

Must read before use

Before using the biped robot kit, it will involve the installation of some necessary software and related plug-ins, so in order to better experience the learning of biped robot, please follow the guidance of this document step by step, including software download, library installation, driver installation, construction steps, etc.

1.Adapted Battery

Due to shipping restrictions, we are unable to provide the required batteries with the product. We apologize for any inconvenience this may cause. To help you quickly find the suitable batteries, we have compiled some recommended links on Amazon, including 18650 batteries (for powering the robot), chargers (for charging 18650 batteries) for your reference.

(1)18650 Sharp-Ended Battery Link:<https://www.amazon.com/Rechargeable-Genuine18650-Flashlight-Doorbells-Headlamps/dp/B0CWX67HTD>

(2)Charger Link: <https://www.cebott.com/products/cebott-us-plug-eu-plug-uk-plug-dual-charger-for-18650-14500-16430-rechargeable-li-ion-battery?variant=42992073015433>

Note: This product needs to be equipped with 18650 Sharp-Ended Battery *2; charger *1.

2.Install Arduino IDE

Install the Arduino IDE on Windows [【Please click here】](#)

Install the Arduino IDE on Mac OS [【Please click here】](#)

3.Install the ESP32 library

[【Please click here】](#)

4.Add a course library file

[【Please click here】](#)

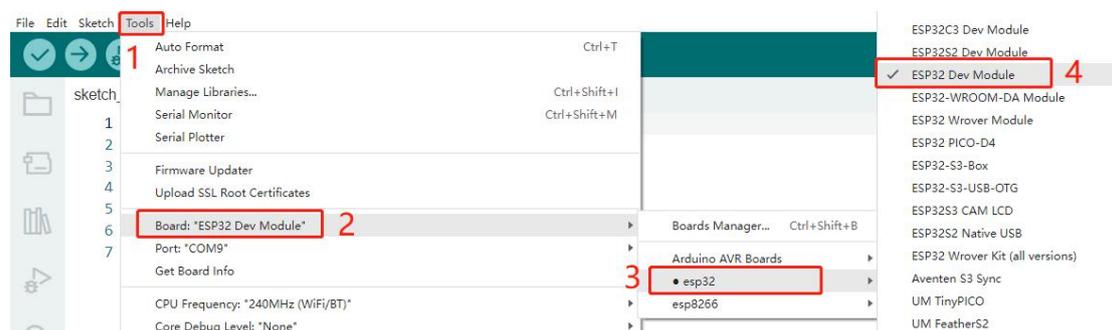
5.Install the driver

[【Please click here】](#)

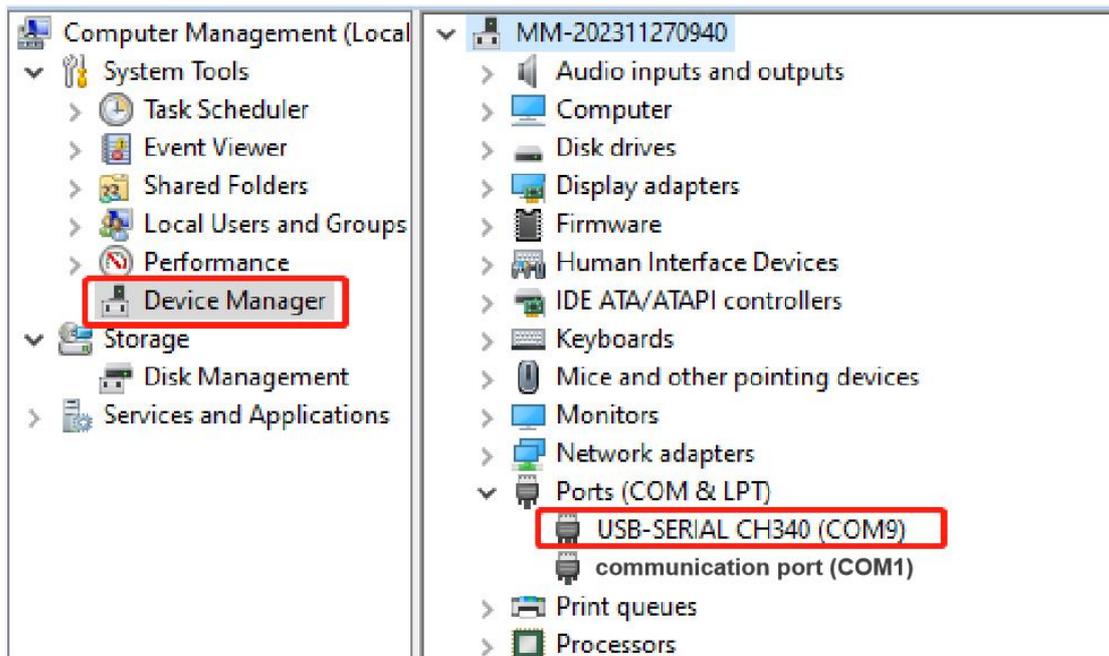
6.Test development environment

After completing the previous steps, you can test whether the development environment is successfully set up through a simple program, please follow the following steps:

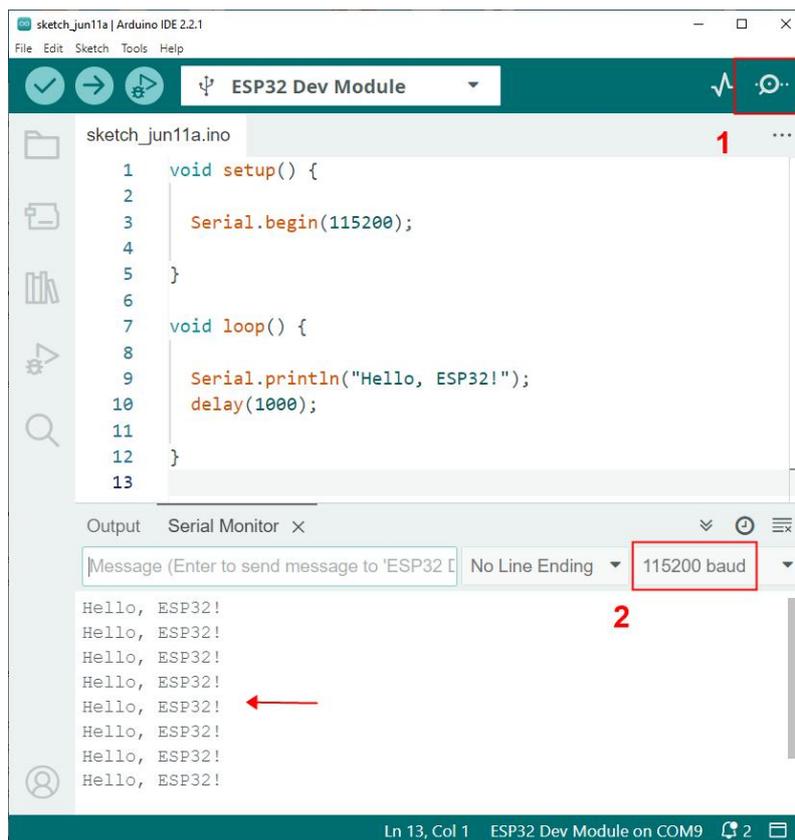
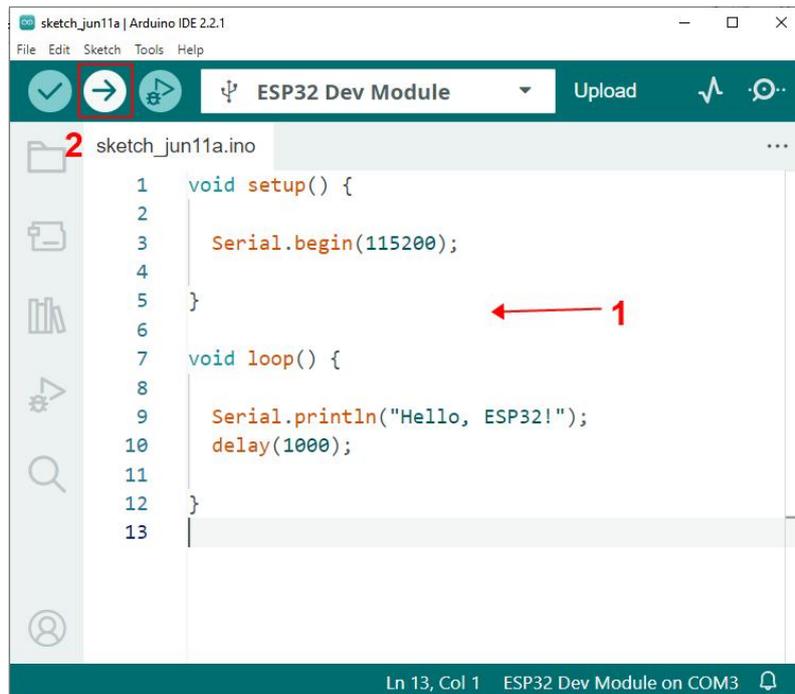
①Connect the controller board to the computer > Open the Arduino IDE> Click Tools > Select ESP32> Select (ESP32 Dev Module).



②Select the serial port (you can view the serial port number in the computer device manager, and then see whether the serial port number appears in the following port, because each controller board has a different COM number, please select according to the actual COM number displayed).



③Open "[Hello_esp32.ino](#)" in English \Arduino\6.Arduino program\Lesson 1\Hello_esp32, connect ESP32 controller board and computer with USB cable, select the correct controller board and port, Upload the code to the ESP32 controller board, select 115200 baud rate, you can see the serial port monitor constantly output "Hello, ESP32!" ", indicating that the development environment of the controller board has been installed.

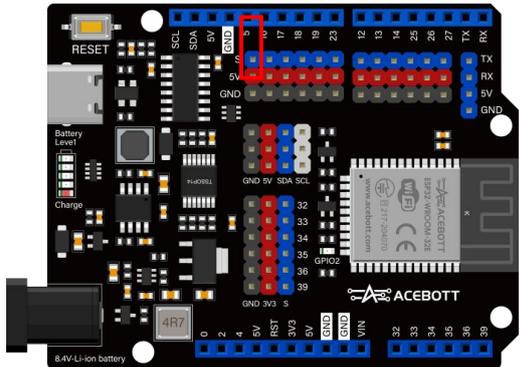


7.Servo Angle initialization

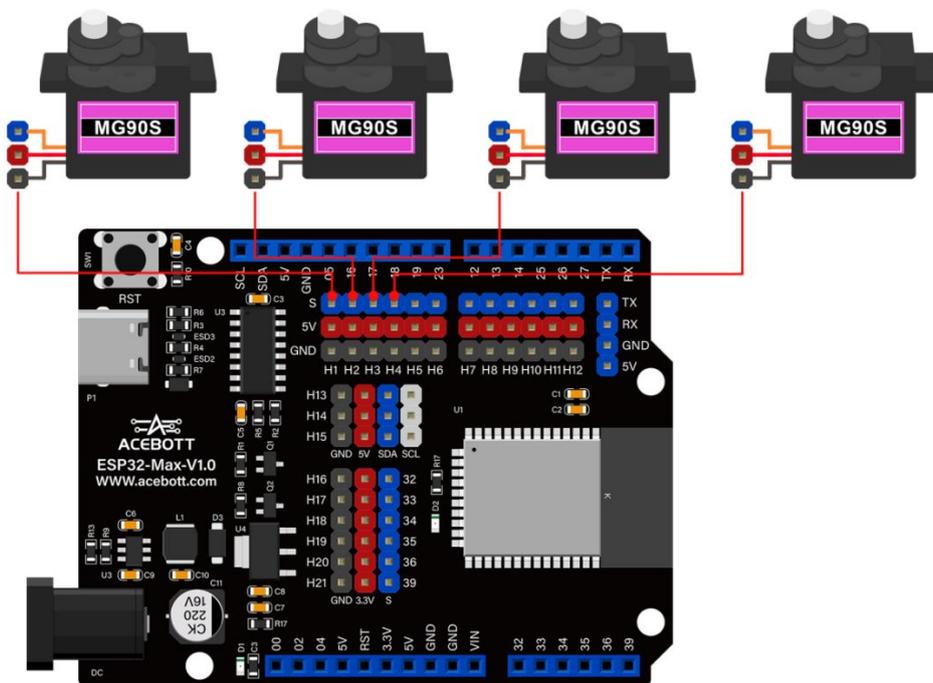
Before assembling the biped robot, in order to successfully assemble its structure, we need to upload the zeroing program of the servo in advance.

(1) Connect the server before uploading the program.

The connection of the servo pins corresponding to the motherboard is shown in the following table.

Servo	ESP32 controller board	Schematic drawing
Brown wire	GND	
Red wire	5V	
Orange wire	GPIO5	

According to the connection mode of the servo, all four servos are connected to the controller board, as shown in the following figure.



(2) After connecting the server, upload the server initialization program.

Open ["Servo_90. ino"](#) in English\Arduino\6.Arduino program\lesson1\Servo_90, connect ESP32 controller board and computer

with USB cable, select the correct controller board, processor and port, and upload the code to ESP32 controller board.

Attention: In order to maintain a stable power output, install the battery box with the 18650 battery, connect it to the power port of the controller board, and turn the switch to the on position for operation. If the servo is not rotating, then it is probably already in a 90 degree position.

8. Biped Robot Assembly Tutorial

[【Please click here】](#)

Attention: If you want to watch the assembly video, please click the link below.

<https://www.youtube.com/watch?v=LHMJ8uW-IdU>

Or scan the QR code below.



9. Biped Robot Tutorial

[【Please click here】](#)

10. After-Sales Support

If you encounter any issues, please contact our support team via email at support@acebott.com, and we will respond within 24 hours. You can also scan the QR code below to follow us for troubleshooting guides and the latest updates.



ACEBOTT FB Group QR Code



YouTube QR Code