Commercial 6-Axis Collaborative Robot
**Warning**

BEFORE USING MYCOBOT 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)
myCobot Pro is a commercial 6-axis robot developed by Elephant Robotics, compact but powerful, simple to operate, and has a weight of 3kg, a payload of 1kg and a working radius of 320mm.

With three mainly strengths and characteristics of Usability, Security and Economy, myCobot Pro is the cost-effective choice of automated production, can quickly deploy on the production line and entail human-robot collaboration in close proximity safety, effectively reducing cost and increasing efficiency for enterprises.

### Powerful Performance & Equipped with 2 Screens
Coupled with Brushless DC Industrial Motor, can achieve ±0.3mm repeated positioning accuracy
Carries two display screens supporting M5STACK Ecological Application, effectively expand your collaborative application space

### Integrated Modular Design & Safe Cooperation
The compact design allows it to make full use of the production space and perfectly blend into the production environment
Based on the efficient and exact collision detection algorithm, myCobot pro can work safely with people

### Open Resource, Easy to Operate and Programming
Operators with no programming experience can quickly use the robot by free move and UIFlow visual programming
Supports various of development environments such as ROS, moveit and RoboFlow developed by Elephant Robotics.

### Economical & High Cost Performance
With standard 8-hour work, myCobot pro is a perfect choice for high-repetitive, standard assembly line work
As a cost-effective 6-axis commercial robot arm, it is suitable for business that require both low cost and high performance to cut down cost and boost efficiency
The design prototype of myCobot Pro 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.
### Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>myCobot Pro</th>
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<tbody>
<tr>
<td>model</td>
<td>mycobot Pro-320</td>
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<tr>
<td>payload</td>
<td>1kg</td>
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<tr>
<td>reach</td>
<td>320mm</td>
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<tr>
<td>weight</td>
<td>3kg</td>
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<tr>
<td>repeatability</td>
<td>±0.5mm</td>
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<tr>
<td>DOF</td>
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<td>IP Level</td>
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<tr>
<td>Material</td>
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<tr>
<td>Working Condition</td>
<td>0~50°C</td>
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<tr>
<td>Adapter power supply</td>
<td>110~220V AC</td>
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<td>Joints range</td>
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<tr>
<td></td>
<td>J2: +/- 160°</td>
</tr>
<tr>
<td></td>
<td>J3: +/- 160°</td>
</tr>
<tr>
<td></td>
<td>J4: +/- 160°</td>
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<td></td>
<td>J5: +/- 170°</td>
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<td></td>
<td>J6: +/- 175°</td>
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<tr>
<td>Noise</td>
<td>&lt;85 dB</td>
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<tr>
<td>Power Supply</td>
<td>24V 5A; 120W</td>
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<td>Max End-speed</td>
<td>0.7m/s</td>
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</table>

### Tool IO

- 12V/GND
- Digital-INPUT x2
- Digital-OUTPUT x2
- 485Bus AB

### Base IO

- Digital-INPUT x3
- Digital-OUTPUT x3

### Communication [Base]

- Ethernet Port
- typeC-Port

### Max Rotational Speed

- 180°/s

### Servo-Gear Set

- Alloy Steel
- 12 Bit

### Servo-Encoder

- Max Rotational Speed: 180°/s

### Software

- RoboFlow
- uiFlow
- myStudio
- myFlow
- ROS
- MoveIt
- Python

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### M5STACKt Control Board Pin Map

#### M5 Basic side pin diagram

- ESP32
- IR-Led
- Reset
- 5x5 RGB LED (G37)
- 5V 3.3V GND 32.1 G22 G22 G19 G16

#### M5 Basic side pin diagram

- Power Socket
- 5V 3.3V GND 32A A990 A990 A990 A990
- Battery Socket
- 5V 3.3V GND 32A A990 A990 A990 A990
- SPI
- I2C
- JP30-34
- Jumper Pins
- Jumper Pins

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### Atom diagram

- Button inside (G39)
- 5x5 RGB LED (G37)

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### Atom pin diagram

- 2G 0.4P
- M2 SCREW HOLE
- MPL31856
- Inside
- M3-5MM TAPPING HOLE
- USB-C
myStudio is a one-stop platform for robots

myStudio integrates myCobot’s 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:
- Official website: https://www.elephantrobotics.com/myCobot/
- Github: https://github.com/elephantrobotics/MyStudio/

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**Burn Table**

Development environments that support the secondary development of myCobot are: UIflow, Roboflow, Arduino, ROS, python, etc.

<table>
<thead>
<tr>
<th>Development Environment</th>
<th>Library on PC</th>
<th>Basic Firmware</th>
<th>Atom Firmware</th>
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<tbody>
<tr>
<td>Default Program</td>
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<td>Visual Programming</td>
<td>UIflow</td>
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<td>RoboFlow Industrial Programming Software</td>
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<td>Transponder</td>
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<td>Arduino Maker!</td>
<td>Arduino IDE</td>
<td>All Examples</td>
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<td>+ M5Stack Lib</td>
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<tr>
<td></td>
<td>+ MyCobotBasic Lib</td>
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<td>API on Desktop</td>
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<td>BT_Transponder</td>
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<tr>
<td></td>
<td>Android/iPhone</td>
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</tbody>
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