

AlphaBot2 - Roboter Bausatz für Raspberry Pi 3



Artikel-Nr.:	ABOT2-PI
Hersteller:	Waveshare
EAN:	614961950474
Herkunftsland:	China
Zolltarifnummer:	84733020
Gewicht:	0.47 kg

Übersicht

This AlphaBot2 robot kit is designed to use with Raspberry Pi 3 Model B (not included). It features rich common robot functions including line tracking, obstacle avoiding, Bluetooth/infrared/WiFi remote control, video monitoring, 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 assembling, 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-Pi, the upper adapter board for controller:

- LM2596 voltage regulator, provides the Pi with stable 5V power
- TLC1543 AD acquisition chip, allows the Pi to use analog sensors
- PCA9685 servo controller, make it more smoothly to rotate the pan head
- CP2102 UART converter, easy for controlling the Pi via UART

Lieferumfang

- AlphaBot2-Pi (adapter board) x1

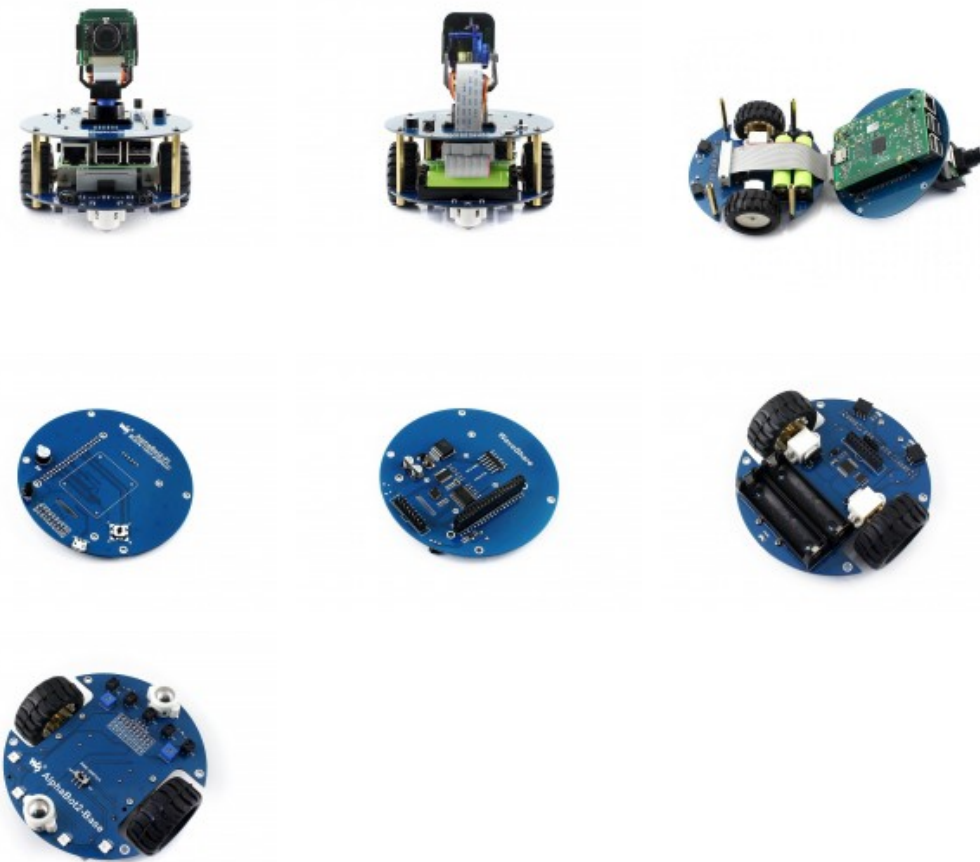
- AlphaBot2-Base (base chassis) x1
- RPi Camera (B) x1
- Micro SD Card 16GB x1
- Power adapter US standard 5V/2.5A USB output x1
- SG90 servo x2
- 2 DOF pan and tilt kit x1
- IR remote controller x1
- FC-20P cable 8cm x1
- USB type A plug to micro B plug cable x1
- 15PIN FFC 25cm x1
- AlphaBot2-Pi screws x1
- Micro SD Card Reader x1
- Screwdriver x1

Note: This product requires two 14500 batteries and a Raspberry Pi 3 to work, which are NOT included and should be purchased separately.

Dokumentation / Downloads

- <http://www.waveshare.com/wiki/AlphaBot2>
- <http://www.waveshare.com/wiki/AlphaBot2-Pi>

Weitere Bilder:



What's on the AlphaBot2-Base



1. AlphaBot2 control interface for connecting built-in controller adapter board
2. Ultrasonic module interface
3. Photoeye avoiding indicator
4. Smart alarm buzzer
5. SFH6805 reflective infrared photoelectric sensor for obstacle avoiding
6. FT232RLV reflective infrared photoelectric sensor for line tracking
7. Pushbutton for adjusting obstacle avoiding range
8. TDA2040 dual 11V bridge motor driver
9. LM8563 voltage comparator
10. NE555 timer-gate module (oscillator rate 1.5L, 6V/000900)
11. Pusher switch (alarm buzzer alarm, audio alarm)
12. Power switch
13. Battery holder (supports 1.5/2/3/4/5/6/7/8/9/10/11/12V)
14. W5500 Ethernet module (RJ45)
15. Power indicator

What's on the AlphaBot2-PI



1. AlphaBot2 control interface for connecting Raspberry Pi 3 Model B
2. Raspberry Pi interface for connecting Raspberry Pi 3 Model B
3. Power indicator
4. USB TO UART chip for connecting the Pi to UART
5. LM8563 for voltage regulation
6. TDA2040 10W 12V 0.5A audio amplifier, allows the Pi to use analog sensors
7. PCA9685 servo controller, make it more convenient to control the servo
8. GPRS/GSM GPRS TO UART converter
9. Joystick
10. RS receiver
11. Buzzer

Base board + Adapter board

Compatible with multi-controller boards



Full functions, How to play, Up to you

