Elephant Robotics 大象机器人

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小象协作机械臂

myCobot 280 JetsonNano

—

myCobot系列六轴协作机器人

myCobot series of six-axis collaborative robots

⚠ 开机必读

本册为myCobot 280 JetaonNano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/mycobot-280jetsonnano-cn/

myCobot

myCobot 280 Jetson Nano

myCobot

六轴协作机器人

myCobot 280 for Jetson Nano 六轴协作机器人是机械臂基于mycobot 280协作机械臂系列开发，英伟达官方合作产品，采用JETSONNANO + ATOM双核心主控。

myCobot 280 for Jetson Nano 六轴协作机器人自重1030g，有效载荷250g，有效臂展280mm，体积小巧但功能强大，具备丰富的软硬件交互方式及多样化兼容拓展接口，支持多平台的二次开发，有效帮助用户实现多场景的应用开发。

英伟达官方合作产品，JETSONNANO + ATOM双核心主控

• Jetson Nano，1.5GHz 4核微处理器，运行Debian/Ubuntu平台。
• 开放角度、坐标、速度、电流、电压、IO等多种控制接口。

自带ROS，图形化编程Blockly

• 内置ROS仿真机械臂运行状态，超强扩展性。
• blockly可视化编程，同时支持通用Python软件接口。

图像识别 丰富配件 应用广泛

- 自带图像识别算法，可选配任意摄像头。
- 自主搭配显示器、夹爪吸泵等不同配件，实现更多应用化场景。

独特工业设计，极致小巧

- 一体化设计，整体机身结构紧凑，净重仅850g，十分便于携带。
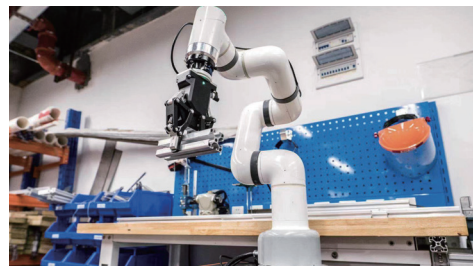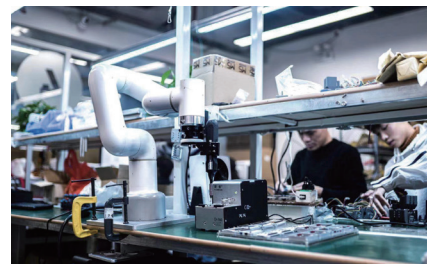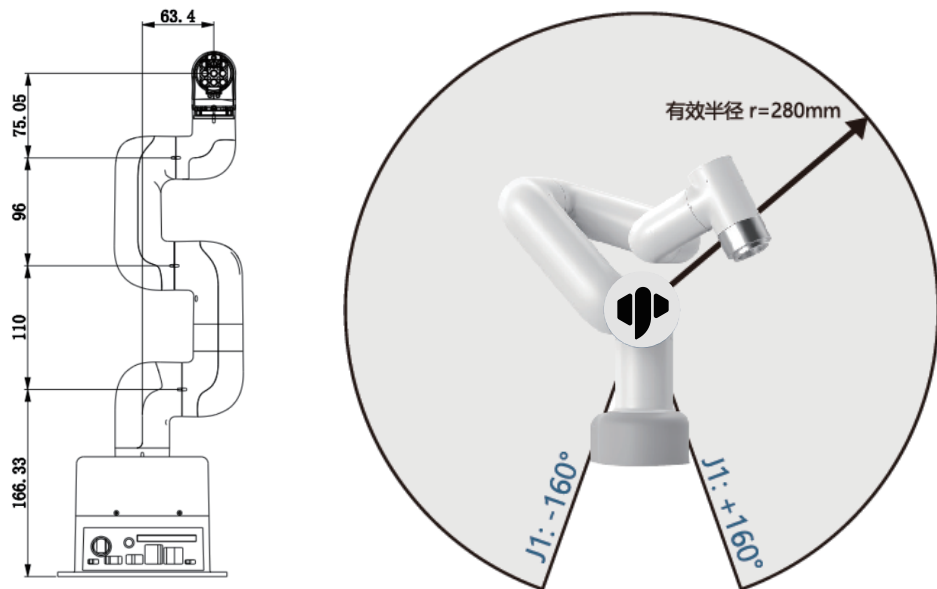- 模块化设计，备件少、维护成本低，可快速拆卸更换，实现即插即用。

高配置，搭配Lego接口

- 内含6个高性能伺服电机，响应快，惯量小，转动平滑。
- 底座及末端带有乐高科技件接口，适用于各项微型嵌入式设备开发。

myCobot小象机械臂设计原型-大象机器人C系列all-in-one机器人

myCobot小象机械臂的设计原型为大象机器人2018年推出的国内首款 all-in-one 一体式协作机器人。作为国内首款一体式协作机器人，它曾获得2019CAIMRS工业机器人创新奖，2019高工机器人年度"创新技术奖"，远销海内外30多个国家并备受数家来自世界500强名企的一致认可与好评。
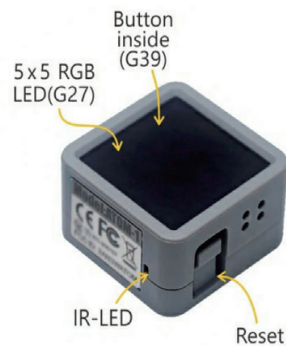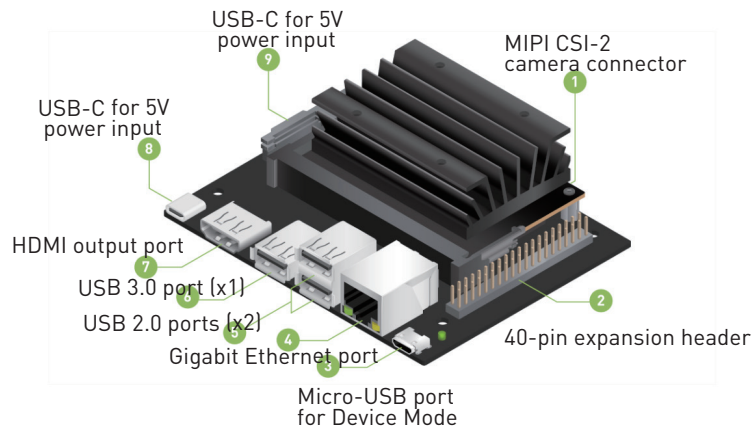
myCobot小象机械尺寸与工作范围图

有效半径 r=280mm

J1: -160°   J1: +160°

产品参数

自由度	6
有效负荷	250g
臂展	350mm
工作半径	280g
重复定位精度	±0.5mm
自重	1030g
电源输入	8-12V , 5A
工作环境	-5℃~45℃
通信	USB Type-C

副控板参数	
型号	ATOM
芯片	ESP32,240MHz Dual-core 520KB SRAM
Flash	4MB
安装位置	第六关节后方
LED显示	WS2512C 2020 X25
软件	非开源，可烧录固件

主控板参数	
GPU	128-core NVIDIA Maxwell
CPU	Quad-core ARM ®A57 @ 1.43 GHz
Memory	2 GB 64-bit LPDDR4 25.6 GB/s
无线	802.11ac
网口	*1
视频	HDMI*1
IO口	40个

myCobot

USB-C for 5V power input
9

MIPI CSI-2 camera connector
1

USB-C for 5V power input
8

HDMI output port
7

USB 3.0 port (x1)
6

USB 2.0 ports (x2)
5

Gigabit Ethernet port
3

Micro-USB port for Device Mode
4

40-pin expansion header
2

Button inside (G39)

5 x 5 RGB LED(G27)

IR-LED

Reset

Atom 介绍图

MPU6886 inside

M2-SCREW HOLE

Ext.Pin

Ext.Pin @2.54mm

PH2.0-4

USB-C

Atom 功能引脚图

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myCobot 产品配件

❶

自适应夹爪

❷
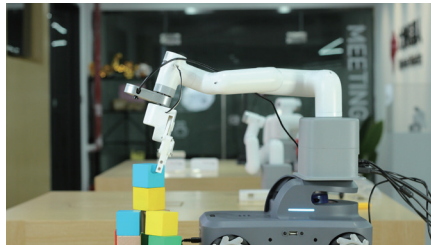
摄像头法兰

❸

吸泵

❹
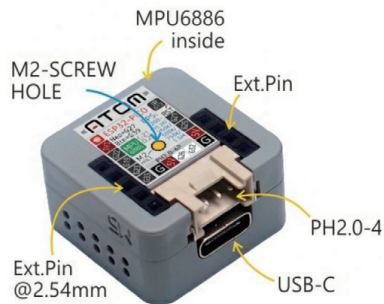
G型底座

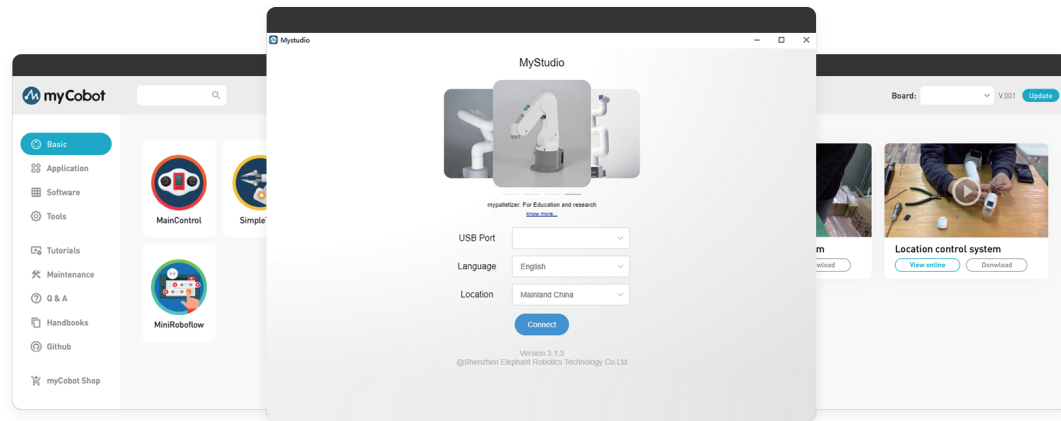大象机器人面向机械臂扩展应用，打造"my-系列"产品线。相关配件的上新，请关注官方淘宝店铺。

店铺名称：大象机器人

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myCobot 280 应用场景

夹爪是一种可以实现类似人手功能的机器人部件。其结构较复杂、抓取物体牢固、不易掉落、易操作的优点。夹爪套件包括夹爪配件和乐高科技件，通过可编程系统控制机械臂的末端执行器，实现物件的抓取、多点定位等功能。在所有的开发环境下都可以使用夹爪，如ROS、Python、myBlockly、RoboFlow等

myStudio

myStudio 是一个一站式的机器人的使用平台。

myStudio 整合了【my系列】的软件资源及各类资料，主要功能为：

1）下载更新固件；2）查看机器人使用视频教程；3）维护和维修方面的信息（如视频教程、Q&A等）

请下载最新版的 myStudio 进行使用

软件下载链接如下：

1、官网：https://www.elephantrobotics.com/download/

2、Github：https://github.com/elephantrobotics/MyStudio/

BEFORE USING MECHARM 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 mechArm Pi, please read and download **Gitbook** before using it.

Official Website: https://www.elephantrobotics.com/mycobot-280jetsonnano-cn/

myCobot

myCobot 280 Jetson Nano

six-axis collaborative robots

myCobot 280 for Jetson Nano is a six-axis collaborative robot arm based on the myCobot 280 series of collaborative arms. It is an official collaboration with Nvidia and uses the Jetson Nano + ATOM dual core control.

MyCobot 280 for Jetson Nano Six-axis collaborative robot weight 1030g, payload 250g, arm span 280mm, compact but powerful, with rich hardware and software interaction modes and diversified compatible expansion interfaces, support multi-platform secondary development, effectively help users to achieve multi-scene application development.

Nvidia's official collaboration product, JETSONNANO + ATOM dual core master

- Lent The Jetson Nano, using a 1.5ghz quad-core microprocessor, runs on Debian/Ubuntu.
- Buy a ticket to open control interfaces for angles, coordinates, speed, current, voltage, IO and more.

Built-in ROS，graphical programming Blockly

- Built-in ROS simulation mechanical arm running state, super expansibility.
- Mingle Blockly for visual programming while supporting a common Python software interface.
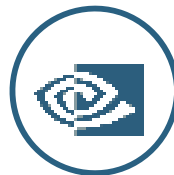
Image recognition rich accessories are widely used

- Autonomic integration of different components, such as a monitor and claw suction pump, enables more application scenarios.
- Features a built-in image recognition algorithm, which allows you to choose any camera.

Image recognition rich accessories are widely used

- The modular design features few spare parts and low maintenance cost. The system can be quickly disassembled and replaced, enabling plug and play.
- The integrated design features a compact fuselage with a net weight of just 850g, making it easy to carry around.

Image recognition rich accessories are widely used

- Automatically features six high-performance servo motors that offer fast response, low inertia and smooth rotation.
- Base and end with LEGO technology parts interface, suitable for the development of micro-embedded devices.

myCobot 280 - Design Prototype - Elephant Robot®C Series Robot

The design prototype of myCobot 280 is from All-in-one Robot launched by Elephant Robot in China in 2018. As the first integrated collaborative robot in China, it has won the 2019 CAIMRS Industrial Robot Innovation Award and 2019 High-tech Robot Annual "Innovation Technology Award", and has been also sold to more than 30 countries at home and abroad, receiving unanimous praise and recognition from the factories of the world's top 500 enterprises.
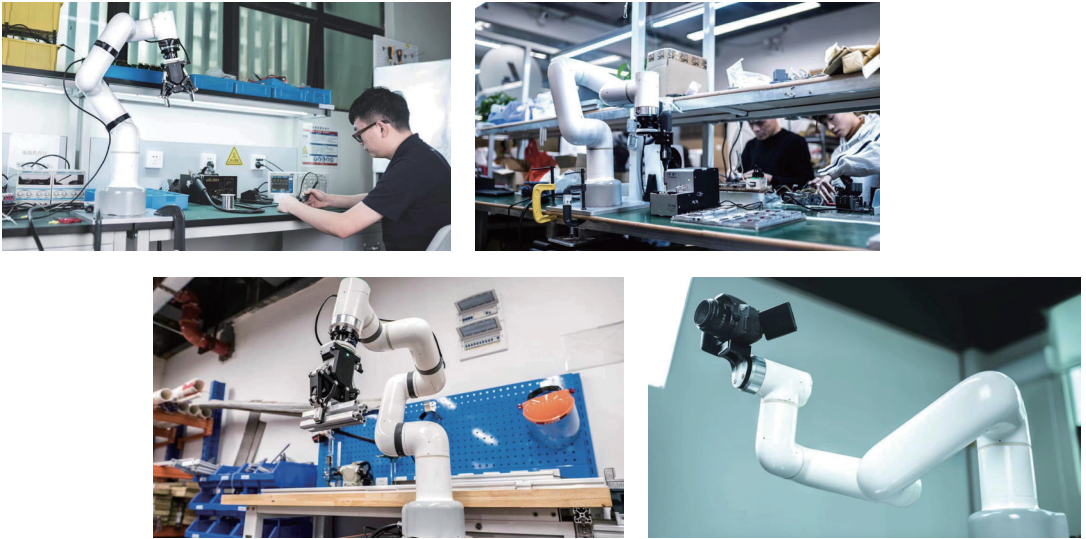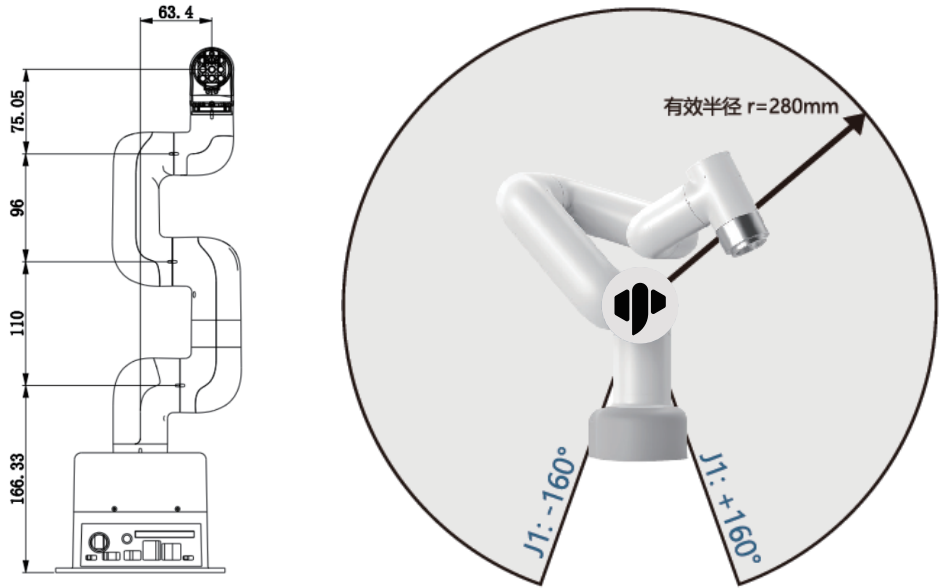
myCobot 280 - Size and Working Range Diagram


图 2-1 机器人.

产品参数

freedom	6
Payload	250g
Arm spread	350mm
Working radius	280g
Repetitive positioning accuracy	±0.5mm
dead weight	1030g
Power input	8-12V , 5A
work environment	-5°C~45°C
signal communication	USB Type-C

副控板参数

model	ATOM
chip	ESP32,240MHz Dual-core 520KB SRAM
Flash	4MB
Installation position	Installation position
LED display	WS2512C 2020 X25
Software	Non open source, can burn firmware

主控板参数

GPU	128-core NVIDIA Maxwell
CPU	Quad-core ARM ®A57 @ 1.43 GHz
Memory	2 GB 64-bit LPDDR4 25.6 GB/s
wireless	802.11ac
internet access	*1
Video	HDMI*1
IO mouth	40个
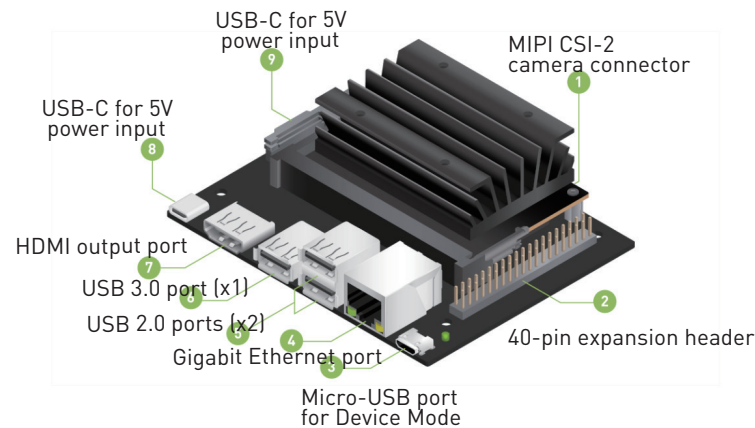
myCobot

Atom 介绍图
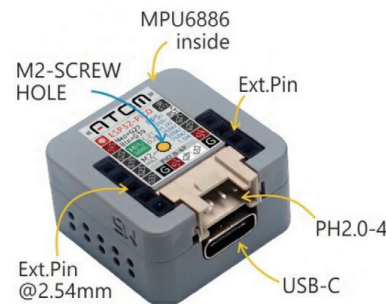
Atom 功能引脚图

myCobot Product accessories

❶
Adaptive claw

❷
Camera flange

❸
sucking pump

❹
G base

大象机器人面向机械臂扩展应用，打造"my-系列"产品线。相关配件的上新，请关注官方淘宝店铺。

店铺名称：大象机器人

myCobot 280 application scenarios

Cclaw clip is a robot component that can function a human hand.Its structure is more complex, grasp the object firm, not easy to fall, easy to operate the advantages.The claw clip kit includes claw clip accessories and high-tech parts, which control the end actuator of the robotic arm through a programmable system to achieve objects, multi-point positioning and other functions.Cclaw can be used in all development settings, such as ROS, Python, myBlockly, RoboFlow, etc..
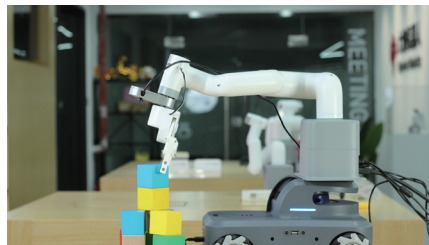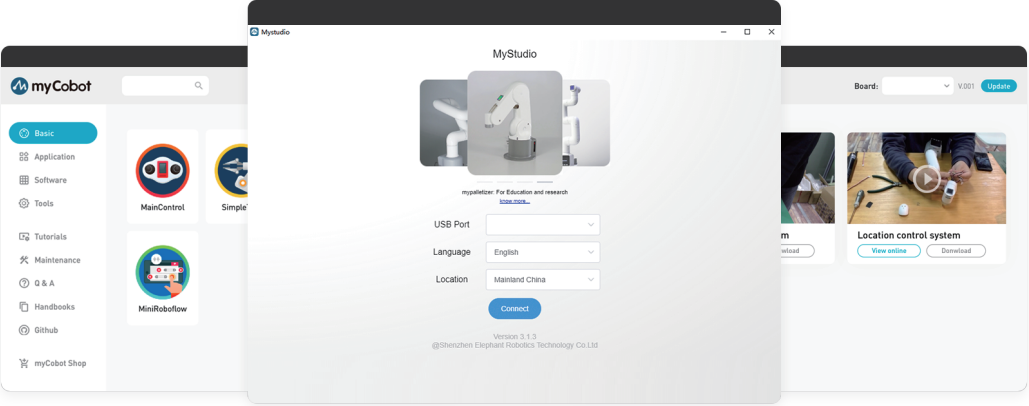
myStudio

myStudio is a one-stop platform for robots

myStudio integrates my series software and various materials.
The main functions of myStudio are: 1) Update the firmware; 2) Provide video tutorials on how to use the robot; 3) Provide maintenance and repair information (such as video tutorials, Q&A, etc.).

Please download the latest version of myStudio to use.

The download link is as follows:
Officail website: https://www.elephantrobotics.com/en/downloads/
Github: https://github.com/elephantrobotics/MyStudio/

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。

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)

舵机	
保修期限	保修服务
≤1个月	我司免费提供一个新舵机并承担寄送运费(仅一次)
1-3个月	我司免费提供一个新舵机，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.

Sever motor	
Warranty Period	Warranty Services
≤1 months	Elephant Robotics offers a free new servo motor and bear the freigh.
1-3 months	Elephant Robotics offers a free new servo 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.

During the warranty period of the delivered product, the company only repairs the malfunctions that occur during normal use of the robot for free. However, in the following cases, the customer will be charged for repairs (even during the warranty period):
• Damage or malfunction caused by incorrect use and improper use different from the contents of the manual.
• Failure caused by unauthorized disassembly by the customer.
• Damage caused by improper adjustment or unauthorized repairs.
• Damage caused by natural disasters such as earthquakes and floods.

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

- 如果您有购买意向或者任何参数疑问请添加售前小管家微信。
   If you have purchase intention or any parameter questions, please add pre-sales
   butler wechat.

- 如果列举的问题无法帮助解决相关问题，并且有更多售后问题想要咨
   询，请添加售后小管家微信。
   Anyway, if the problem listed doesn't help solve the problem, and you have more
   after-sales problems to consult, you add a after-sales butler to the wechat.