Pair PS4 Controller to ESP32-WROOM-32

⭐ **Goal: Pair a PS4 controller to ESP32 via Bluetooth.** This is done in two goals: a) grab the ESP32 MAC address; b) reassign the dualshock4 controller to the ESP32's MAC address..

📋 Requirements:

- Genuine Sony Dual Shock 4 Controller.
- ESP32 with Bluetooth Classic (BR/EDR) like the ESP32-WROOM-32
- PC, USB Cable, Arduino IDE

Note: These newer ESP32 chips do not have Bluetooth Classic, only BLE — so they cannot pair with a PS4 controller (which uses Classic):

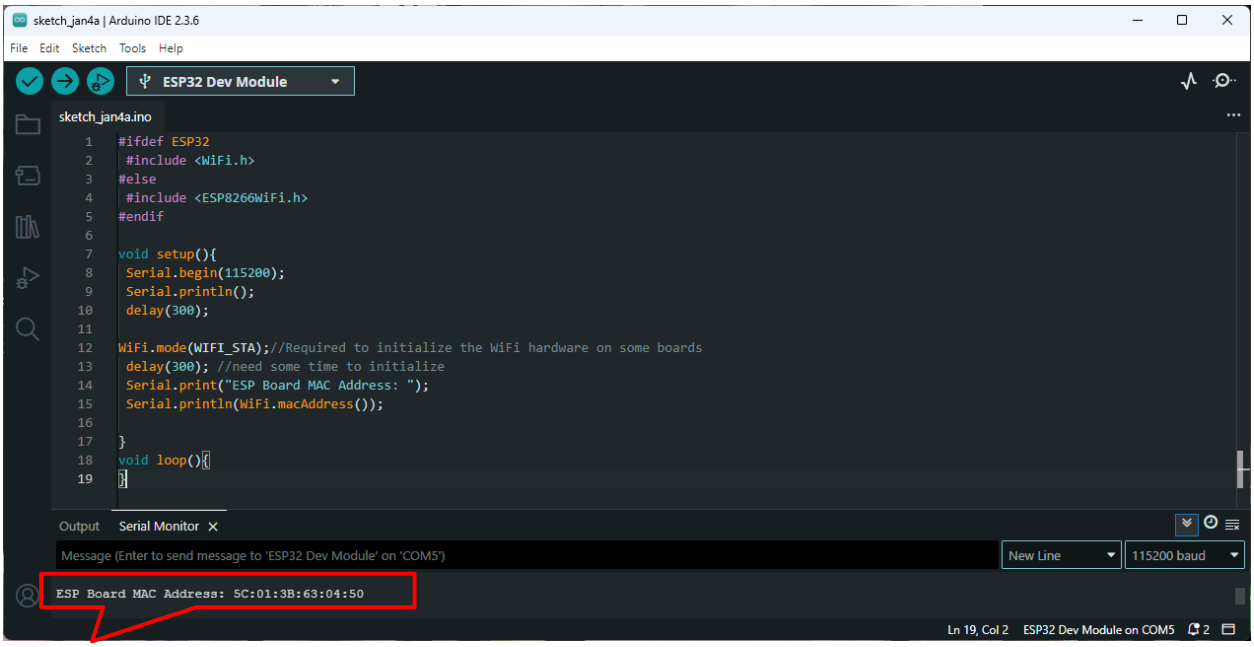
❌ ESP32-S3 ✅ ESP32-WROOM-32
❌ ESP32-C3
❌ ESP32-C6
❌ ESP32-H2

📄 Guide:

1) Upload this code on your ESP32. The serial monitor will output ESP32's mac address. *Document the wifi mac address of the ESP32.*

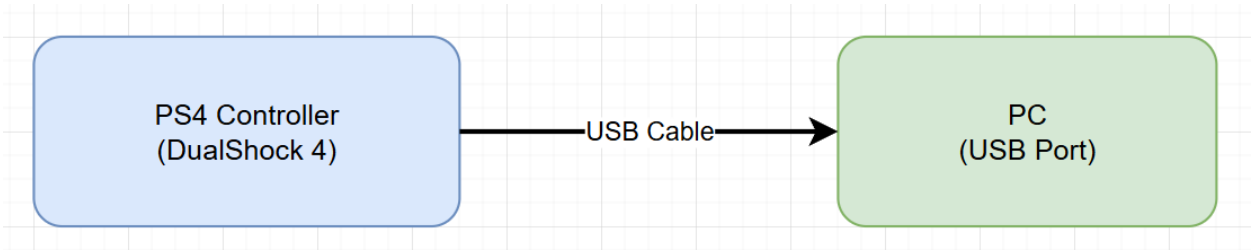
```cpp
#ifdef ESP32
 #include <WiFi.h>
#else
 #include <ESP8266WiFi.h>
#endif

void setup(){
 Serial.begin(115200);
 Serial.println();
 delay(300);

WiFi.mode(WIFI_STA);//Required to initialize the WiFi hardware on some boards
 delay(300); //need some time to initialize
 Serial.print("ESP Board MAC Address: ");
 Serial.println(WiFi.macAddress());

}
void loop(){
}
```

Pair PS4 Controller to ESP32-WROOM-32

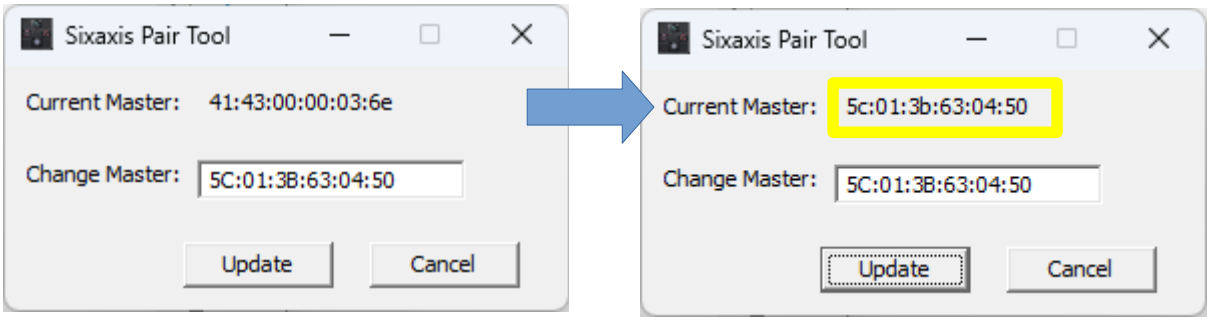


*Open the Serial Monitor>Document the wifi mac address of the ESP32.*2). Install the Six axis controller pair software. [https://sixaxispairtool.en.lo4d.com/download]

3) Connect your PS4 controller via USB to your PC.



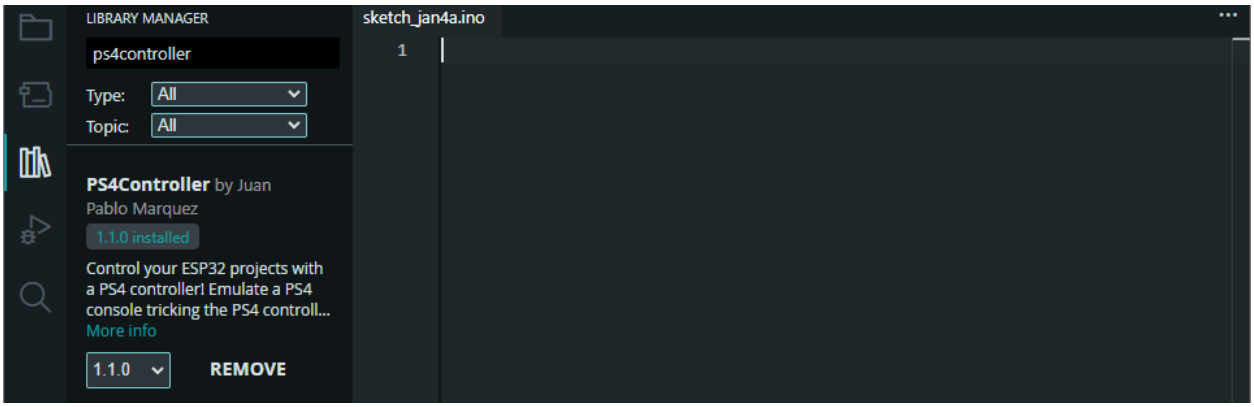
4) Paste your ESP32 MAC address in the window (from step 1). Click Update.



Unplug Ps4 controller.

5) Install the PS4controller library in Arduino IDE.

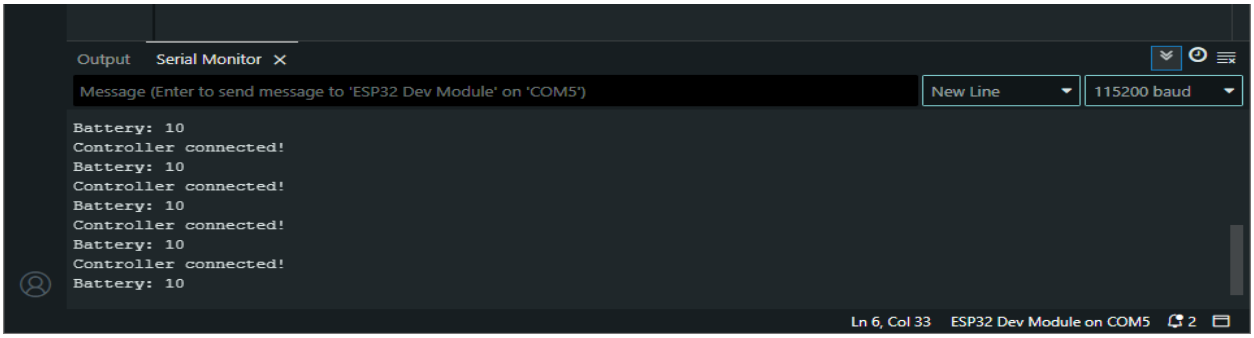
Pair PS4 Controller to ESP32-WROOM-32



6) Paste this code into your IDE. Change the MAC address to the one recorded in step 1. Upload this code to your ESP32.

```cpp
#include <PS4Controller.h>

void setup() {
Serial.begin(115200);
//Set ESP32's MAC address to pair with PS4 Controller
 PS4.begin("xx:xx:xx:xx:xx:xx");//This is your ESP32's MAC !!!
 Serial.println("Waiting for PS4 controller...");
}

void loop() {
if (PS4.isConnected()) {
 Serial.println("Controller connected!");
 Serial.print("Battery: ");
 Serial.println(PS4.Battery());
 delay(1000);
}
}
```

Turn on PS4 controller. The controller's light will change dark blue when connected. The Serial Monitor should show controller is paired.



Done!

⚠Troubleshooting⚠:

If you have issues (you paired to something else, controller battery dies) you have to wipe the ESP32's memory of all paired Bluetooth devices. Wipe the bond pairing data use this sketch:

```
#include <PS4Controller.h>
#include "esp_bt_main.h"
#include "esp_bt_device.h"
#include "esp_gap_bt_api.h"
#include "esp_err.h"

void setup()
{
  PS4.begin();
  uint8_t pairedDeviceBtAddr[20][6];
  int count = esp_bt_gap_get_bond_device_num();
  esp_bt_gap_get_bond_device_list(&count, pairedDeviceBtAddr);
  for(int i = 0; i < count; i++)
  {
    esp_bt_gap_remove_bond_device(pairedDeviceBtAddr[i]);
  }
}

void loop()
{
}
```