

JarzRover iPhone-ESP32 - What to Buy for the Basic Kit

Customer kit v1.1.0, 7 October 2026. Open your package and compare your order before buying anything. Mark each item HAVE or NEED. Basic and digital orders may include different parts; the list below is a missing-parts checklist, not a promise about your order contents.

Choose by the phone mounted on the rover: this list is for **iPhone + classic ESP32/BLE**. The handheld Controller phone is separate. An iPhone cannot control Nano through USB.

Electronics and assembly shopping list

Links open Amazon searches so you can compare current listings. They are not approved-product links or a guarantee of fit, stock, price or electrical compatibility. Ask an adult to check the specifications against the [hardware guide](#) and [wiring guide](#) before ordering. Buy only items missing from your kit.

Quantity	Item and shopping link	Check before buying
1	Classic ELEGOO ESP-WROOM-32 development board - Amazon search	Classic ESP32; GPIO16/17 available. Not C3/S3 or a PSRAM variant.
1	L298N dual motor-driver module - Amazon search	Identify enable/regulator jumpers, logic supply and combined motor current per channel.
4	TT gear motors with matching wheels - Amazon search	Check mounting fit, shaft/wheel fit, rated voltage and stall current; two motors share each channel.
1	HC-SR04 ultrasonic module - Amazon search	Compatible regulated 5 V supply. ECHO needs a 3.3 V-safe interface.
2	Optical speed sensors and encoder disks - Amazon search	Digital DO output; disks fit the wheel shafts and printed mounts. Identify output type before choosing level shifting.
1	USB data cable for the board - Amazon search	Choose the connector actually fitted to your board; charging-only cables cannot upload code.
As needed	Insulated signal wires and connectors - Amazon search	Match header ends; use separately rated wire/connectors for motor power.
1	Power switch and battery pigtail - Amazon search	Match your confirmed battery connector, polarity, voltage and current. Similar-looking plugs can differ.
Set	Mounting screws, nuts and spacers - Amazon search	8 M3 motor screws/nuts, 2 M3 mount screws/nuts, 2 long back-cover screws and 2 small sensor screws. Confirm actual lengths/thread fit with your parts.
1 pair for sonar	1% divider resistors: 10 kohm + 18 kohm - Amazon search	Use the wiring-guide circuit for confirmed 5 V push-pull ECHO (supply ≤ 5.1 V); not a power regulator.
As required	Separate speed-signal interface - Amazon search	Choose by actual push-pull/open-collector output. A generic shifter is not automatically suitable; request help first.

Power: confirm these together before ordering

Battery pack, matching charger, switch, pigtail and the driver/motor ratings must form one compatible set. Ask JARzLabs for the specification for your actual kit before buying a battery or charger. Do not select a pack from capacity (mAh) alone or copy an older OpenBot battery count. A generic shopping link is deliberately not supplied for these unconfirmed parts.

For ESP32, plan a verified regulated mobile supply or suitable USB power source as well as the motor supply. Bench USB power does not define an untethered installation. Never connect the motor battery directly to 5V, 3V3 or a GPIO.

Items to provide or borrow

Item	Notes / shopping link
Two compatible iPhones	Robot runs on the rover phone; Controller runs on the handheld phone. Check the installation guide before buying a phone.
Computer	Mac with Xcode, CocoaPods and Flutter, plus an Apple account and source assistance. No signed public iOS app is included.
Printed chassis and mount	Use included prints if supplied, or print the STL files. You can use a local printing service; a personal 3D printer is not required.
Multimeter	Amazon search - adult checks polarity, continuity and regulated voltages.
Hand tools	Amazon search - match the supplied fasteners.
Insulation and soldering supplies	Amazon search - adult use where the wiring method requires it.

After your parts arrive

- 1 Label the rover's left and right sides. Check board labels and parts with an adult before connecting power.
- 2 Follow the [installation guide](#), then the matching [component tests](#).
- 3 Keep the PDFs in documents/ together after extracting the ZIP. Shopping links need internet; the local guide links do not.

Questions about missing parts, source access, iOS development, Creature Lab or ball tracking: Jarzlabs24@gmail.com. Send your order/kit type and board label so we can help you avoid buying the wrong part.