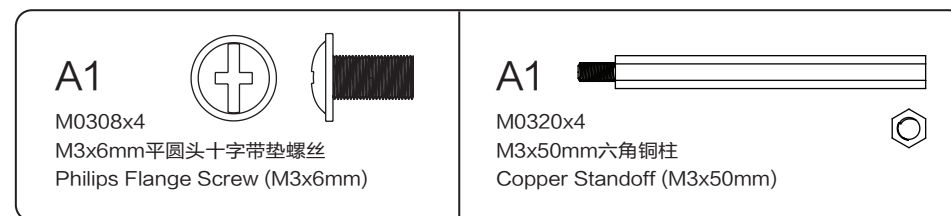
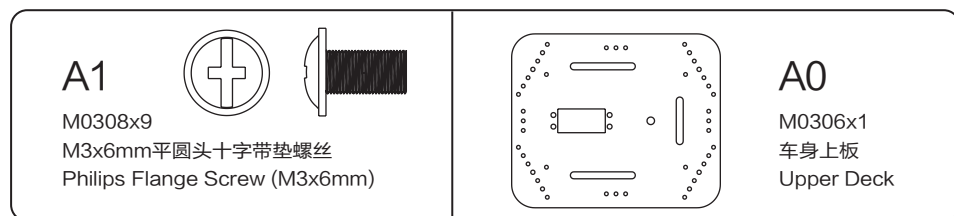
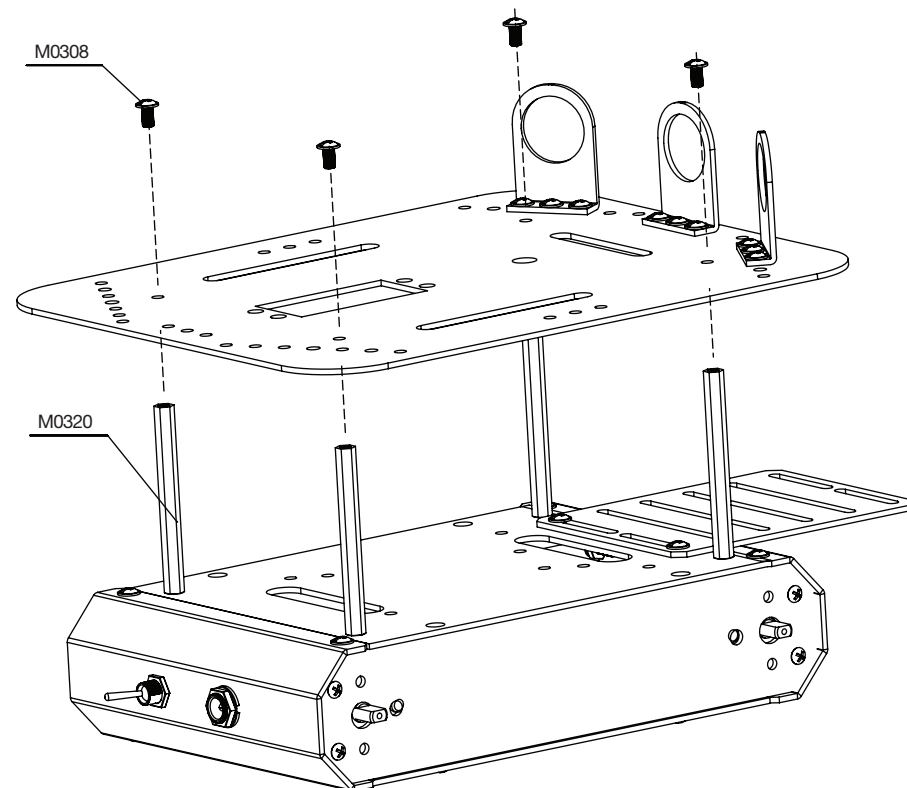
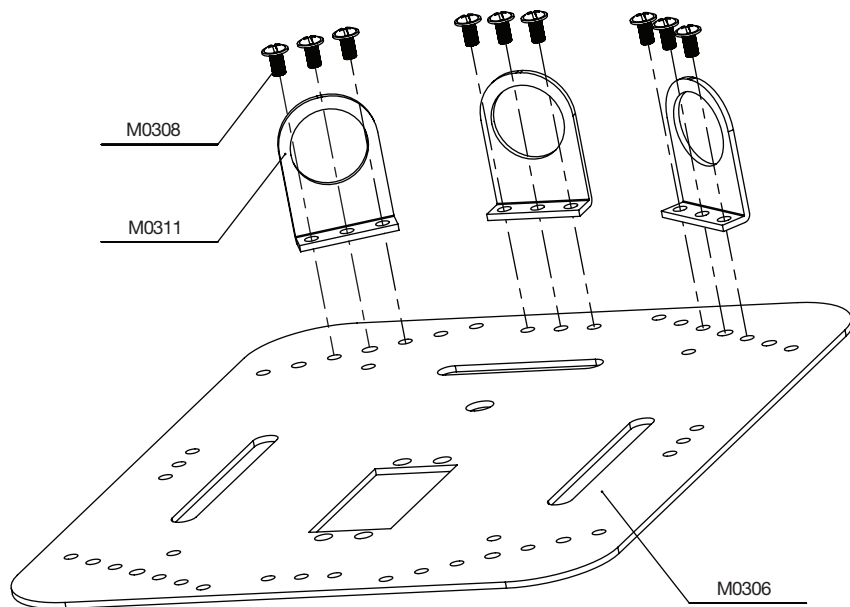
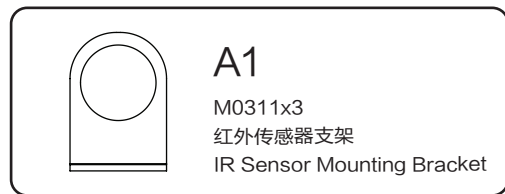


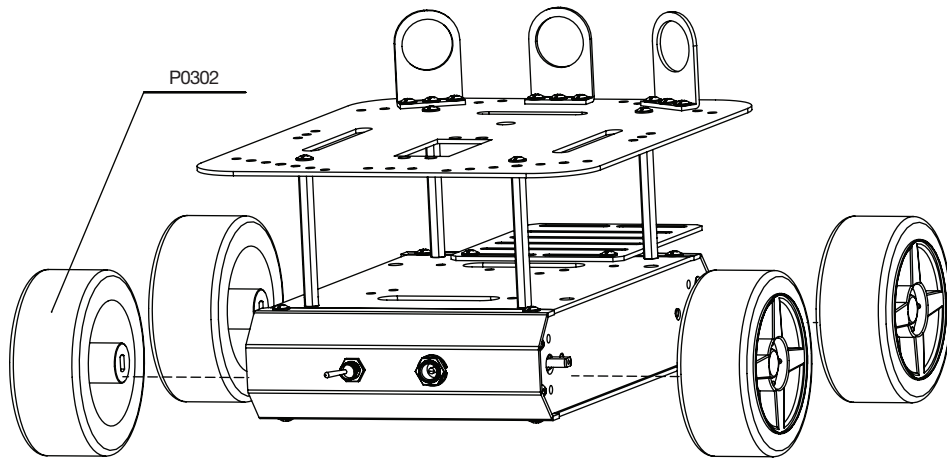
	<p>A2 M0319x1 传感器固定板 Sensor plate</p>		<p>A0 M0305x1 上盖板 Top Plate</p>
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A1
 M0308x4
 M3x6mm平圆头十字带垫螺丝
 Philips Flange Screw (M3x6mm)





编号 Product NO.	盒编号 BOX	袋编号 Packet	名称 Name	数量 Amount	备注 Remark
M0301		A0	底板 Base Plate	1	
M0302		A0	侧板 Side Plate	2	
M0303		A0	后盖板 Rear Plate	1	
M0304		A0	前盖板 Front Plate	1	
M0305		A0	上盖板 Top Plate	1	
M0306		A0	车身上板 Upper Deck	1	
M0307		A1	M3X4mm沉头十字螺丝 Philips Contersunk Screw (M3X4mm)	2	
M0308		A1	M3x6mm平圆头十字带垫螺丝 Philips Flange Screw (M3x6mm)	40	
M0309		A1	M2.5X25mm半圆头十字螺丝 Philips Truss Screw(M2.5X25mm)	8	
M0310		A1	M2.5螺母 M2.5 Nut	8	
M0311		A1	红外传感器支架 IR Sensor Mounting Bracket	3	
M0312		A1	M6专用垫片 M6 Special Washer	1	
M0322		A1	M3X10mm六角铜柱 Copper Standoff (M3x10mm)	4	

编号 Product NO.	盒编号 BOX	袋编号 Packet	名称 Name	数量 Amount	备注 Remark
M0313		A1	M6螺母 M6 Nut	2	
M0314		A1	M2.5垫圈 M2.5 Washer	8	
M0315		A1	电源开关 Power Switch	1	
M0316		A1	电源插口 Power Jack	1	
M0317		A1	M2.5弹簧垫圈 M2.5 Spring Washer	8	
M0318		A1	M8螺母 M8 Nut	1	
M0319		A2	传感器固定板 Sensor Plate	1	
M0320		A1	M3x50mm六角铜柱 Copper Standoff (M3x50mm)	4	
M0321		A1	M3螺母 M3 Nut	20	
P0301		A3	电机 Motor	4	
P0302		A0	轮子 Wheel	4	
P0303		A4	电池盒 Battery Holder	1	
P0304		A4	红黑电机线 Motor Wire	1	

主控器:

- Romeo BLE 多合一控制器 SKU: DFR0305
- Bluno Mega 2560控制器 SKU: DFR0323
- WiDo WiFi 物联网主控器 SKU: DFR0321

巡线机器人:

- Mini寻线传感器 SKU: SEN0017
- 智能灰度传感器 SKU: SEN0147

避障机器人:

- 3-80cm红外数字避障传感器 SKU: SEN0019
- 红外扫描套件 SKU: KIT0019
- 超声波扫描套件 SKU: KIT0020

环境传感器:

- 高精度DHT22温湿度传感器 SKU: SEN0137
- ML8511 UV紫外线传感器 SKU: SEN0175
- PM2.5 激光粉尘传感器 SKU: SEN0177
- CO2 二氧化碳传感器模块 SKU: SEN0159
- 6轴电子罗盘LSM303DLH SKU: SEN0079

通信模块:

- GPS/GPRS/GSM 模块 SKU: TEL0051
- SIM800H GPRS/GSM扩展板 集成DTMF/TTS SKU: TEL0089

电池:

- 7.4V 2200MA 锂电池 SKU: FIT0137

Controller:

- Romeo BLE (Arduino Compatible Atmega 328) SKU: DFR0305
- Bluno Mega 2560 - Bluetooth 4.0 SKU: DFR0321
- WiDo - Open Source IoT Node (Arduino Compatible) SKU: DFR0321

Line Tracking Robot:

- Line Tracking Sensor for Arduino SKU: SEN0017
- Smart Grayscale Sensor SKU: SEN0147

Adjustable Infrared Robot:

- Adjustable Infrared Sensor Switch SKU: SEN0019
- IR Scanner Kit SKU: KIT0019
- Ultrasonic Scanner kit SKU: KIT0020

Environment Sensor:

- DHT22 Temperature and Humidity Sensor SKU: SEN0137
- UV Sensor - ML8511 SKU: SEN0175
- PM2.5 Sensor Module - Laser Sensing SKU: SEN0177
- CO2 Sensor (Arduino compatible) SKU: SEN0159
- LSM303 Breakout Board - Tilt Compensated Compass SKU: SEN0079

Communication Module:

- GPS/GPRS/GSM Shield SKU: TEL0051
- SIM800H GPRS Shield SKU: TEL0089

Battery:

- 7.4V Lipo 2200mAh Battery SKU: FIT0137



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Website: www.DFRobot.com

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DFRobot has the final authority of interpretation on this manual.