

Thanks for your support on our products, we will continue to provide you better quality and service!

### About keystudio

1. Keystudio is a best-selling brand owned by KEYES Corporation, our product lines range from Arduino boards, shields, sensor modules, Raspberry Pi, micro:bit extension boards and smart car to complete starter kits designed for customers of any level to learn Arduino knowledge.

2. All of our products comply with international quality standards and are greatly appreciated in a variety of different markets throughout the world.

3. Welcome check more contents from our official website:

4. <http://www.keyestudio.com>

### \*References and After-sales Service

5. Download Profile : <https://fs.keyestudio.com/KS0470>

6. Feel free to contact us please, if there is missing part or you encounter some troubles. Welcome to send email to us : [service@keyestudio.com](mailto:service@keyestudio.com). We will update projects and products continuously based on your sincere advice.

### \*Warning

1. This product contains tiny parts(screws, copper pillars),

keep it out of reach of children under 7 years old please.

2. This product contains conductive parts (control board and electronic module). Please operate according to the requirements of this tutorial. Improper operation may cause overheating and damage parts. Do not touch and immediately disconnect the circuit power.

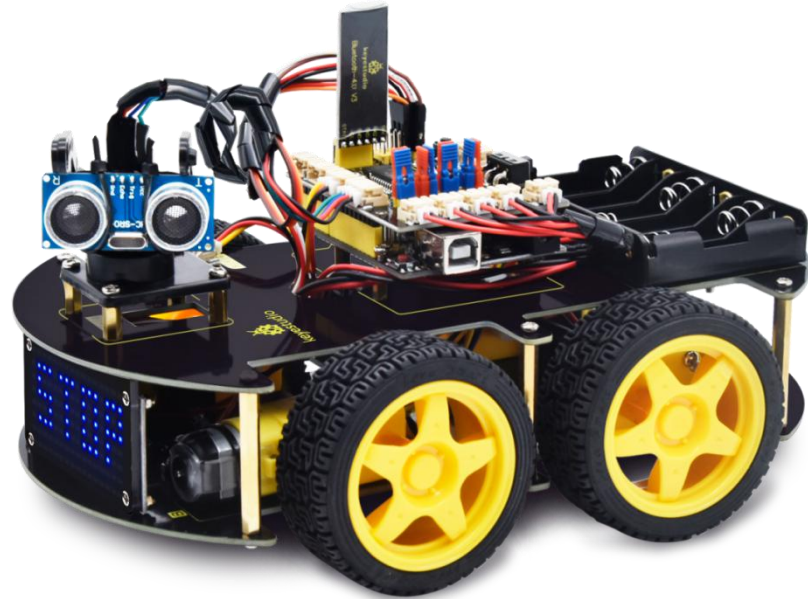
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[fennie@keyestudio.com](mailto:fennie@keyestudio.com)

[4WD BT Multi-purpose Smart Car V2.0 Kit](#)

Mixly tutorial



# 1. Introduction

Nowadays, technological education such as VR, kids programming, and artificial intelligence, has become mainstream in educational industry. Thereby, people attach importance to STEAM education.

The 4WD multi-purpose robot car, newly upgraded by the Keyes team, is one of the most favoured programming robots. It is not only beautiful in appearance, but also powerful in function. In addition to the common function like line tracking, obstacle avoidance and remote control, etc.

15 learning projects, from simple to complex, will guide you

how to make a smart 4wd robot on you own and introduce the detailed knowledge about sensors and modules.

Simultaneously, it is the best choice if you intend to obtain a DIY robot for learning programming, entertainment and competition requirement.

## 2. Features

1. Multi-purpose function: Obstacle avoidance, follow, IR remote control, Bluetooth control, ultrasonic follow and displayed face emoticons.
2. Simple assembly: No soldering circuit required, complete assembly easily.
3. High Tenacity: Aluminum alloy bracket, metal motors, high quality wheels and tracks
4. High extension: expand other sensors and modules through motor driver shield and sensor shield
5. Multiple controls: IR remote control, App control(IOS and Android system)

6. Basic programming : Mixly programming.

## 3. Specification

Working voltage: 5v

Input voltage: 7-12V

Maximum output current: 2A

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

Motor speed: 5V 200 rpm/min

Motor drive mode: dual H bridge drive

Ultrasonic induction angle: <15 degrees

Ultrasonic detection distance: 2cm-400cm

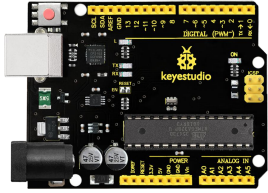
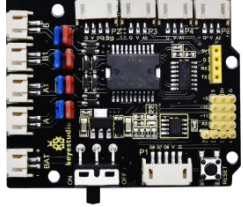

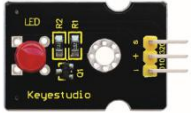


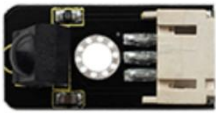
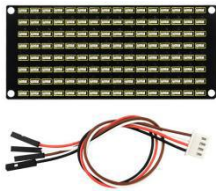

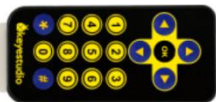
Infrared remote control distance: 10 meters (measured)



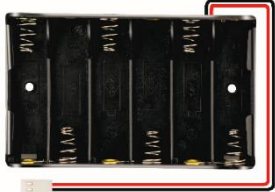
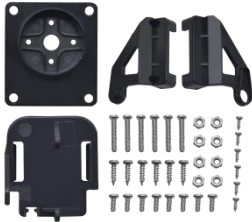


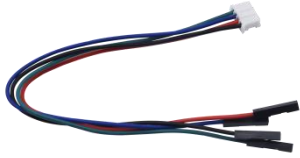

Bluetooth remote control distance: 50 meters (measured)

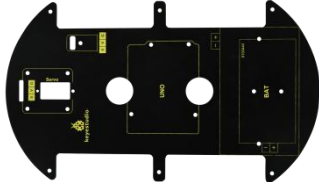
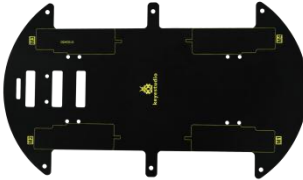



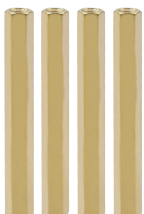


Bluetooth control: support Android and iOS system

## 4. Product List


No	Name	QTY	Picture
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1	Keyestudio V4.0 Board	1	
2	Keyestudio Motor Driver Shield	1	
3	Keyestudio HM-10 Bluetooth-4.0	1	
4	Red LED Module	1	
5	HC-SR04 Ultrasonic Sensor	1	
6	Keyestudio Line Tracking Sensor	1	
7	Keyestudio IR Receiver Sensor	1	
8	Keyestudio 8*16 LED Dot Matrix	1	
	4pinDupont Line	1	
9	Keyestudio 9G Servo	1	
10	Keyestudio Remote Control	1	

11	USB Cable	1	
12	18650 Battery Holder	1	
13	6 AA Battery Holder	1	
14	Servo Platform	1	
15	Double Head JST-PH2.0MM-5P 24AWG Line 15CM	1	
16	Double head JST-PH2.0MM-3P 24AWG line 8CM	1	
17	JST-PH2.0mm-4P to 2.54 DuPont female single 26AWG line	1	
18	The acrylic for 8*16 LED screen	1	

19	Keyestudio 4WD smart car V2.0 Top board	1	
20	Keyestudio 4WD smart car V2.0 bottom PCB	1	
21	Fixed parts	4	
22	Wheel	4	
23	M3*10MM dual-pass copper pillar	10	
24	M3*40MM dual-pass copper pillar	4	
25	M3*30MM round-head cross screw	8	
26	M3*6MM round-head screw	40	



27	M3 Nickel plated nut	16	
28	M2X8MM round-head screw	6	
29	M3*8MM round-head screw	4	
30	M2 Nickel Plated Nut	6	
31	M3*10MM flat screw	3	
32	motor (with welding wire)	4	
33	3*40MM screwdriver	1	
34	black Nylon ties 3*100MM	6	
35	Winding tube diameter 8MM black	1	
36	3Pin F-F Dupont Wire (20CM)	3	

37	Decorative board (decorate the ultrasonic sensor)		
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