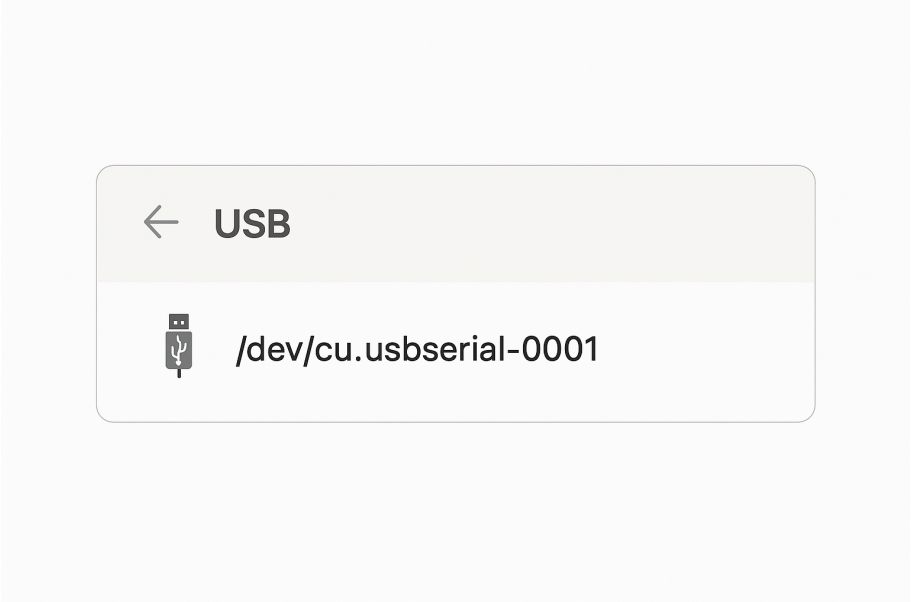
Installing Pure MicroPython on the M5Stack Core2 - Step-by-Step Guide

This guide explains how to erase the flash memory and install the official MicroPython firmware on the M5Stack Core2, using a Mac and the `esptool.py` utility.

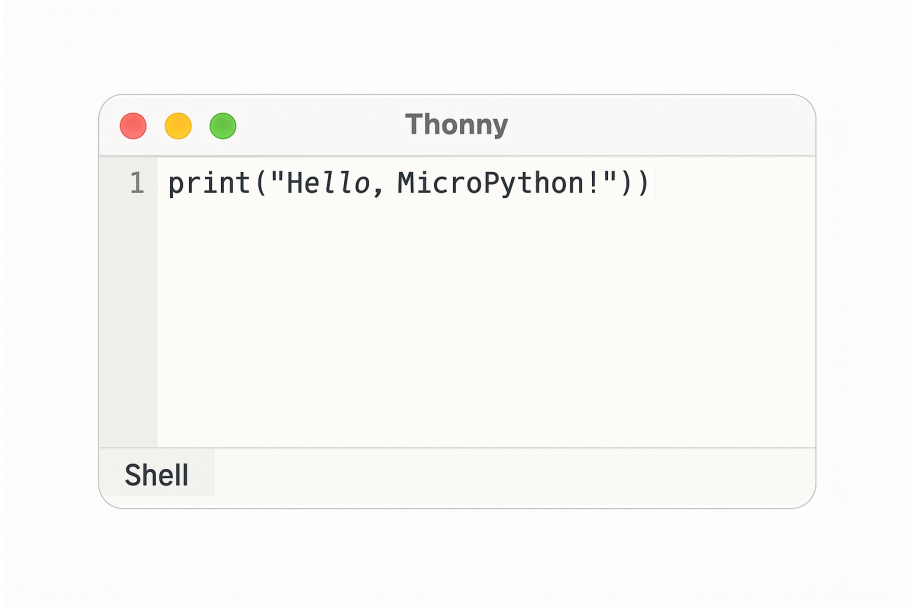
Step 2 - Identify the Serial Port



Step 3 - Erase the Flash Memory / Step 5 - Flash the Firmware

```
on3 -m esptool --port /dev/cu.usbseial-0001 write_fla
odl.py
tod va 4.5.1
ected chip ESP32
necting...
aceback (invalid)!
der has been succes fully stub
o version v4.3
o type: ESP32
tures WlFi,BT,Dual Core, 240MHz, VRef calibration in efus
 Address 4c75:25x
o runtime: YES
lware Security Features:**Traceback (invalid)!
ressed 14800 bytes to 9787...
ting at 0x00001000... (6 %)
s [                 ======== (7okbC5b7622d80c
a of data verified.
d resetting via RTS  pin...
```

Step 6 - Test with Thonny



This guide explains how to erase the flash memory and install the official MicroPython firmware on the M5Stack Core2, using a Mac and the `esptool.py` utility. This is intended for users who want to work directly with Python via Thonny IDE.

Requirements

- M5Stack Core2 device
- USB-C cable
- A Mac computer with Python 3 installed
- Internet connection

Step 1: Install `esptool.py`

Open Terminal and run:

```
pip install esptool
```

This will install the tool used to erase the flash and upload new firmware.

Step 2: Identify the Serial Port

Connect your M5Stack Core2 via USB-C. Then run:

```
ls /dev/tty.*
```

Look for a port name like:

```
/dev/tty.usbserial-XXXXX
```

Make a note of it.

Step 3: Erase the Flash Memory

Use `esptool.py` to erase the flash:

```
esptool.py --chip esp32 --port /dev/tty.usbserial-XXXXX erase_flash
```

(Replace `/dev/tty.usbserial-XXXXX` with your actual port.)

Wait until it says `Chip erase completed successfully`.

Step 4: Download MicroPython Firmware

Visit the official website:

```
https://micropython.org/download/esp32/
```

Download a recent firmware, e.g.:

```
esp32-20230426-v1.20.0.bin
```

Place the file in your Downloads folder.

Step 5: Flash the Firmware

Still in Terminal, run:

```
esptool.py --chip esp32 --port /dev/tty.usbserial-XXXXX --baud 460800 write_flash -z 0x1000 ~/Downloads/esp32-20230426-v1.20.0.bin
```

This will install MicroPython on your Core2.

Step 6: Test with Thonny

1. Open **Thonny**.
2. Go to `Tools > Options > Interpreter`.
3. Choose:
   - Interpreter: *MicroPython (ESP32)*
   - Port: *Your USB serial port (e.g. /dev/tty.usbserial-XXXXX)*
4. Click OK.

You should now see a `>>>` prompt.

Try typing:

```
print("Hello from M5Core2!")
```

You're done!

You now have a clean MicroPython environment on your M5Stack Core2.

From here, you can start programming the screen, LEDs, servos and more using pure Python!