Elephant Robotics launch a most compact desktop 6-DOF collaborative robot arm - mechArm

As the most compact collaborative robot, the mechArm Pi 270 is portable. It's tough but reliable for its centrosymmetric structure with high effectiveness.

NEW YORK, UNITED STATES, June 3, 2022 /EINPresswire.com/ -- Elephant Robotics is well known for its series of innovative products that help enhance manufacturing, assembly, education, and more. In 2020, Elephant Robotics released the world's smallest 6-axis

Stable Structure of mehArm

robot arm – myCobot. It has been a great success once myCobot is introduced and gained many users and support. From this on, Elephant Robotics is continuously bringing more collaborative robots to the market. The total number of myCobot sold is over 5000 units in the past 12 months.

> **"** mechArm is tough but reliable for its centrosymmetric structure with high effectiveness for users to increase programming efficiency and stability."
>
> *Elephant Robotics*

Following the footprint of myCobot and to fulfill the demand from more users, Elephant Robotics is expanding its Lightweight Robot Arm Product Line, and mechArm, a 6 DOF articulate collaborative robot, is one of the key players.

Classic Industrial Robot Design

mechArm is the first desktop-level robot arm built with the classic industrial centrosymmetric structure which is the most widely used industrial robot application. This time-proven structure provides the robotic arm with good bilateral support and overall rigidity, reducing motion sway and offset in rotation. In this way, we could increase the accuracy of movement, bringing the robot arm faster, more stable, and more precise work performance.

Open-source Robot Arm

mechArm has provided various software interfaces and adapted to most development platforms. mechArm provides the underlying applications like ROS and MoveIt, and various APIs and SDK interfaces. As for programming methods, it also supports multiple ways including Python, C, Blockly, and RoboFlow. We aim to provide a user-friendly secondary development experience and soften the learning curve of robotics so that we could lower the development difficulty to allow more users to have their hand on mechArm.

Specification of mechArm

Applications of mechArm

Best Option for Entry-level Robotic Education

As a desktop-level 6-axis robotic arm, the mechArm weighs only 1kg and is equipped with 6 high-performance servo motors, which can achieve a repeatable positioning accuracy of 0.5mm and a load of 250g. As the main controller, Raspberry Pi provides powerful independent computing power for the robotic arm, as well as a friendly educational community in Raspberry Pi press and Raspberry Pi foundation for users. The kinematics algorithm is the same as that of the industrial-grade robotic arm, and it is one of the best choices for robotics professionals and enthusiasts to get started.
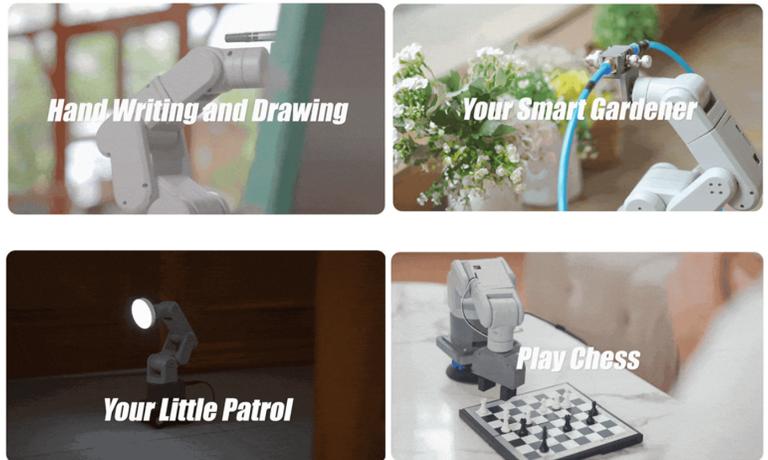
The Only Limitation Is Imagination

As a desktop-level robotic arm, mechArm aims to provide users with a learning and development platform to the greatest extent and release unlimited creativity. The end effectors could be connected via a globally shared patented LEGO pore design, which is perfectly compatible with hardware such as grippers and suction pumps. This greatly simplifies the difficulty of secondary development and enriches development possibilities.

mechArm is for young people to build artificial intelligence programming scenarios, such as chess duel, writing, and drawing, voice control, visual tracking, laser engraving, etc. It supports

graphical programming control and A variety of expansion accessories, a built-in Raspberry Pi chip, integrated IO ports, and LEGO pores.

In most secondary developments, with Raspberry Pi's built-in Bluetooth and Wifi module, remote control is possible when mechArm is connected to a phone. Also, mechArm is fully supported with ROS which is widely adopted by most AGVs and users can easily build up a remote robotic arm with the least development involved. For instance, if you combine the rich end effectors provided by Elephant Robotics including grippers, suction pumps, and cameras, you could easily create a remote control auto patrol!

Elephant Robotics' Vision

"With the new mechArm, we are happy to enable customers to create possibilities with higher efficiency on a larger scale than ever before," said Elephant Robotics Founder Joey Song. "We have helped customers from different industries to achieve automation upgrading like the Tumor Thermal Therapy Robot in medical use. We hope to reach more people to use our latest robotic arm to create and enhance their businesses and maker work."

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