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微信



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# myArm 300 Pi

世界上最小的一体式7自由度机器人  
7-Axis robot with arm-like dexterity

## Warning

BEFORE USING MYARM 300 PI 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 myArm 300 Pi, please read and download **Gitbook** before using it.

**Official Website:** myArm 300 PI 2023 EN - Elephant Robotics

**Gitbook:** <https://docs.elephantrobotics.com/docs/myarm-pi-300-en/>

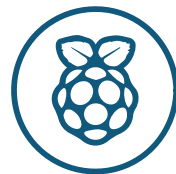
# myArm 300 Pi

The world's smallest 7-DOF robot.



## A 7-DOF robot with human-like agility

The myArm 300 Pi is an integrated 7-DOF robot that uses the Raspberry Pi 4B as its main control board. It is paired with the Ubuntu Mate 20.04 OS, specifically customized for robots by ElephantRobot-ics. No additional PC controller is needed. By simply connecting a monitor, keyboard, and mouse, users can easily start basic development. This ensures that the robot no longer requires an external controller but still provides an experience similar to a desktop PC.



- An official joint product with Raspberry Pi, providing comprehensive Raspberry Pi 4B peripheral-hardware ecosystem support.
- Offers open IO, USB, LAN, HDMI, and other PC-level hardware interfaces.
- Supports the connection of various sensors and actuators, meeting embedded development application needs.



- Customized Ubuntu MATE 20.04 OS. ElephantRobotics adapted this based on the Ubuntu 20.04 LTS version, dedicated for embedded robot device development over three years.
- Supports various software development environments, significantly improves system fluidity, and fully exploits the hardware potential of Raspberry Pi devices.



- Compatible with the M5stack ecosystem, providing PWM, IO, etc., supporting the connection of PWM motors, infrared sensors, and other M5stack product hardware.
- Features a Lego quick plug tool interface, allowing users to independently develop customized accessories, significantly enhancing the product's hardware expansion capabilities.

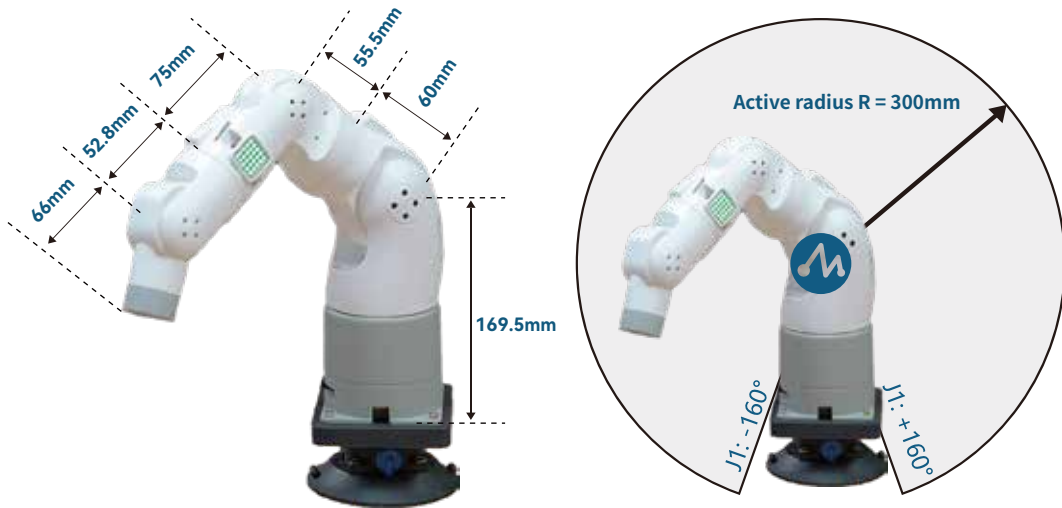


- Equipped with ROS, compatible with ROS1 & ROS2, and supports RVIZ, MOVEIT.
- Features Blockly for easy drag-and-drop programming, 100+ control interfaces, and Python code conversion.



- Innovative robot design concept, integrated two-color body design, revealing industrial design aesthetics.
- Houses 7 high-precision all-metal magnetic encoder motors in a very small space, with structural complexity comparable to industrial products.

## myArm 300 Pi- Size and Working Range Diagram



## Parameter

myArm 300 Pi	
Model	myArm 300 Pi
DOF	7
Maximum Load	200g
Maximum Working Radius	300mm
Repeatability Accuracy	$\pm 0.5\text{mm}$
Net Weight	1.5 KG
Lifespan	500 H
Adapter Specifications	DC 12V-5A
Core CPU	Broadcom BCM2711, 64-bit 1.5GHz quad-core
Core Memory	4 GB 64-bit LPDDR4 25.6 GB/s

Main Control	Raspberry Pi 4B 4G
Core network	*1
Core Bluetooth	*1
Core Wireless	802.11ac
Core Video Interface	microHDMI*2
Audio Interface	3.5mm
I/O Ports	2,3,4,5, 6,7,9, 11,12,13, 16,17,18,19, 20,21,22,23,

## Base connection



- 1: Robotic Arm Charging Port
- 2: Base Pin Port
- 3: USB 2.0 and USB 3.0
- 4: Ethernet Port
- 5: Switch Button
- 6: Raspberry Pi Power Port
- 7: Display Interface
- 8: 3.5mm Audio Jack
- 9: End-Effector IO Interface
- 10: End-Effector Grove Interface
- 11: Type C Interface
- 12: End-Effector Atom
- 13: Servo Interface

## Accessories



- 1 Dexterous hand
- 2 G base
- 3 Camera module
- 4 Vertical suction pump
- 5 Mobile phone holder
- 6 Large suction cup base

Elephant Robotics is targeted at robotic collaboration applications. For more information about the accessories, explore our online store and follow us on and Twitter.

**Online store:** <https://shop.elephantrobotics.com/>

**Twitter:** @cobotMy

## ⚠ 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°F)的高温下。

## ⚠ 开机必读

本册为myArm 300 Pi-树莓派版产品画册

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://www.elephantrobotics.com/myarm-300-pi-2023-cn/>

Gitbook: <https://docs.elephantrobotics.com/docs/myarm-pi-300-cn/>

# myArm 300 Pi

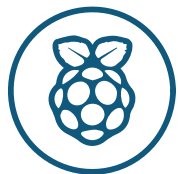
## 世界上最小 7自由度机器人



Raspberry Pi  
树莓派版

## 灵巧如人手的7自由度机器人

myArm 300 Pi 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, 提供近似于桌面级PC电脑的操作体验; 因此机器人无需额外搭配PC主控, 只用链接显示器、键盘、鼠标等, 就可以便捷使用; myArm机器人是快速构建机械臂学科教育、控制逻辑教学、机器人应用、ROS仿真实验课堂的首选助手, 帮助您快速开始7轴机械臂学习与应用。



### 内嵌树莓派生态, 开发无限可能

- 树莓派官方联名产品, 完善的树莓派4B周边硬件生态支持
- 开放IO、USB、LAN、HDMI等多种PC级别硬件接口
- 支持链接多种传感器与执行器, 满足嵌入式开发应用需求



### 定制化 Ubuntu MATE 20.04 操作系统

- 大象机器人基于Ubuntu 20.04 LTS版本适配, 历时三年, 专为嵌入式机器人设备开发
- 支持多种软件开发环境, 显著提高系统流畅度, 完美发掘树莓派设备的硬件潜力







## 丰富软件编程,应用广泛

- 内置 ROS 机器人操作系统,支持 ROS1、ROS2两种开发环境,支持 RVIZ、MOVEIT 多种多种功能
- 内置 Blockly 拖拽式编程软件,提供 100+ 机器人控制接口,支持模块代码转换为 Python 代码



## 独特工业设计,极致小巧

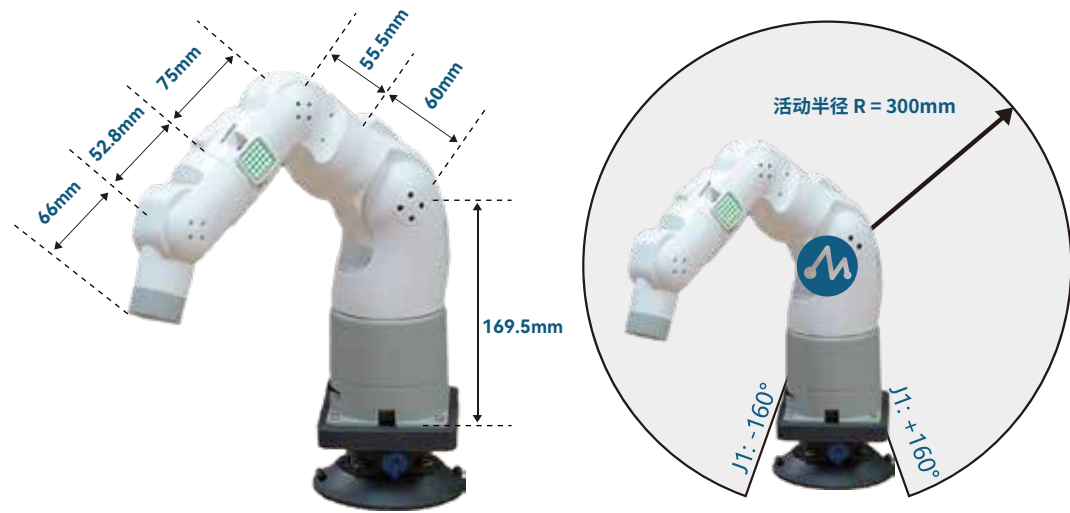
- 创新的机器人设计理念,一体式机身设计,提供双色搭配,纯白机身搭配灰色底座,工业设计美学尽览于眼中
- 超小空间中放置7颗全金属高精度磁编码器电机,支持关节位置零位校准、掉电保存,满足机器人模拟应用场景需求



## 高配置,搭配Lego接口

- M5stack生态兼容,末端提供 Atom 硬件模块,提供PWM、IO等多种功能,支持连接PWM电机、红外传感器等各种M5stack产品硬件
- Lego 快插工具接口,支持使用 Lego连接件 扩展各种末端配件,支持用户自主开发适配的定制化配件,极大的提高了产品的硬件扩展属性

## 尺寸与工作范围图



## 产品参数

myArm 300 Pi	
型号	myArm 300 Pi
自由度	7
有效负载	200g
工作半径	300mm
重复定位精度	±0.5mm
净重	1.5 KG
寿命时长	500 H
适配器规格	DC 12V-5A
核心CPU	Broadcom BCM2711, 64位 1.5GHz四核
核心Memory	4 GB 64-bit LPDDR4 25.6 GB/s

主控	Raspberry Pi 4B 4G
核心网口	*1
核心蓝牙	*1
核心无线	802.11a
核心视频接口	microHDMI*2
音频接口	3.5mm接口
输入端口 (INPUT)	2,3,4,5, 6,7,9, 11,12,13, 16,17,18,19, 20,21,22,23,

## 底座接口



- 1: 机械臂充电口
- 2: 底部引脚口
- 3: USB2.0和USB3.0
- 4: 网口
- 5: 开关按键
- 6: 树莓派供电插口
- 7: 显示屏接口
- 8: 3.5mm音频插口
- 9: 末端IO接口
- 10: 末端Grove接口
- 11: Type C接口
- 12: 末端Atom
- 13: 舵机接口

## 配件支持



1 灵巧手    2 G型底座    3 摄像头法兰    4 垂直吸泵    5 手机夹持器    6 大吸盘底座

了解更多配件请前往公司官网 <https://www.elephantrobotics.com/myarm-300-pi-2023-cn/>

相关配件上新, 请关注淘宝店铺 [大象机器人](#)



## 产品保修卡

用户信息(必填):

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。
- 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。

## 中国地区(含港澳台)零售商品售后政策说明表

保修期限	产品类别	保修服务
最长365天	整机	该类别包括所有单独销售的主机产品和配件产品，如机械臂、机器人配件、机器人套装、机器人周边产品等。
365天	机械结构	该类别包括机器人或套装所包含的所有结构部件，如机器人内的关节连轴件、关节外壳、关节轴承、末端法兰等；套装内的亚克力结构件、金属型材、传送带主体结构等。
365天	供电系统	该类别包括直流电源、线缆、逆变器等
180天	控制系统	该类别包括PCB、主控、电子开关、继电器、伺服驱动器等
180天	传感器	该类别包括套装产品及定制产品包含的各类传感器，如：ToF、激光雕刻头、红外测距传感器、摄像头模组等
90天	执行器	该类别包括伺服电机、步进电机、谐波电机、气缸、真空泵机等
365天	其他	该类别包括螺丝配件包等

### 退货/换货条款

1. 产品购买后7天内，若未开封，则可无理由退/换货（运费由客户承担）。
2. 在7天内，若产品已开封但无明确的产品问题，我们将不提供退换货服务。若产品有明显的使用问题，我们支持无条件退换（运费由我司承担）。
3. 如收到产品后，发现包装内缺少配件，请在7天内联系售后补发（运费由我司承担）。
4. 退换货物流方式说明：
  - 中国大陆（除港澳台、西藏、新疆）地区支持顺丰普通快递退换货；
  - 其他地区（含国际物流）的退换方式请与售后人员沟通确认。

### 保修覆盖

在保修期内，若任何零部件出现问题，我们将根据对应零部件的保修政策进行处理。由于机器人产品包含多种零部件，不同零部件的售后保修期可能不同，敬请仔细阅读对应零部件的售后政策以避免误解。

1. 保修期内，如存在出现因制造缺陷导致产品无法按照使用说明正常使用的问题，我司提供免费售后维修服务一次（包括且不限于更换、维修对应零部件），以确保产品可以正常使用，同时由我司承担运费及物料费用。
2. 在保修期外或保修期内由人为导致的产品售后问题，售后物料费用及运输费用由客户承担，我司将按照对应物料公开的售后价目表中注明的费用进行收费。
3. 非免费保修范围内的返厂，一律不支持到付件，到付件我司有权拒收，如因拒收导致物品丢失，我司不承担对应责任。
4. 如客户有需要进行现场交付或维修的需求，需和售后工作人员及订单的销售经理确认具体事项内容。

### 保修例外

人为因素或不可抗力因素导致的损坏不在保修范围内。

1. 人为因素包括但不限于未按照产品用户手册或使用指南正确使用、安装或保养产品、未经授权的产品改装、修理或拆解、产品遭受撞击、跌落、浸水或其他形式的不当处理或存储、使用非原厂配件、零件或耗材，或者使用不符合产品规格的电源或电压。
2. 不可抗力因素包括但不限于任何无法预见、无法避免并且无法克服的事件，包括但不限于自然灾害（如洪水、地震、台风、火灾等）、战争、罢工、骚乱、政府行动或其他类似事件。

### 备注

请注意以下几点：

1. 如果在售后服务过程中遇到当前售后分类中未包含的零部件，所属分类将由我司售后服务人员进行判断。
2. 本表格只适用于我司直接销售的零售产品，如果您是通过代理商购买或购买的二手产品，此售后政策将不适用，您需要与销售商确认具体的售后政策。
3. 由于包装材料（如纸箱、海绵、纸托等）属于易损品，一经发出便可能损坏，无法进行二次销售，因此，这些材料并未包含在售后保修政策内，如果您需要购买新的包装材料，请与售后人员联系。
4. 本表格的最终解释权归深圳市大象机器人科技有限公司所有。

## 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.**

## INTERNATIONAL AFTER-SALES POLICY

Warranty Period	Product Category	Subdivision
365 Days	Whole Machine	This category includes all separately sold main products and accessories, such as robotic arms, robot accessories, robot kits, peripheral products of robots, etc.
365 Days	Mechanical Structure	This category includes all structural components contained in the robot or kit, such as the joint connector inside the robot, joint shell, joint bearing, end flange, etc.; acrylic structural components in the kit, metal profiles, main body structure of the conveyor belt, etc.
365 Days	Power Supply System	This category includes direct current power supplies, cables, inverters, etc.
180 Days	Control System	This category includes PCBs, main controls, electronic switches, relays, servo drives, etc.
180 Days	Sensors	This category includes all types of sensors contained in the kit products and custom products, such as: Time of Flight (ToF), laser engraving heads, infrared distance sensors, camera modules, etc.
90 Days	Actuators	This category includes servo motors, stepper motors, harmonic motors, cylinders, vacuum pump machines, etc.
365 Days	Others	This category includes screw accessory packs, etc.

## Warranty Coverage

During the warranty period, should any component experience issues, we will handle it according to the respective warranty policy of the component. As our robotic products comprise various components, the after-sales warranty period might differ among them. We encourage you to carefully read the after-sales policy of the corresponding components to avoid misunderstandings.

1. Within the warranty period, if there are instances of product malfunction due to manufacturing defects that prevent normal use as per the usage instructions, our company offers one-time free after-sales repair services (including, but not limited to, replacement or repair of the corresponding components). This ensures the product can function as expected, with all shipping and material costs being borne by our company.
2. For product after-sales issues caused by human factors within the warranty period, or issues that occur outside the warranty period, the customer will be responsible for the material and transportation costs. Our company will charge according to the costs specified in the publicly available after-sales price list for the corresponding materials.
3. Any factory returns outside the scope of free warranty coverage will not support cash on delivery; our company reserves the right to reject such items. If rejection leads to the loss of items, our company will not bear corresponding responsibility.
4. If the customer needs on-site delivery or repair services, specific details need to be confirmed with the after-sales staff and the sales manager of the order.

## Return/Exchange Terms

1. Within 7 days of product purchase, if it remains unopened, customers can return/exchange without any specific reason (Shipping fees are the customer's responsibility).
2. Within the same 7-day period, if the product has been opened but does not exhibit any distinct issues, we will not offer return/exchange services. However, if the product presents significant operational problems, we will support an unconditional return/exchange (Shipping fees will be covered by our company).
3. Should you discover missing accessories within the product packaging upon receipt, please contact our after-sales service within 7 days for reshipment (Shipping fees will be covered by our company).
4. Regarding the logistics of returns/exchanges, customers are responsible for covering the shipping costs from the place of purchase to our company's warehouse. If you encounter any issues or require assistance during this process, please do not hesitate to reach out to our after-sales service team. Additionally, you may also contact us at [support@elephantrobotics.com](mailto:support@elephantrobotics.com). We are here to support you every step of the way.

## Warranty Exceptions

Damages due to human factors or force majeure are not within warranty coverage.

1. Human factors may include but are not limited to improper use, installation, or maintenance of the product contrary to the user manual or usage guide, unauthorized product modifications, repairs, or disassembly, mishandling or improper storage of the product (such as impacts, falls, immersion, etc.), using non-original accessories, parts, or consumables, or using power sources or voltage not in line with product specifications.
2. Force majeure factors may include but are not limited to any unforeseeable, unavoidable, and insurmountable event, including natural disasters (e.g., floods, earthquakes, typhoons, fires), wars, strikes, riots, government actions, or similar occurrences.

## Notes

1. If there are components encountered during the after-sales service process that are not included in the current after-sales category, their classification will be determined by our after-sales service personnel.
2. This policy applies only to retail products directly sold by our company. If you have purchased through an agent or bought second-hand products, this after-sales policy will not apply, and you will need to confirm the specific after-sales policy with the seller.
3. Packaging materials (like cartons, sponges, paper supports, etc.) are consumables and are susceptible to damage once shipped, rendering them unsuitable for resale. Therefore, these materials are not covered within the after-sales warranty policy. Should you require new packaging materials, please contact our after-sales service team.
4. The final interpretation of this policy is reserved by Shenzhen Elephantrobotics Co., Ltd.