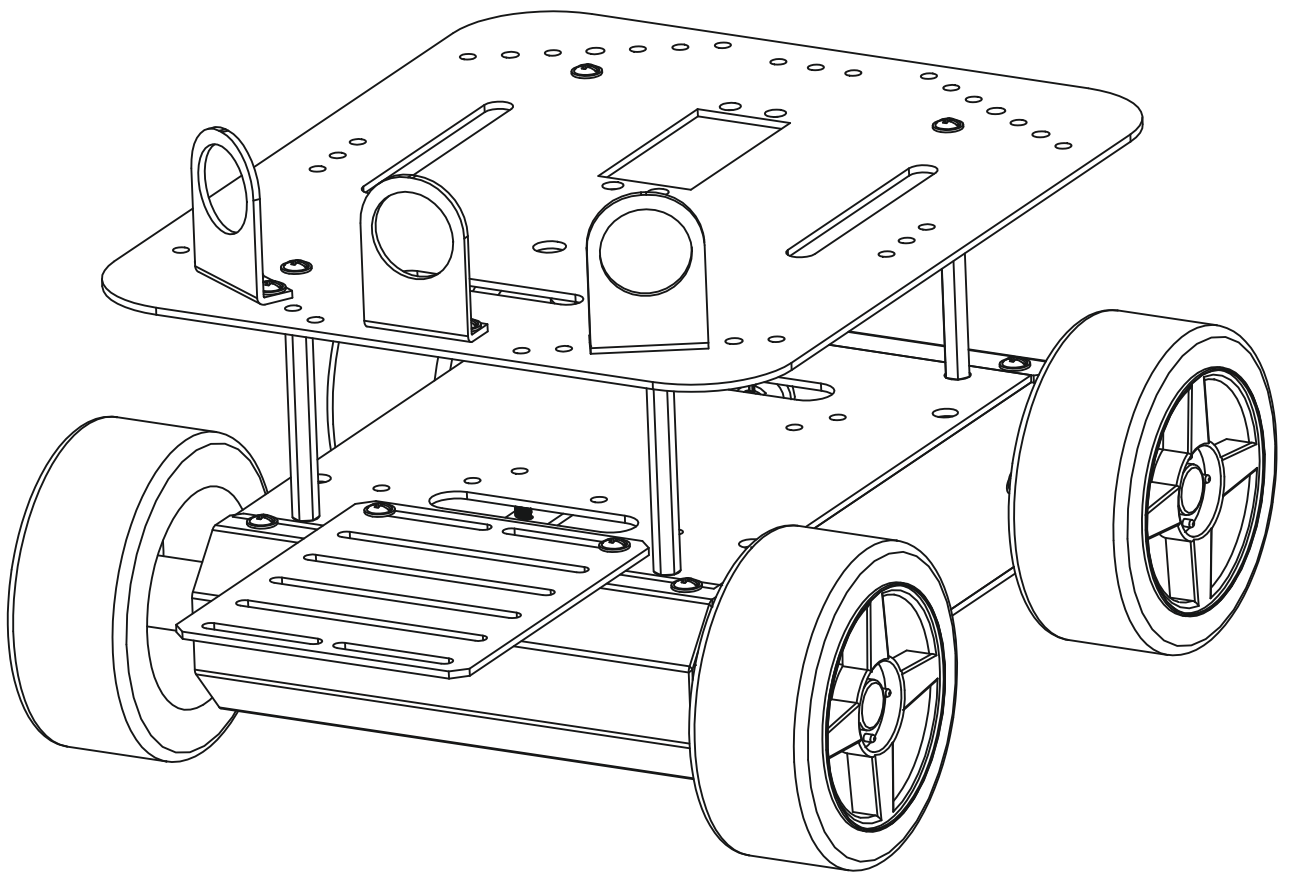


Instruction Manual

Pirate - 4WD Mobile Platform

安装说明书

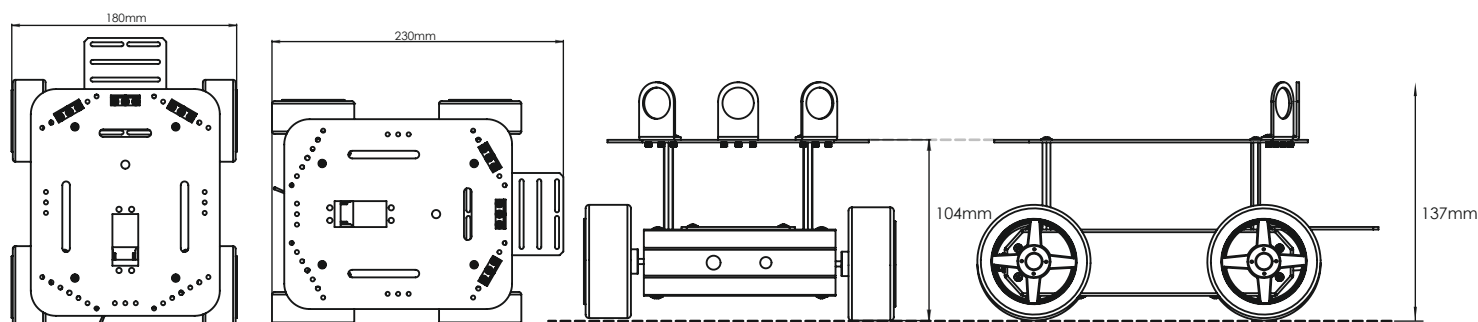


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产品特性 Features

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

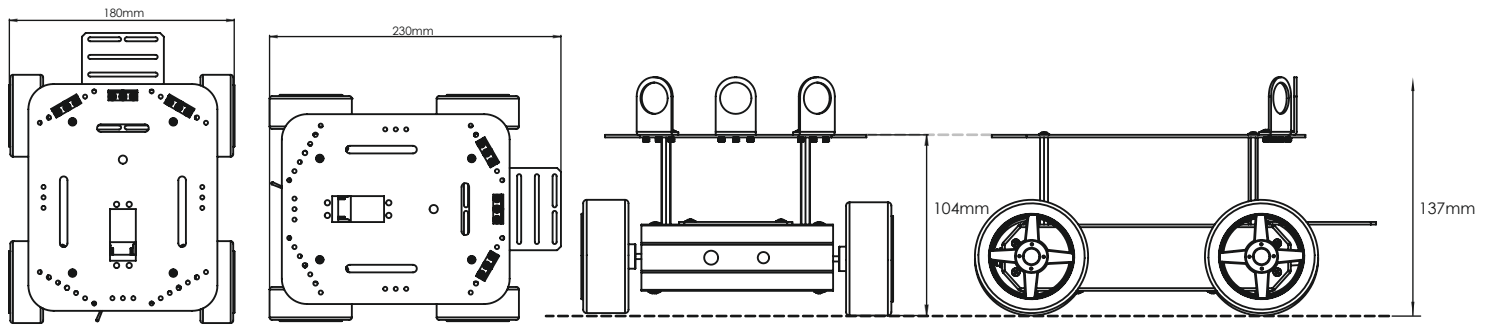
最大行驶速度:61cm/s

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。

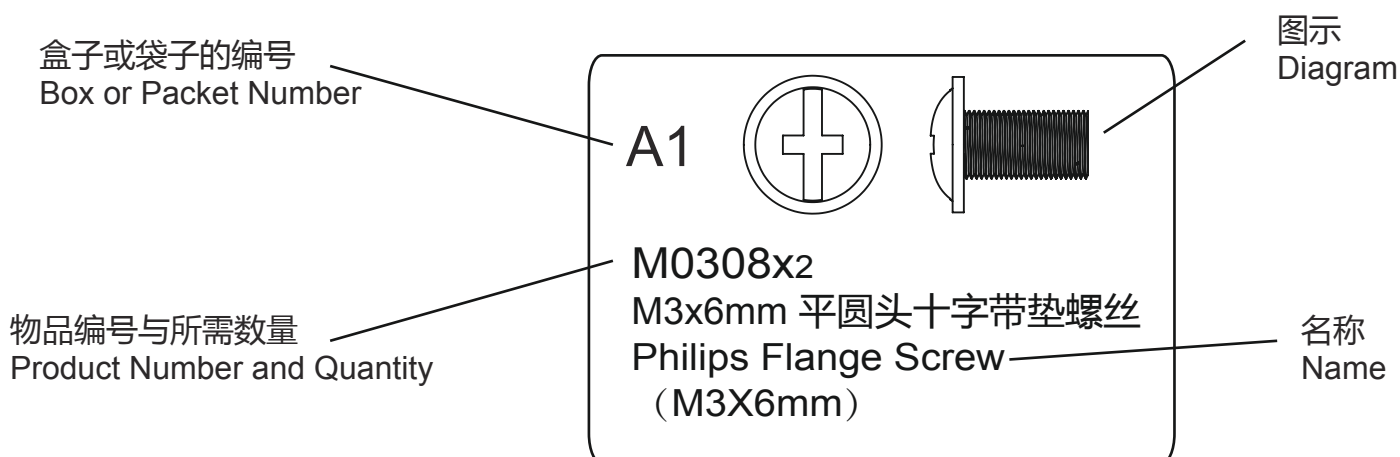
The following parts below are not included in the Parts List, they are self-provided:

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

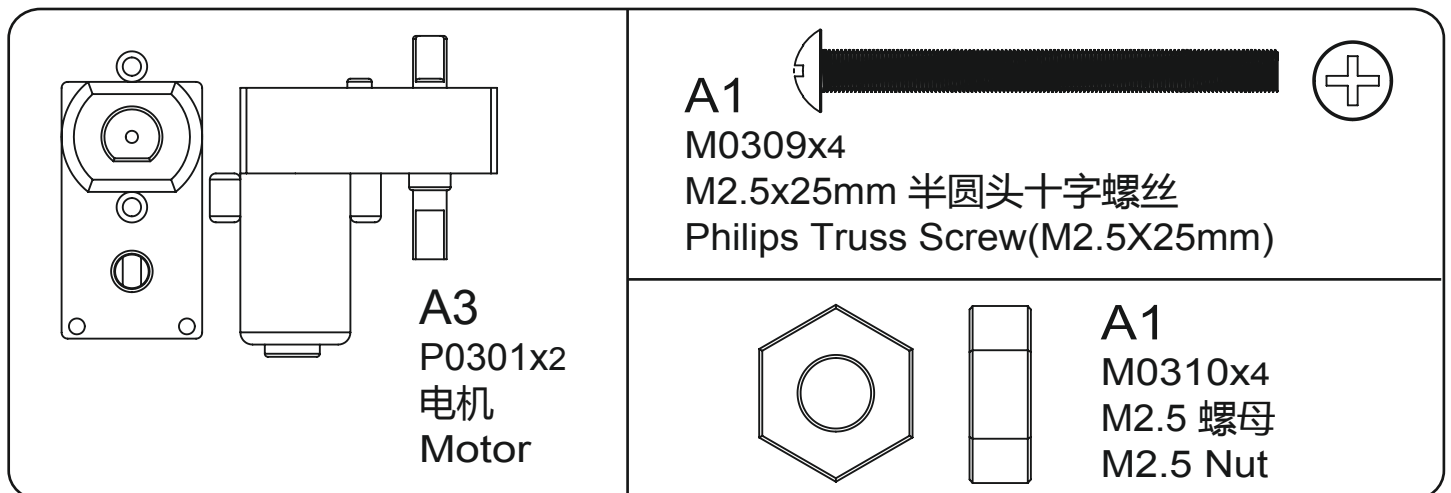
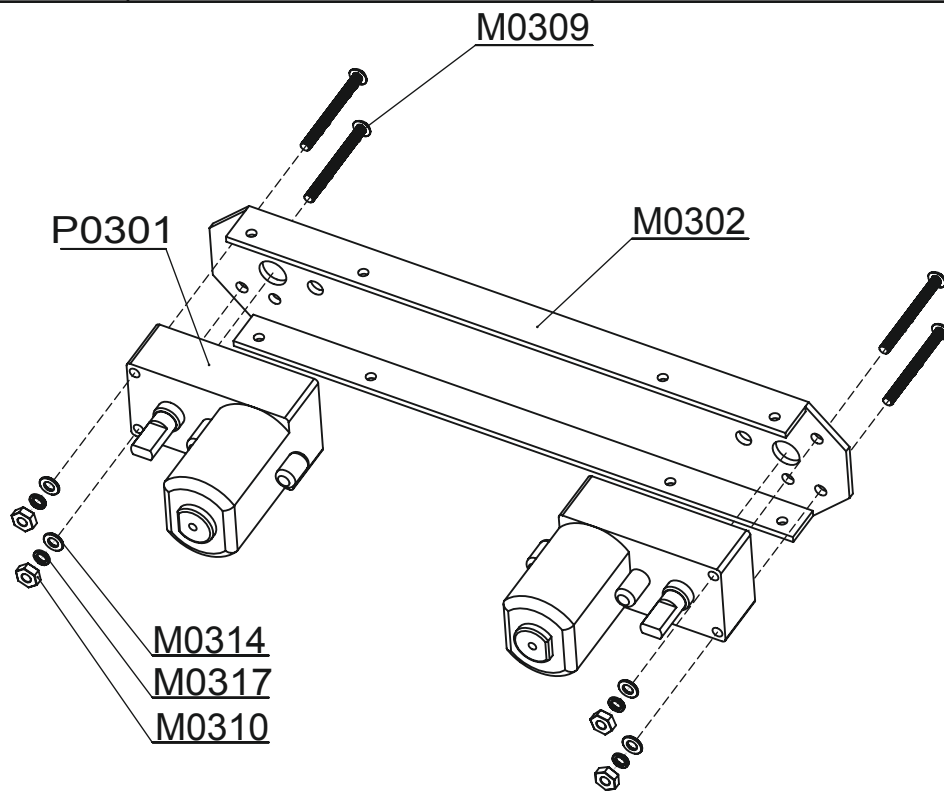
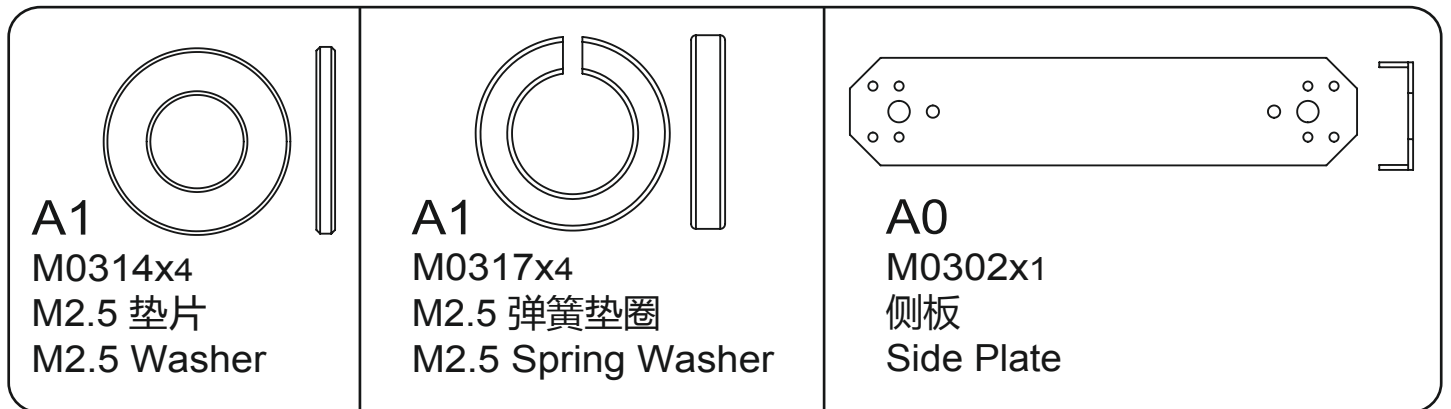
When starting assembly, prepare tools below and pick out the parts referring to the Parts List:

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

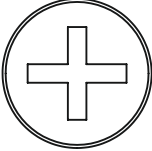
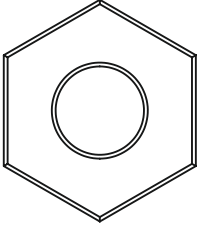
标志含义 Symbol Definition

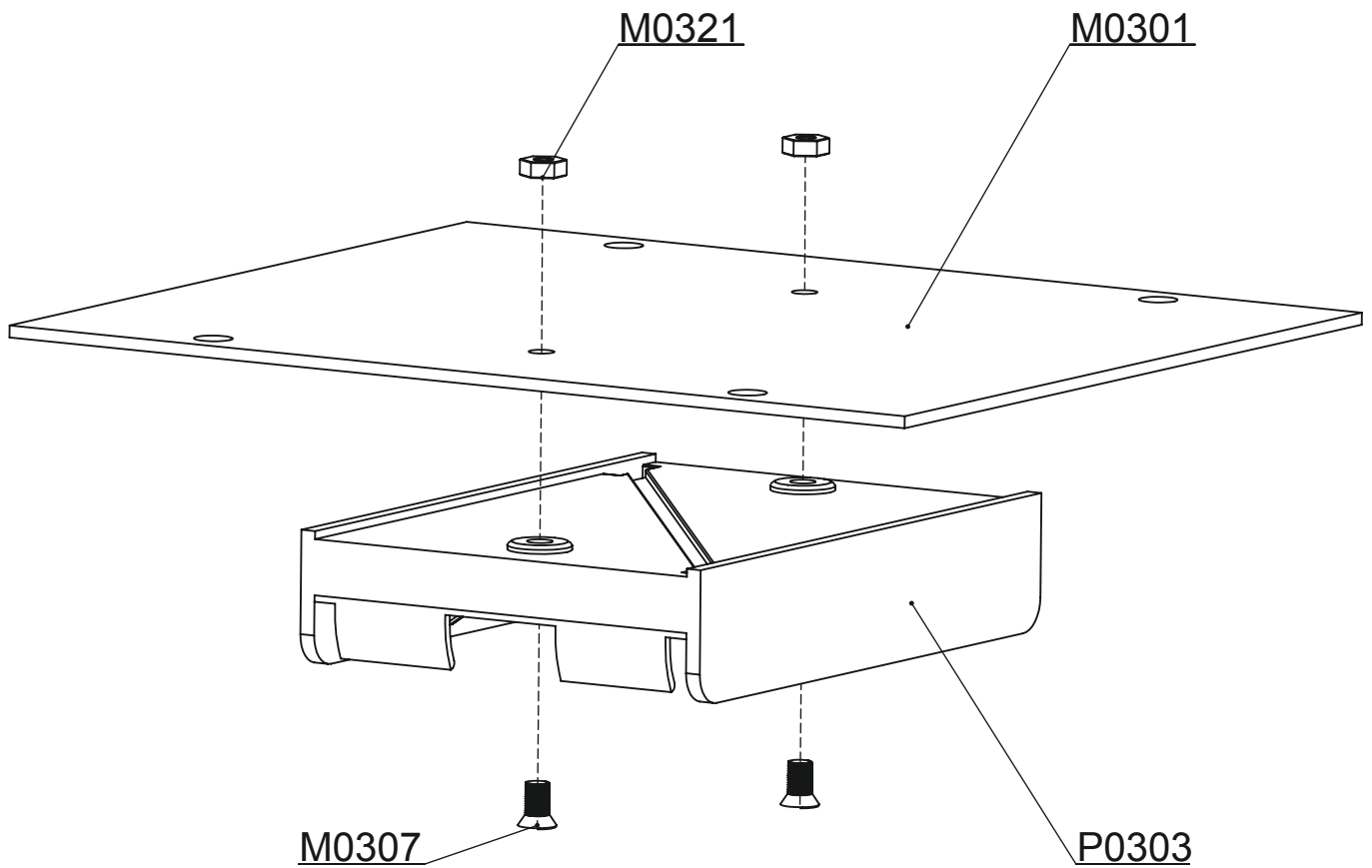


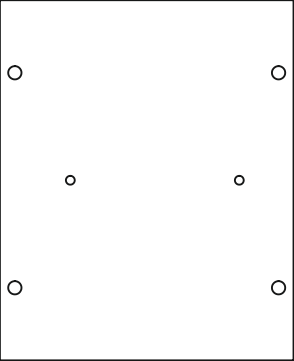
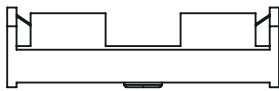
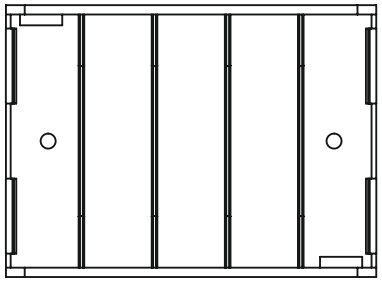
电机安装 Motors Assembly



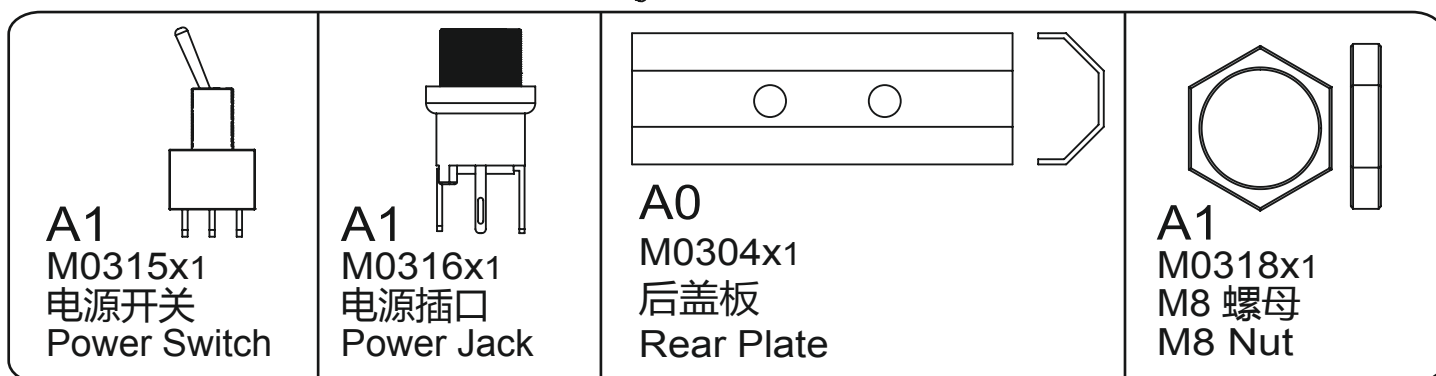
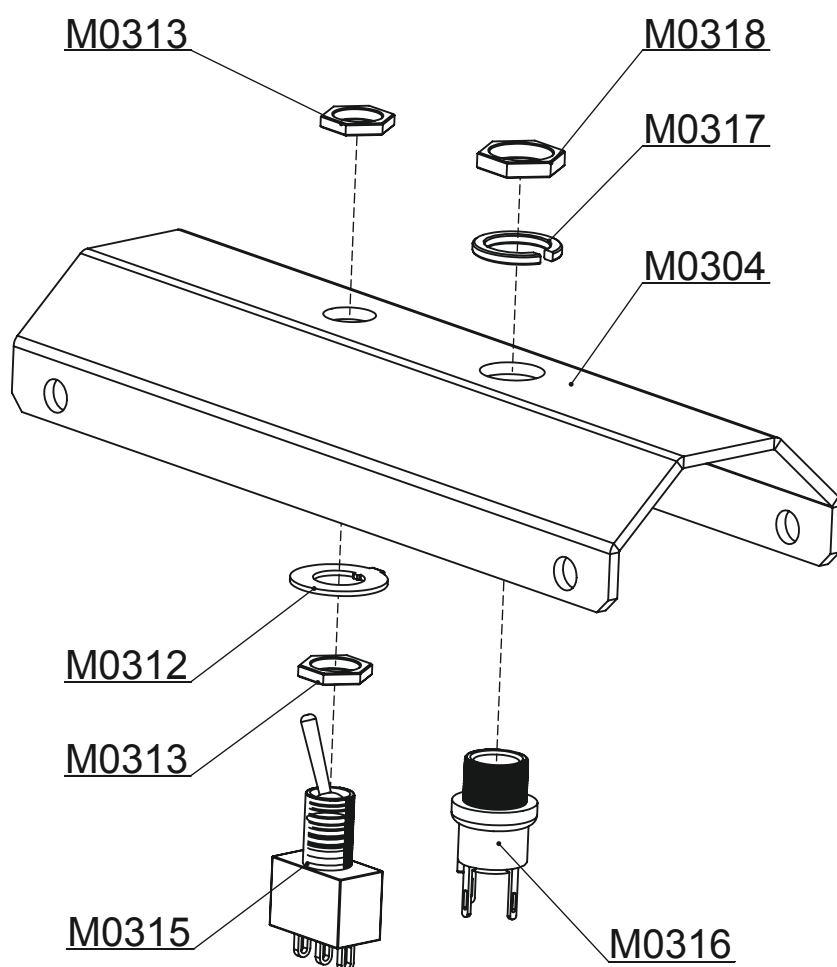
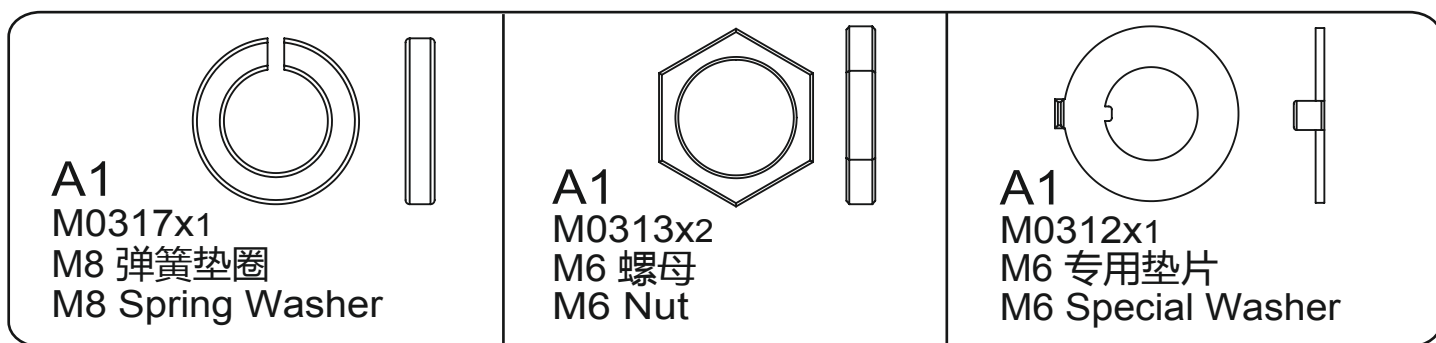
电池盒安装 Battery Holder Assembly

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

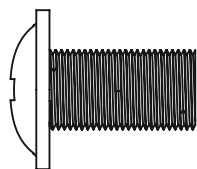
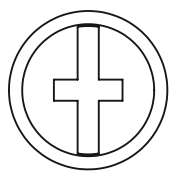
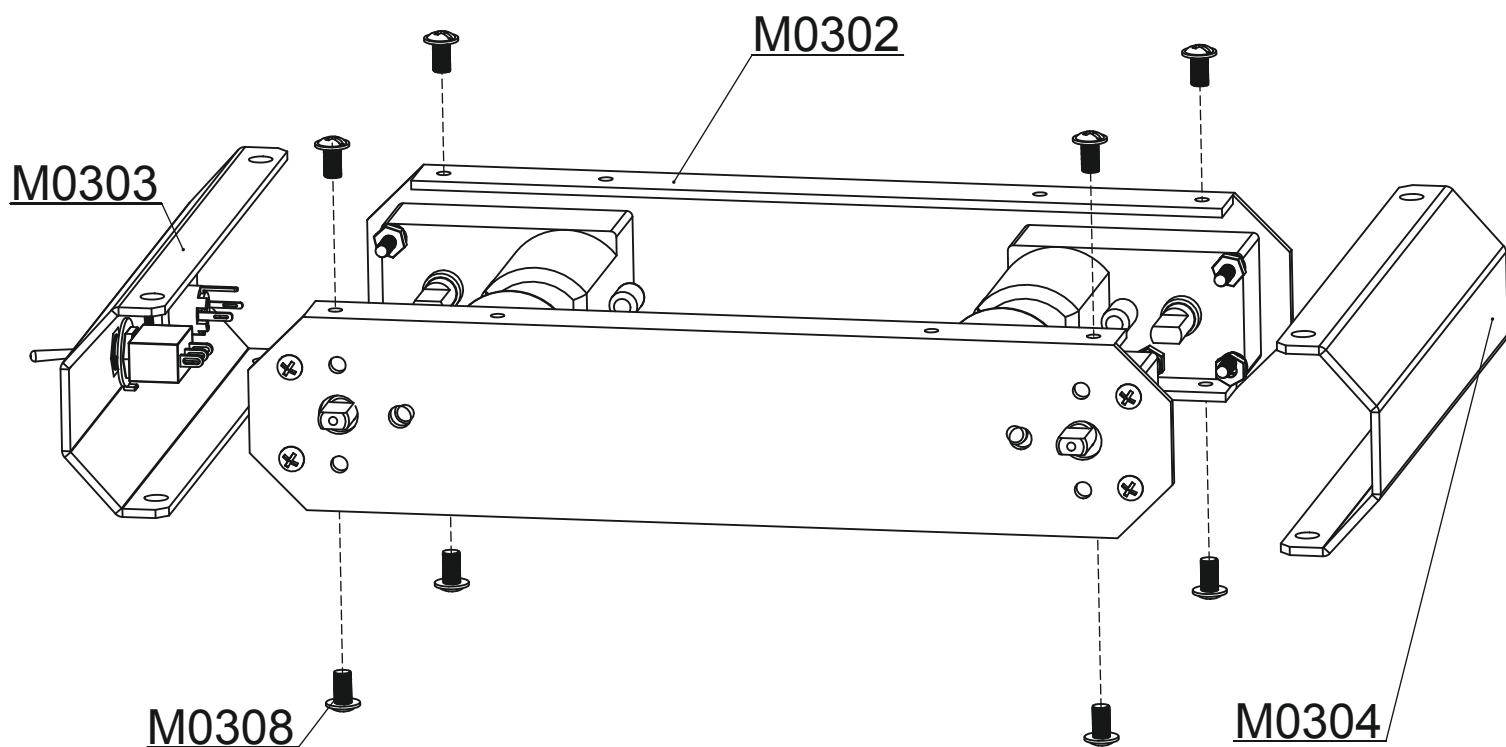


| | |
|--|--|
|  <p>A0 M0301x1 底板 Base Plate</p> |  <p>A4 P0303x1 电池盒 Battery Holder</p>  |
|--|--|

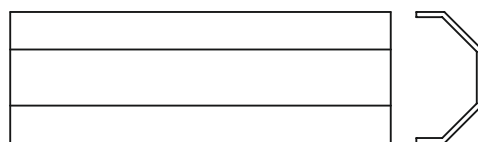
开关及插座安装 Power Jack and Switch Assembly



前后挡板安装 Front and Rear Plate Assembly

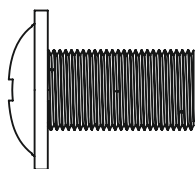
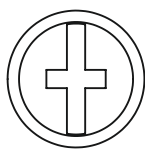
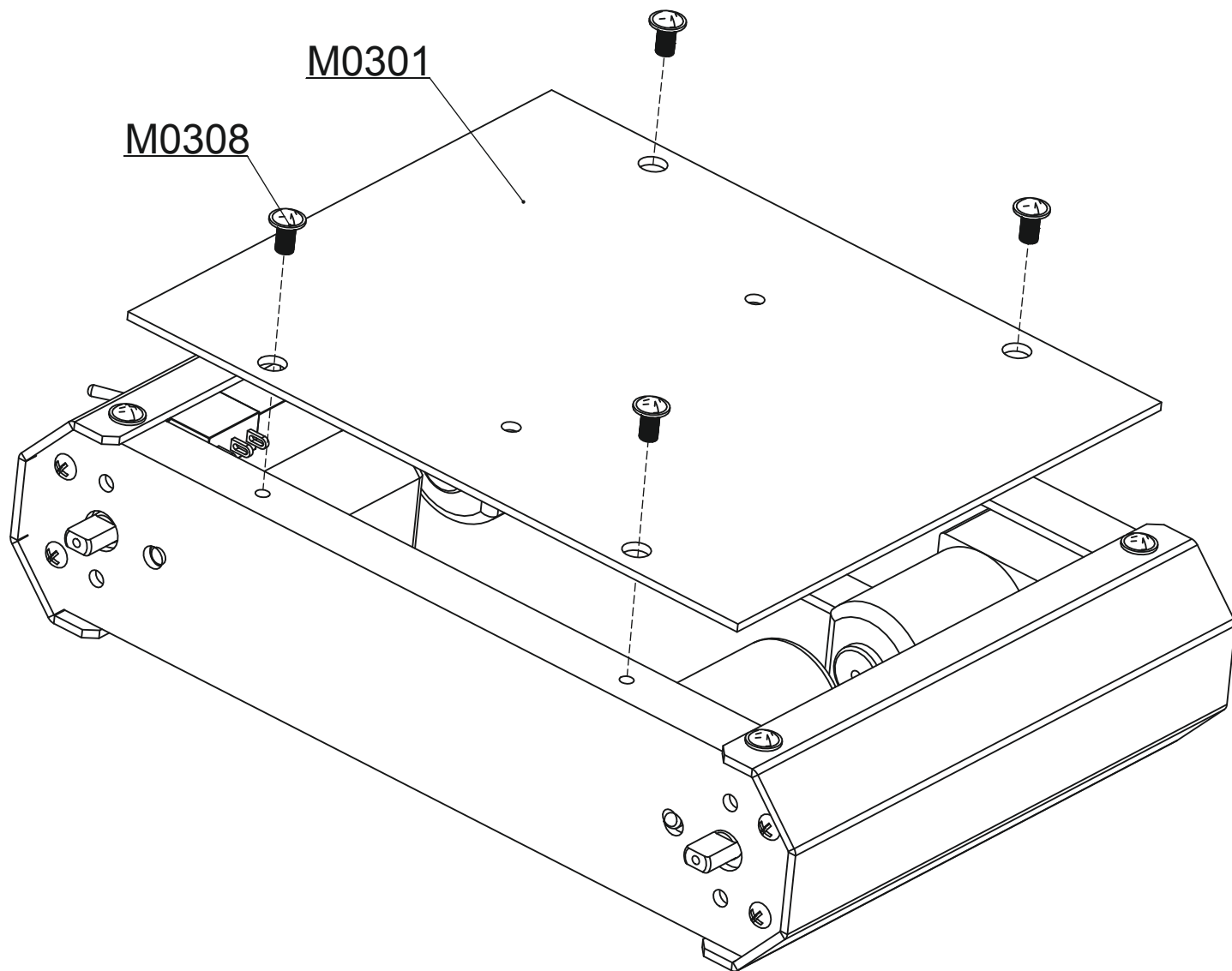


A1
M0308x8
M3x6mm 平圆头十字带垫螺丝
Philips Flange Screw (M3x6)



A0
M0304x1
前盖板
Front Plate

底板安装 Base Plate Assembly



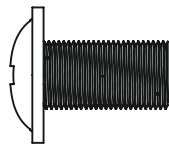
A1

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

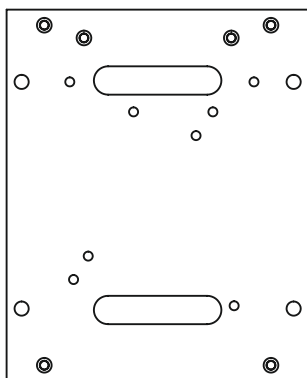
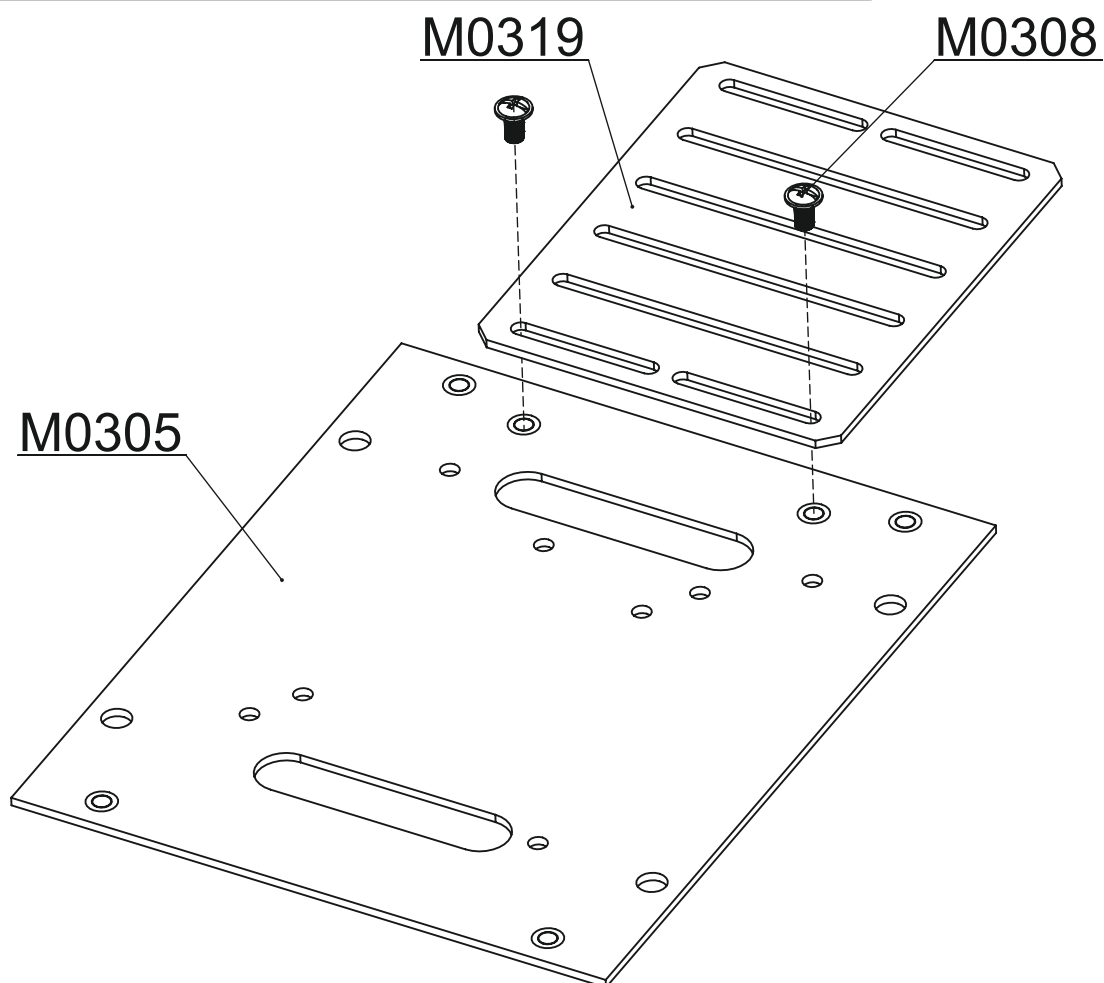


A1

M0308x2

M3x6mm 平圆头十字带垫螺丝

Philips Flange Screw (M3x6mm)

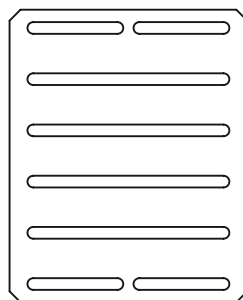


A0

M0305x1

上盖板

Top Plate



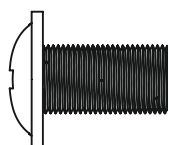
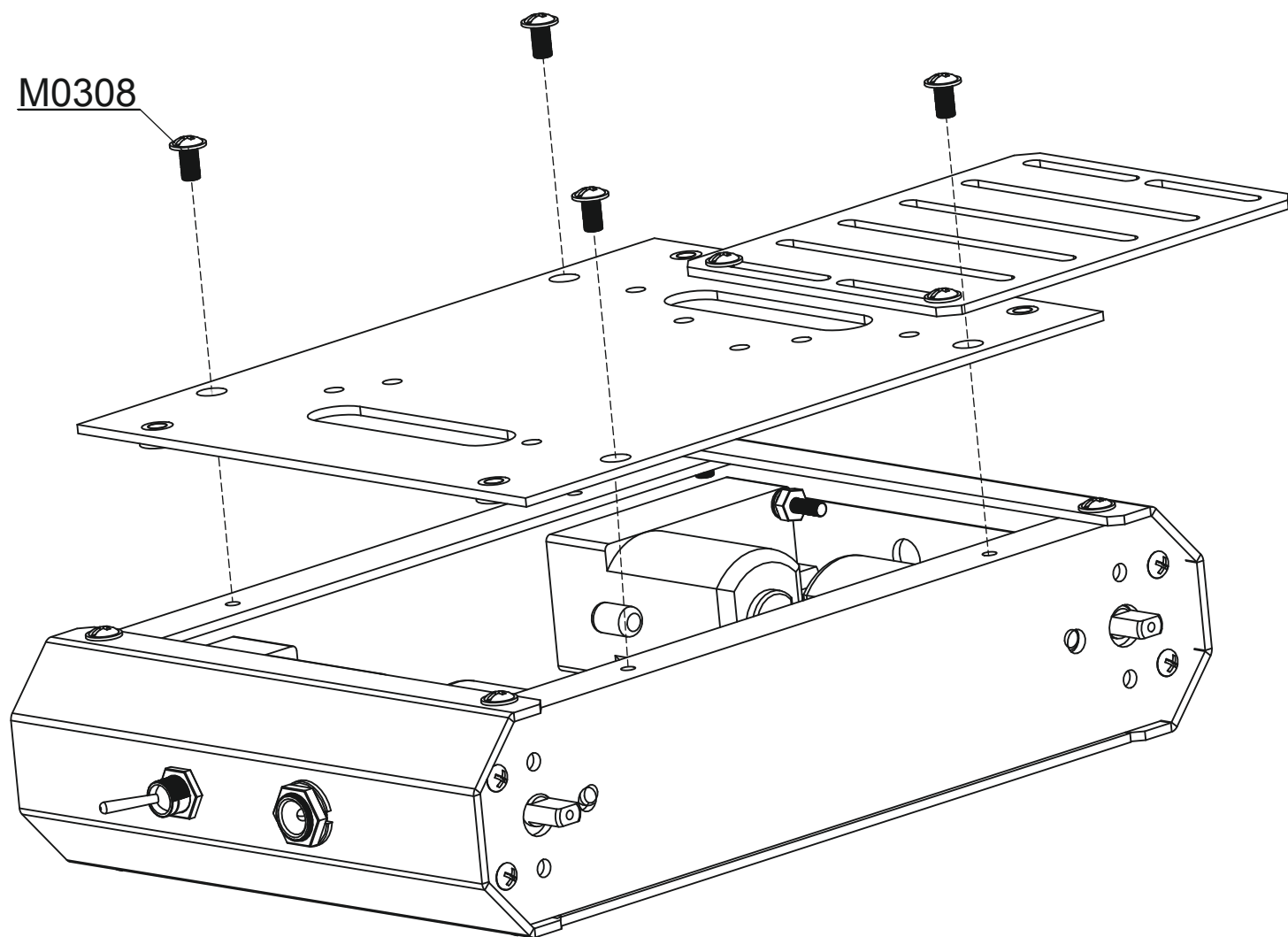
A2

M0319x1

传感器固定板

Sensor plate

上盖板安装 Top Plate Assembly



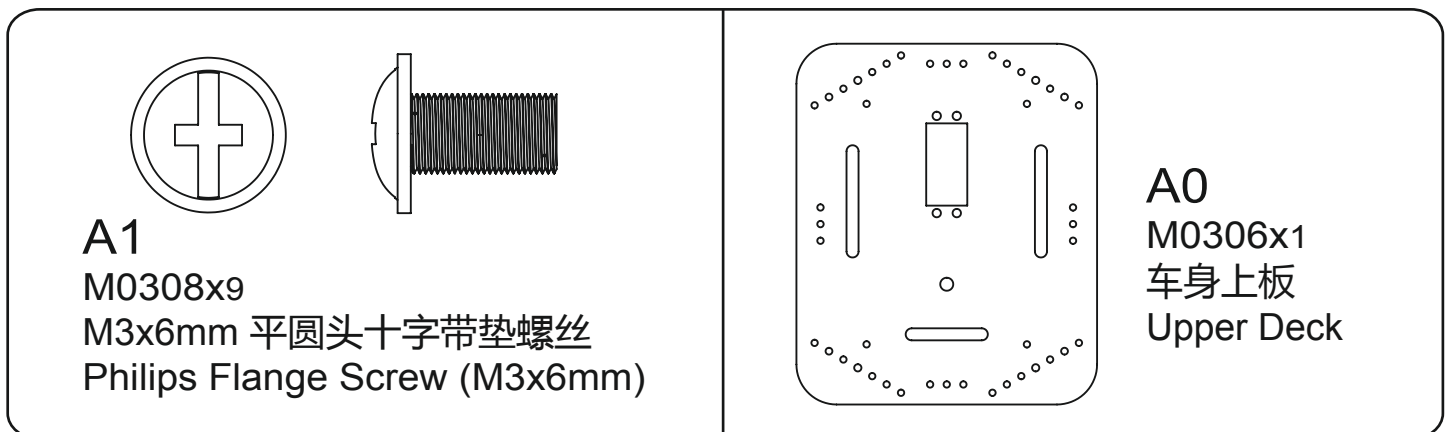
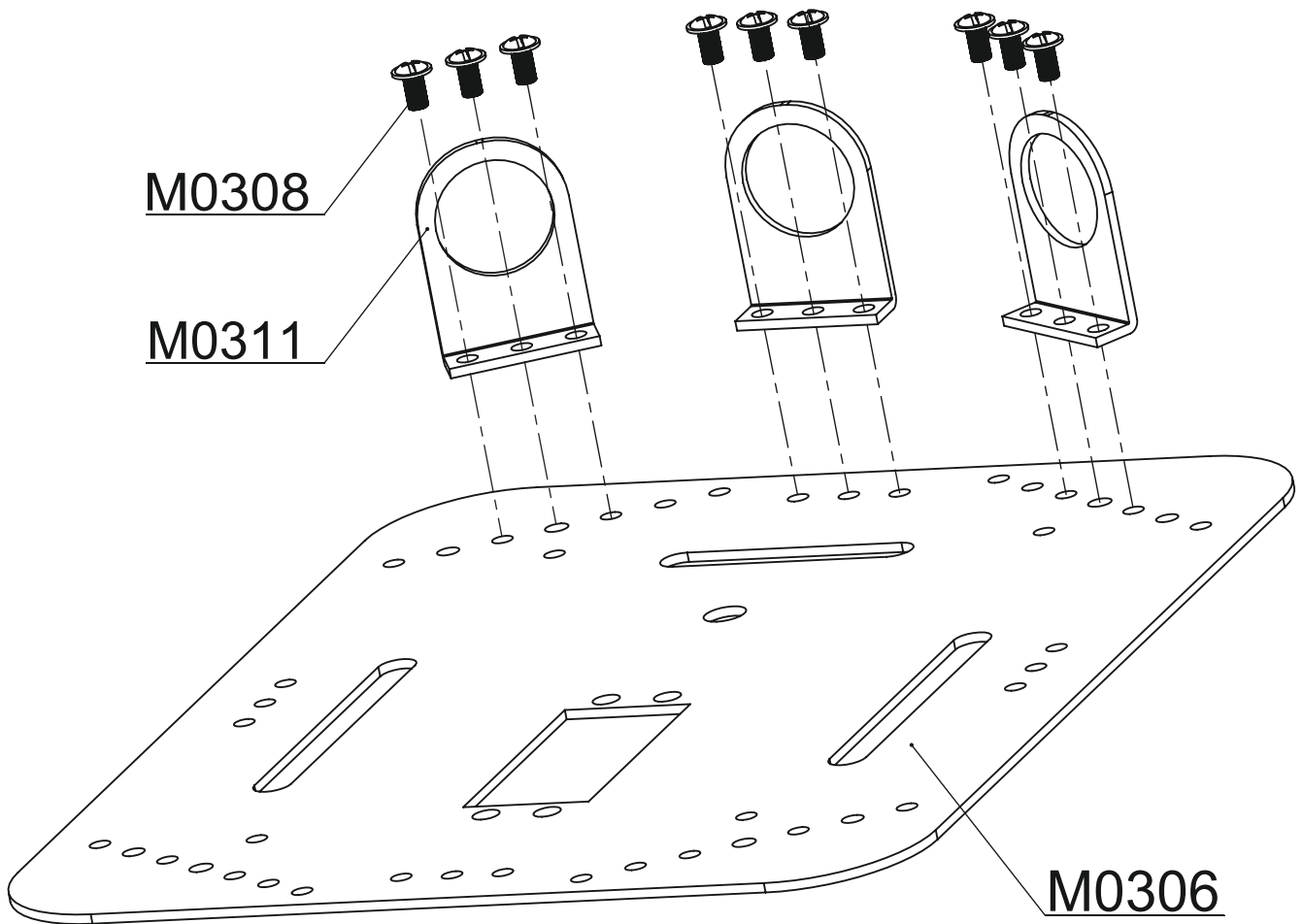
A1

M0308x4

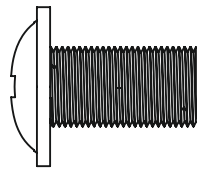
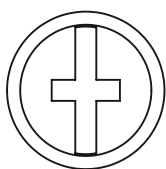
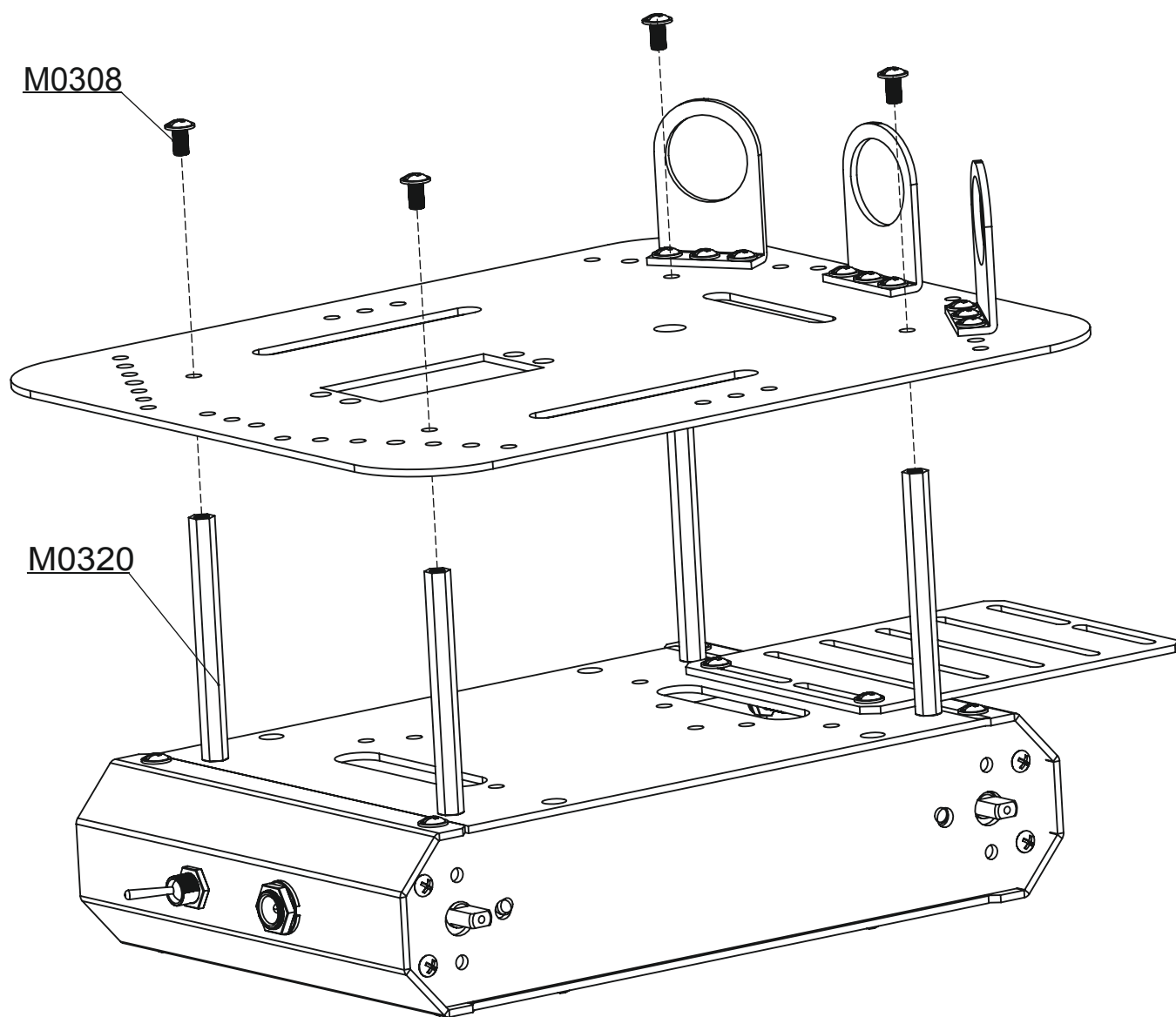
M3x6mm 平圆头十字带垫螺丝

Philips Flange Screw (M3x6mm)

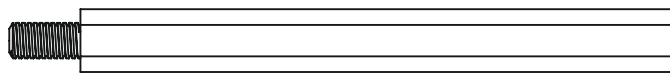
红外传感器支架安装 IR Sensor Bracket Assembly



车身上板安装 Upper Deck Assembly

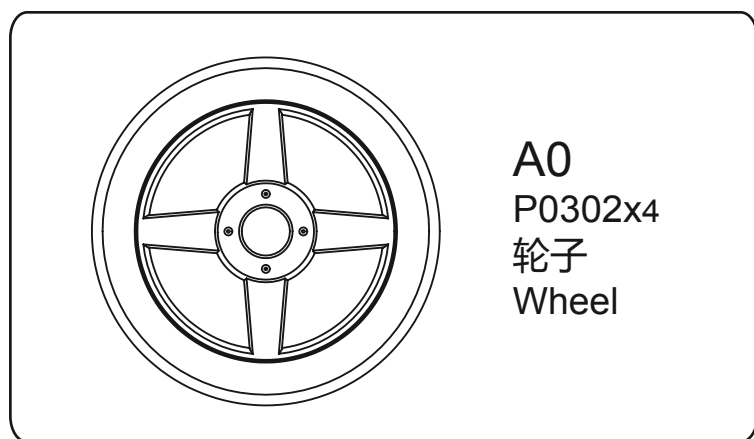
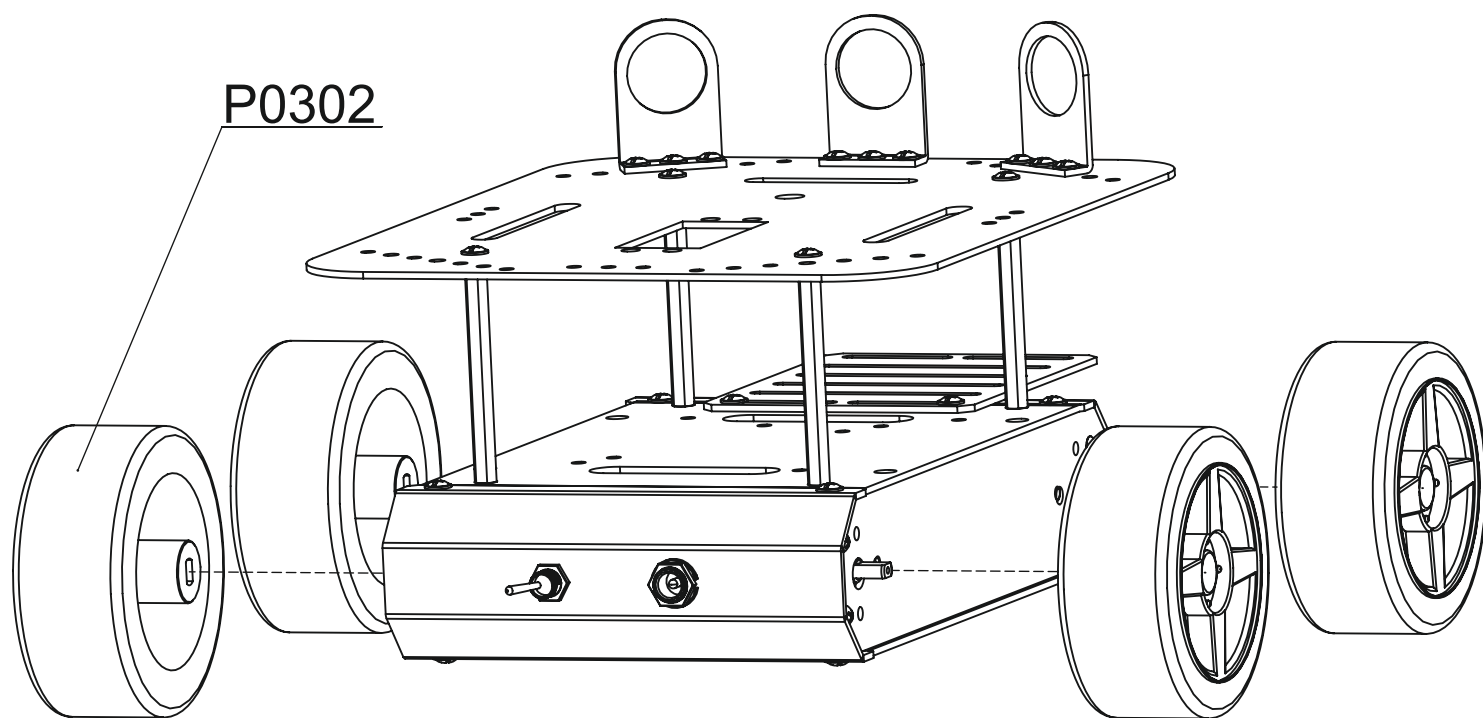


A1
M0308x4
M3x6mm 平圆头十字带垫螺丝
Philips Flange Screw (M3x6mm)



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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DFRobot