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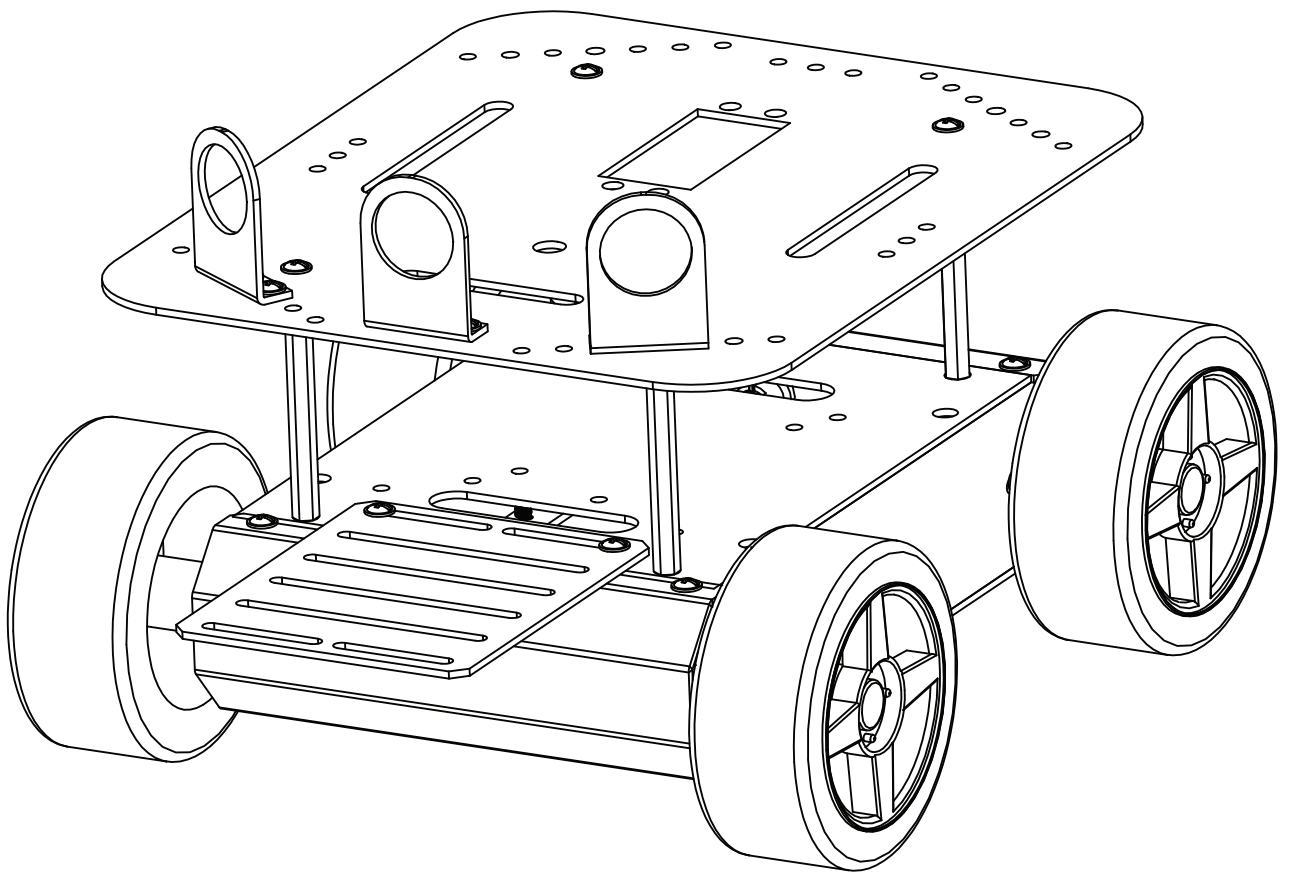
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Instruction Manual

# Pirate - 4WD Mobile Platform

安装说明书



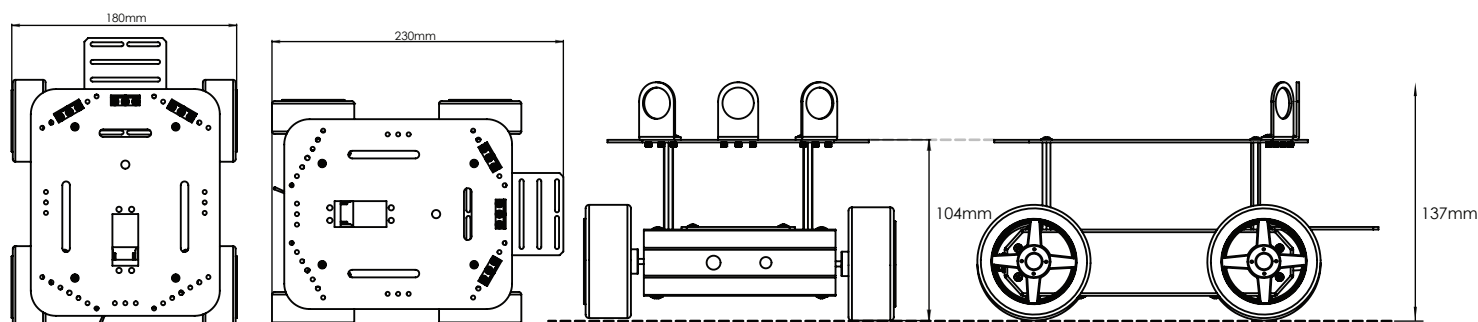
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# 产品特性 Features

## 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：710克

车轮直径：65mm

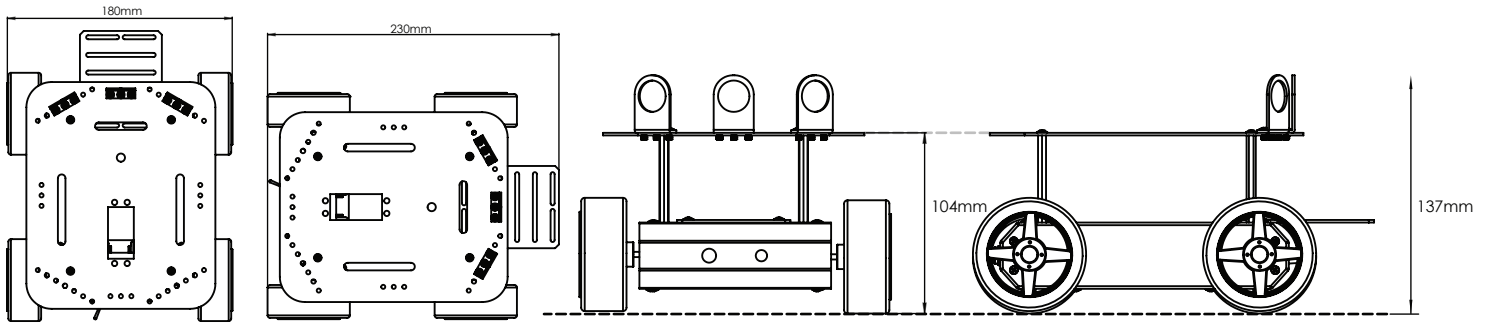
最大行驶速度:61cm/s

## 电机参数：

- 电机供电电压：3-6V
- 堵转电流(3V):260mA
- 减速比：1：120
- 堵转电流(6V):470mA
- 无负载转速(3V):100RPM
- 力矩(3V): 1.2Kgcm
- 无负载转速(6V):200RPM
- 力矩(6V): 1.92Kgcm
- 无负载运行电流(3V):60mA
- 重量:45g
- 无负载运行电流(6V):71mA

# 产品特性 Features

## Dimensions :



## Introduction :

The Pirate four-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 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): 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。

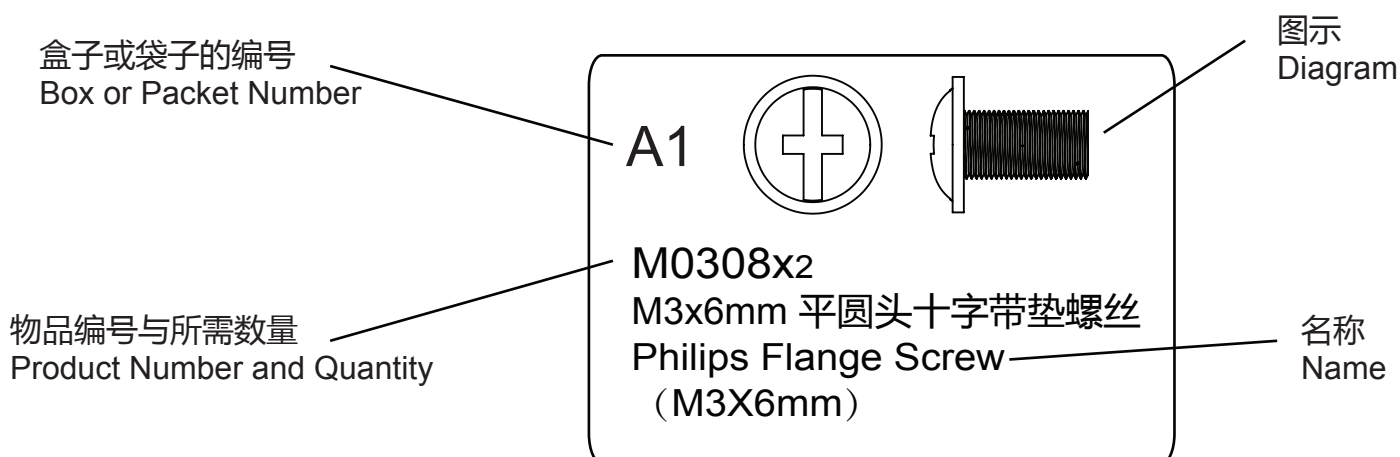
The following parts below are not included in the Parts List, they are self-provided:

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

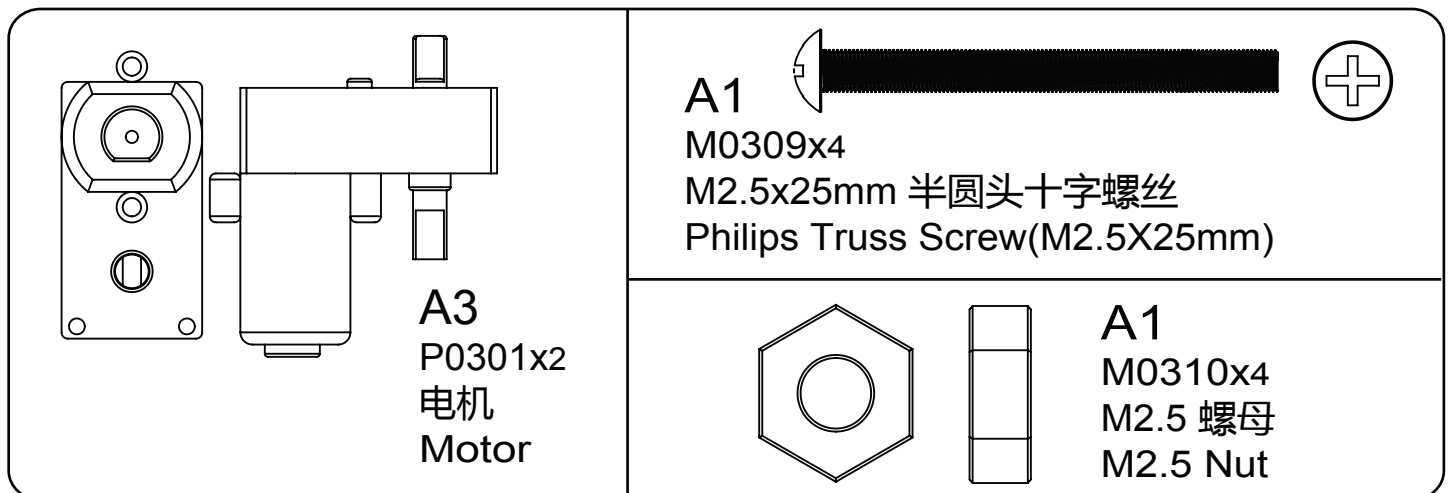
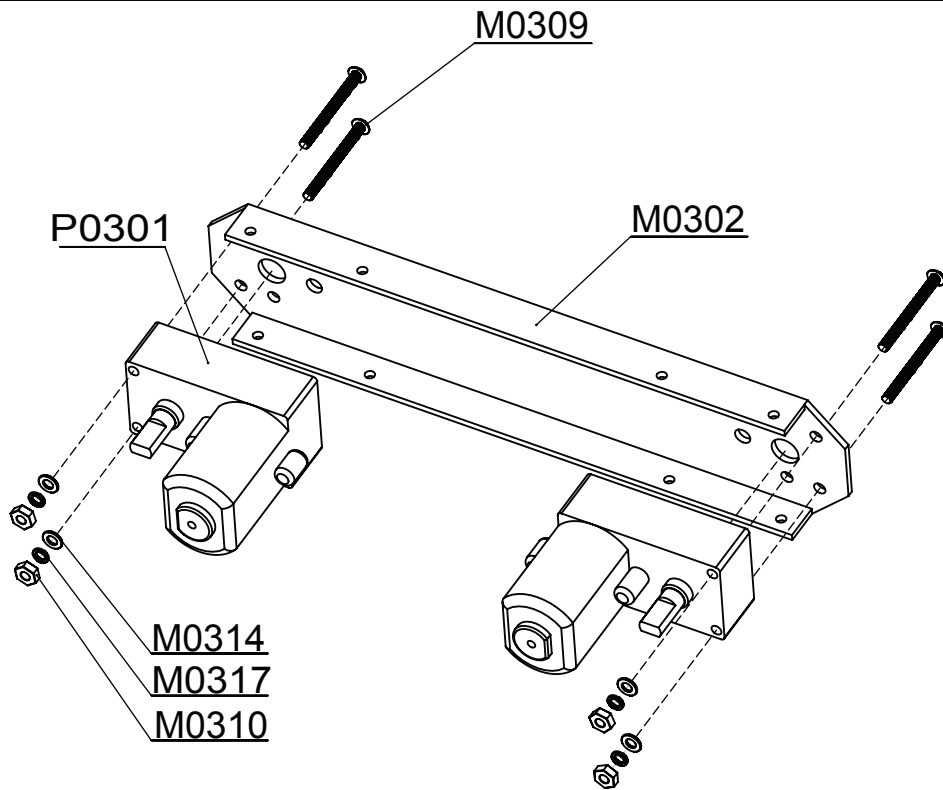
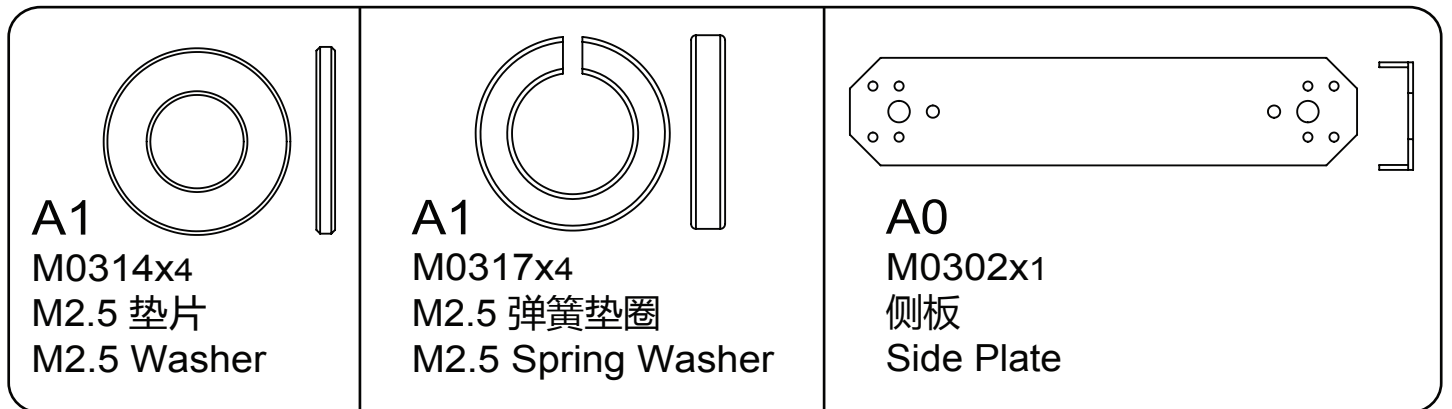
When starting assembly, prepare tools below and pick out the parts referring to the Parts List:

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

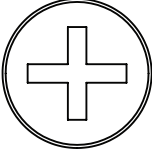
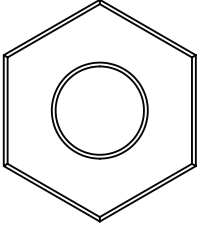
## 标志含义 Symbol Definition

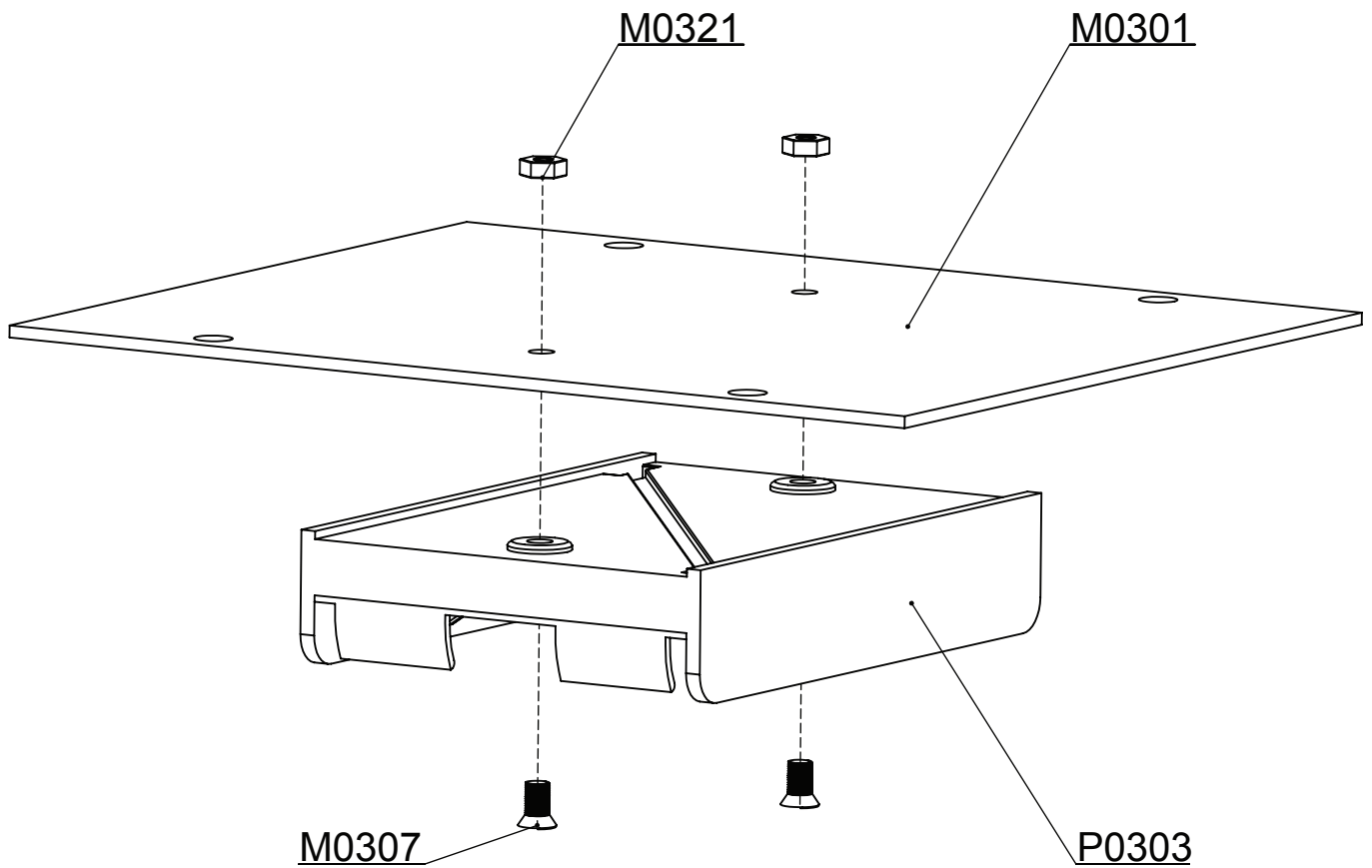


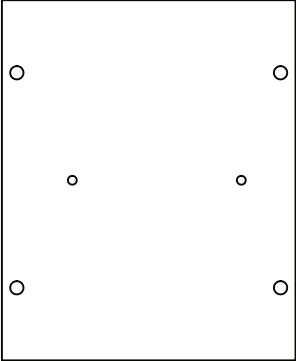
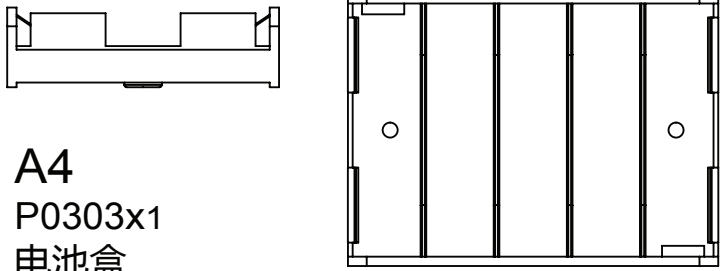
# 电机安装 Motors Assembly



# 电池盒安装 Battery Holder Assembly

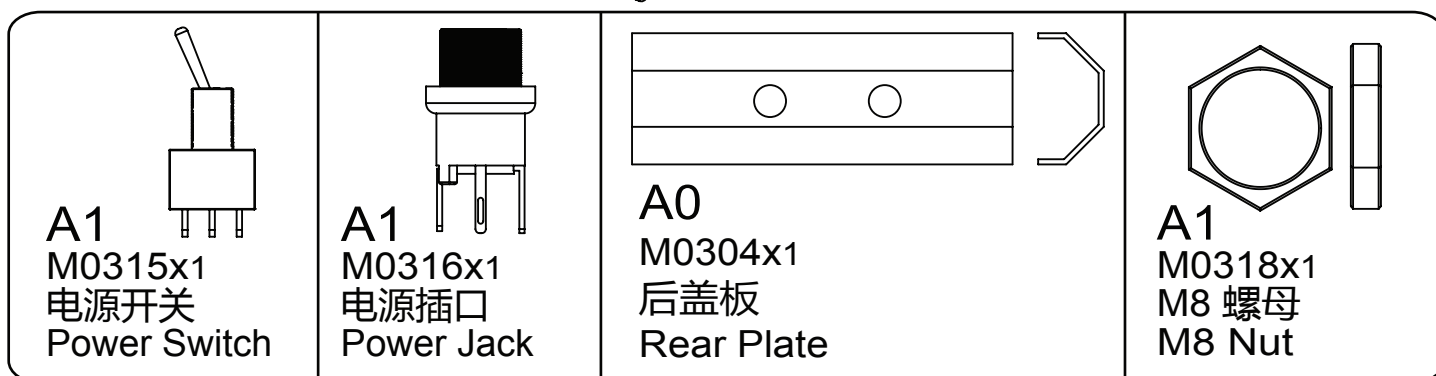
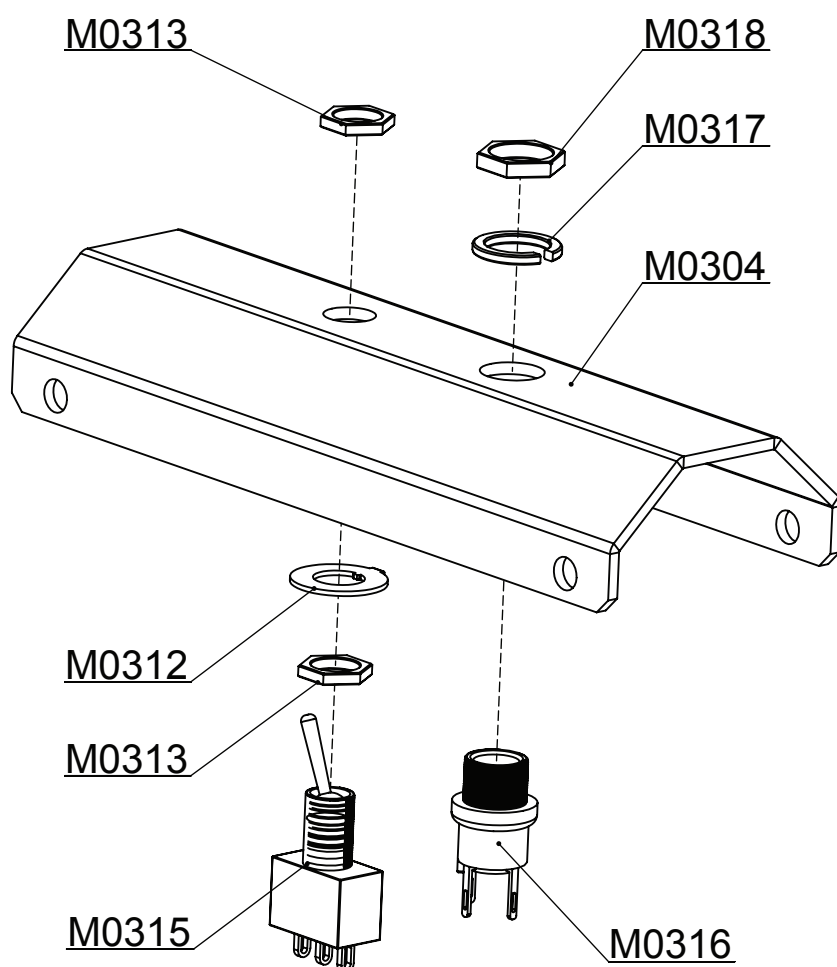
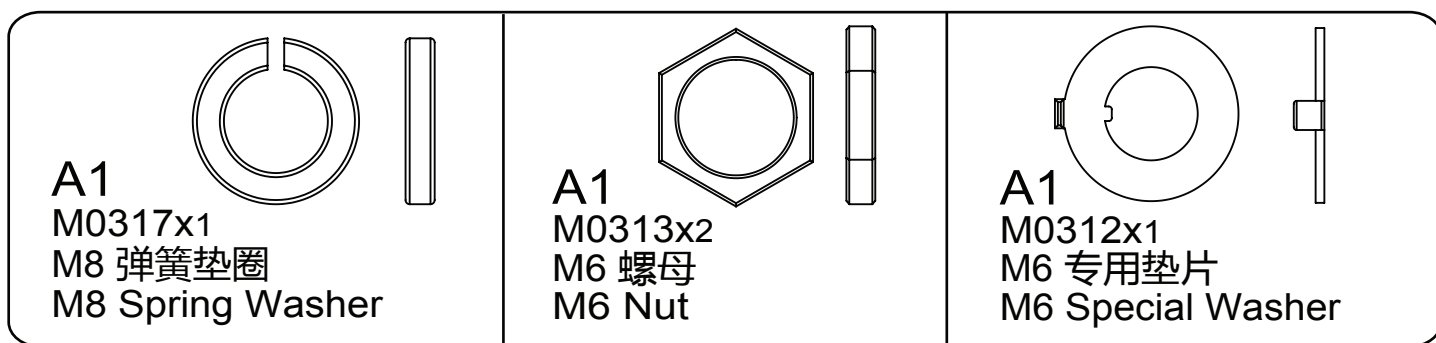
 <p><b>A1</b> M0307x2 M3x4mm 沉头十字螺丝 Philips Countersunk Screw(M3x4mm)</p>	 <p><b>A1</b> M0321x2 M3 螺母 M3 Nut</p>
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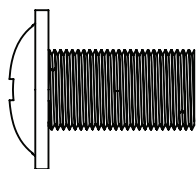
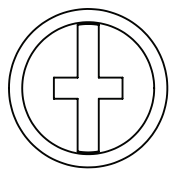
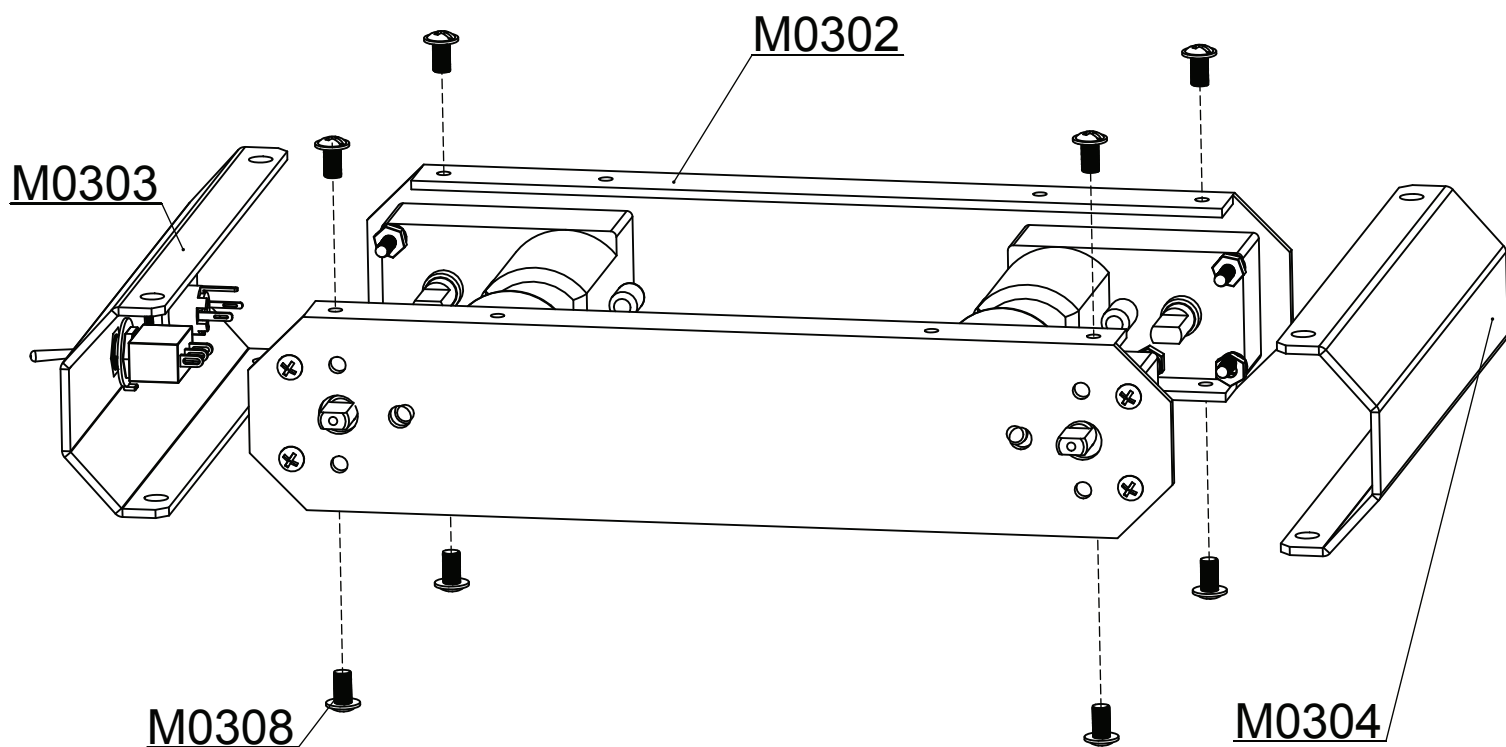
 <p><b>A0</b> M0301x1 底板 Base Plate</p>	 <p><b>A4</b> P0303x1 电池盒 Battery Holder</p>
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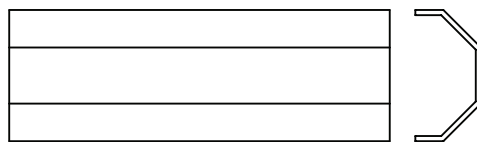
# 开关及插座安装 Power Jack and Switch Assembly



# 前后挡板安装 Front and Rear Plate Assembly

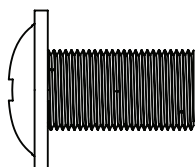
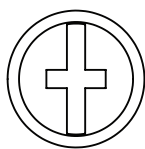
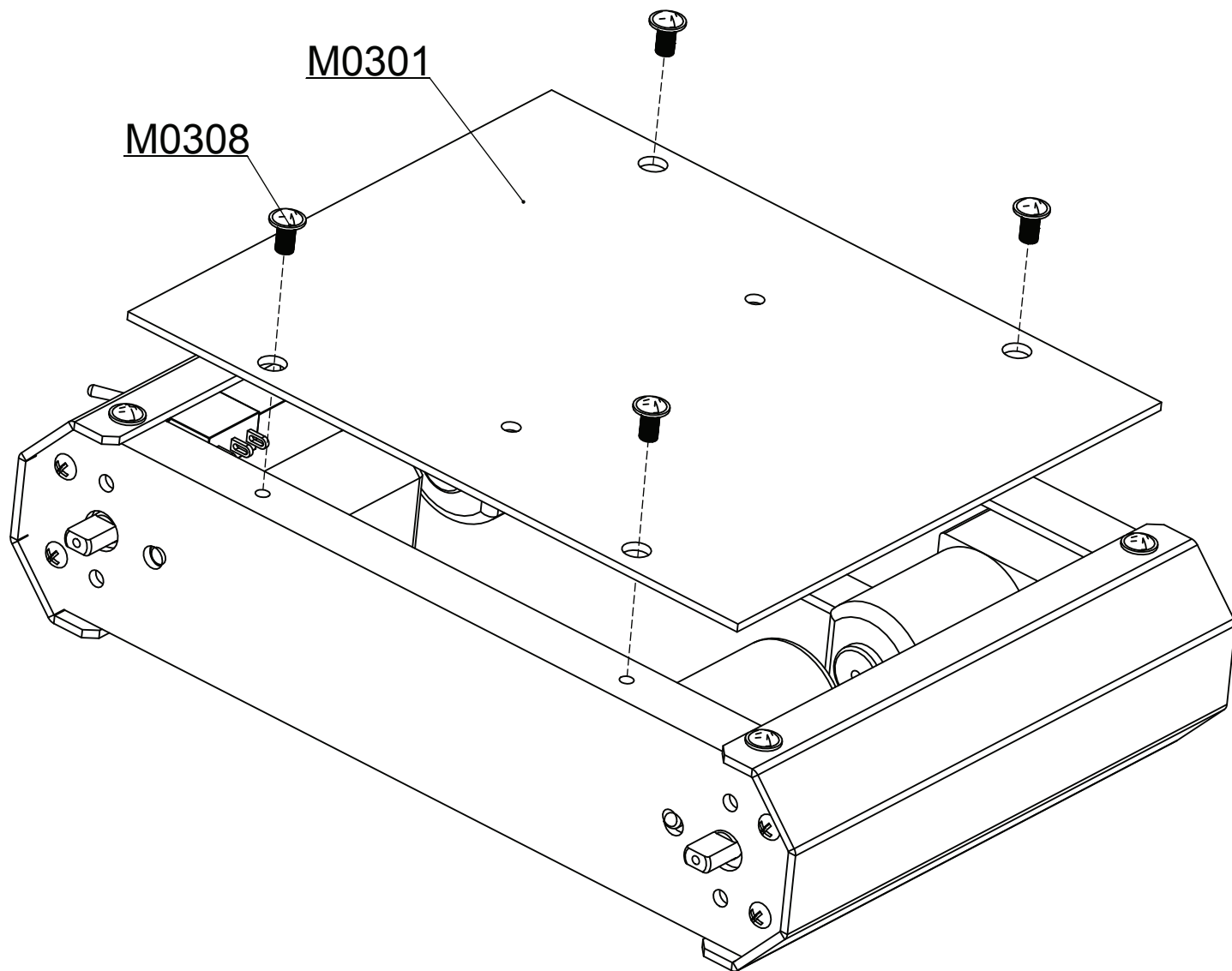


A1  
M0308x8  
M3x6mm 平圆头十字带垫螺丝  
Philips Flange Screw (M3x6)



A0  
M0304x1  
前盖板  
Front Plate

# 底板安装 Base Plate Assembly



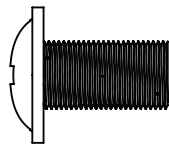
A1

M0308x4

M3x6mm 平圆头十字带垫螺丝

Philips Flange Screw (M3x6mm)

# 传感器固定板安装 Sensor Plate Assembly

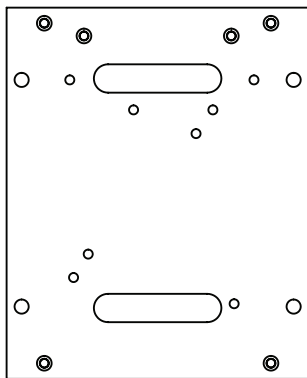
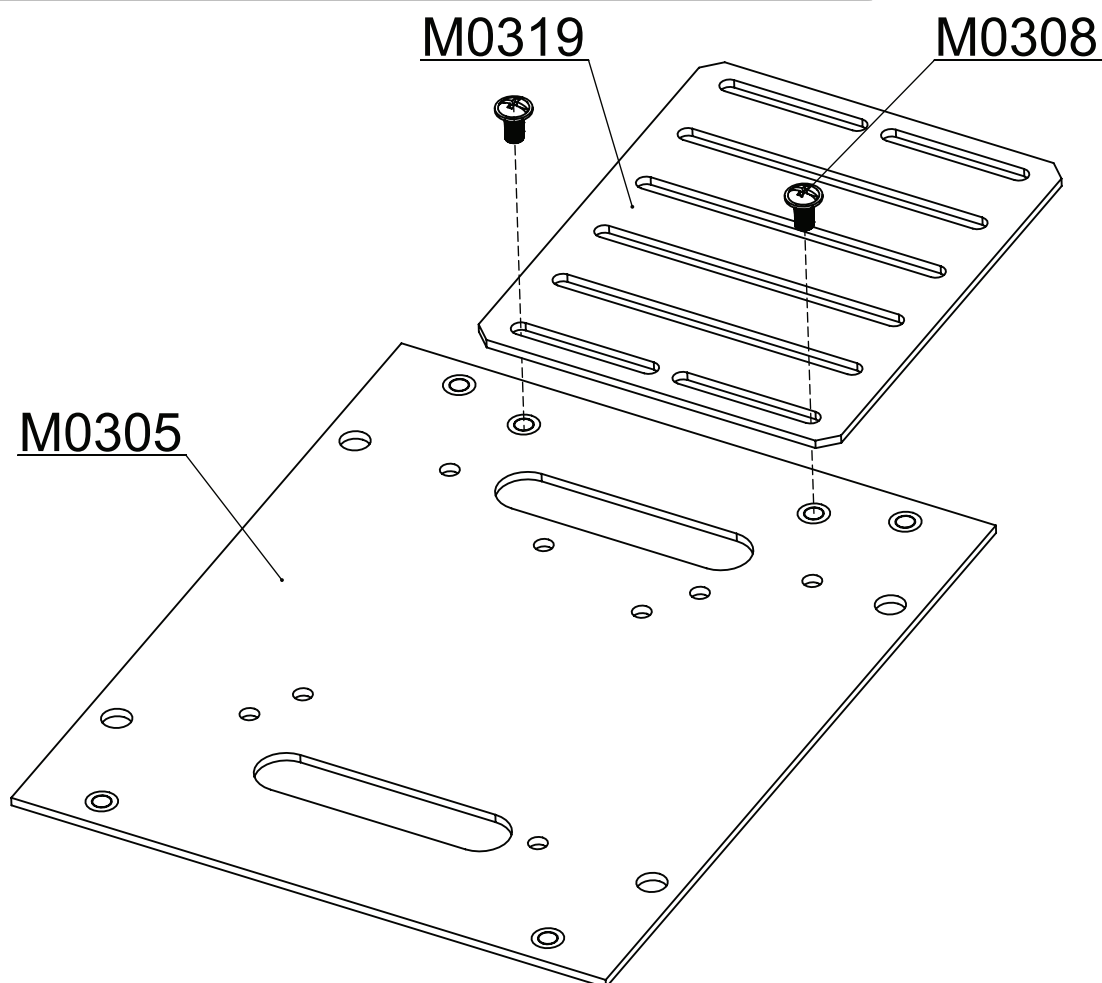


A1

M0308x2

M3x6mm 平圆头十字带垫螺丝

Philips Flange Screw (M3x6mm)

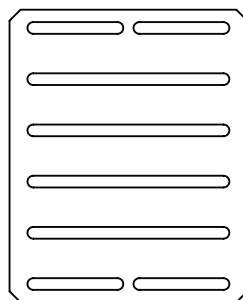


A0

M0305x1

上盖板

Top Plate



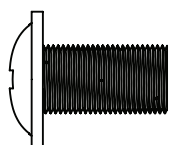
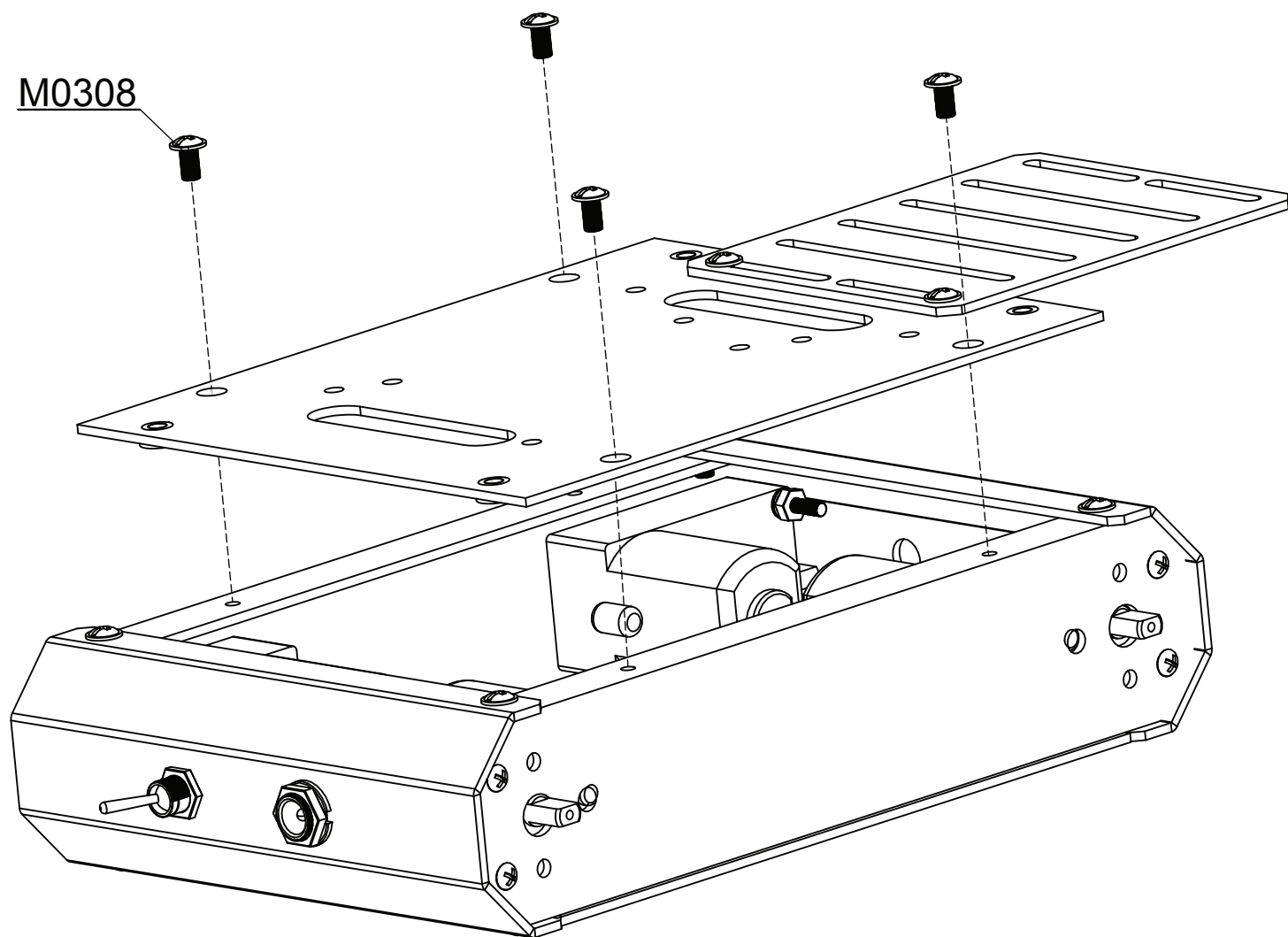
A2

M0319x1

传感器固定板

Sensor plate

# 上盖板安装 Top Plate Assembly



A1

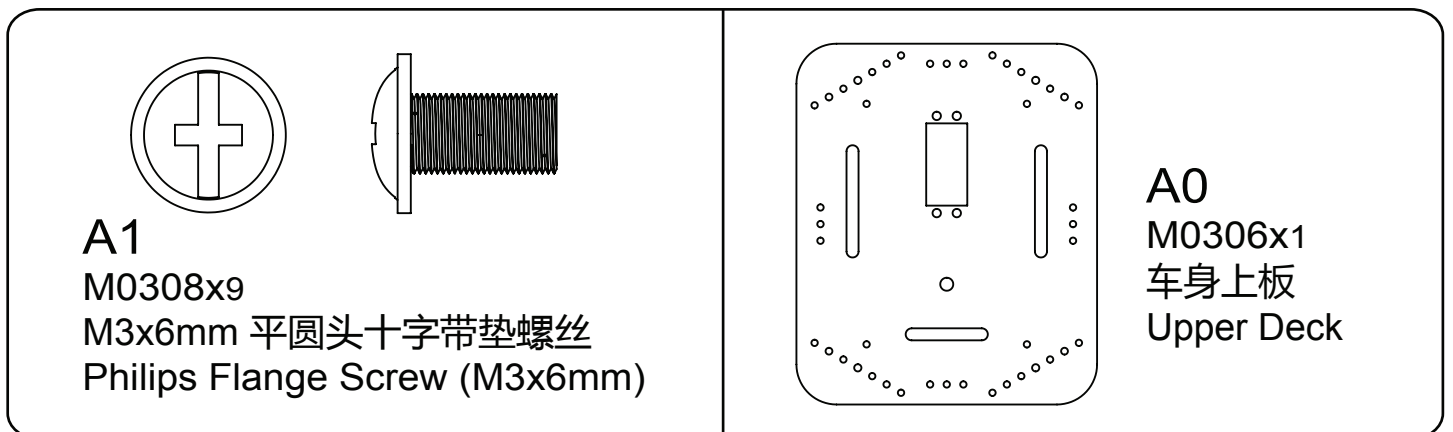
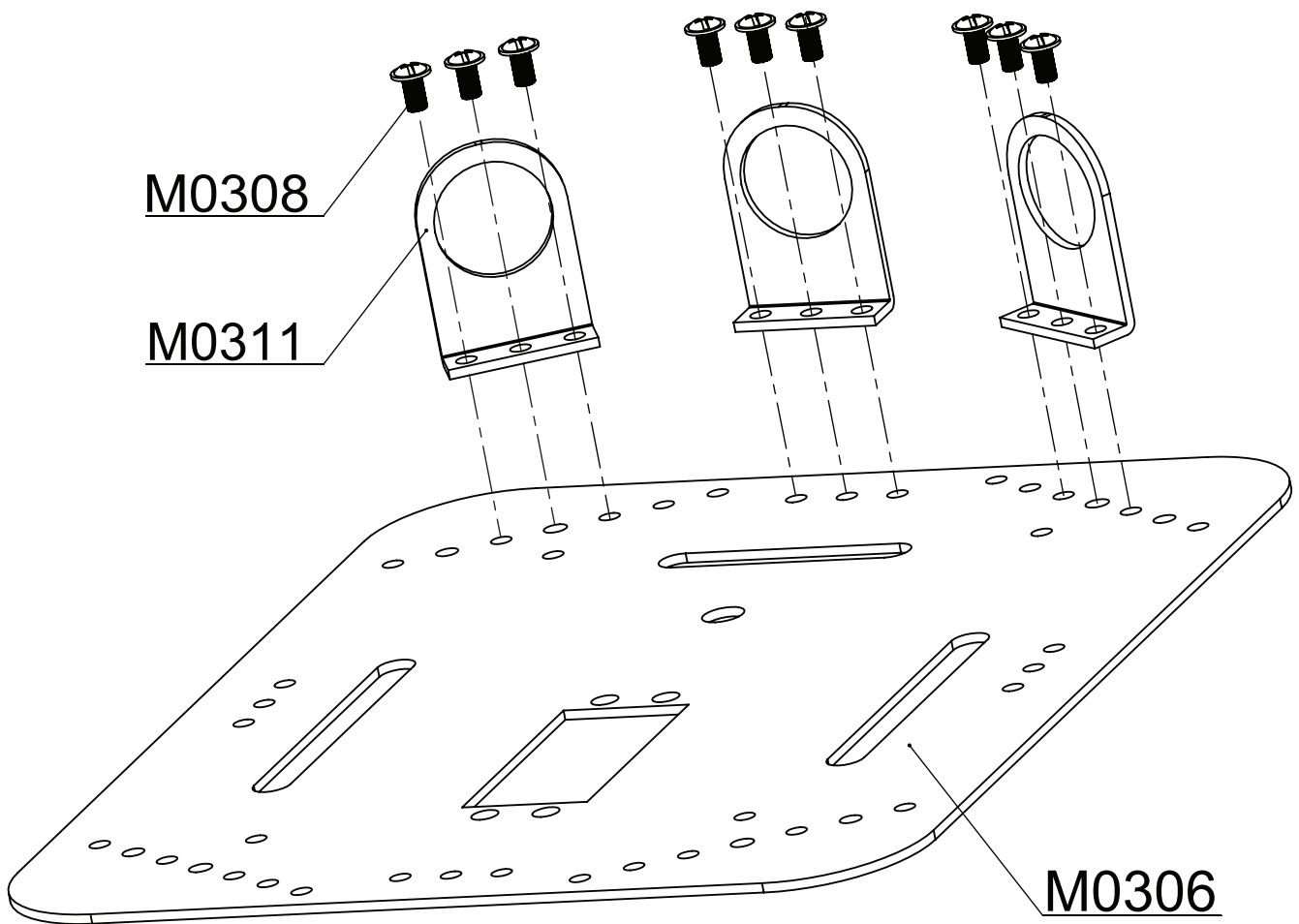
M0308x4

M3x6mm 平圆头十字带垫螺丝

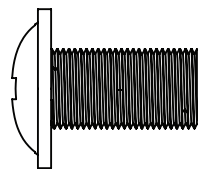
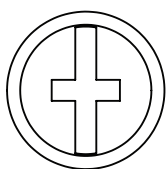
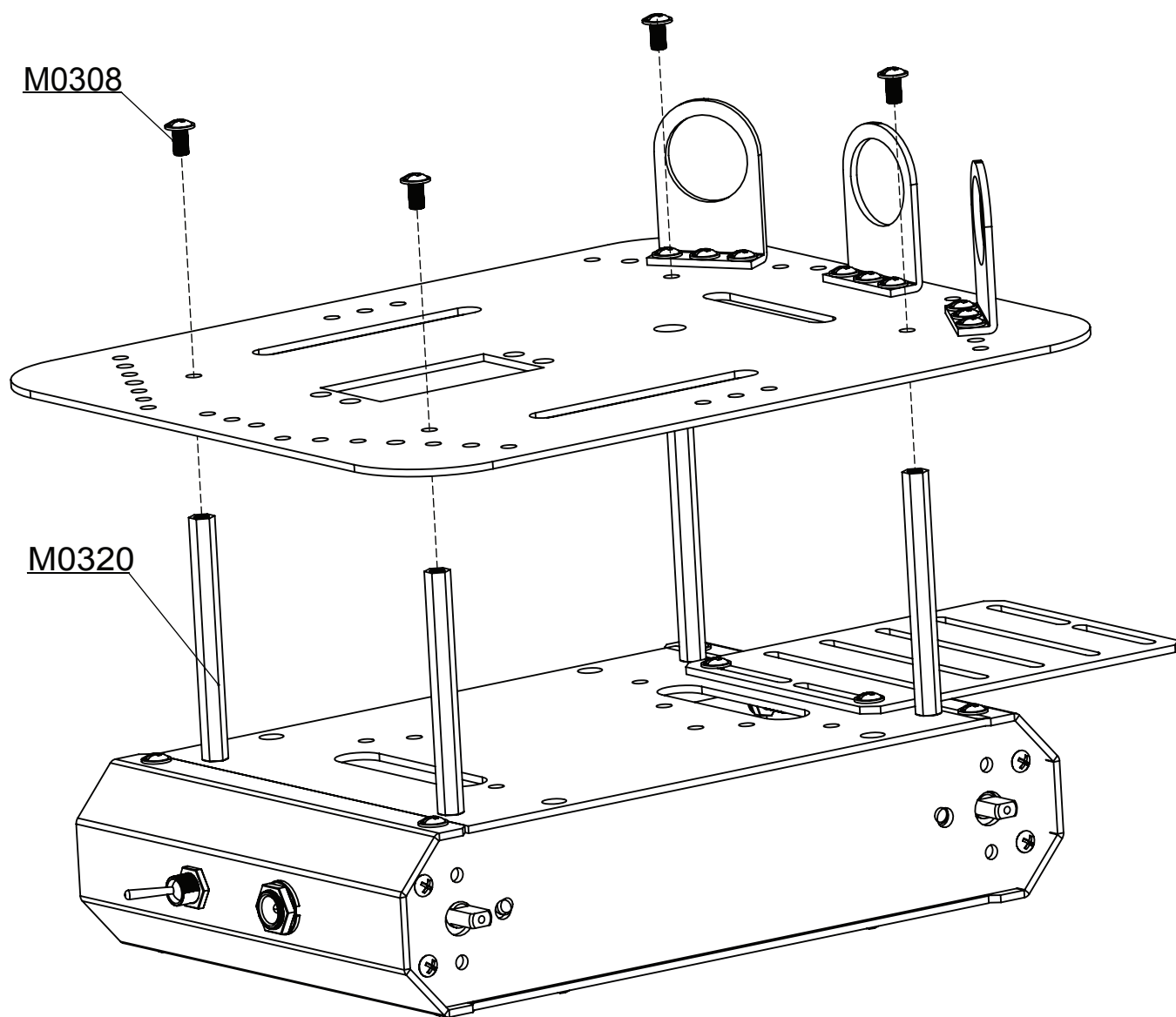
Philips Flange Screw (M3x6mm)



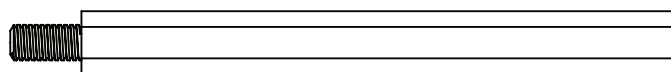
# 红外传感器支架安装 IR Sensor Bracket Assembly



# 车身上板安装 Upper Deck Assembly

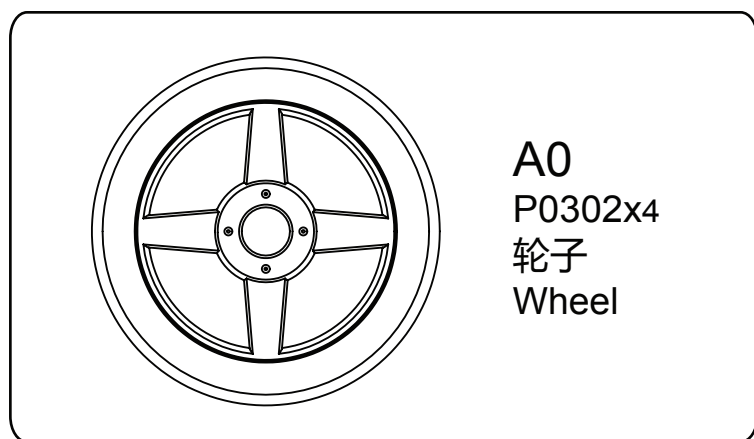
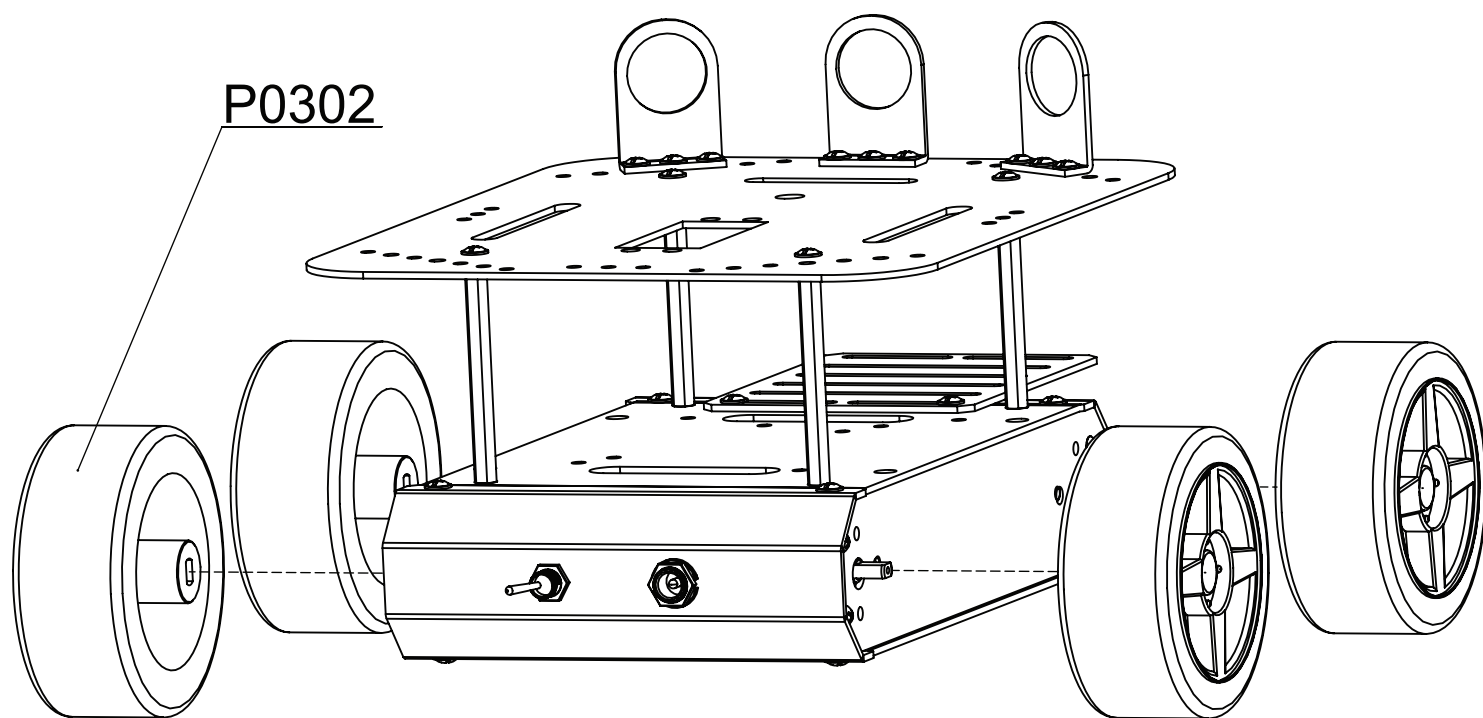


A1  
M0308x4  
M3x6mm 平圆头十字带垫螺丝  
Philips Flange Screw (M3x6mm)



A1  
M0320x4  
M3x50mm 六角铜柱  
Copper Standoff (M3x50mm)

# 车轮安装 Wheels Assembly



# 零部件清单(A) Parts List(A)

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)	31	
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	

# 零部件清单(B) Parts List(B)

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	9	
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	2	
P0301		A3	电机 Motor	4	
P0302		A0	轮子 Wheel	4	
P0303		A4	电池盒 Battery Holder	1	



设计与监制  
Design&Executive

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