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# myAGV Pi 2023

自主导航灵巧四轮直驱小车

Autonomous Navigation Smart 4-Wheel Drive Vehicle

# ♪ 警告

在使用本产品之前,请阅读本手册中所有说明及警告提示。

- 为避免火灾或电击危险,请勿将产品暴露在雨中或潮湿的地方。
- 请勿将产品放在火中或靠近火处。
- 请勿将本产品放置或使用在炎热潮湿的地方。
- 请勿暴力拆卸本产品。
- 请勿将产品暴露在过度的冲击下,如从高处跌落。
- 不要将产品暴露在超过60°C(140°CF)的高温下。

#### ⚠ 开机必读

本册为myAGV Pi 2023 产品画册

关于本产品的操作使用及二次开发,请先在大象机器人官网阅读并下载Gitbook相关指导说明。

下载链接: https://docs.elephantrobotics.com/docs/gitbook/2-serialproduct/2-buy.html



### 大象移动机器人

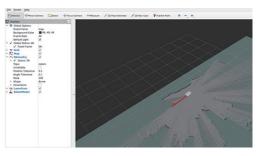
myAGV Pi 2023采用树莓派4B核心主板, 搭配大象机器人专为机器人定制的Ubuntu Mate 20.04 操作系统, 流畅易用; myAGV 2023具备2D建图与导航、3D建图与导航、图形化编程、可视化软件、ROS仿真、手柄键盘控制等多钟功能, 是科研教育、个人创客的首选。

# 产品性能



全向移动

竞赛级麦克纳姆轮,全包裹金属车架,分体式结构可拆卸。



SLAM激光雷达

激光雷达实时建图扫描,自动规划路径进行避障导航。



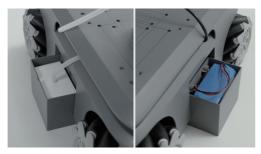
内置摄像头

500W高清摄像头可进行物体识别与精准定位。



载物机器人

不同尺寸物料盒任意选择,载物运输解放双手。



额外扩展

车身双侧弹仓,扩展电池增加续航时间;扩展吸泵与机械臂搭配。



多种玩法

搭载机器臂,实现移动抓取,电脑控制实时运动。



#### 复合机器人

可搭载多款机械臂,搭建复合机器人场景应用,实现移动抓取、物流分拣等。

# 产品参数

产品	移动机器人
型号	myAGV PI 2023
核心主控	树莓派 4B
尺寸	331.15*230*110mm
重量	4.16KG
导航续航	181 min
待机续航	328 min
充电电压	12.6V 2A
轮胎类型	麦克纳姆轮

最大移动速度	0.9m/s
最大负载	5KG
激光雷达	360°全向
雷达范围	0.12-8m
内置摄像头	500W像素
复合机器人	myPallitizer 260系列 mechArm 270 系列 myCobot 280 系列 myArm 300 系列 ultraArm 系列

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# ⚠ Warning

#### BEFORE USING MYAGV READ ALL INSTRUCTIONS AND CAUTIONARY MARKINGS IN THIS MANUAL

- 1. Do not expose the product to rain or moisture to reduce fire or shock hazard.
- 2. Do not place the product in or near fire.
- 3. Do not leave the product in a car in hot or humid weather.
- 4. Do not disassemble, crush or pierce the product.
- 5. Do not expose the product to excessive shock such as dropping from a high place.
- 6. Do not expose the product to high temperatures above 60 °C (140 °F).

#### ⚠ Attention

Regarding the operation and secondary development of myAGV, please read and download **Gitbook** before using it.

Official Website: https://docs.elephantrobotics.com/docs/gitbook/2-serialproduct/2-buy.html



#### **Elephant Roboics Mobile Robot**

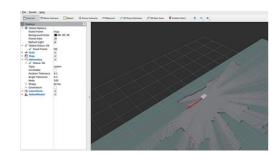
myAGV Pi 2023 is powered by a Raspberry Pi 4B core board, paired with the customized Ubuntu Mate 20.04 operating system from Elephant Robotics, ensuring a smooth and user-friendly experience. myAGV offers a wide range of features, including 2D mapping and navigation, 3D mapping and navigation, graphical programming, visual software, ROS simulation, gamepad and keyboard control, making it the top choice for research, education, and individual makers.

#### **Product Performance**



Omnidirectional movement

Competition-level Mecanum wheels, Fully Wrapped Metal Frame, Removable Split Structure.



**SLAM Lidar** 

The built-in gmapping and cartographer algorithms for ROS.Real-time mapping and scanning of Lidar, automatic path planning for obstacle avoidance and navigation.



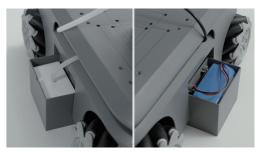
Built-in camera

5 million high-definition camera for object recognition and precise positioning.



Cargo robot

Can carry and transport different sizes of cargo boxes arbitrarily, release your hands.



Additional extensions

Double-sided magazines on the body: increased batteries lengthen the working time.



Multiple ways to play

The gamepad control supports multi-robots collaboration in real-time.



#### Compound robot

Compatible with multiple robotic arms, enabling the creation of complex robotic scenarios for tasks such as mobile picking and logistics sorting.

#### **Parameter**

Product	Mobile Robot
Model	myAGV Pi 2023
Core Controller	Raspberry Pi 4B
Dimensions	331.15*230*110mm
Weight	4.16KG
Navigation Battery Life	181 minutes
Standby Battery Life	328 minutes
Charging Voltage	12.6V 2A
Wheel Type	Mecanum Wheel

Maximum Speed	0.9m/s	
Maximum Load	5KG	
Lidar	360° omnidirectional	
Lidar Range	0.12-8m	
Built-in Camera	500W pixels	
Composite Robots	myPallitizer 260 Series, mechArm 270 Series, myCobot 280 Series, myArm 300 Series, ultraArm Series	

# 产品保修卡

用尸信息必項):			
购买人	订单号	联系电话	
地址		物流签收日期	
产品问题描述(必填):			

如需退换货,请事先联系客服确认退回相关信息。待客服确认后,填写此卡并将这一页随同产品一起寄回。 注:我司在法律允许范围内保留对本产品保修卡解释和修改的权利。

- 产品自签收起7日内未拆封可无理由退换,因产品退换所产生的费用及其他风险需由客户承担。
- 用户如需产品保修服务需提供相应的购买单据及产品保修卡作为保修凭证。
- 凡属于正常使用下由于产品本身质量问题引起的硬件故障,保修期内大象机器人给予免费维修。
- 保修起始日期为产品购买日或物流签收日。

교수 (수 수/ V/ 14 )

• 维修更换的配件归大象机器人所有,必要时会收取适当的成本费用。

以下为详细的配件保修服务说明(如需以下产品售后服务,请事先联系客服沟通并确认相关信息)

电机	
保修期限	保修服务
≤1个月	我司免费提供一个新电机并承担寄送运费(仅一次)
1-3个月	我司免费提供一个新电机,由客户自行承担运费(仅一次)
≥3个月	客户需自己重新购买

电子件	
保修期限	保修服务
≤3个月	由用户拆卸后寄回,我司免费更换并承担往返运费(仅一次)
3-6个月	由用户拆卸后寄回并承担往返运费,我司免费更换(仅一次)
≥6个月	客户需自己重新购买

#### 结构件,含外壳部分

保修期限	保修服务
≤1年	我司免费提供新的零件,由客户自行承担运费(仅一次)
≥1年	客户需自己重新购买

特别说明:在交付产品的保修期内,本公司仅对正常使用机器人时发生的故障进行免费修理。但在以下情况下,将对客户收取修理费用(即使在保修期内):

- (1) 因不同于手册内容的错误使用以及使用不当而导致的损坏或故障
- (2) 客户未经授权进行拆卸导致的故障
- (3) 属于外壳等部件自然的消耗,磨损及老化
- (4) 因调整不当或未经授权进行修理而导致的损坏
- (5) 因地震、洪水等自然灾害导致的损坏

因此,请严格遵照本手册及相关手册的指示对机器人进行操作。

#### **WARRANTY CARD**

Customer Information (Required):				
Purchaser	Order No	Phone		
Address		Logistics Receipt Date		
Product problem description(Required):				

If you need to apply for warranty service, please contact our customer service to confirm the detailed information. After confirmation, please fill in the card and send it back together with the product and the attached invoice. Note: Our company reserves the right to explain and modify the warranty card of this product within the scope of the law.

- Return service is limited to goods not opened within 7 days after the receipt date of logistics of the products. The freight or other risks incurred in return shall be borne by the customer.
- Customers should provide the purchasing invoice and warranty card as the warranty certification when a warranty is being asked.
- Elephant Robotics will be responsible for the hardware faults of products caused by the normal using during the warranty period.
- The warranty period starts from the date of purchase or the receipt date of the logistics.
- The faulty parts from the products will be owned by Elephant Robotics, and the appropriate cost will be charged if necessary.

If you need to apply for warranty service, please contact our customer service first to confirm the detailed information.

<b>Warranty Period</b>	Warranty Services
≤1 months	Elephant Robotics offers a free new Motor and bear the freigh.
1-3 months	Elephant Robotics offers a free new Motor, customs shall bear the freight.
≽3 months	Customers need to buy it themselves.
Electrical Parts	
≼3 months	Customers need to send it back after disassembly, Elephant Robotics shall send a new one for free and bear the freight out and home.
3-6 months	Customers need to send it back after disassembly and bear the freight out and home, Elephant Robotics shall send a new one for free.
≽6 months	Customers need to buy it themselves.
Structure Parts,	including Shell Parts
≤1 year	Elephant Robotics offers free new components once, customs shall bear the freight.
≽1 year	Customers need to buy it themselves.
normal use of the rob during the warranty p • Damage or malfund	period of the delivered product, the company only repairs the malfunctions that occur during pot for free. However, in the following cases, the customer will be charged for repairs (even period): ction caused by incorrect use and improper use different from the contents of the manual. nauthorized disassembly by the customer.

Motor

Therefore, please strictly follow the instructions in this manual and related manual to operate the robot.

Damage caused by improper adjustment or unauthorized repairs.
Damage caused by natural disasters such as earthquakes and floods.
