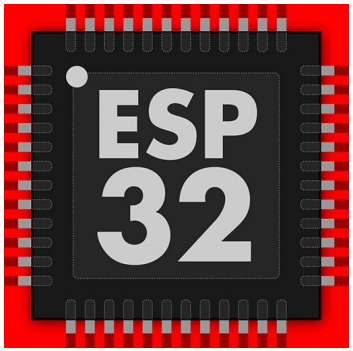
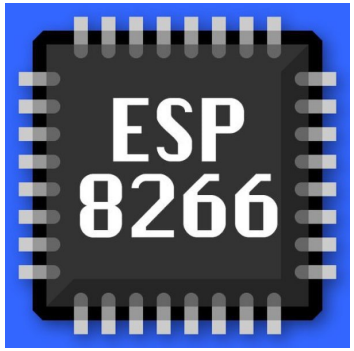
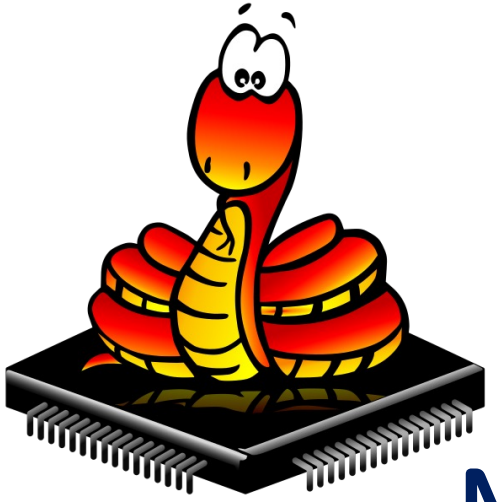
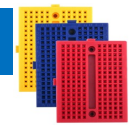






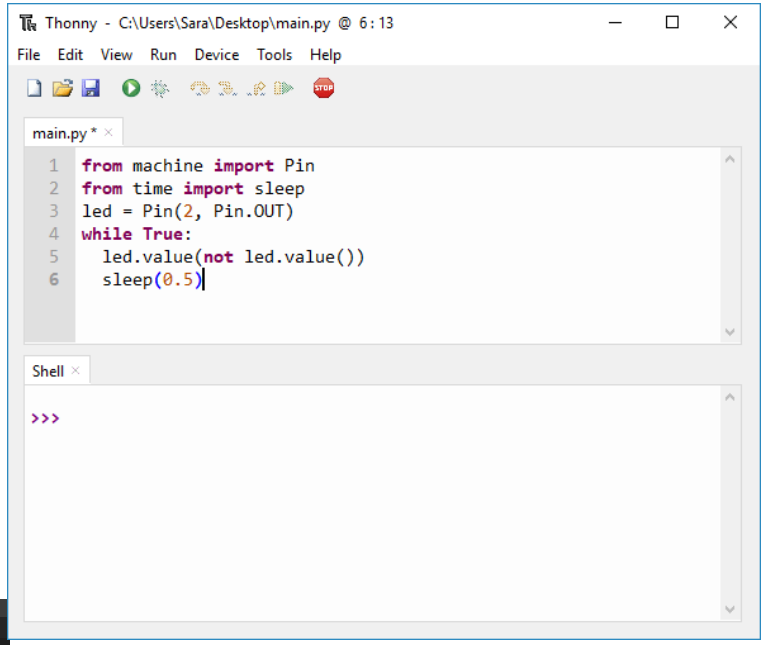
Module 1.
MicroPython Basic

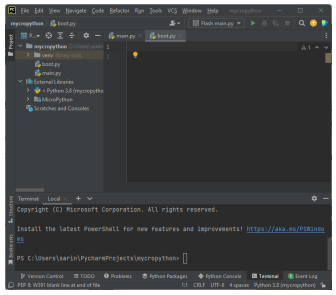
safyzan salim
019 622 0575

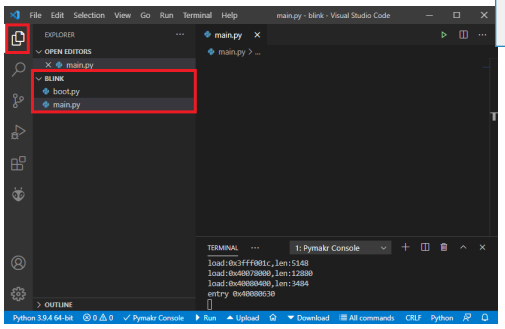


List of IDEs to program ESP32 and ESP8266 boards with MicroPython:

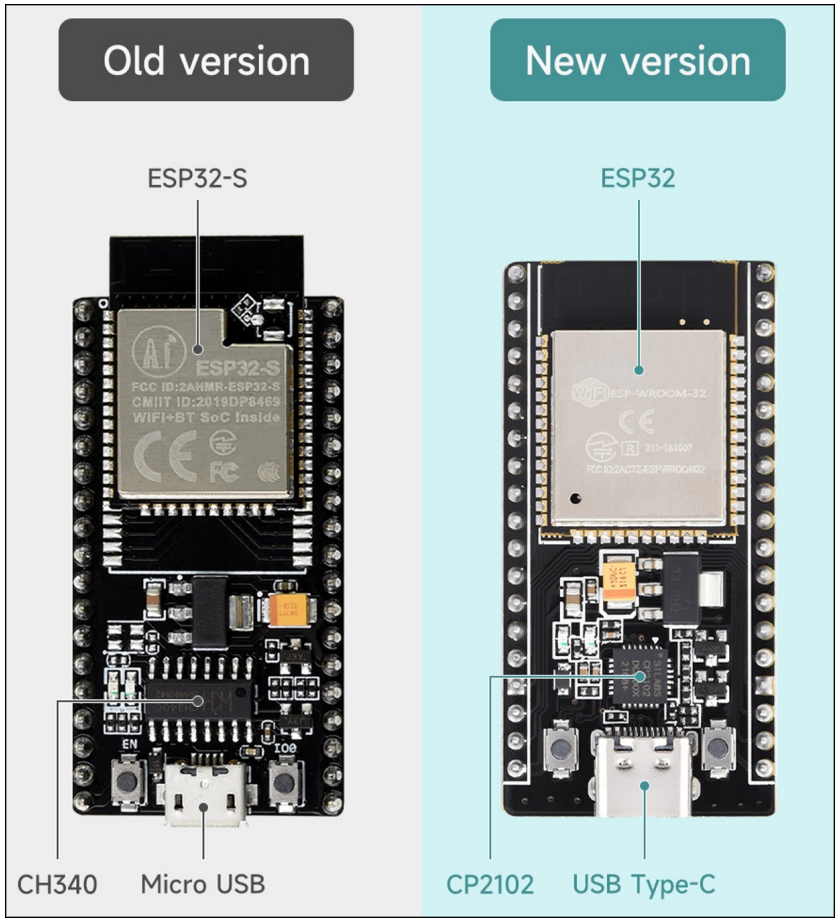
- Mu Editor
- uPyCraft IDE
- Thonny IDE
- Introduction VS Code + Pymakr extension
- Introduction PyCharm
- Introduction micro microIDE





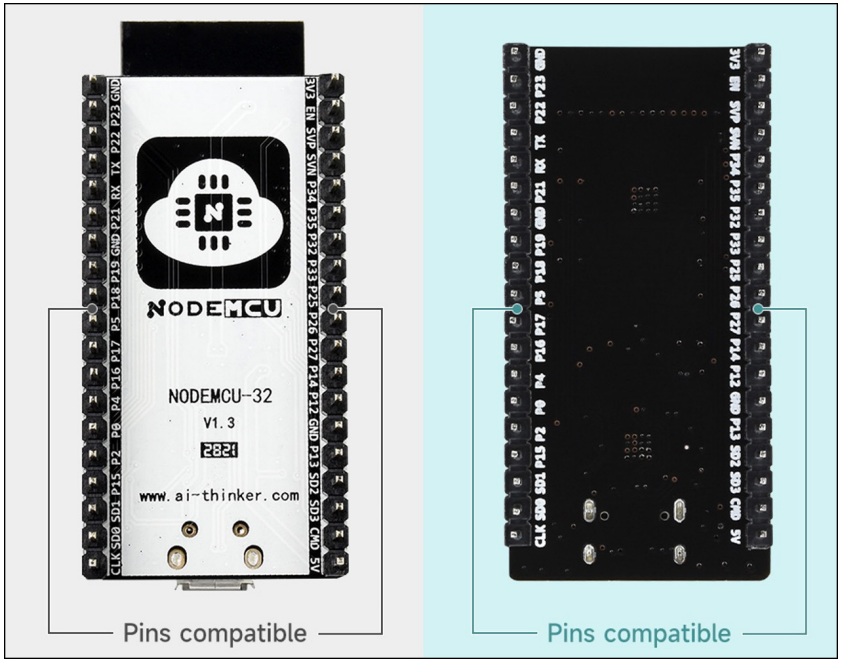


NodeMCU-ESP32S: Version Comparison



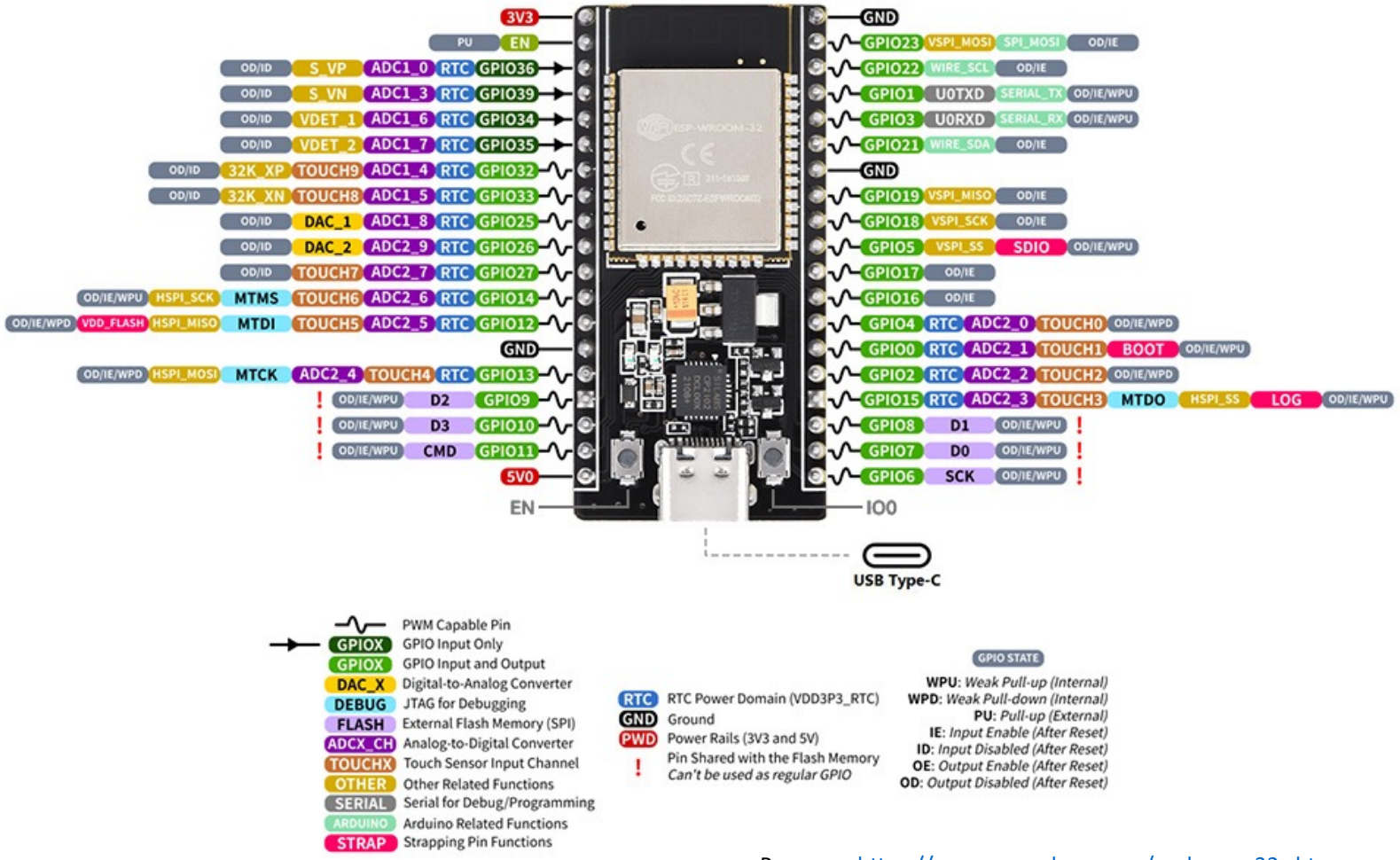
Old version

New version



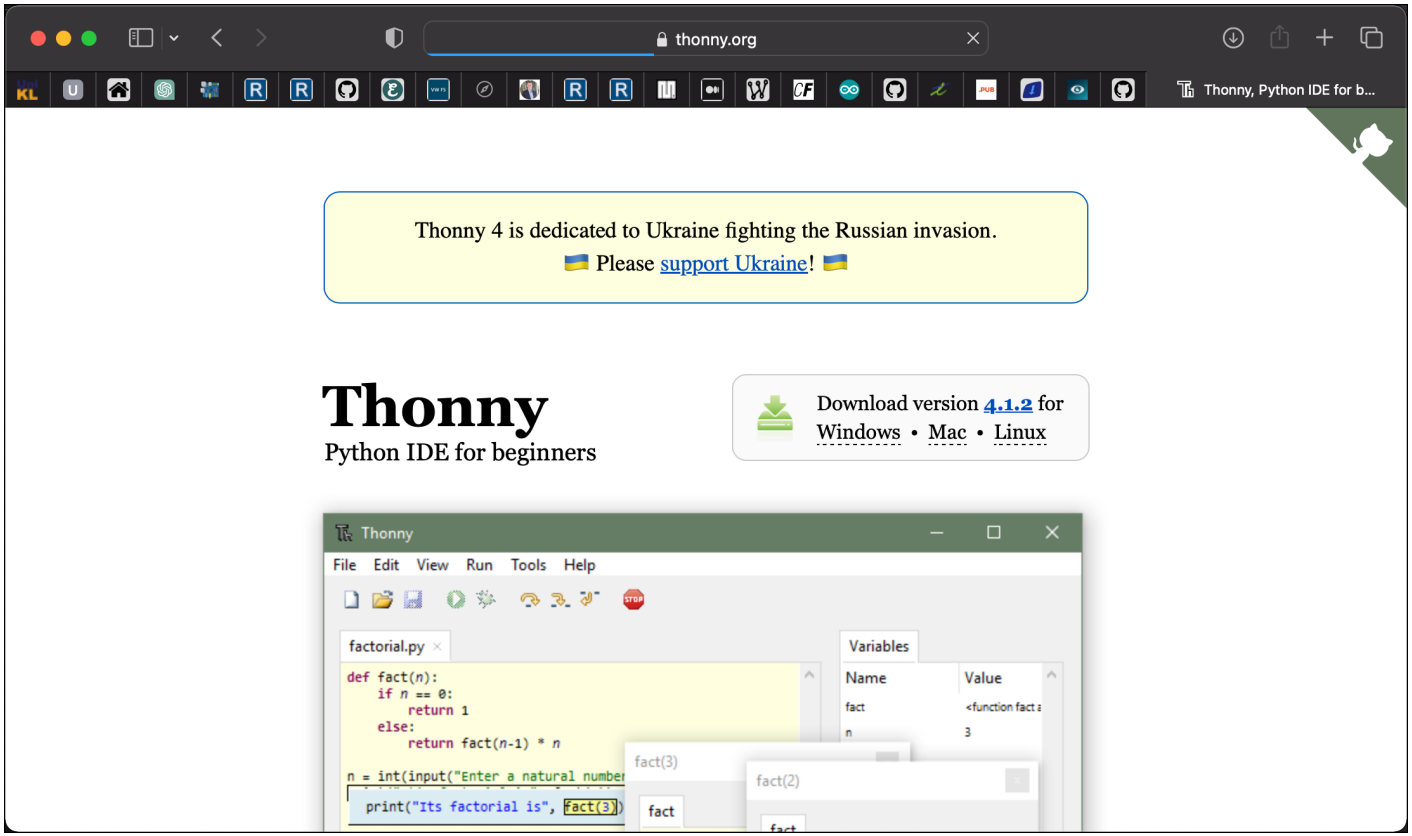
Resource:https://www.waveshare.com/nodemcu-32s.htm

NodeMCU-ESP32S: Pin Assignments

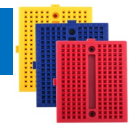


Resource:https://www.waveshare.com/nodemcu-32s.htm

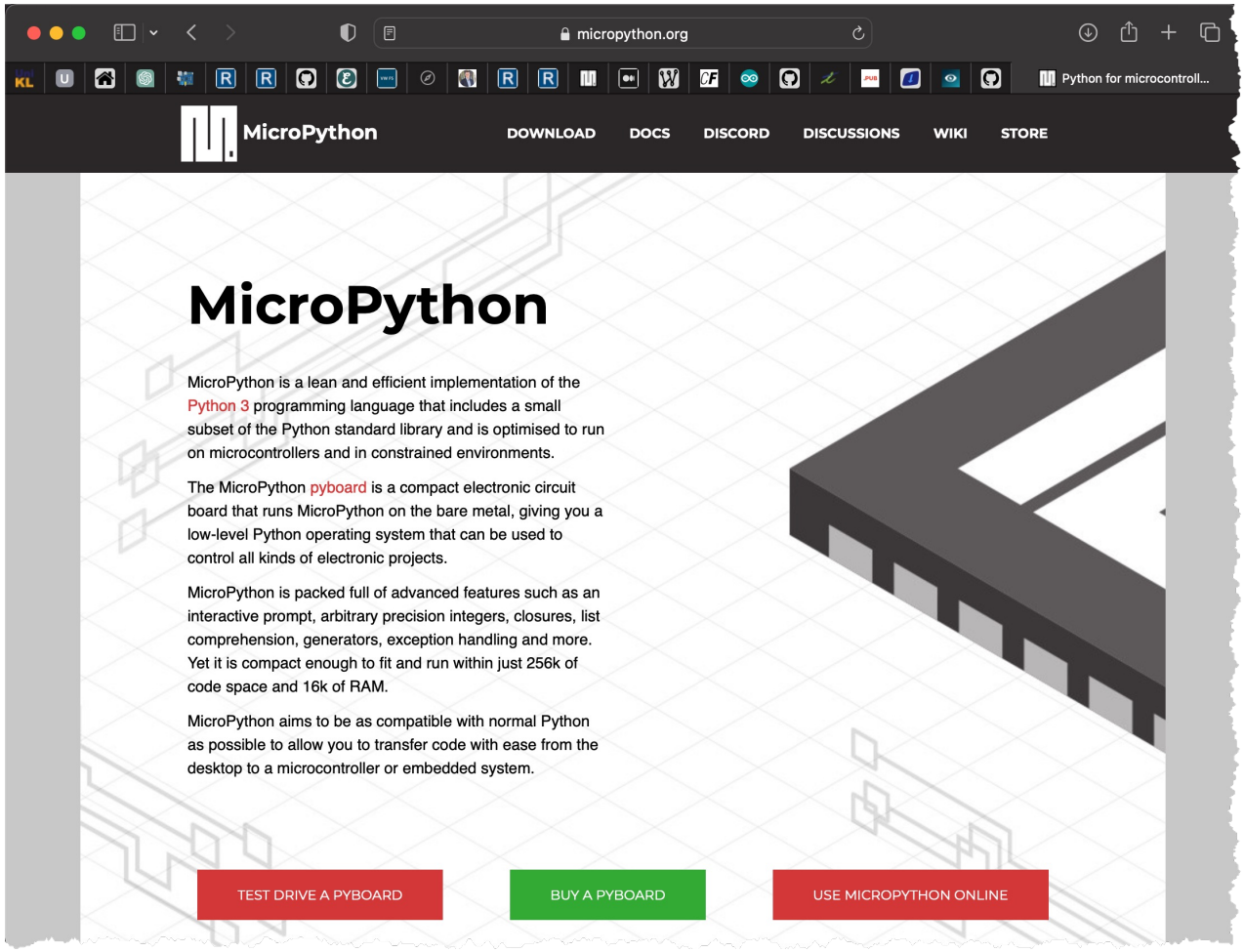
Download & Install: Python IDE



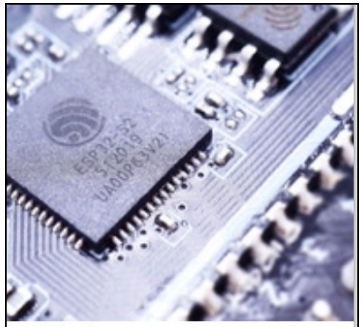
- Beginner friendly Python IDE.
- To erase & flush new firmware to ESP32S with the help of ESP tool.



Download & Install: MicroPython Firmware



Download & Install: MicroPython Firmware



ESP32-S2
Espressif

Firmware

Releases

v1.20.0 (2023-04-26) .uf2 [.bin] [.elf] [.map] [Release notes] (latest)
v1.19.1 (2022-06-18) .uf2 [.bin] [.elf] [.map] [Release notes]
v1.18 (2022-01-17) .bin [.elf] [.map] [Release notes]

FeatherS3
Unexpected Maker

Firmware

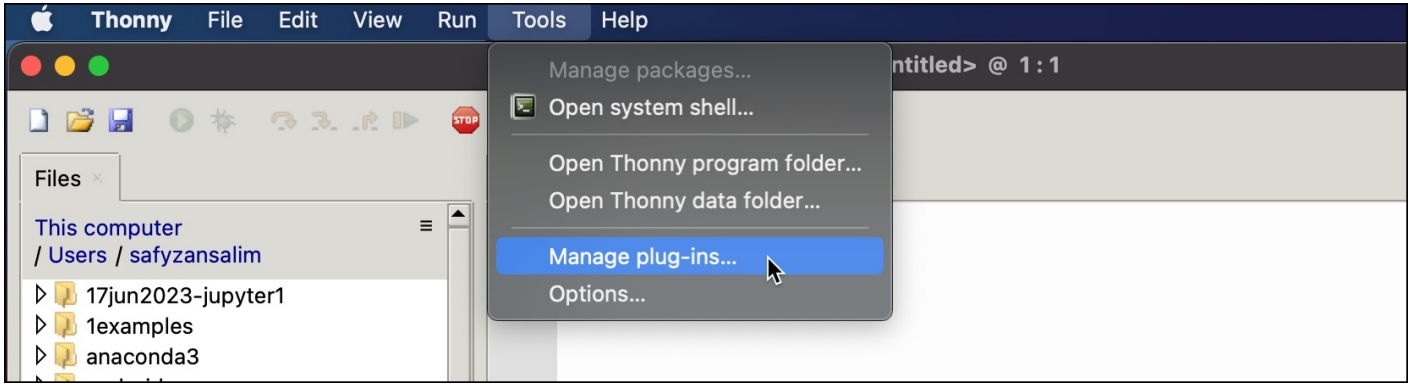
Releases

v1.20.0 (2023-04-26) .uf2 [.bin] [.elf] [.map] [Release notes] (latest)
v1.19.1 (2022-06-18) .uf2 [.bin] [.elf] [.map] [Release notes]

Nightly builds

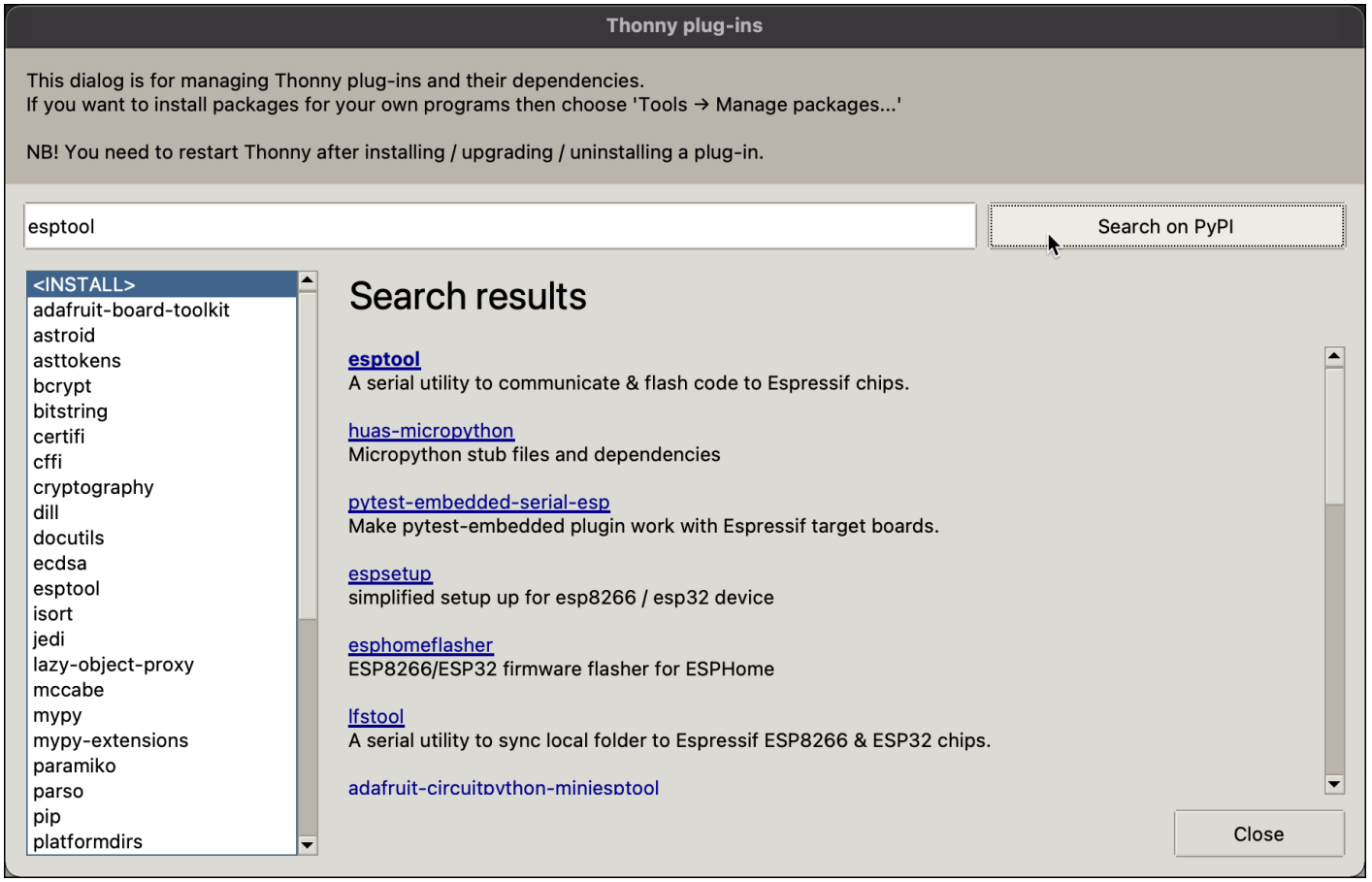
v1.20.0-442-gd00105494 (2023-09-04) .uf2 [.app-bin] [.bin] [.elf] [.map]
v1.20.0-441-gbf35eefc6 (2023-09-04) .uf2 [.app-bin] [.bin] [.elf] [.map]
v1.20.0-439-g545b94a8f (2023-09-04) .uf2 [.app-bin] [.bin] [.elf] [.map]
v1.20.0-438-g65f0cb11a (2023-09-03) .uf2 [.app-bin] [.bin] [.elf] [.map]

Flushing New ESP32S Firmware



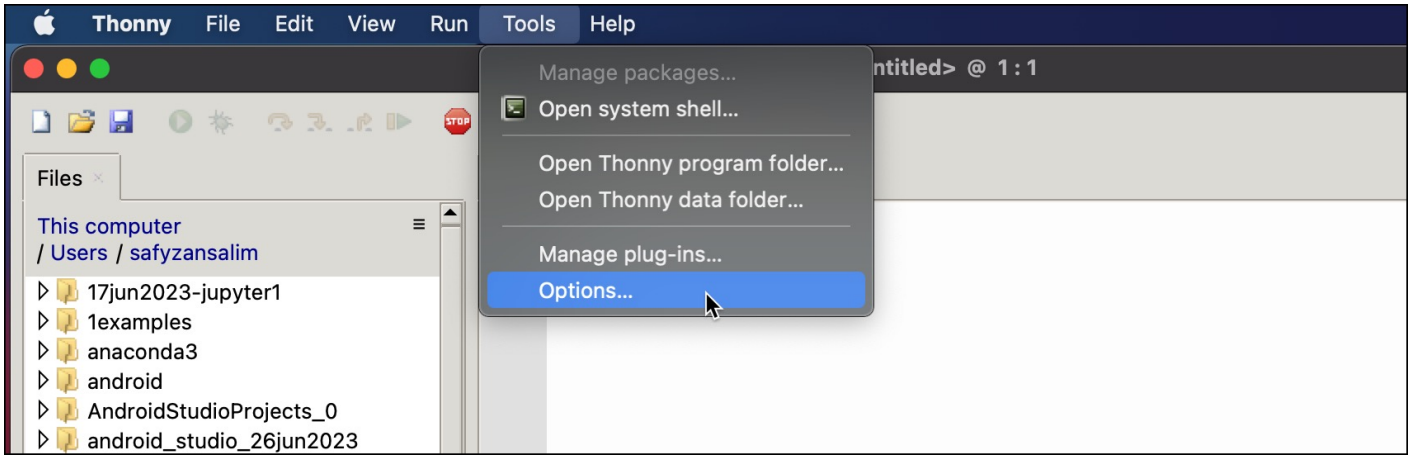
- Install plug-ins first.
- **Tools > Manage plug-ins**

Flushing New ESP32S Firmware



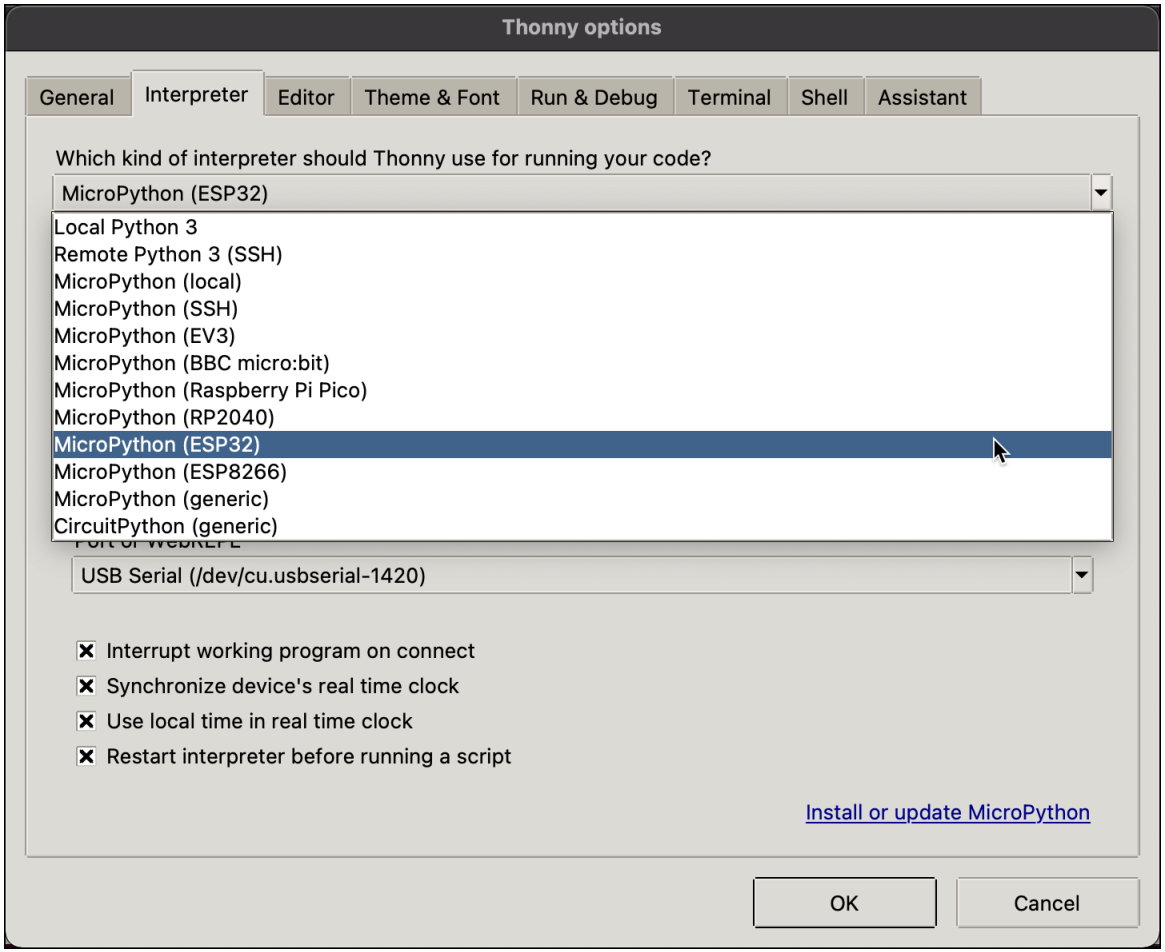
- Type **esptool** & click Search on PyPi button.
- Click **esptool** to install.

Flushing New ESP32S Firmware



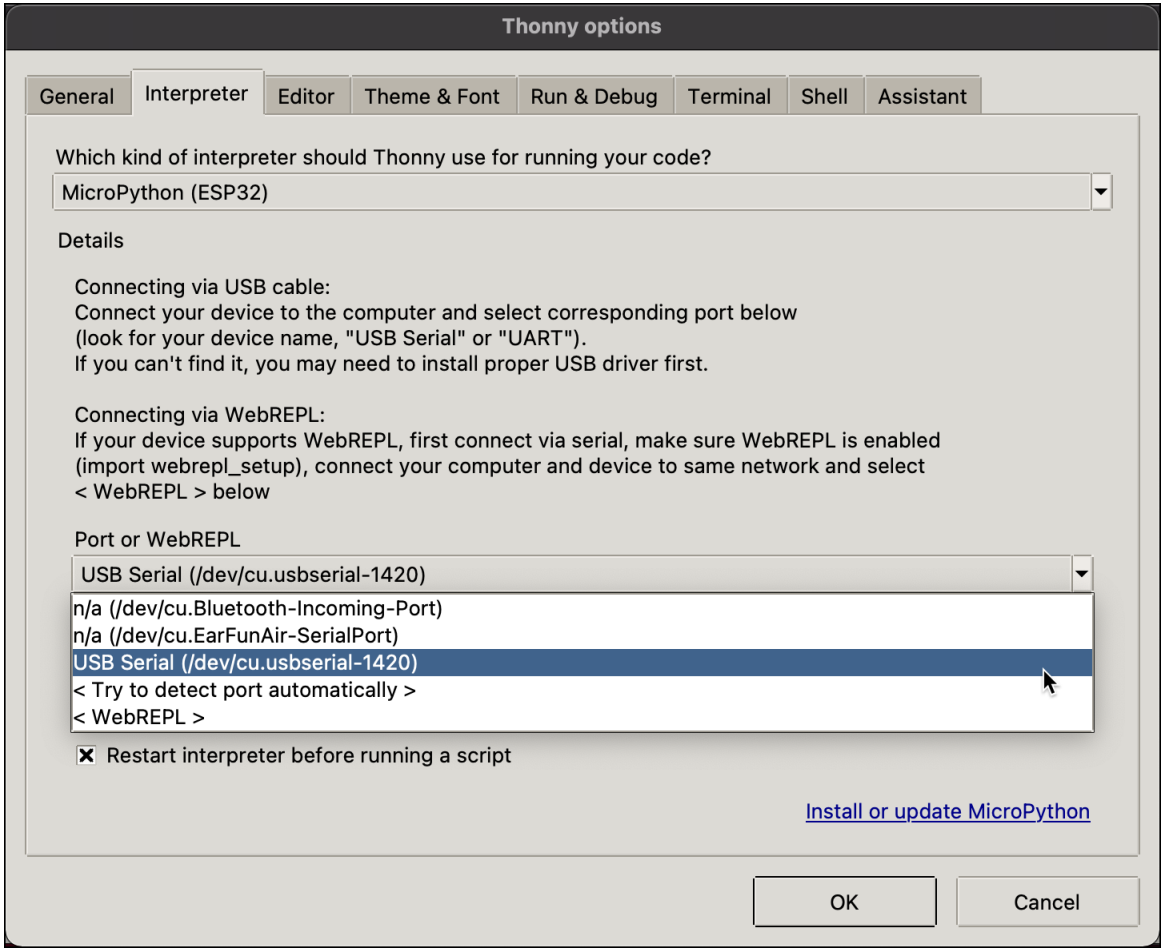
- To install Firmware.
- **Tools > Options**

Flushing New ESP32S Firmware



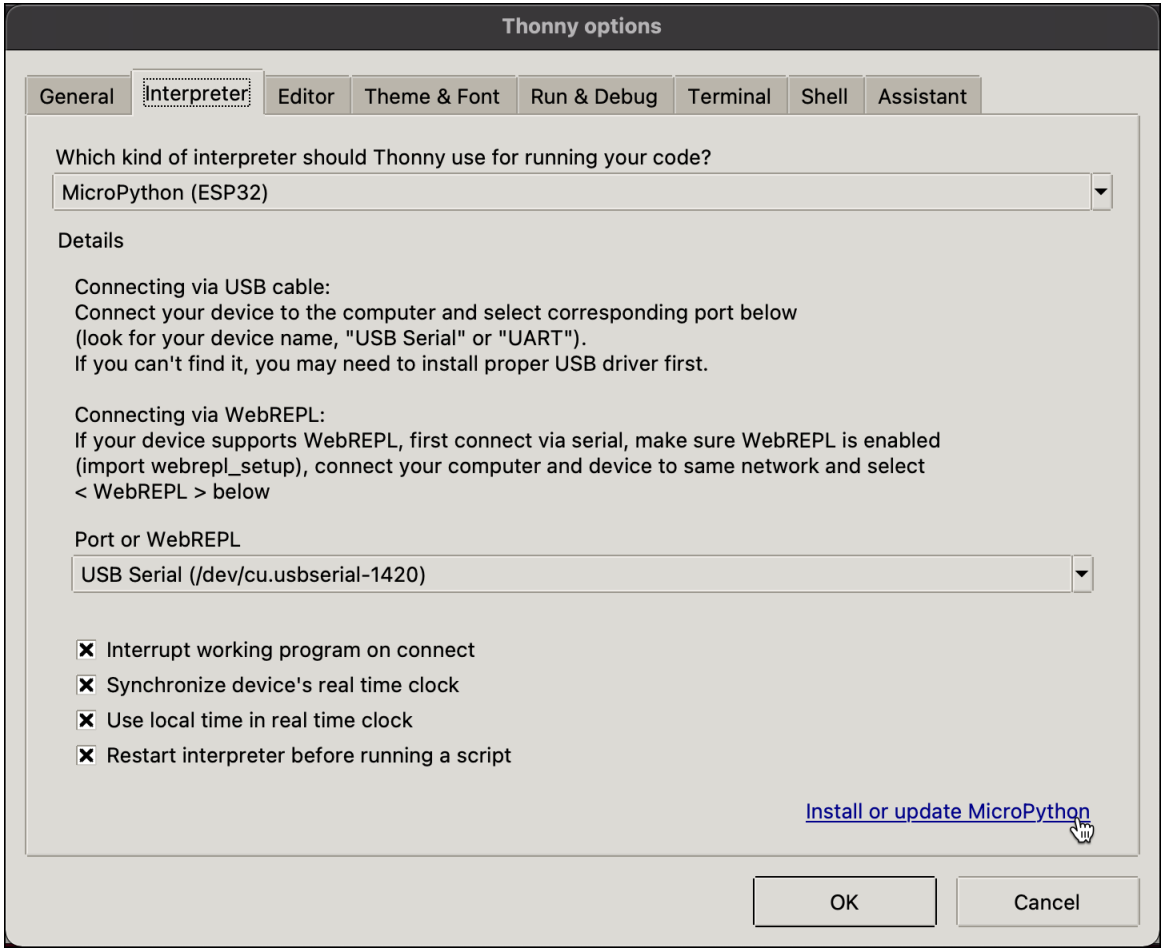
- Go to **Interpreter** tab.
- Select **MicroPython (ESP32)**.

Flushing New ESP32S Firmware



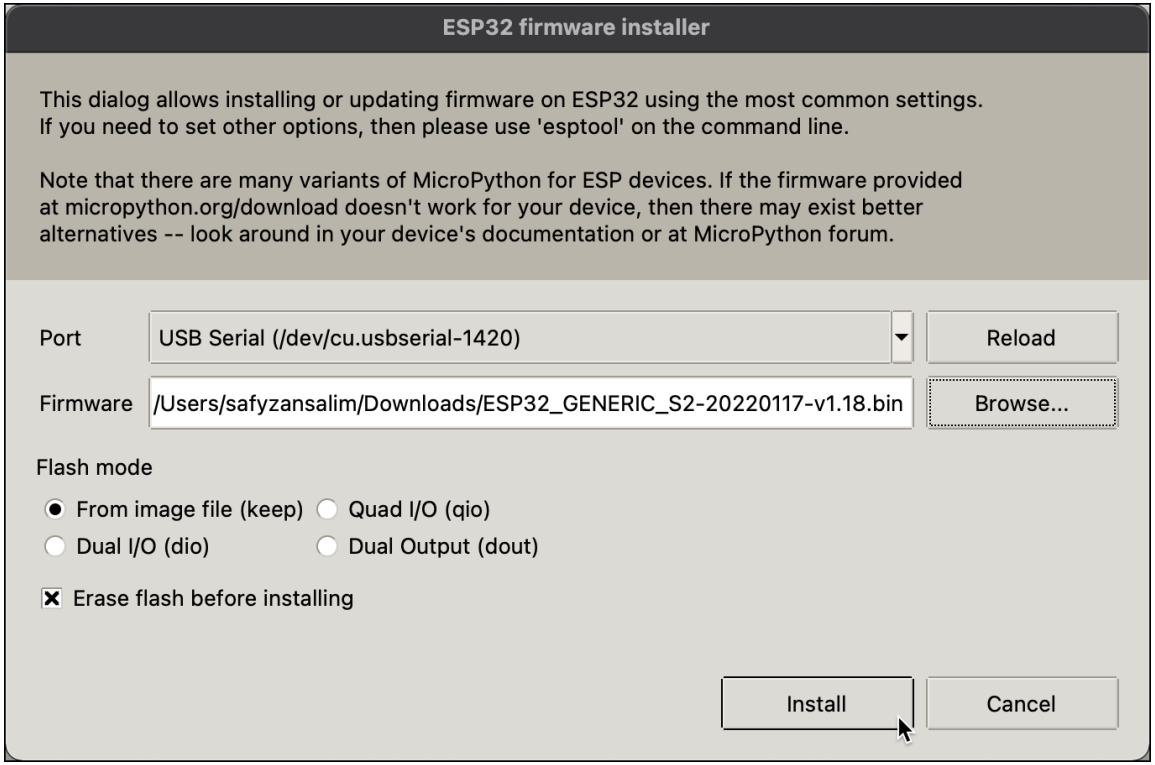
- **Port**: Choose the appropriate comm port of your ESP32S.

Flushing New ESP32S Firmware

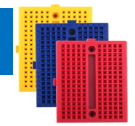


- **Click Install or Update Micropython** link.

Flushing New ESP32S Firmware

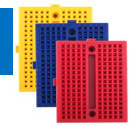


- **Port**: Which port the EPS32S is connected.
- **Firmware**: browse and find the downloaded dot bin file from micropython.org.
- **Ensure that the Erase flash before installing is checked.**
- Click **Install** button.



Try this:

- **>>> import machine**
- **>>> led = machine.Pin(2, machine.Pin.OUT)**
- **>>> led.on()**
- **>>> led.off()**
- **>>> led.value(1)**
- **>>> led.value(0)**
- **>>> led.value(true)**
- **>>> led.value(false)**



Try this:

- **>>> import machine**
- **>>> led = machine.Pin(2, machine.Pin.OUT)**
- **>>> import time**
- **>>> while True:**
    - **led.on()**
    - **time.sleep(0.5)**
    - **led.off()**
    - **time.sleep(0.5)**
    - **(press enter twice)**