Elephant Robotics mechArm 270-M5 6 Axis Robot Arm Ideal For Makers Instruction Manual

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Contents

⚠ Warning

BEFORE USING MECHARM READ ALL INSTRUCTIONS AND CAUTIONARY MARKINGS IN THIS MANUAL

⚠ Attention

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

Official Website **https://www.elephantrobotics.com/mecharm**

The most compact 6-axis articulated robot

The mechArm270 -MS belongs to the “mechArm” series of six-axis articulated robotic arms from Elephant Robot. It uses a MS Stack Basic main control and supports ROS simulation software. It is an industrial-like configuration launched by Elephant Robot for maker innovation and robot industry-university-research services.

The body weight of mechArm270 -MS is 1 kg, the payload is 2S0g, and the working radius is 270mm. The design is compact and portable. It is small but powerful, easy to operate, and can work with people safely. As the first small six-axis robotic arm of Elephant Robot, it has three advantages of ease of use, safety and economy, and is a cost-effective choice.

Classic industrial configuration, the first choice for robotic enthusiast

- The most classic six-axis centrosymmetric structure of industrial robots, compact and robust.
- The preferred platform for universal and vocational education, colleges and individual development, applying what you have learned to break through the barriers of production, education and research.

Embedded Raspberry Pi ecology, Dual-screen unlimited development possibilities

- Support Arduino rich software application ecology
- mechArm carries two display screens, supports 3 physical buttons, and supports fastLED library, which is convenient for expanding application interactive output

Highly opened source, compatible with massive software and API

- Compatible with a various of API software, built-in ROS/Moveit to simulate the operation state of the manipulator, super expansibility
- From introductory drag teaching and Blockly visual programming to industrial practical operation platform, one

machine opens up the whole platform of industry, academia and research.

High configuration, powerful performance

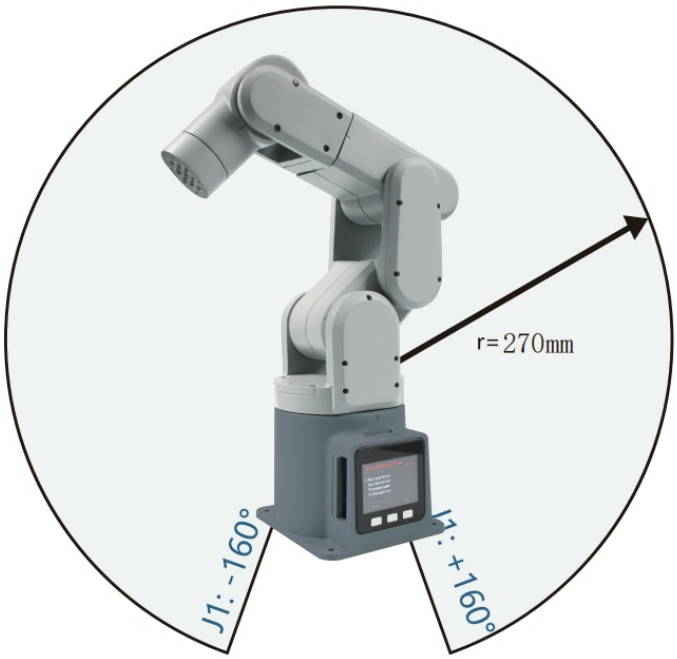
- The use of brushless DC servos can achieve a repeat positioning accuracy of ±1 mm.
- The base and the end are equipped with installation interfaces, which are suitable for the development of various peripheral products and equipment.

Specifications

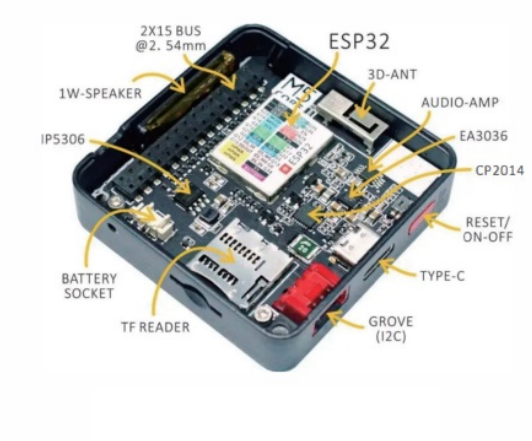
Product Name	mechArm
model	mechArm 270-MS
DOF	6
Repeatability	±0.Smm
Payload	250g
Weight	1 Kg

Product Name	mechArm
Working radius	270mm
power input	8-12V, SA
Communication	USB/Type-C
Motor	120° /s
Motor type	High precision magnetic encoder servo mater

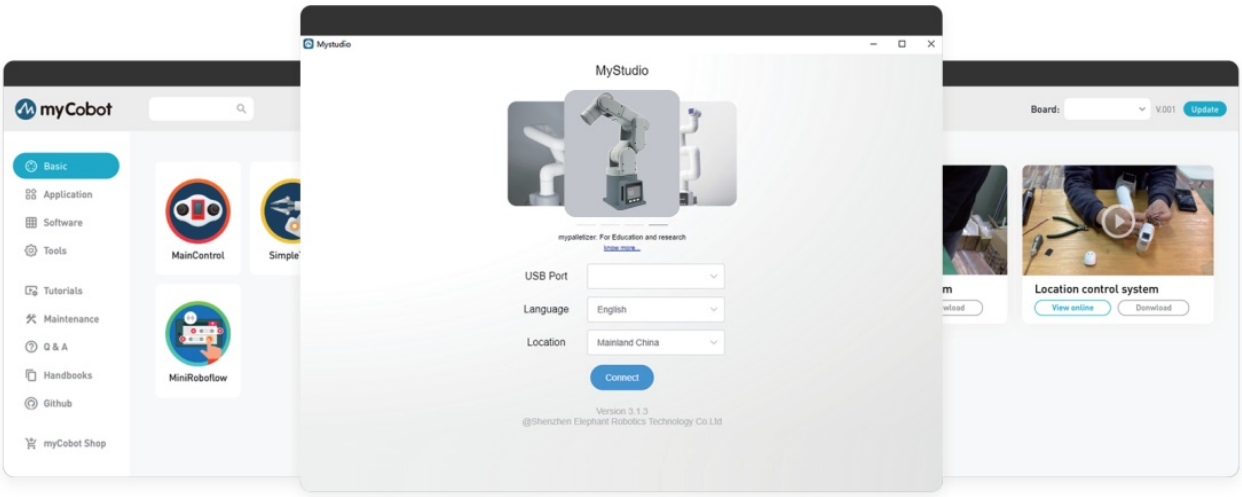
mechArm pi 270 – Size and Working Range Diagram



Control Board Pin Map



myStudio



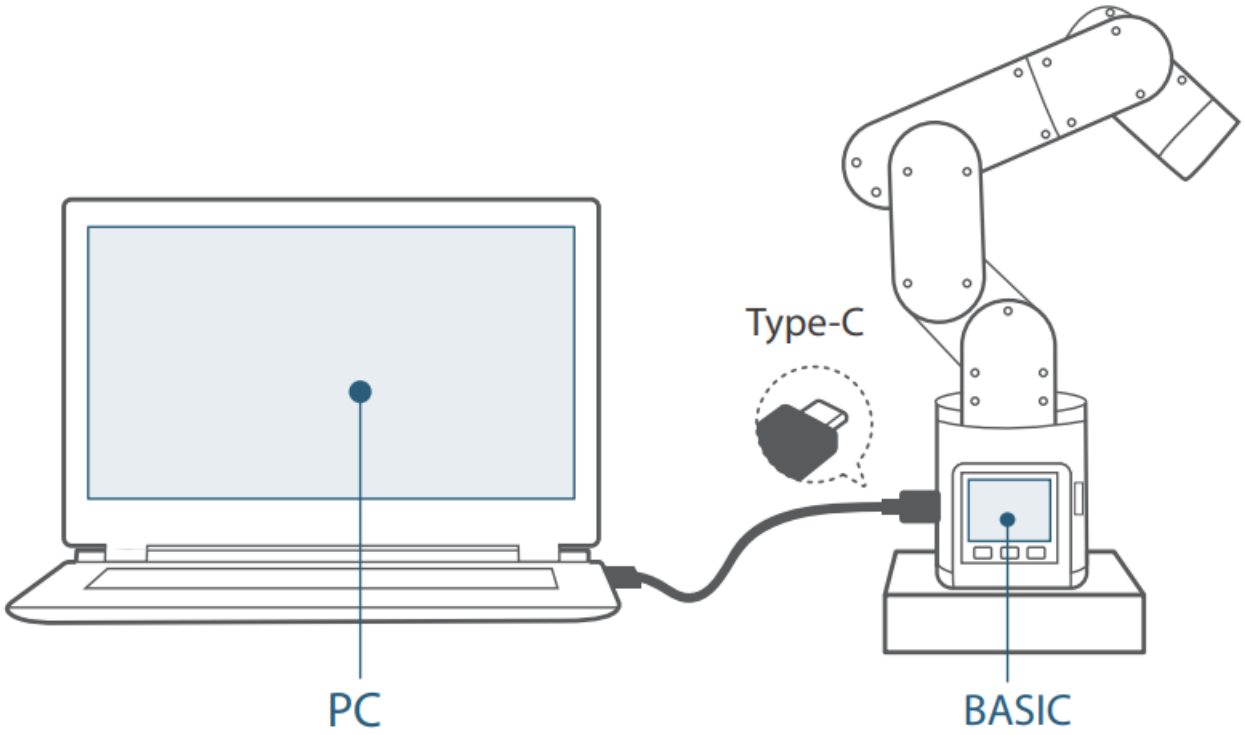
myStudio is a one-stop platform for robots

myStudio integrates mechArm software and various materials.

Please download the latest version of my Studio to use.
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.).

The download link is as follows:
Official website: **https://www.elephantrobotics.com/mechArm/**
Github: **https://github.com/elephantrobotics/MyStudio/**

Burn Table



Development environments that support the secondary development mechArm are: myBlockly, RoboFlow, Arduino, ROS, python, etc.

Dev_elopment Environment	Library on PC	Basic Firmware	Atom Firmware
Default Program	N/a	mainControl	atomMain
Visual Programming	myBlockly	myBlockly	atomMain
RoboFlow Industrial Programming Software	RoboFlow	Transponder	atomMain
Arduino Maker!	Arduino IDE + MSStack Lib+ MSStack Lib	All Exapmles	atomMain
API on Desktop	Python/ C+	Transponder	atomMain
ROS Development	ROS	Transponder	atomMain
USB/TxRx0(G 1 /G3	Read Protocol	Transponder	atomMain
BlueTooth	Read Protocol	BT_ Transponder	atomMain

MechArm Accessory

1. Adaptive Gripper

2. Camera Flange

3. Suction Pump

4. G Base

Elephant Robotics are targeted at robotic collaboration applications, making “my-series” product line.
For new information about the accessories, Follow us on Shopify and Twitter.
Shopify: **https://shop.elephantrobotics.com/**

Twitter: @cobotMy

WARRANTY CARD

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
≤ months	Elephant Robotics offers a free new sever motor and b ear the freigh.
≤1-3 months	Elephant Robotics offers a free new sever motor, cust oms shall bear the freight.
≥3 months	Customers need to buy it themselves.
Electrical Parts (MS Hardware)	
≥3 months	Customers need to send it back after disassembly, Ele phant 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	
≤year	Elephant Robotics offers free new components once, customs shall bear the freight.
≥2cl 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.

Elephant Robotics

Documents / Resources

	Elephant Robotics mechArm 270-M5 6 Axis Robot Arm Ideal For Makers [pdf] Instruction Manual mechArm 270-M5 6 Axis Robot Arm Ideal For Makers, mechArm 270-M5, 6 Axis Robot Arm Ideal For Makers, Arm Ideal For Makers, Ideal For Makers

References

- _____
- GitHub - elephantrobotics/myStudio: A comprehensive software for mycobot. Provides firmware burning, documentation, tutorials, etc
- Elephant Robotics: Online Robotics Store | Buy Robots Arm for Small Bu
- MechArm - Elephant Robotics
- MechArm - Elephant Robotics