# Thank you for supporting and purchasing our products, we will continue to provide you with better products and services!

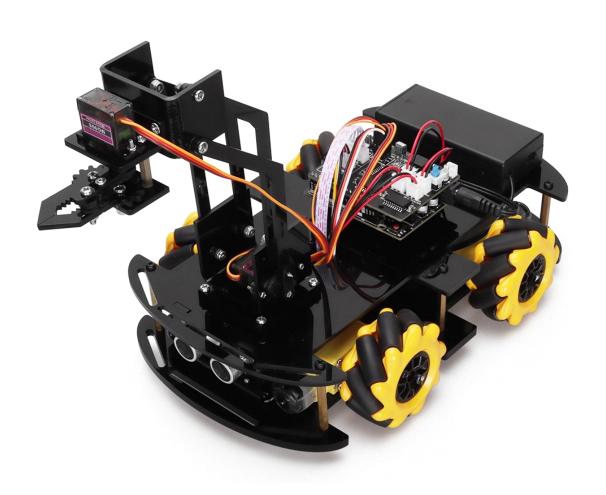
#### Reference materials and after-sales service

- 1. Assembly video : <a href="http://www.zhiyi.ltd/">http://www.zhiyi.ltd/</a>
- 2. If you encounter some troubles in the process of using the product, please feel free to contact us. Welcome to email us: <a href="mailto:robot@zhiyi.ltd">robot@zhiyi.ltd</a> We will keep updating projects and products based on your sincere suggestions.

### Warning

This product contains tiny parts (screws, copper posts), and children under the age of 7 should assemble and use under a guardian. This product contains conductive parts (control boards, electronic modules). Please follow the requirements of this tutorial, improper operation may cause overheating, damage components, do not touch the faulty circuit and disconnect the power immediately

# **McKnum Wheel robotic arm Car**



#### **Product introduction**

Today, technology education such as virtual reality, children's programming, and artificial intelligence has become the mainstream of the education industry. Therefore, STEAM education has been highly valued by people. Arduino is very famous for maker education. So what is Arduino? Arduino is an open source electronics platform based on easy-to-use hardware and software. The Arduino board is able to read the input - a light on a sensor, a button press or release - and convert it to an output - activating a motor or turning on an LED light. Based on this, the Zhiyi Technology team designed a Mecanum wheel robotic arm robot suit. The kit features an Arduino IDE compatible lucky six board that can be programmed using the Arduino IDE through a shield that maps its pins to sensors and drivers. This set of tutorials, ranging from simple to complex, will guide you how to make a Mecanum wheel robotic arm robot, and learn detailed knowledge about mechanical transmission, sensors, servo motors, remote control, etc. In addition, if you already have a certain foundation for making robots, this set will allow you to have more DIY possibilities and meet your requirements for learning engineering, physical circuits and programming.

# **Product features**

- 1. Multi-function: Mecanum wheel multi-directional movement, three-way tracking, ultrasonic obstacle avoidance and following, Bluetooth remote control, infrared remote control, robotic arm grabbing;
- 2. assembly difficulty: no need to weld the circuit, the terminal connection port is easy to install, and the assembly manual is matched to complete the assembly clearly and efficiently;
- 3. High strength: solid material bracket, thickened bottom plate, flexible and firm mechanical arm parts, high-quality wheels;
- 4. High extension : rich interfaces to expand other sensors and modules ;
- 5. Basic programming: Arduino code based on C language;
- 6. High degree of freedom: custom bluetooth remote control interface
- 7. Intelligent innovation: automatic mode of mechanical arm action memory function;

# technical specification

Working voltage: 5v

Input voltage: 7-12V

Maximum output current : 2A

Maximum power consumption : 25W (T=75°C)

Motor speed: 5v 200rpm/min

Ultrasonic induction angle : < 15 degrees

Ultrasonic detection distance : 2cm ~ 400cm

Bluetooth remote control distance: 10~50 meters

Servo motor angle range: 0~180°\0~360°

# **Product list**

M3\*30 round head screw\*8pcs

M3\*16 round head screw\*8pcs

M3\*12 round head screw\*10pcs

M3\*10 flat head screw\*10pcs

M2.5\*20 round head screw\*4pcs

M2\*10 round head screw\*6pcs

M1.6\*10 Round head screw\*4pcs

M3\*8 Round head screw\*20pcs

M3\*6 Round head screw\*6pcs



M3 Lock Nut\*10pcs



M3 Nut\*22pcs



M2 Nut\*6pcs



M1.6 Nut\*4pcs



M3\*40 Copper column\*6pcs



M3\*20 Copper column\*2pcs



M3\*10 Copper column\*3pcs



Motor frame\*4pcs



Servo\*3pc



Tracking module\*1pc



battery pack\*1pc



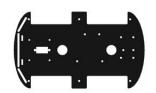
Ultrasonic bracket\*1pc



Ultrasonic module\*1pc



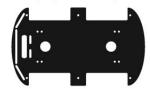
bluetooth module\*1pc



top plate\*1pc



Motor with 2P terminal wire \*4pcs Robotic arm parts\*1pc



bottom plate\*1pc



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The McKnum Wheel (With coupling)\*4pcs



Infrared remote controller\*1pc



type-c line\*1pc



Robotic arm chassis bracket\*1pc



Pliers chassis\*2pcs



Sleeve \* 1pc Phillips screwdriver\*1pc



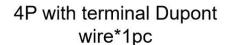
Chassis bearing ring\*1pc



Red and white lines 5P double head reverse\*1pc



3P servo extension cable\*1pc





Main control board\*1pc