

Firmware Flashing & Factory Reset

You can restore your device to its factory state at any time by reflashing the firmware.

This process ensures a clean, reliable software environment and can also be used to update to the latest release.

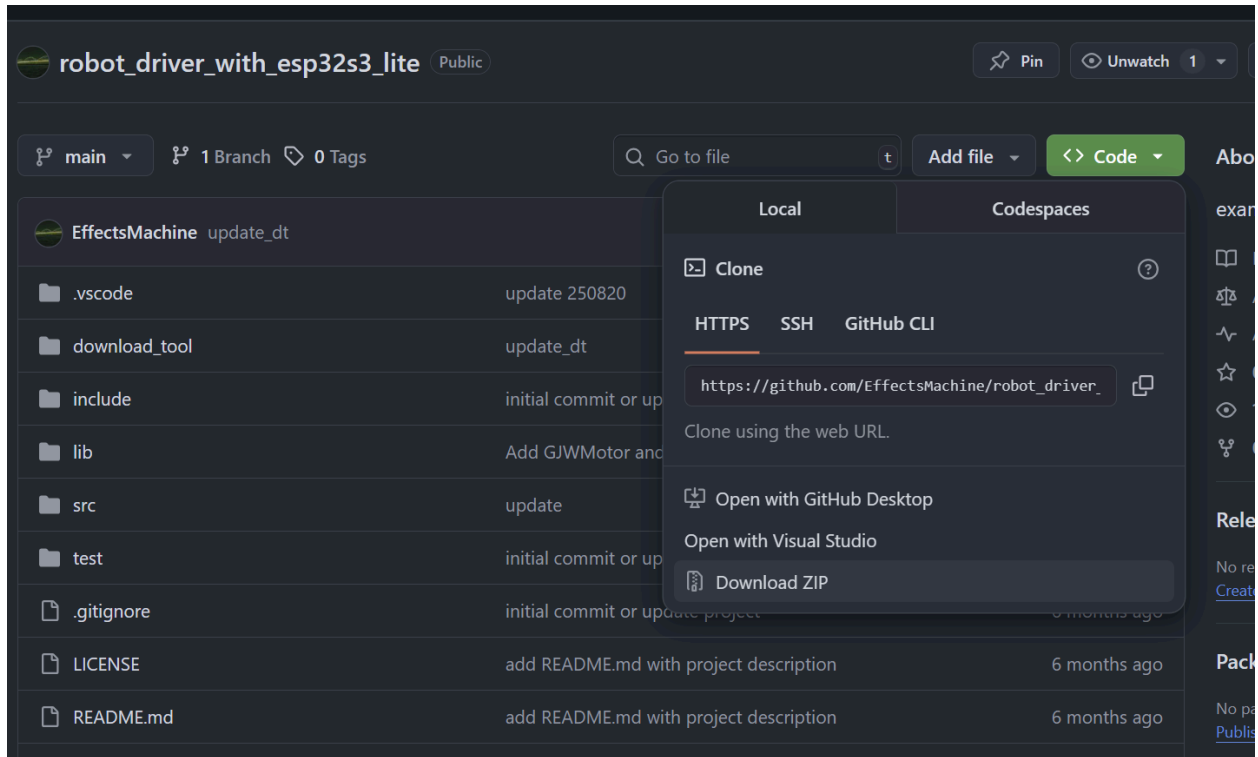
1. Open-Source Repository

 **GitHub:**

```
https://github.com/EffectsMachine/robot_driver_with_esp32s3_lite
```

All firmware files, tools, and example codes are available here.

2. Download the Project



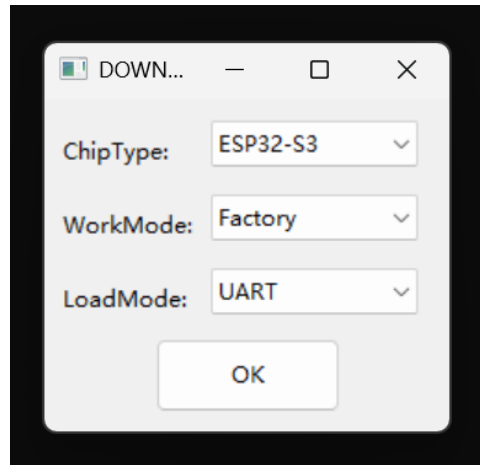
1. Visit the GitHub repository and click **"Code → Download ZIP."**
2. Extract the downloaded ZIP file to any folder on your computer.
3. Inside the extracted directory, locate the `download_tool` folder.
4. Open `RD_ESP32S3_LITE_Download_Tools` — this folder contains the firmware flashing utility.

3. Connect the Board

- Use a USB cable to connect the board's **UART interface** to your computer.
- Ensure no other software is currently accessing the same COM port.

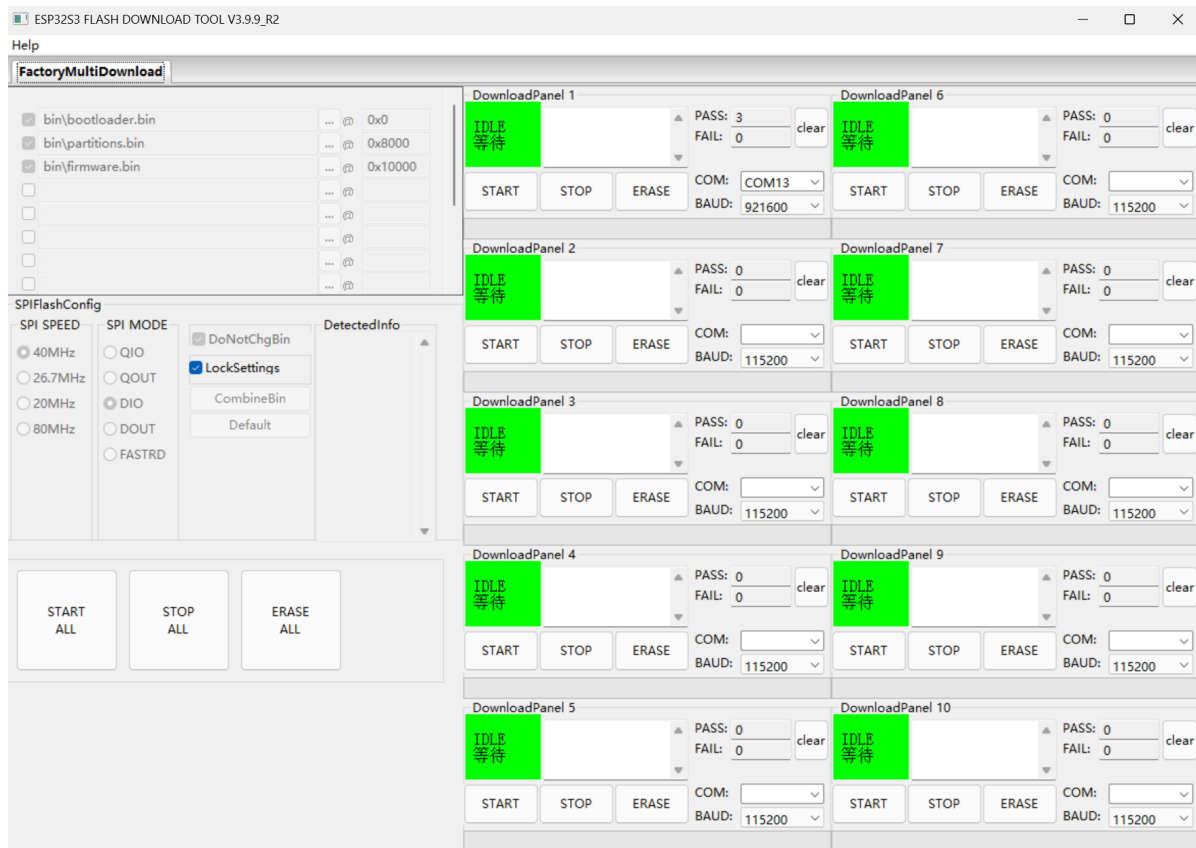
4. Launch the Flash Tool

1. Run `flash_download_tool_3.9.9_R2.exe`.
2. When prompted:



- **Chip Type:** Select **ESP32-S3**
- **Work Mode:** Choose **Factory**
- **Download Mode:** Select **UART**

3. Click **OK** to open the main flashing interface.



5. Configure and Start Flashing

1. From the interface:
 - Select your device's **COM port**.
 - Set the **BAUD rate** to **921600** for optimal speed.
2. Click **START** to begin flashing.

💡 Tip:

If you're flashing multiple driver boards, you can assign COM ports for each and click **START ALL** to flash them in batch mode.

Wait until the process completes. Do **not** disconnect the device during flashing.

6. Finish and Reboot

Once flashing is complete, the board will **not** automatically reboot, you need to restart it.

After restart, the newly flashed firmware will start running immediately.

Your device has now been **successfully reset to factory state**.