07.Feb.2026

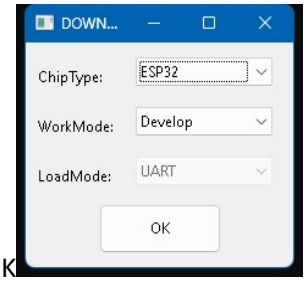
Installation instructions for the ESP32PWMPCB_Firmware 1.1:

1: Installation via Arduino IDE - from source

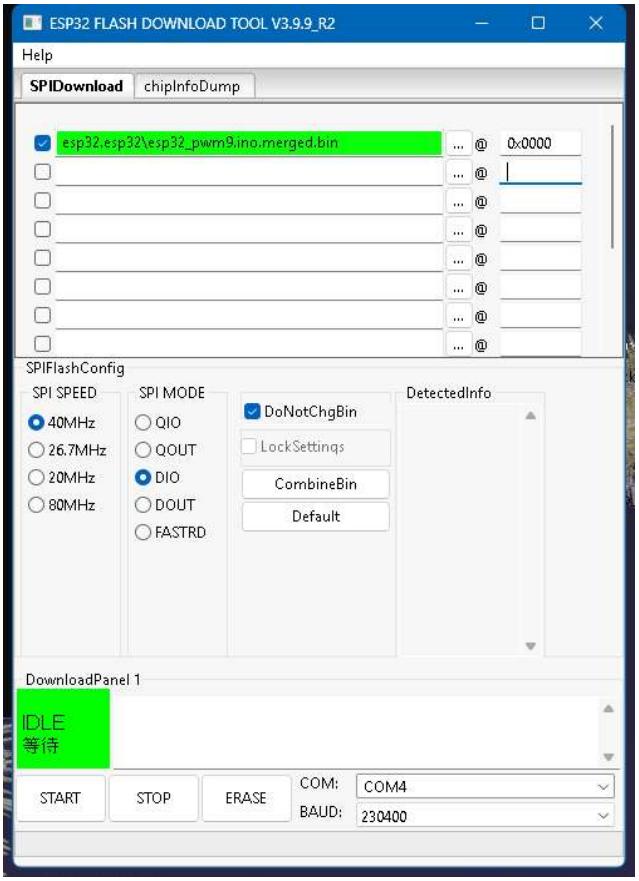
- You need to have the Arduino IDE installed onto your computer
- Install ESP32 Support via the board manager: Arduino ESP32 Boards and esp32 by Espressif
- Install the following Libraries: WiFi Manager by tapzu,Ethernet2 fom the enclosed Library - !!!! NOT THE ONE FROM THE LIBRARY MANAGER !!!!
- You need to install the enclosed file "Ethernet2-W5500-ESP32.zip" to your library folder of your IDE -> Sketch -> Include Library -> Add .ZIP Library -> select enclosed library
- open your .ino file into your arduino ide
- Connect a serial 3.3V level interface to your ESP Board to pin RX, TX and GND
- select the Board In the IDE: Tools->Board: esp32 -> ESP32 Dev Module
- select the Com port of your serial interface: COM "X" usually not COM 1
- select your ESPs operation data, under tools like CPU Frequency, upload speed etc. Keep the default, if you do not know.
- Press the Peset and Flash button simultaneously on you ESP PCB.
- Release first the reset button and after that the flash button - now the ESP is in flash mode and waits for uploads.
- Press the upload button in the IDE and wait until it compiled - ignore warnings. The upload should start automatically.
- After that your ESP node is ready for setup via nodeconfig.pl from the bechele software.

2: Installation via Flash download tools from Espressif from the enclosed pre-compiled .bin file.

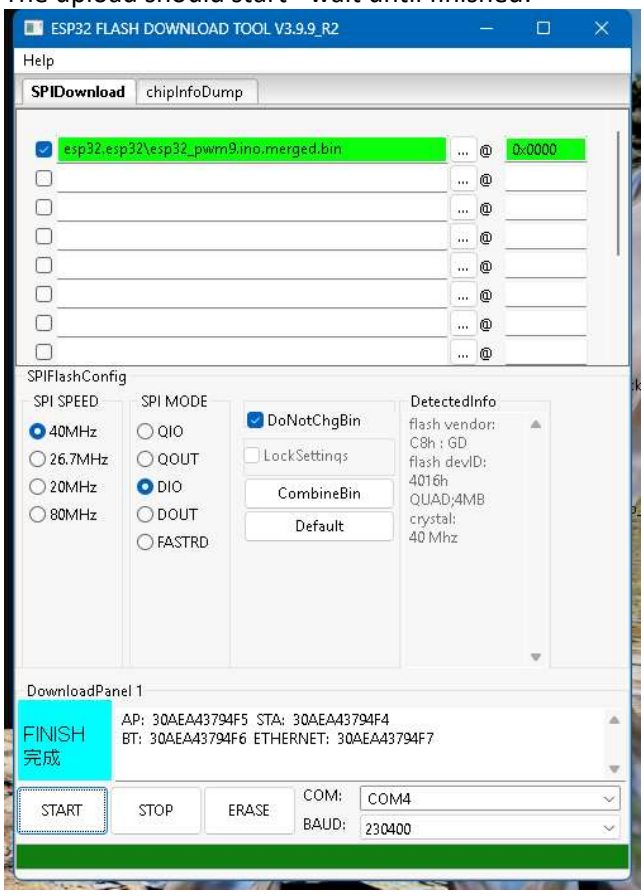
- Download the tool from https://www.espressif.com/en/support/download/other-tools - https://dl.espressif.com/public/flash_download_tool.zip
- Install the tool
- Run the tool:



- Select ESP32 and Develop -> OK
- Connect a serial 3.3V level interface to your ESP Board to pin RX, TX and GND
- Select the file to upload and enter address 0x0000: Also set com port and upload speed. Then press "START"



- The upload should start - wait until finished:



- After that your ESP node is ready for setup via nodeconfig.pl from the bechele software.