AlphaBot2 robot building kit for Arduino (no Arduino controller)

SKU 110060866

Description
The Arduino controller is NOT included.

This AlphaBot2 robot kit is designed to use with an Arduino compatible controller (not included). It features rich common robot functions including line tracking, obstacle avoiding, ultrasonic ranging, infrared remote control, Bluetooth communication, etc.

Thanks to the highly integrated modular design, it is fairly easy to assemble by a snap, no soldering, no wiring. After a few minutes spent on hardware assembing, you're almost there, our open source demo codes is ready to help you get started fast.

AlphaBot2 Features

AlphaBot2 employs a 2-layer structure to provide excellent stability and compatibility.
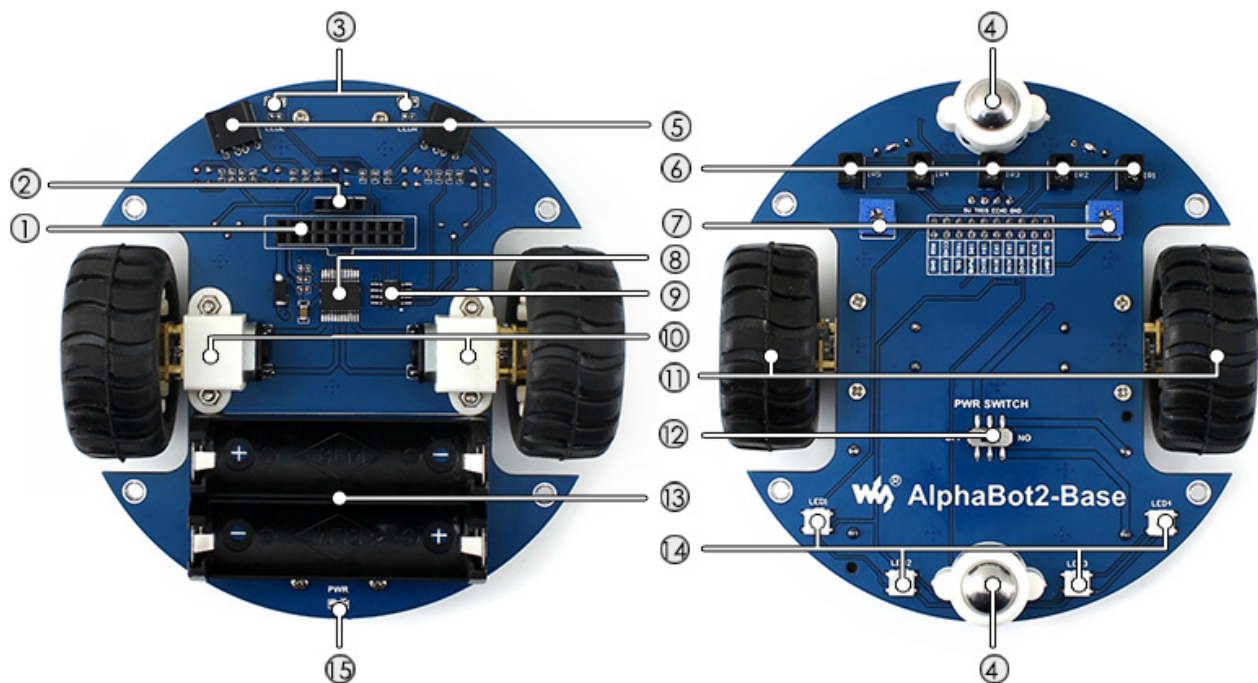
AlphaBot2-Base, the lower base chassis:

•5-ch infrared sensor, analog output, combined with PID algorithm, stable line tracking
•Onboard modules like line tracking, obstacle avoiding, needs no messy wiring
•TB6612FNG dual H-bridge motor driver, compared with L298P, it's more efficient, more compact, and less heating
•N20 micro gear motor, with metal gears, low noise, high accuracy
•Onboard RGB LEDs, true color lighting, pretty cool

AlphaBot2-Ar, the upper adapter board for controller:

•Onboard Arduino interface, into which Arduino controller can be directly plugged
•0.96inch 128x64 yellow/blue dual color OLED
•TLC1543 AD acquisition chip
•PC8574 I/O expander, avoid I/O shortage
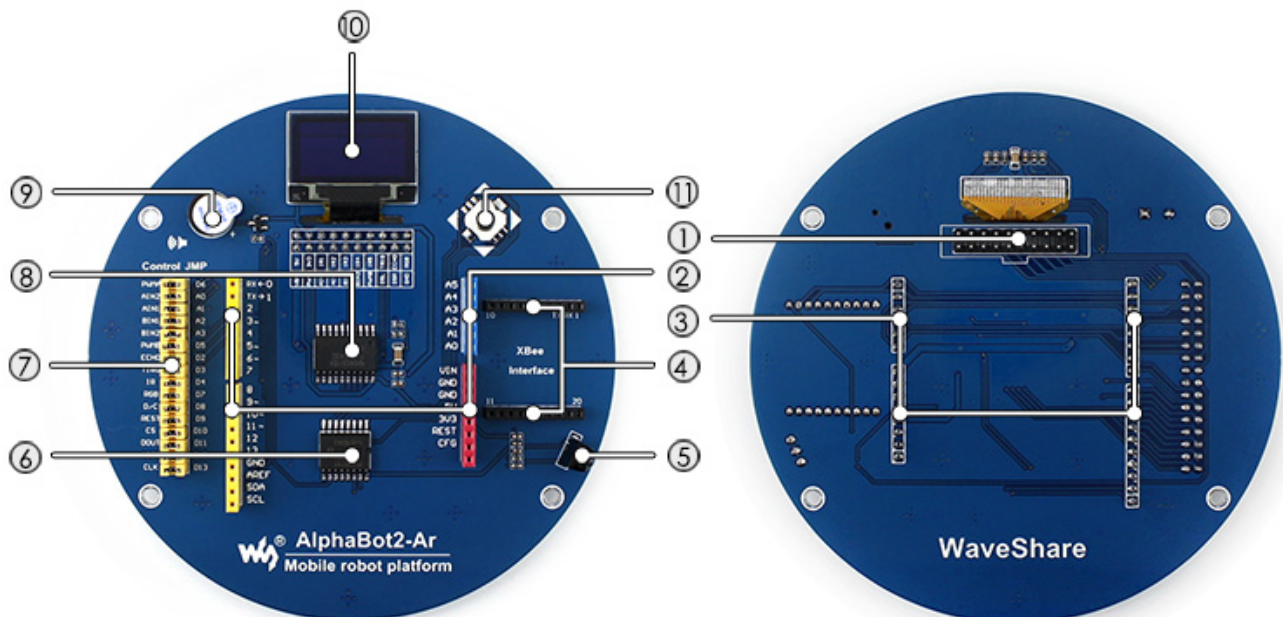•Xbee connector, for connecting dual-mode Bluetooth module

What's on the AlphaBot2-Base

1.**AlphaBot2 control interface:** for connecting sorts of controller adapter board
2.**Ultrasonic module interface**
3.**Obstacle avoiding indicators**
4.**Omni-direction wheel**
5.**ST188:** reflective infrared photoelectric sensor, for obstacle avoiding
6.**ITR20001/T:**reflective infrared photoelectric sensor, for line tracking

7.**Potentiometer**for adjusting obstacle avoiding range
8.**TB6612FNG**dual H-bridge motor driver
9.**LM393** voltage comparator
10.**N20 micro gear motor** reduction rate 1:30, 6V/600RPM
11.**Rubber wheels** diameter 42mm, width 19mm
12.**Power switch**
13.**Battery holder:** supports 14500 batteries
14.**WS2812B:** true color RGB LEDs
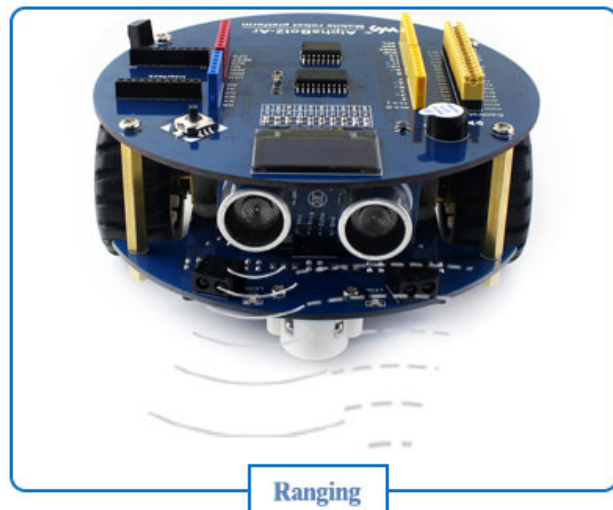15.**Power indicator**

What's on the AlphaBot2-Ar

1.**AlphaBot2 control interface:** for connecting AlphaBot2-Base
2.**Arduino expansion header:** for connecting Arduino shields
3.**Arduino interface:** for connecting Arduino compatible controller
4.**Xbee connector:** for connecting dual-mode Bluetooth module, remotely control the robot via Bluetooth
5.**IR receiver**
6.**PC8574:** I/O expander, SPI interface
7.**Arduino peripheral jumpers**
8.**TLC1543:** 10-bit AD acquisition chip
9.**Buzzer**
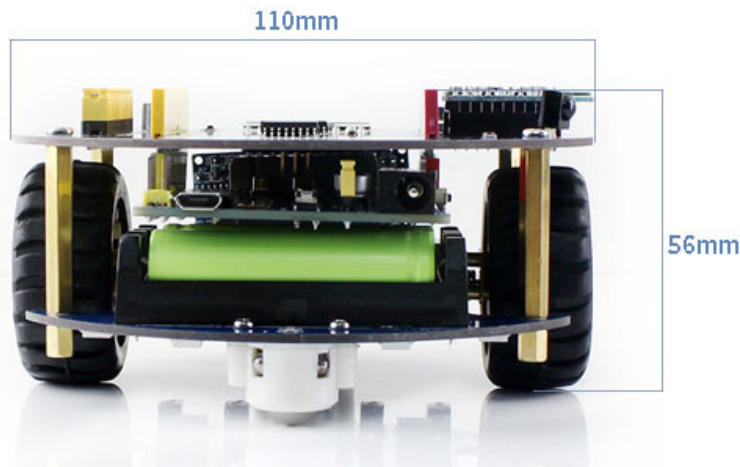10.**0.96inch OLED** SSD1306 driver, 128x64 resolution
11.**Joystick**

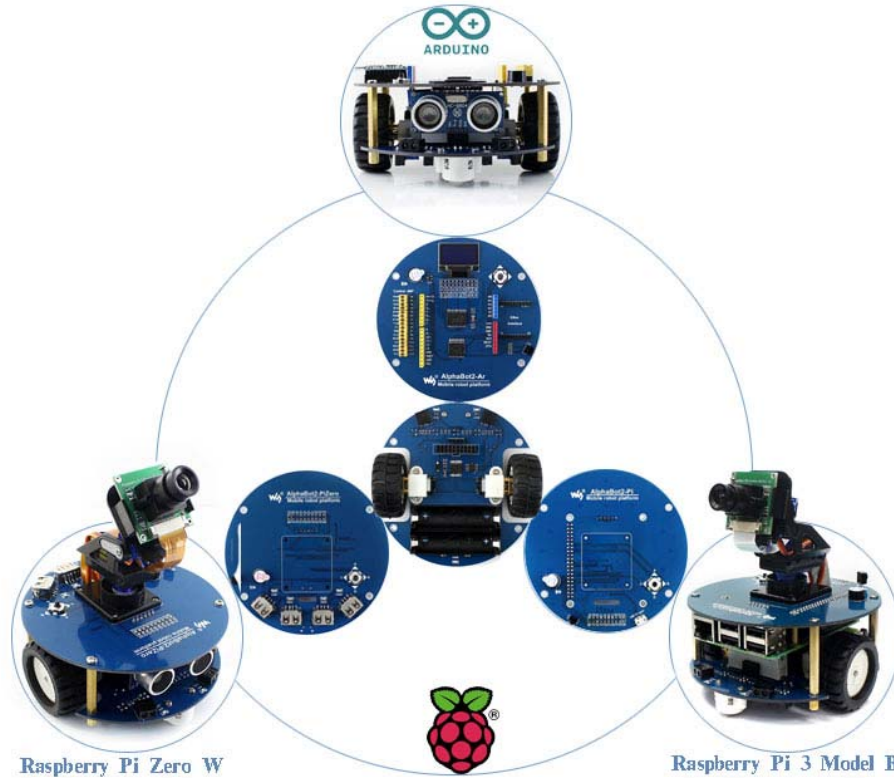## Infrared/Bluetooth remote control

Easily take control of your robot

Remote control

Ultrasonic sensing

Ultrasonic ranging

Ultrasonic obstacle avoiding

Ranging

Clever design, Proper layout, Stable structure

110mm

56mm

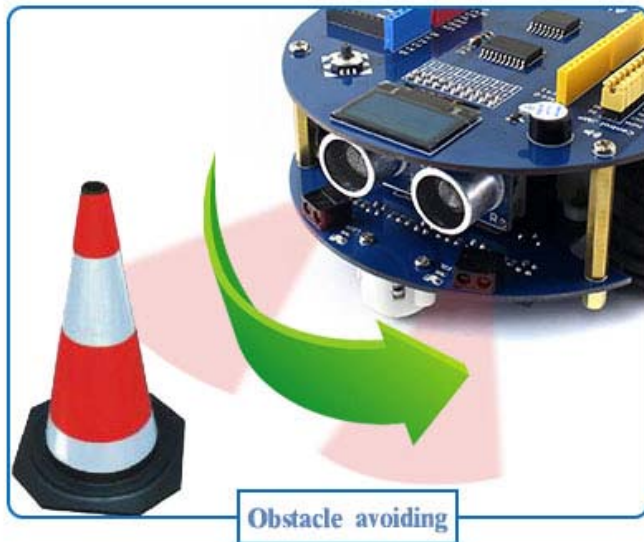# Base board + Adapter board
Compatible with multi controller boards

Modular design, Easy installing without wiring

Line tracking

N20 motor + rubber wheel

RGB LED

Obstacle avoiding

Ultrasonic
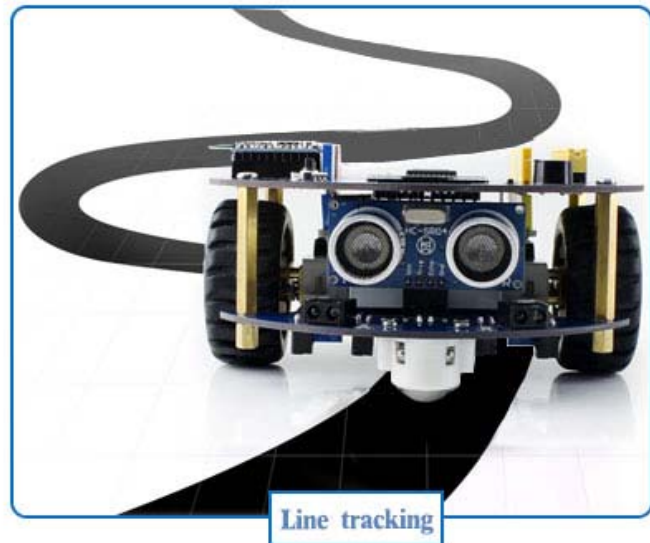
Raspberry Pi Zero W

Raspberry Pi 3 Model B

Full functions, How to play, Up to you

Obstacle avoiding

Auto obstacle avoiding

Infrared obstacle avoiding

Easily get out of obstacles in the way

Auto line tracking

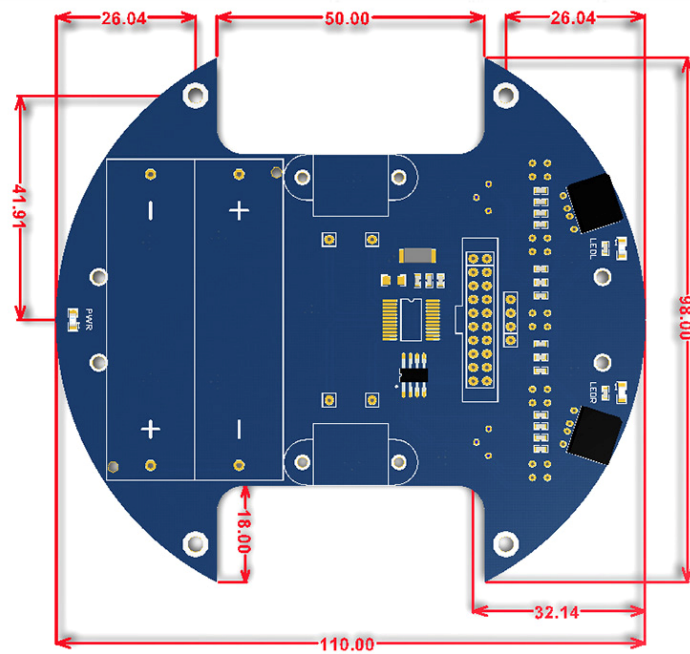5-ch detector, high sensitivity

PID algorithm, stable tracking

Line tracking

Technical Details

Dimensions	220mm x 165mm x 70mm
Weight	G.W 282g
Battery	Exclude

Part List

AlphaBot2-Ar (adapter board)	1
AlphaBot2-Base (base chassis)	1
Ultrasonic sensor	1
IR remote controller	1
FC-20P cable 8cm	1
USB type A plug to micro B plug cable	1
AlphaBot2-Ar screws	1
Screwdriver	1

Package Contents		Products					
Item	Description	AlphaBot2-Ar Acc Pack	AlphaBot2-Ar	AlphaBot2-Pi Acc Pack	AlphaBot2-Pi	AlphaBot2-PiZero Acc Pack
AlphaBot2-Base	Motor driver, integrates sensors for obstacle avoiding, line tracking	√	√	√	√	√
AlphaBot2-Ar	Adapter board, for connecting Arduino	√	√			
AlphaBot2-Pi	Adapter board, for connecting RPi3 B			√	√	
AlphaBot2-PiZero	Adapter board, for connecting RPi Zero W					√
RPi3 B	Raspberry Pi 3 Model B				√	
UNO PLUS	Enhanced Arduino compatible board		√			
Dual-mode Bluetooth	Dual-mode Bluetooth module		√			
Ultrasonic sensor	Ultrasonic obstacle avoiding, ranging	√	√			√
IR remote controller	remotely control the robot	√	√	√	√	√
RPi Camera (B)	Raspberry Pi camera, adjustable focus			√	√	√
SG90	Servo, working with the pan head, controlling the rotation of the camera			√	√	√
Micro SD Card 16GB	16GB Miro SD Card, class 10			√	√	√
5V 2.5A Power Adapter	RPi3 B requires 2.5A or above power supply			√	√	√

Unit:mm