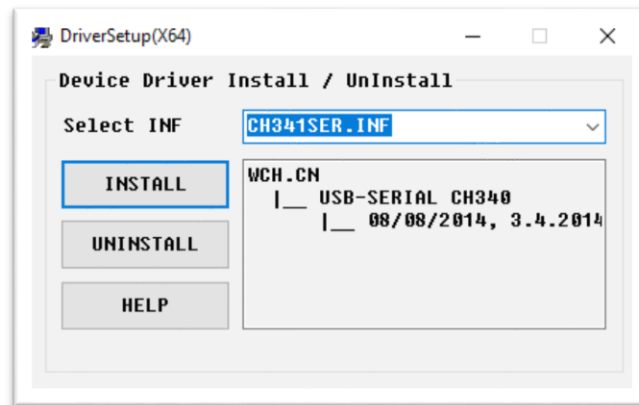


1. Installing USB–Serial Drivers

To communicate with ESP8266 or ESP32, a driver is required, depending on the chip on your development board.

- Many boards use **CH340/CH341** → install the driver with *DriverSetup(X64)*.



- Some boards use **CP210x** → install the corresponding driver (included with the software or downloadable from Silicon Labs).

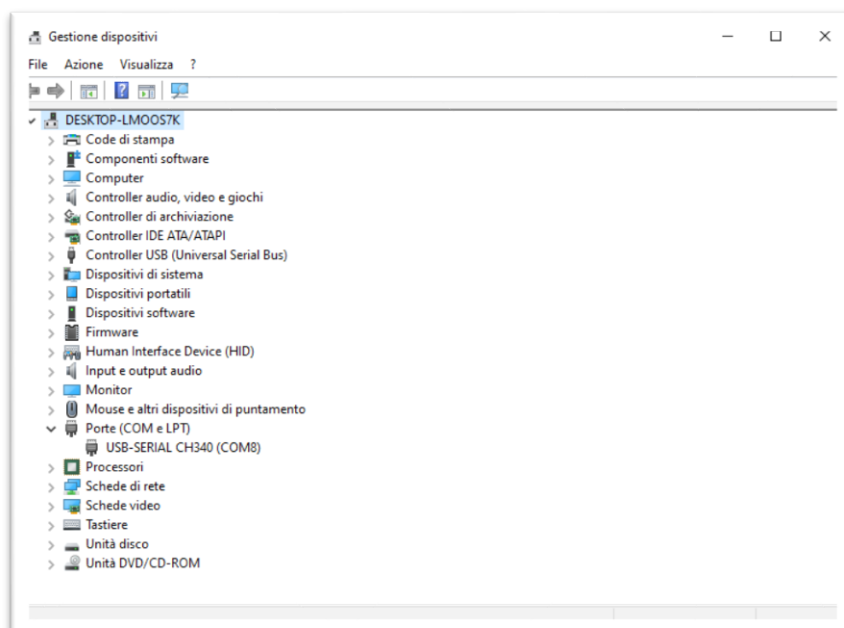
After installation, Windows Device Manager should show a new serial port, for example:

USB-SERIAL CH340 (COM8)

or

Silicon Labs CP210x USB to UART Bridge (COMx)

Remember the COM port number: it is required to configure ESP Programmer.



2. Starting ESP Programmer 2

Open the software **ESP Programmer 2**.

You will see two main panels:

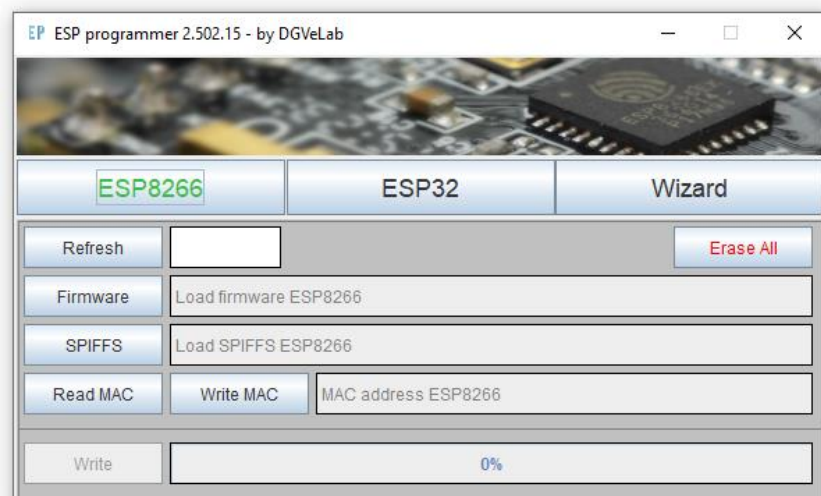
- **ESP8266**
- **ESP32**

Click on the microcontroller you want to program: the related buttons will be enabled.

3. Selecting the Serial Port

- Press **Refresh** to update the COM port.
- Or type the corresponding COM port of your device into the textbox.

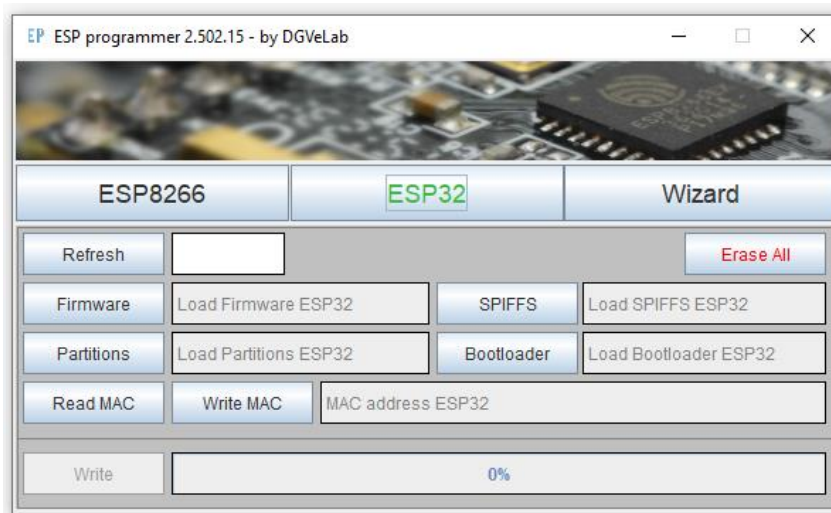
4. Programming the ESP8266



Available functions:

- **Firmware** → load the firmware.
- **SPIFFS** → load the file system.
- **Read MAC / Write MAC** → read or write the device MAC address.
- Press **Write**: the progress bar at the bottom will show the completion percentage.

5. Programming the ESP32

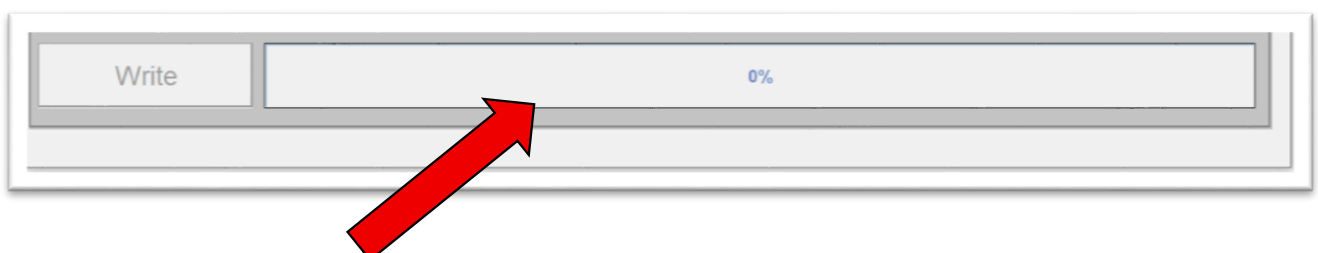


Available functions:

- **Firmware** → load the firmware.
- **Partitions** → load the partition table.
- **SPIFFS** → load the file system.
- **Bootloader** → write the bootloader.
- **Read MAC / Write MAC** → manage the MAC address.
- After selecting the required files, press **Write**: the progress will be shown in the progress bar.

6. Writing Progress

The programming status is displayed in the **progress bar** at the bottom, indicating the completion percentage.



7. FAQ – Frequently Asked Questions

The device does not appear in Device Manager.

→ Reinstall the CH340 or CP210x driver (depending on your board). Check that the USB cable supports data transfer, not just charging.

I cannot find the COM port in ESP Programmer.

→ Press “Refresh” and make sure no other program (Arduino IDE, Serial Monitor) is using the same port. You can also manually type the COM port into the textbox.

The device is not recognized even after driver installation.

→ Plug in the board while holding down the **BOOT** button, then release it after a few seconds: some models require this procedure to be detected correctly.

For ESP32, how to force recognition if the software does not detect it?

→ Press and hold **BOOT**, then briefly press **RST (reset)** and release **BOOT**. This combination forces the ESP32 into programming mode.

After programming, the ESP does not start.

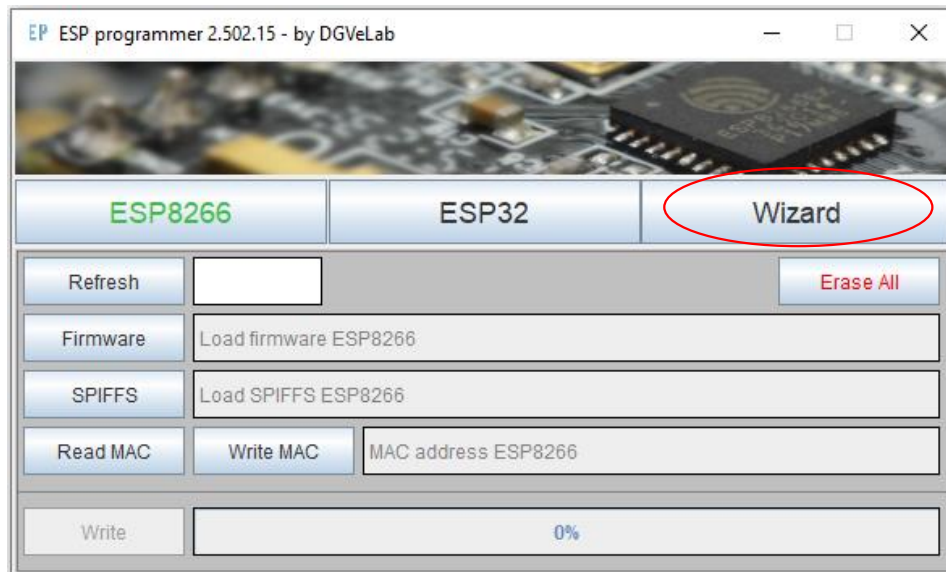
→ Check that you uploaded the correct firmware, partitions, and bootloader for your model. Some boards require holding **BOOT** during the start of writing.

Wizard Mode Tutorial

The **Wizard mode** simplifies the configuration of the ESP's Wi-Fi network and static IP (ESP8266 or ESP32).

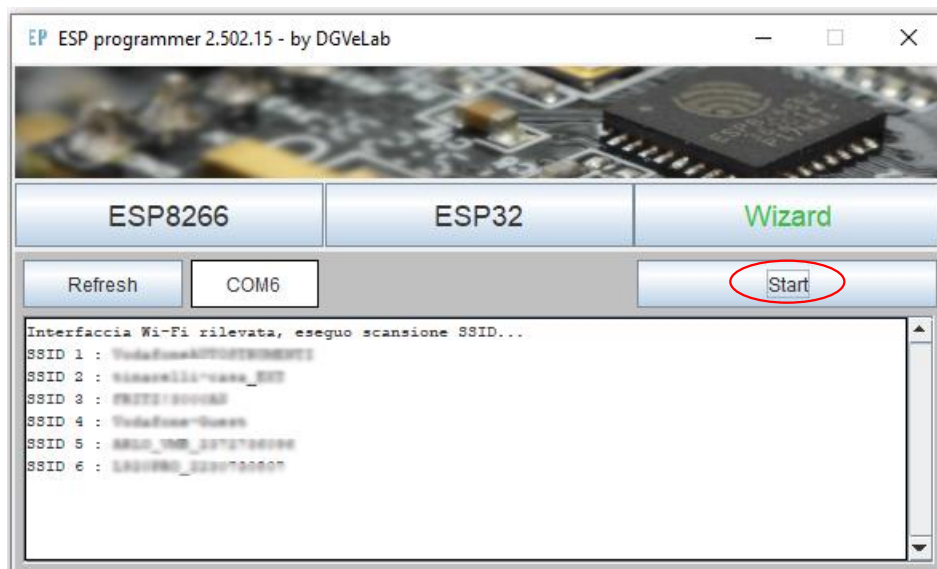
This guided procedure allows you to set SSID, password, and network parameters **without opening the ESP's web page**, but directly from the PC via USB.

1. Launching the Wizard

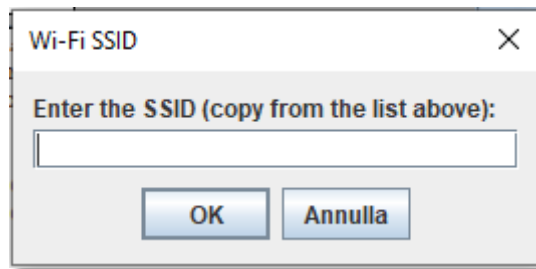


- Open **ESP Programmer**.
- Go to the **Wizard** tab.
- Enter the correct **COM port** (e.g., COM7) or press **Refresh** to detect it.

2. Press Start and enter SSID



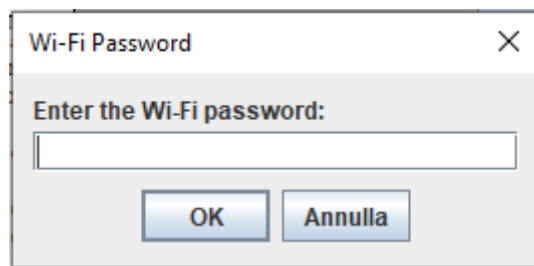
- Press the **Start** button (next to the COM box).
- A series of popup windows will guide you step by step.



- The first popup asks: *Enter the SSID (copy from the list above):*
- Copy the SSID (your Wi-Fi network name) from the log list and confirm with **Continue**.

3. Enter Password

- Next popup: *Enter the Wi-Fi password:*
- Type the Wi-Fi password and press **Continue**.

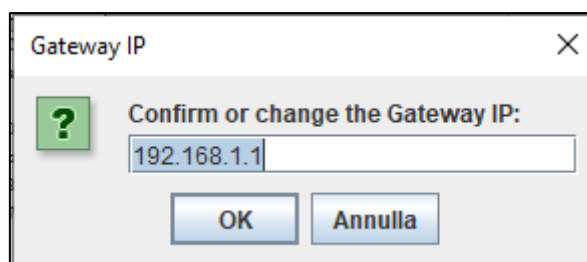


4. Confirm Gateway IP

- The wizard automatically detects the **gateway** (your modem/router's IP).
- It shows it already filled in the popup:

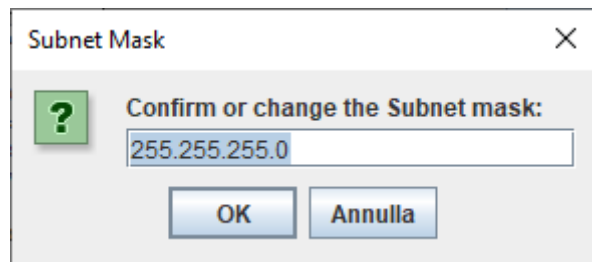
*Confirm or change the Gateway IP:
Check if it's correct (typically 192.168.1.1 or 192.168.1.254).*

- Modify it only if necessary, then press **Continue**.



5. Confirm Subnet

- The wizard automatically detects the **Subnet**
- It shows it already filled in the popup: Confirm or change the Subnet mask:
- Usually it's 255.255.255.0.
- Confirm with **Continue**.



6. Confirm Static IP

- The wizard calculates a **free static IP** in your network.
- It suggests it in the popup:

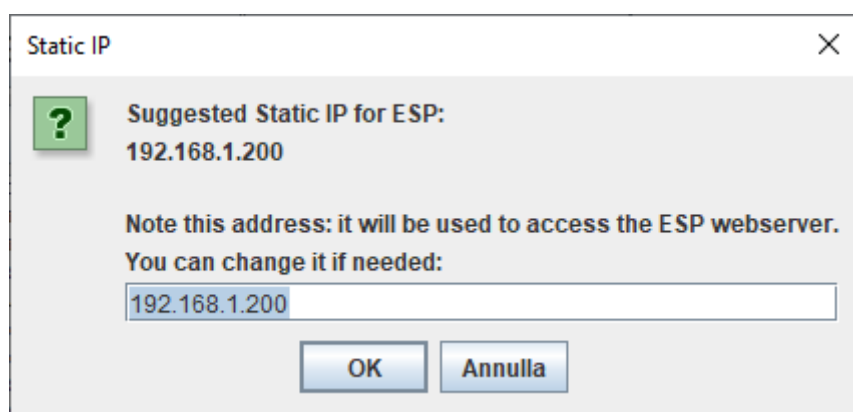
Suggested Static IP for ESP:

192.168.1.210

Note this address: it will be used to access the ESP webserver.

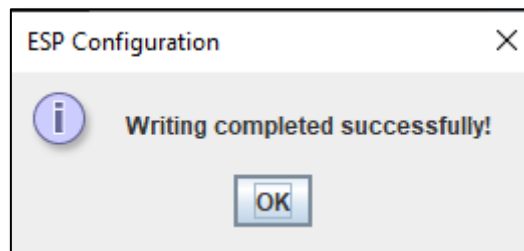
You can change it if needed:

- You can accept it or enter another one.
- **Write this address down:** it will be the one to reach the ESP's webserver.
- Press **Continue**.



7. Sending Data

- The PC builds a command with all the data and sends it to the ESP via USB.
- Wait for the confirmation popup:
 - ✓ *OK SAVED* → configuration successfully saved.
 - ✗ *ERR: ...* → specific error (missing SSID, invalid IP, etc.).
 - ⚠ *No response from ESP within timeout* → no reply received (check COM port).



8. Open Browser

- The ESP reboots with the new parameters.
- Now you can access it from your browser using the **chosen static IP**

(e.g., <http://192.168.1.210>).

