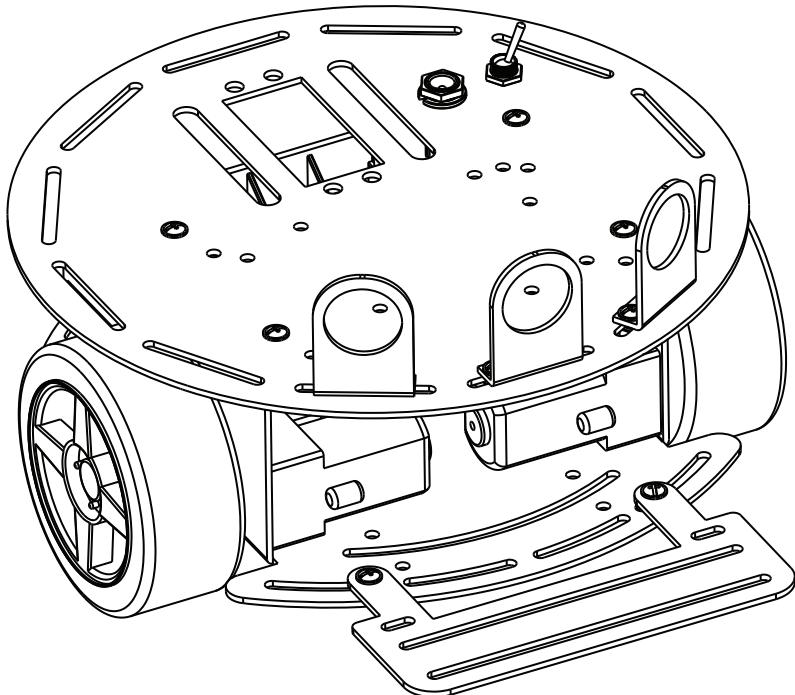


# Instruction Manual

## Turtle - 2WD Mobile Platform

安装说明书

**DFEROBOT** DRIVE THE FUTURE



在使用Turtle - 2WD Mobile Platform之前，请仔细阅读此说明书。

Read the manual carefully before using Turtle - 2WD Mobile Platform.

Ver1.1

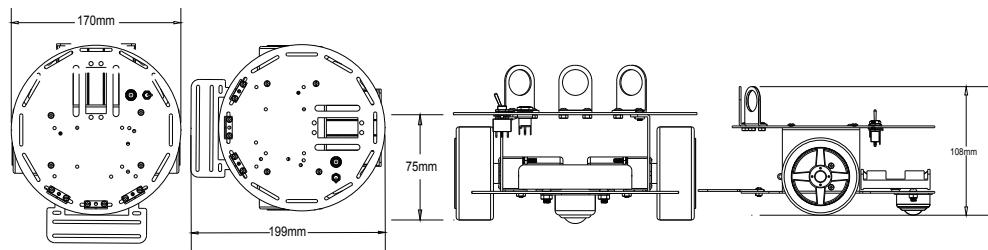


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# 产品特性 Features

## 整机尺寸：



## 简介：

Turtle-2WD Mobile Platform两轮驱动机器人是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。2轮差数驱动，使用转弯半径趋近于零，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。使用Arduino控制器编程简单，控制起来非常有趣。

整机重量：445克

车轮直径：65mm

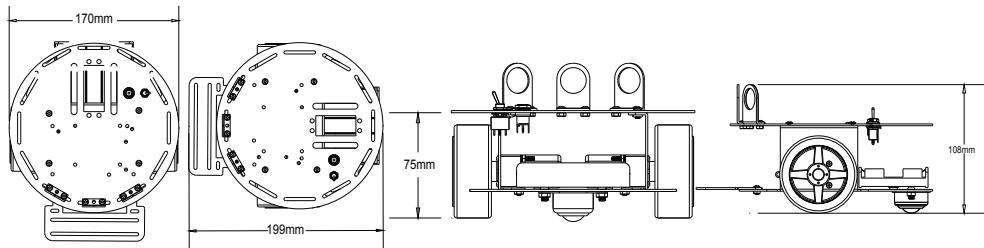
最大行驶速度：61cm/s

## 电机参数：

- 电机供电电压：3-6V
- 减速比：1 : 120
- 无负载转速(3V)：100RPM
- 无负载转速(6V)：200RPM
- 无负载运行电流(3V)：60mA
- 无负载运行电流(6V)：71mA

# 产品特性 Features

## Dimensions :



## Introduction :

The Arduino 2WD two - wheel - drive robot is a DFRobot original design and widely used as 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 two 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: 445g

Wheel Diameter : 65mm

Highest Speed: 61cm/s

## Motor Feature :

- Gear Ratio : 1:120
- No-load speed (3V): 100RPM
- No-load speed (6V): 200RPM
- No-load current (3V): 60mA
- No-load current (6V): 71mA
- Stall current (3V): 260mA
- Stall current (6V): 470mA
- Torque (3V): 1.2Kgcm
- Torque (6V): 1.92Kgcm
- Weight : 45g

# 产品安装说明 Notice for Assembly

**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。

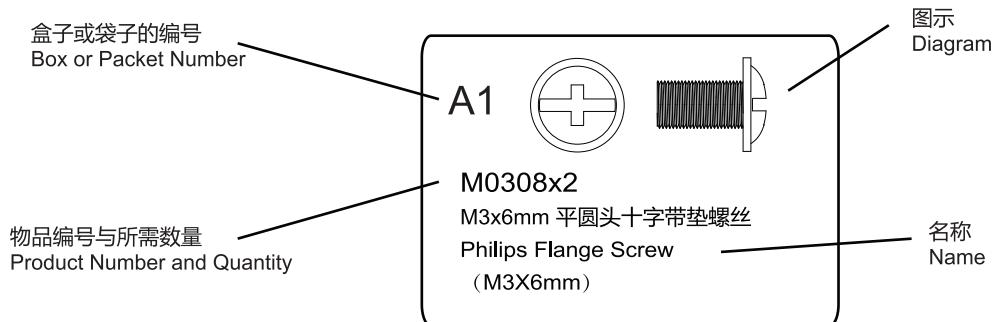
**The following parts below are not included in the Parts List, they are self-provided:**

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

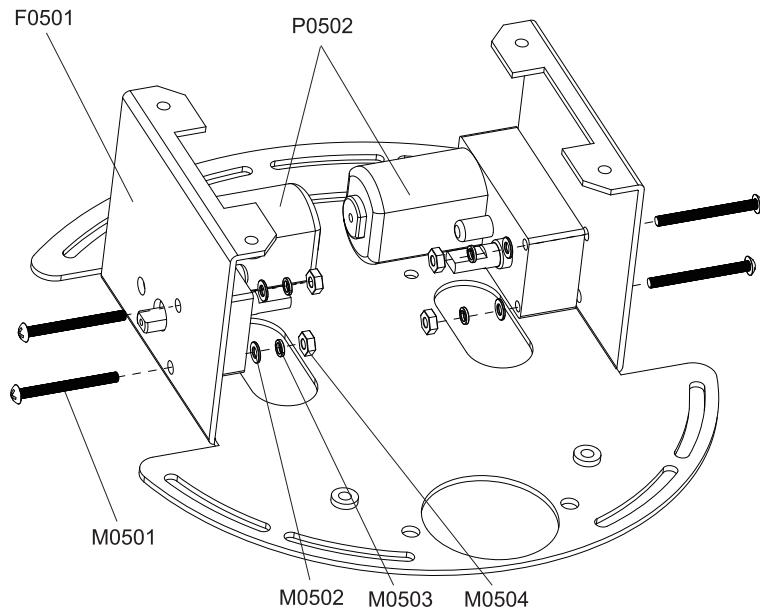
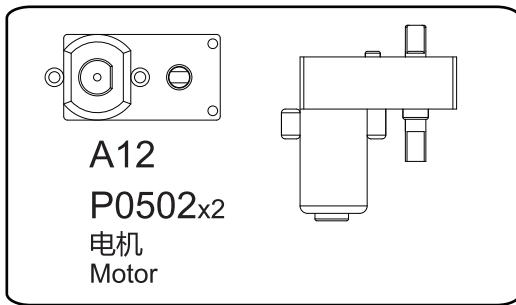
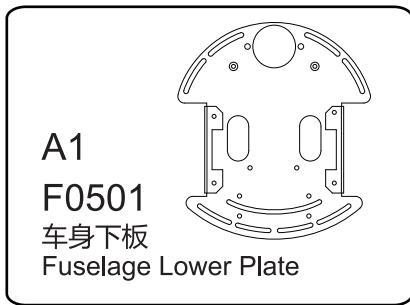
**When starting assembly, prepare tools below and pick out the parts referring to the Parts List:**

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

## 标志含义 Symbol Definition

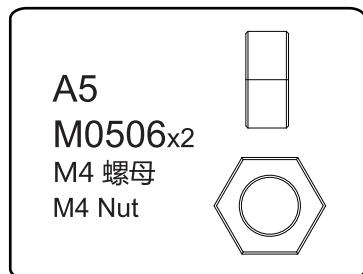
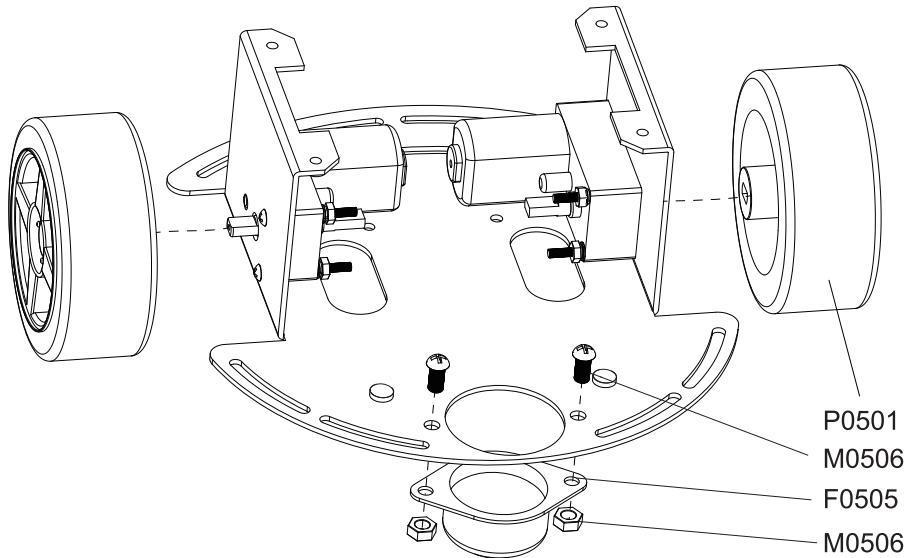
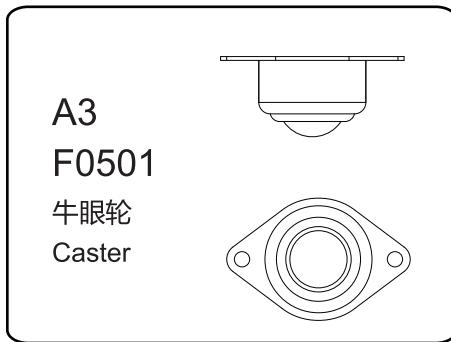


# 底盘主要部件安装(A) Main Chassis Assembly(A)

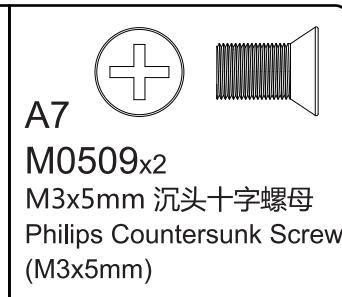
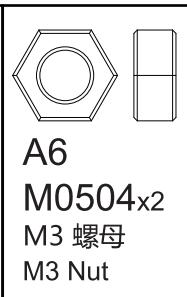
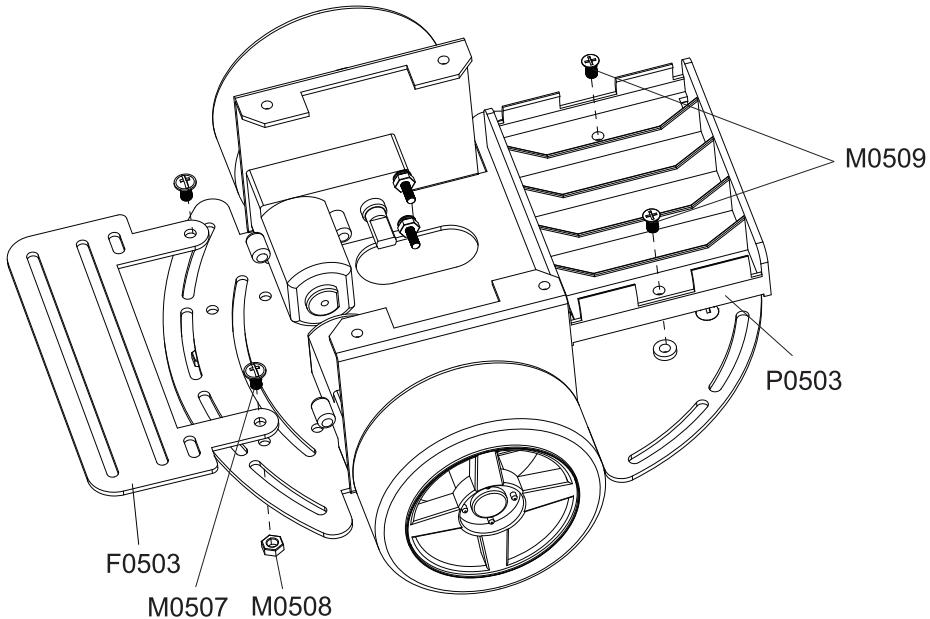
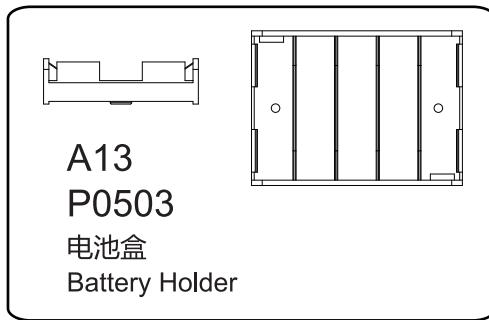
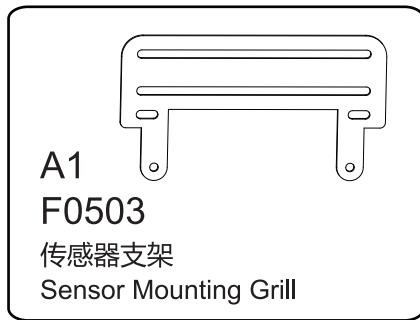


 A4 M0501x4 M2.5x25mm平圆头十字螺丝 Philips Truss Screw (M2.5x25mm)	 A4 M0502x4 M2.5垫片 M2.5 Washer	 A4 M0503x4 M2.5弹簧垫圈 M2.5 Spring Washer	 A4 M0504x4 M2.5螺母 M2.5 Nut
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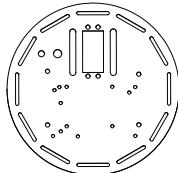
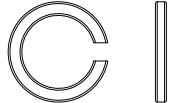
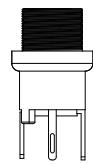
# 底盘主要部件安装(B) Main Chassis Assembly(B)

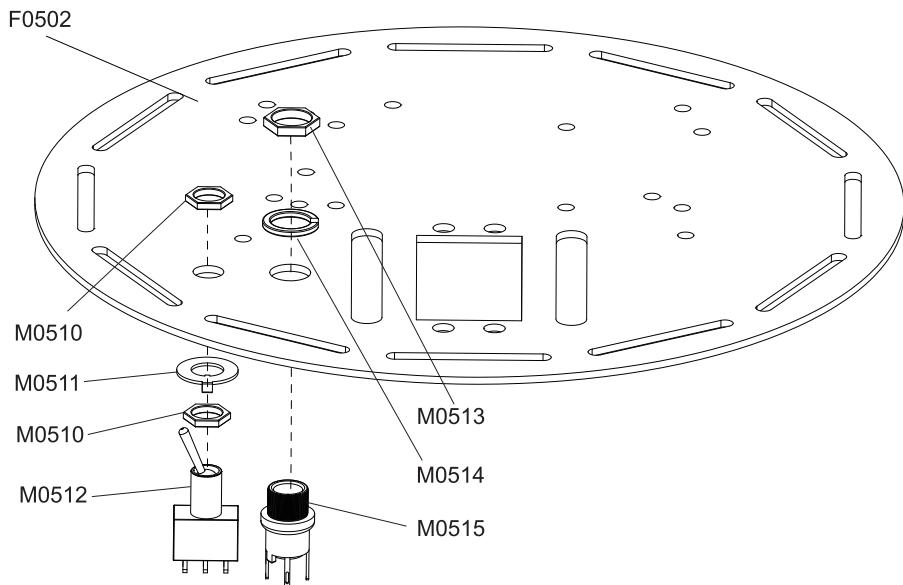


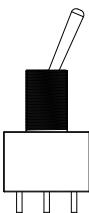
# 底盘附件安装 Accessories for Chassis Assembly



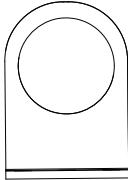
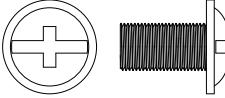
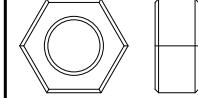
# 上盖部件安装(A) Upper Cover Assembly(A)

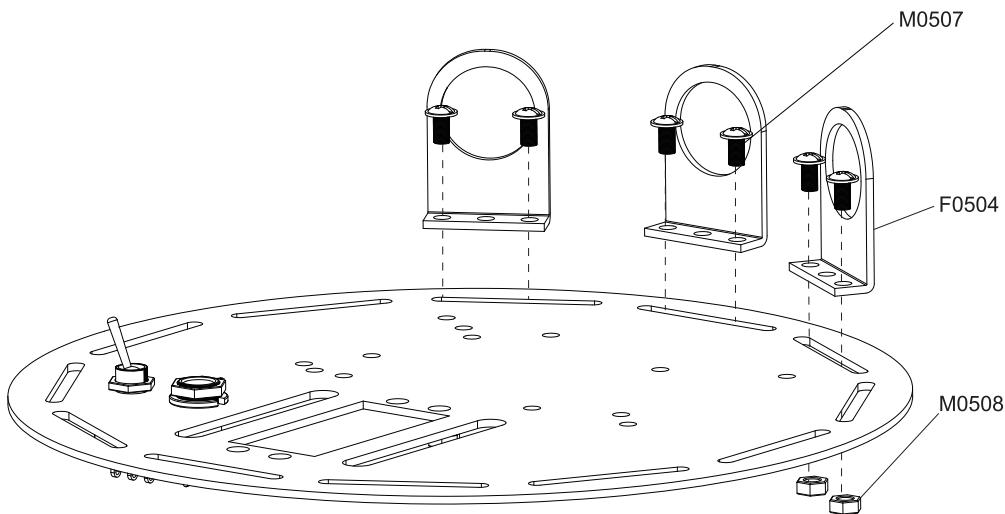
 A1 F0502 车身上板 Fuselage Upper Plate	 A9 M0513 M8 螺母 M8 Nut	 A9 M0514 M8 弹簧垫圈 M8 Spring Washer	 A9 M0515 电源插口 Power Jack
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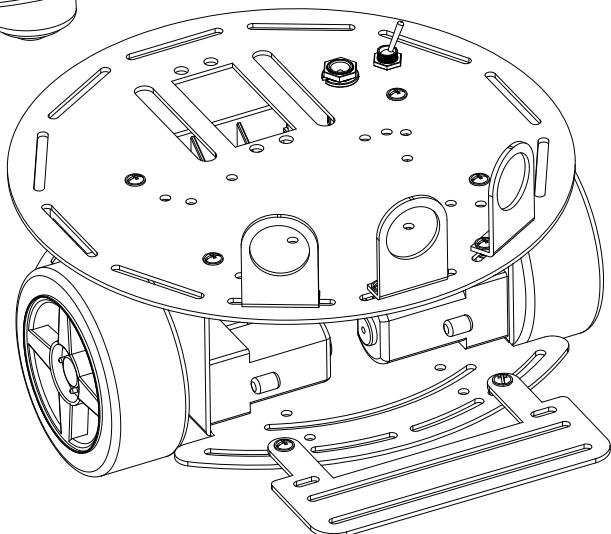
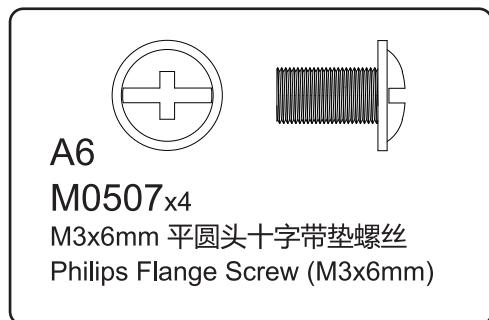
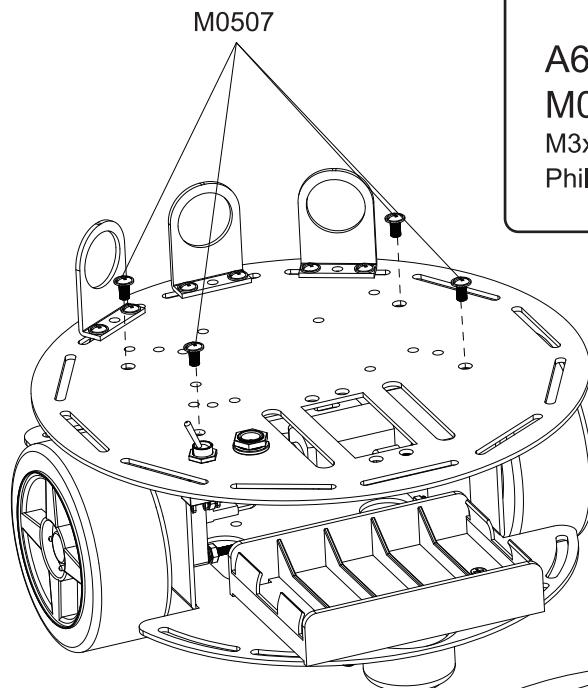
 A8 M0510x2 M6 螺母 M6 Nut	 A8 M0511 M6 专用垫片 M6 Special Washer	 A8 M0512 电源开关 Power Switch
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# 上盖部件安装(B) Upper Cover Assembly(B)

 A2 F0504x3 红外传感器支架 IR Sensor Mounting Bracket	 A6 M0507x6 M3x6mm 平圆头十字带垫螺丝 Philips Flange Screw (M3x6mm)	 A2 M0504x6 M3 螺母 M3 Nut
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# 整机组装 Final Platform Assembly



# 零部件清单 Parts List

编号 Product NO.	盒编号 BOX	袋编号 Packet	名称 Name	数量 Amount	备注 Remark
F0501		A1	车身下板 Fuselage Lower Plate	1	
F0502		A1	车身上板 Fuselage Upper Plate	1	
F0503		A1	传感器支架 Sensor Mounting Grill	1	
F0504		A2	红外传感器支架 IR Sensor Mounting Bracket	3	
F0505		A3	牛眼轮 Caster	1	
M0501		A4	M2.5x25mm 半圆头十字螺丝 Philips Truss Screw(M4x25mm)	4	
M0502		A4	M2.5 垫片 M2.5 Washer	4	
M0503		A4	M2.5 弹簧垫圈 M2.5 Spring Washer	4	
M0504		A4	M2.5 螺母 M2.5 Nut	4	
M0505		A5	M4x8mm 半圆头十字螺丝 Philips Truss Screw(M4x8mm)	2	
M0506		A5	M4 螺母 M4 Nut	2	
M0507		A6	M3x6mm 半圆头带垫螺丝 Philips Flange Screw(M3x6mm)	19	
M0508		A6	M3 螺母 M3 Nut	19	
M0509		A7	M3x5mm 沉头十字螺丝 Philips Countersunk Screw(M3x5mm)	2	
M0510		A8	M6 螺母 M6 Nut	2	
M0511		A8	M6 专用垫片 M6 Special Washer	1	
M0512		A8	电源开关 Power Switch	1	
M0513		A9	M8 螺母 M8 Nut	1	
M0514		A9	M8 弹簧垫圈 M8 Spring Washer	1	
M0515		A9	电源插口 Power Jack	1	
M0516		A10	M3x10mm 铜支柱 Copper Pillar(M3x10mm)	4	
P0501		A11	轮子 Wheel	2	
P0502		A12	电机 Motor	2	
P0503		A13	电池盒 Battery Holder	1	

## 控制器:

- DFRduino Romeo 328控制器 (Arduino 兼容) SKU:DFR0004
- XBee扩展板(Arduino兼容) SKU:DFR0015
- L298N直流电机驱动模块DF-MD V1.3 SKU:DRI0002
- Wireless GamePad for Arduino SKU:DFR0182

## 结构升级包:

- 橡胶轮子(适用于4WD和2WD平台) SKU:FIT0003
- 云台舵机支架套件 SKU:FIT0004
- 迷你直流减速电机(带后输出轴) SKU:FIT0016
- 手机支架(兼容Android手机和Iphone) SKU:FIT0167
- D65mm橡胶轮子 - 蓝/红/银 (无连接轴)SKU:FIT0199 + 轮子 - 电机连接轴  
SKU:FIT0198
- DF05BB舵机 SKU:SER0020

## 传感器:

- URM37 V3.2超声波测距模块 SKU:SEN0001
- GP2Y0A21 距离传感器 SKU:SEN0014
- 3-80cm红外接近开关 SKU:SEN0019

## 通信模块:

- Bluetoooh Bee V2蓝牙串口模块 SKU:TEL0023
- DF-Bluetooth V3蓝牙串口模块 SKU:TEL0026

## 装饰:

- RGB 全彩灯盘 SKU:DFR0106

## 电源:

- 7.4V 2200mAh 锂电池(DC2.1输出接头) SKU:FIT0137

## **Controller:**

- Romeo-All in one Controller (Arduino Compatible Atmega 328)  
SKU:DFR0004
- Xbee Shield For Arduino SKU:DFR0015
- 2A Dual Motor Controller SKU:DRI0002
- Wireless GamePad for Arduino SKU:DFR0182

## **Mechanical Update Package:**

- Rubber Wheel for A4WD and A2WD (Pair) SKU:FIT0003
- Pan and Tilt Kit (Black Anodized) (no servos) SKU:FIT0004
- Micro DC Geared Motor with Back Shaft SKU:FIT0016
- Phone Holder For Andriod&Iphone SKU:FIT0167
- D65mm Rubber Wheel Pair - Blue/Red/Silver (without shaft)  
SKU:FIT0199 + Wheel - Motor Adapter SKU:FIT0198
- DF05BB Standard Servo (5kg) SKU:SER0020

## **Sensor Accessories:**

- URM37 V3.2 Ultrasonic Sensor SKU:SEN0001
- Sharp GP2Y0A21 Distance Sensor (10-80cm) SKU:SEN0014
- Adjustable Infrared Sensor Switch SKU:SEN0019

## **Communication Accessories:**

- Bluetooth Bee SKU:TEL0023
- DFRobot Bluetooth V3 SKU:TEL0026

## **Decoration:**

- Light Disc with 7 SMD RGB LED SKU:DFR0106

## **Power:**

- 7.4V Lipo 2200mAh Battery (Arduino Power Jack) SKU:FIT0137

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