**myCobot 280 Raspberry Pi 2023**

**1 Profile**

**myCobot 280 Pi 2023 belongs to the "myCobot" series. It is a intelligent six-axis robot, featuring multiple functions and light weight of 860g. Adopting Raspberry Pi microprocessor, it is one of the core products developed by Elepanht Robotics for AI education.**

**It has a payload of 250g, and an arm span of 280mm. Although it is small-sized, it boasts multiple functions. It not only works various types of end effectors to conform to different applications, but also supports secondary development based on multi-platform softwares to meet the needs of scientific research, education, smart home, business exploration, etc.**

**Recommended users:**

* **Want to use robotic arm to realize my fantasy**
* **Interested in robots and want to purchase my first robotic arm to learn**
* **Raspberry Pi Enthusiasts**
* **Familiar with machine vision, hope to have a 6-axis robotic arm to cooperate with grasping**

**2 Performance**

**Built-in Ubuntu Mate 20.04 operating system, Developed for robots**

* **Start AP hotspot by default, and connect to AP network for convenient control.**
* **Built-in a variety of development software, such as myStudio, myBlockly, etc.**
* **Built-in multiple development environments, such as: ROS, Python, etc.**
* **Built-in super many extended applications, support visual development, front-end interface development,etc.**
* **Open the underlying operating authority of the system and support user-customized development.**

**Built-in Raspberry Pi ecology enables Unlimited Possibilities**

* **Raspberry Pi 4B, 1.5GHz quad-core microprocessor,Built Ubuntu Mate 20.04 OS with Linux platform.**
* **Supporting USB3.0x2, USB2.0x2, HDMIx2, standardized Raspberry Pi 4B-GPIO interface, and a pluggable TF card.**

**Supporting ROS1+ROS2 and graphical programming**

* **Support ROS1+ROS2 multi-version applications, so that development is no longer limited.**
* **Support graphical programming software, making robot programming applications at your fingertips.**

**Image recognition, rich accessories and wide application**

* **Provided with image recognition algorithms so that any type of camera is compatible**
* **Equipped with different accessories such as monitor, gripper, sucking pump for adopting more application**

**Unique industrial design and a compact structure**

* **With an integrated design, it has a compact structure, weighting only 860g, which makes it portable.**
* **Featuring a modular design and a concise shape, it is convenient to detach or change components so as to lower maintenance cost.**
* **It can begin to work the moment plugged in.**

**Powerful performance and LEGO extension interface**

* **With 6 built-in metal servo motors, the product responds quickly and rotates smoothly due to little inertia.**
* **LEGO interfaces on the pedestal and end enable the development of micro embedded devices.**

**Technical details of 6 DOF collaborative robotic arms**

**Specifications**

**Degree of Freedom 6**

**Payload 250g**

**Weight 860g**

**Working Radius 280mm**

**Positioning Accuracy ±0.5mm**

**Working Temperature -5℃~45℃**

**Working Lifespan 500h**

**Power Input DC 12V, 5A 60W**

**Joint Rotation Range**

**Joint1 -165° ~ +165 °**

**Joint2 -165° ~ +165 °**

**Joint3 -165° ~ +165 °**

**Joint4 -165° ~ +165 °**

**Joint5 -165° ~ +165 °**

**Joint6 -175° ~ +175°**

**Joint Maximum Speed 160°/s**

**Master – Raspberry Pi**

**SOC Broadcom BCM2711**

**CPU 64bit 1.5GHz 4B**

**GPU 500 MHz VideoCore VI**

**RAM 2G**

**Bluetooth Dual mode Bluetooth 2.4G/5G**

**WiFi 802.11AC,Dual model WiFi**

**Auxiliary control-ESP32**

**Main Frequency 240MHz dual core**

**Computing Performance 600DMIPS**

**SRAM 520KB**

**Flash 4M**

**Development**

**Development Platforms(OS) Windows,Linux**

**Programming Python**

**ROS ROS1**

**Communication Protocol Serial Communication,**

**MODBUS,TCP/IP**

**Development software myBlockly,myStudio,Mind+**

**Interfaces**

**USB USB3.0\*2**

**USB2.0\*2**

**I/O Interfaces INPUT\*20 OUTPUT\*20**

**HDMI microHDMI\*2**

**Audio 3.5mm\*1**

**Network Port Gigabit Ethernet Port\*1**