

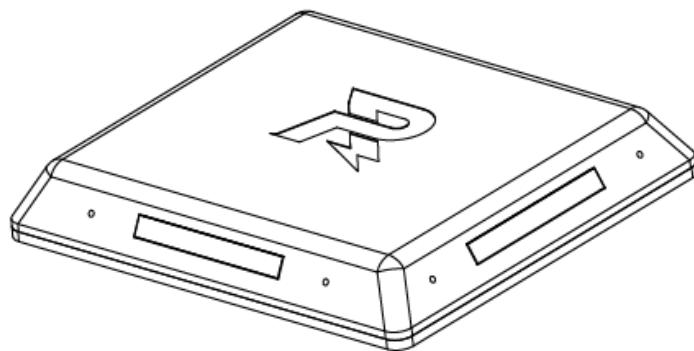
RoboMaster Referee System

RFID Interaction Module FI02

User Guide

使用说明

v1.0 2018.11



Disclaimer

Thank you for purchasing the ROBOMASTER™ Referee System RFID Interaction Module (hereinafter referred to as the "Interaction Module"). Please read this disclaimer carefully before using this product.

By using this product, you hereby signify that you have read and agree to all content herein. Please install and use this product properly and in strict accordance with the User Manual and product instructions, as well as any relevant laws, regulations, and policies. Users shall be responsible for the consequences resulting from their behavior while using this product. DJI™ will not bear any legal responsibilities for any damages due to improper use, installation or modification.

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Product Usage Precautions

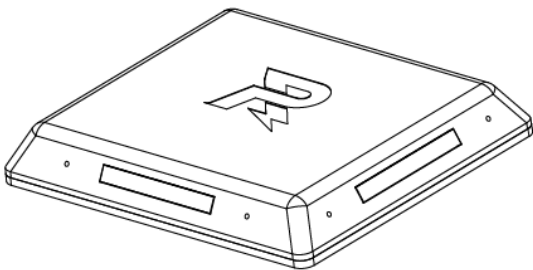
1. Before using the product, make sure that there are no short circuits, and that all interfaces are correctly connected.
2. During installation, make sure that the side of the RFID Interaction Module that bears the RoboMaster icon is not blocked by a metal or carbon fiber plate. The detection range of the RFID Interaction Module is tested in a laboratory environment. If after installation, the effective detection range is smaller than the theoretical value, please check that the module is correctly installed.

3. Make sure that neither side of the IC card to be detected is blocked by metal. Otherwise, the effective detection range of the RFID Interaction Module will be affected.
4. The RFID Interaction Module should not be used alone, but rather used in combination with the Main Control Module and Power Management Module of the Referee System.
5. Before using the product, please download the RoboMaster 2019 Referee System User Manual from the official RoboMaster website to learn more about the product.

Introduction

The RFID Interaction Module integrates IC card reading and writing, CAN communication, and multi-status indicators. It operates at a frequency of 13.56 MHz, can read and write ISO15693 IC cards, and has an effective detection range of 100 mm ($\pm 5\%$).

Inventory List

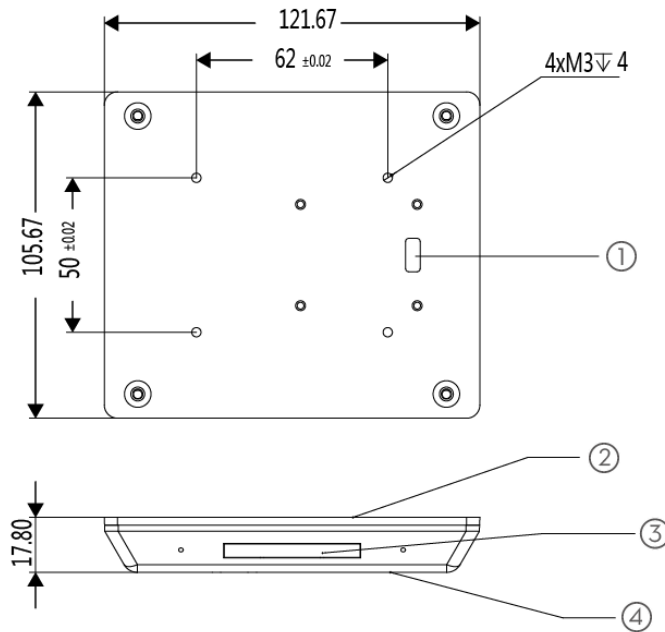


RFID Interaction Module x 1



4-Pin Cable x 1

Interfaces and Dimensions



Unit: mm

1. CAN interface

The RFID Interaction Module is connected to the Power Management Module via the 4-pin cable for power supply and communication.

2. Back

3. LED light indicators

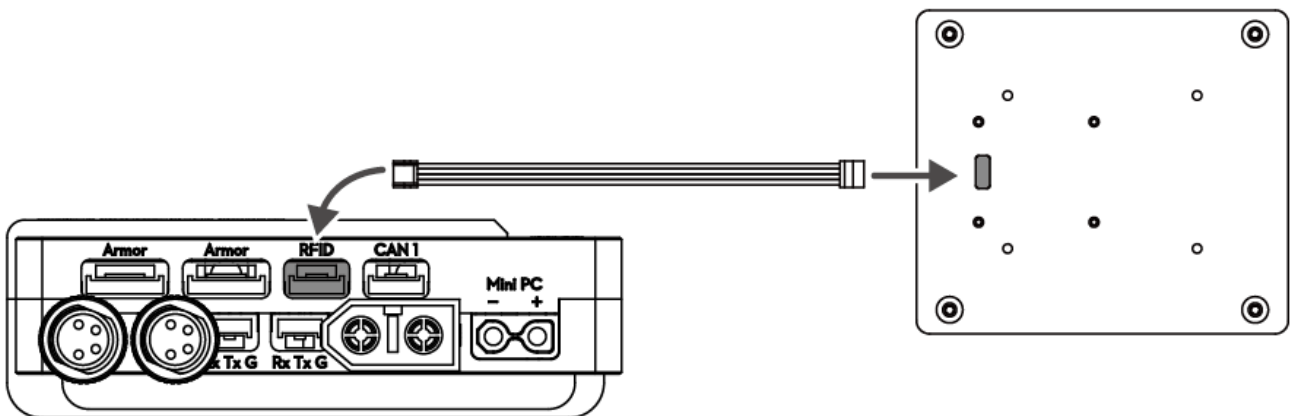
The RFID Interaction Module has an LED light indicator on each side (a total of 4). The descriptions of the LED light indicators status are shown below:

Normal Status	
Solid red/blue	The RFID Interaction Module functions properly
Flashing red/blue	A valid IC card is detected
Solid white	A card is successfully written
Warnings and Errors	
Solid/flashing yellow	The RF signal is disturbed, or an invalid IC card is detected
The lights do not work after the module is powered on	There is a problem with the power supply, or the RFID Interaction Module has been damaged

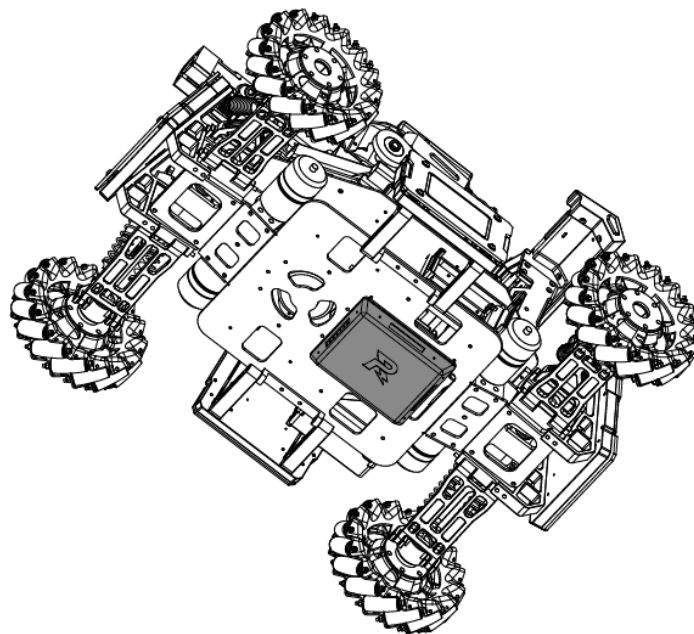
4. Front

Mounting and Connection

1. Connect the RFID Interaction Module to the RFID interface of the Power Management Module using the 4-pin cable included in the package.



2. Use M3 screws to mount the RFID Interaction Module to the chassis. Do not press or bend the cable during installation, and choose an installation location away from the ground.



Product Parameters

Effective Detection Range	100 mm ($\pm 5\%$)
Rated Power Supply Voltage	5 V
Rated Power Supply Current	100 mA
Weight	Approx. 138 g

免责声明

感谢您购买 RoboMaster™裁判系统场地交互模块（以下简称“交互模块”）。在使用之前，请仔细阅读本声明，一旦使用，即被视为对本声明全部内容的认可和接受。请严格遵守手册、产品说明和相关的法律法规、政策、准则安装和使用该产品。在使用产品过程中，用户承诺对自己的行为及因此而产生的所有后果负责。因用户不当使用、安装、改装造成的任何损失，DJI™将不承担法律责任。

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产品使用注意事项

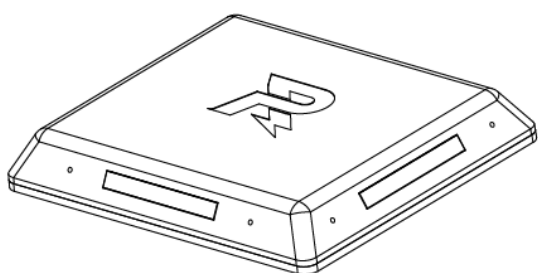
6. 使用时请确保电路无短路、接口按照要求正确连接。
7. 安装时，确保交互模块带 RoboMaster 图标面无金属、碳纤维板遮挡。安装后，交互模块的实际检测距离以测试为准。若有效检测距离较理论值有所缩短，请检查安装是否合理。
8. 确保待检测的 IC 卡两面均无金属遮挡，否则将会影响交互模块的有效检测距离。
9. 交互模块需配合裁判系统主控模块以及电源管理模块一同使用，不可单独使用。
10. 使用前，请前往 RoboMaster 官网下载《RoboMaster 2019 裁判系统用户手册》了解产品更为详细的使用功能。

简介

场地交互模块是一款集读写 IC 卡、CAN 通信、多状态指示灯于一体的模块。采用了 13.56MHz 的低频信号，支持

读写 ISO15693 国际标准协议的 IC 卡，有效探测距离可以达到 100mm($\pm 5\%$)。配合 RoboMaster 裁判系统主控模块和电源管理模块使用，可实现 IC 卡的写入与读取操作。

物品清单

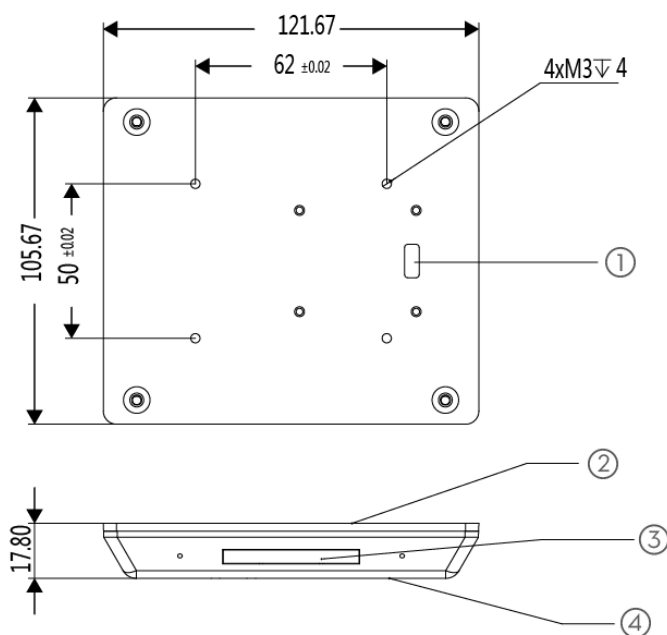


场地交互模块 x 1



4-Pin 连接线 x 1

接口及尺寸



单位：mm

1. CAN 接口

交互模块通过标配的 4-Pin 连接线连接至电源管理模块，进行供电和通讯。

2. 背面

3. LED 灯条

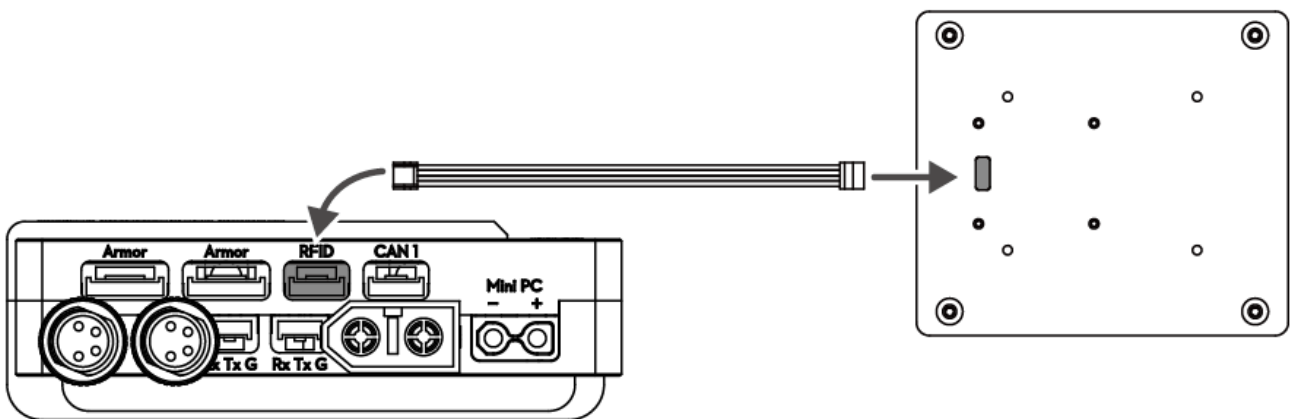
在交互模块的四周分别各有一个 LED 灯条（共 4 个），灯条不同颜色的具体指示意义请参考下表：

正常状态	
红灯/蓝灯常亮	交互模块工作正常
红灯/蓝灯闪烁	检测到有效 IC 卡
白灯常亮	写卡成功
警告与异常	
黄灯常亮/闪烁	射频信号受到干扰或者检测到无效 IC 卡
接通电源后灯不亮	供电异常或者交互模块已经损坏

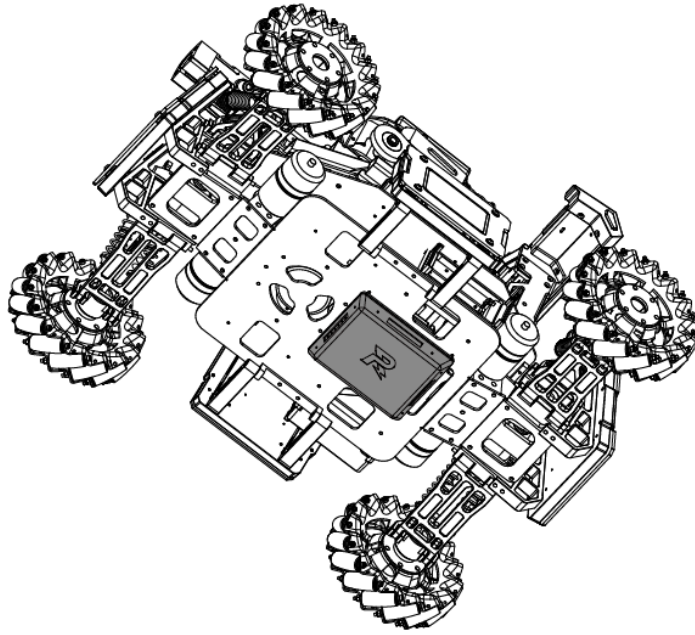
4. 正面

安装连接

3. 使用包装内提供的 4-Pin 连接线将交互模块连接到电源管理模块的 RFID 接口。



2. 使用 M3 螺丝固定交互模块至底盘，安装时切勿压到连接线，并注意保持交互模块与地面有适当的距离。



产品参数

有效探测距离	100 mm($\pm 5\%$)
额定供电电压	5 V
额定供电电流	100 mA
重量	约 138 g

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