

# BalaC

SKU:K038



## Description

**BalaC** is a DIY two-wheeled balancing car. Its base uses an STM32 series main controller, with two motor driver ICs onboard, a power indicator, and a replaceable rechargeable battery. The lightweight design and 360° servo drive form allow you to write balancing programs using the UiFlow graphical interface. The kit includes a StickC, which uses the built-in MPU6886 for attitude calculation, controlling the servo in real-time to achieve balance by calculating offset values. The Lego-compatible design allows you to change different tires. If you want to learn about PID-related content or need an interesting programming toy, BalaC might be a good choice.

## | Features

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- Based on ESP32+STM32
- Personalized DIY
- Detachable design
- Dual-wheel motor drive
- Replaceable battery
- Development platforms:
  - [UiFlow](#)
  - [MicroPython](#)
  - [Arduino](#)

## | Includes

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- 1 x StickC
- 1 x BalaC Base
- 2 x Tires
- 2 x Tire adapters
- 2 x 9G Servos
- 2 x Rubber bands
- 2 x Screws
- 1 x Hex wrench
- 1 x 16340 700mAh Battery
- 1 x USB Type-C Cable (20cm)

## | Applications

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- Balancing car

## | Specifications

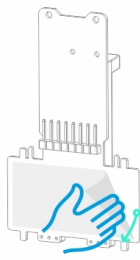
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Specification	Parameters
ESP32-Pico-D4	240MHz dual core, 600 DMIPS, 520KB SRAM, Wi-Fi
MCU	STM32F030F4P6
Servo	Rotation angle: 360°, no-load speed: 0.12 sec/60° (4.8V)
Driver	L9110S
Communication MCU	STM32F030F4P6
Communication Protocol	I2C: 0x38
Battery	16340, 700mAh rechargeable lithium battery
Net Weight	162.0g
Gross Weight	206.0g
Product Dimensions	30 x 100 x 105mm
Package Dimensions	148 x 118 x 42mm

## | Learn

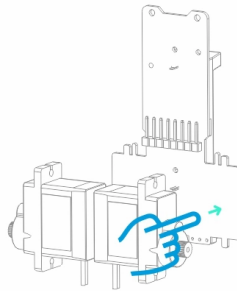
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①



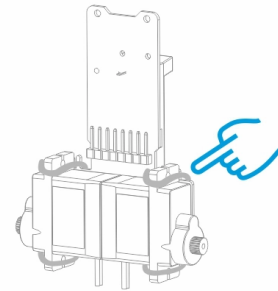
Remove the double-sided tape on the main board.

②



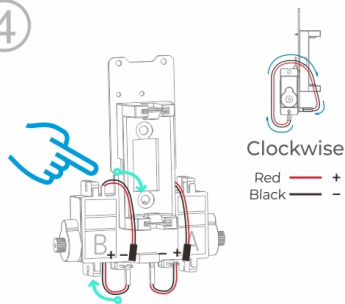
Paste the motor in the indicated position, the direction of the motor is as shown.

③



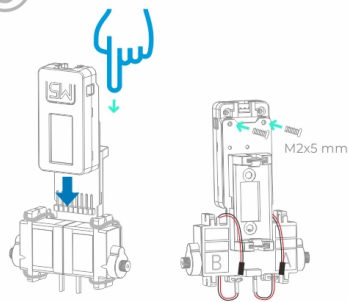
The rubber band is used to fix the main board and the motor.

④



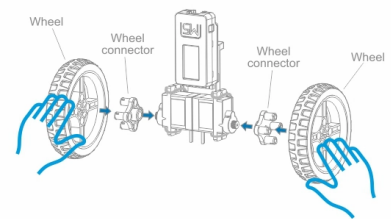
The motor cable is fixed clockwise to the main board, Red represents positive, black represents negative, as shown.

⑤



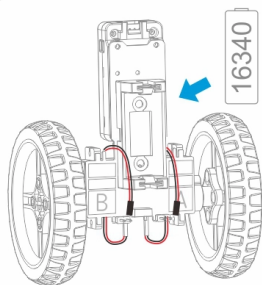
Installation M5StickC

⑥



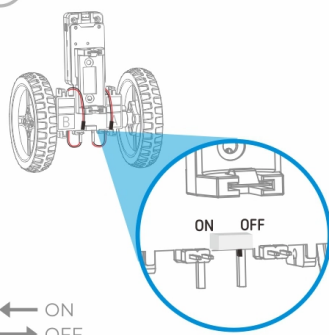
Installation Wheel

⑦



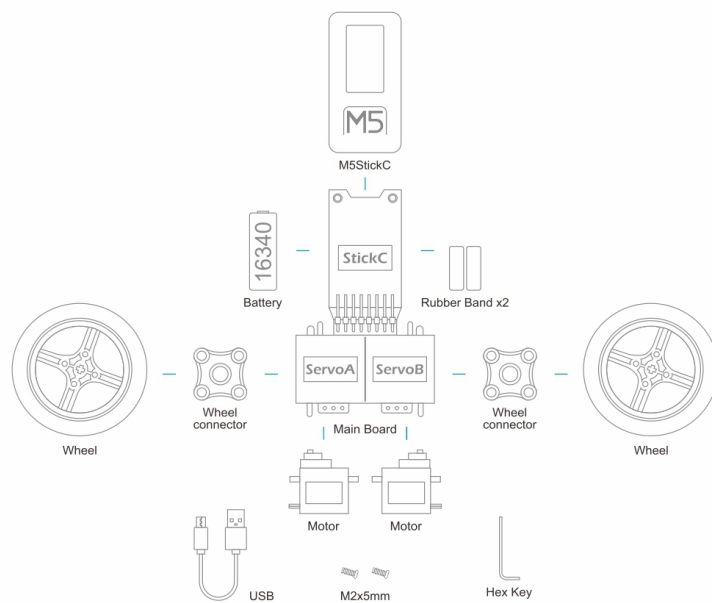
Installation Battery

⑧



← ON  
→ OFF

## ALL Parts



[www.M5Stack.com](http://www.M5Stack.com)

## | Softwares

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### | Arduino

- [BalaC Balancing Example](#)

### | UiFlow1

- [Hat Balac Test Example](#)

### | Easyloader

Easyloader	Download Link	Notes
BalaC Test Easyloader	<a href="#">download</a>	/

## | Video

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- After powering on, press the power button briefly to calibrate. The LED will flash, and once calibration is successful, it will automatically maintain balance.

[BalaC.mp4](#)

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