

Factory Firmware Flashing Method

The ESP32 core board supports two methods for flashing the factory firmware:

1. **Source Code Upload**
2. **Precompiled Firmware Upload**

The firmware used in the "**Precompiled Firmware Upload**" is the compiled output of the project source code from the "**Source Code Upload**" method, so both approaches produce the same result.

For ease of use, we recommend the **Source Code Upload** method, as it only requires a few simple clicks within the Arduino IDE.

1. Source Code Download

i Before downloading the program, please ensure that the serial port driver is properly installed.

- 1) Connect the core board to your computer using a USB cable.



- 2) In the folder named “**LeArm_ESP32_Arduino_factory250512**” (located in the same directory as this document), find the corresponding example project file.

Name	Date modified	Type	Size
src	28/05/2025 11:55	File folder	
Config.h	12/05/2025 11:15	H File	2 KB
Hiwonder.hpp	12/05/2025 11:15	HPP File	8 KB
IIC.cpp	12/05/2025 11:15	CPP File	2 KB
IIC.hpp	12/05/2025 11:15	HPP File	1 KB
LeArm_ESP32_Arduino_factory250512.ino	12/05/2025 11:15	INO File	3 KB
Robot_arm.hpp	12/05/2025 11:15	HPP File	6 KB

- 3) Open the project and select the appropriate board model as shown in the image below.



- 4) First, click “**Verify**” to compile the code, then click “**Upload**.”

Once the upload is complete, and the output window at the bottom of the Arduino IDE displays a message similar to the one shown below, the program has been successfully downloaded.

```
输出
Writing at 0x00058378... (100 %)
Wrote 298816 bytes (165785 compressed) at 0x00010000 in 2.8 seconds (effective 849.7 kbit/s)...
Hash of data verified.

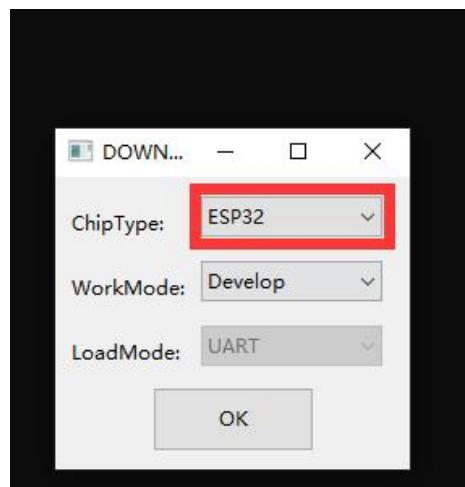
Leaving...
Hard resetting via RTS pin...
```

2. Firmware Flashing (Optional)

- 1) Open the flash_download_tool_3.9.7.exe file located in the “**Firmware flashing tool\flash_download_tool_3.9.7**” directory.

名称	修改日期
bin	2024/6/7 星期五 17:29
combine	2024/7/4 星期四 11:40
configure	2024/7/4 星期四 10:41
dl_temp	2024/7/4 星期四 10:42
doc	2024/6/7 星期五 17:30
logs	2024/7/4 星期四 10:42
secure	2024/3/19 星期二 14:..
flash_download_tool_3.9.7.exe	2024/6/7 星期五 20:42

- 2) Set **Chip Type** to **ESP32**, leave other settings as default, then click **OK**.

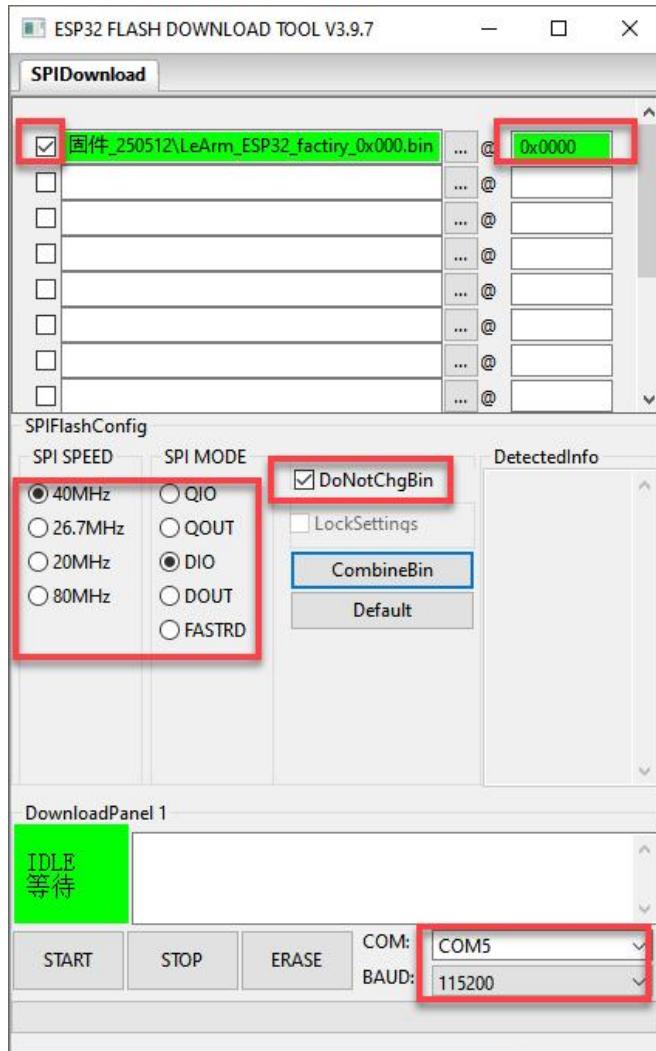


- 3) Once the tool opens, click the “...” button to select the .bin firmware file you wish to flash.

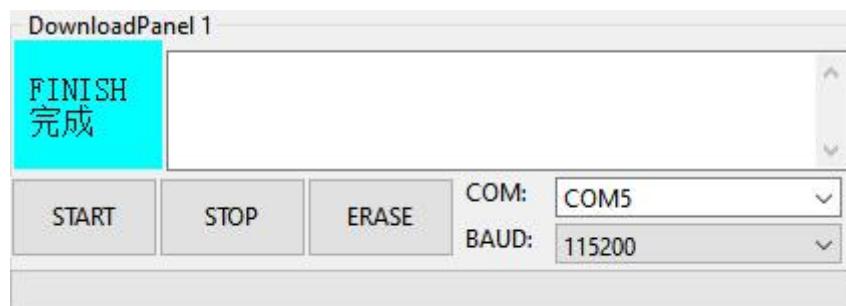


- 4) Make sure the checkbox on the left is selected. Configure the remaining

settings according to the image below. For the COM port, select the port number assigned to the core board in your device manager.



- 5) Click “**ERASE**” to clear the previously downloaded firmware (**this step is required**). Wait a moment until the left status panel displays “**FINISH**” indicating that the erase is complete.



- 6) Click “**START**” to flash the selected firmware. Wait for the process to finish.

