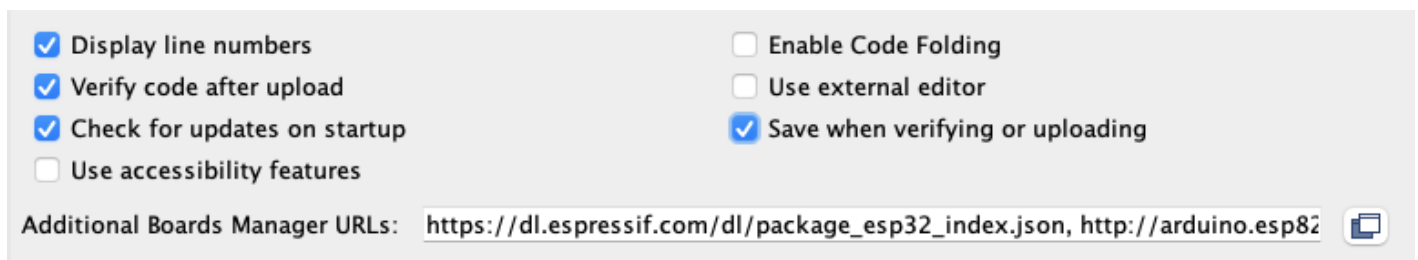


Swarm Tile Eval Kit Feather

Adafruit Feather Software Flashing Instructions

1. Configure your Arduino IDE for your Feather Huzzah:
 - a. Follow installation instruction based on your operating system
 - i. <https://support.arduino.cc/hc/en-us/sections/360003840514-Installation>
 - ii. In Arduino IDE > Preferences, ensure to include the required Board Manager URLs:
 - https://dl.espressif.com/dl/package_esp32_index.json,
[http://arduino.esp8266.com/stable/package_esp8266com_index.j](http://arduino.esp8266.com/stable/package_esp8266com_index.json)



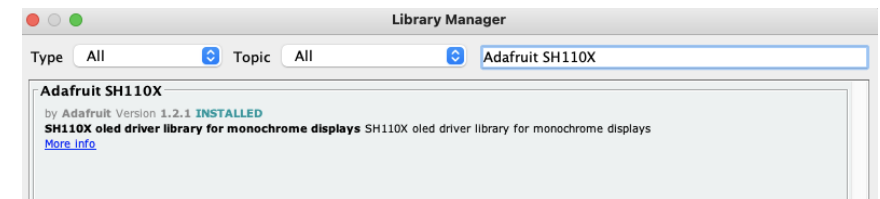
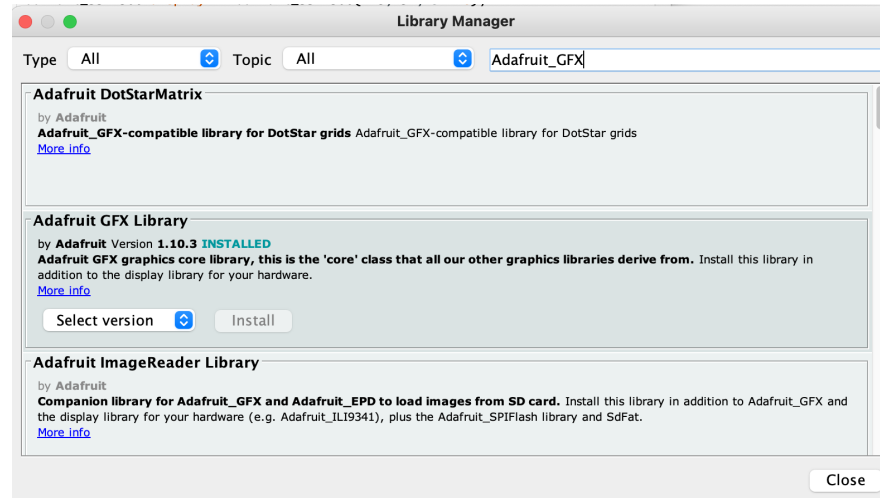
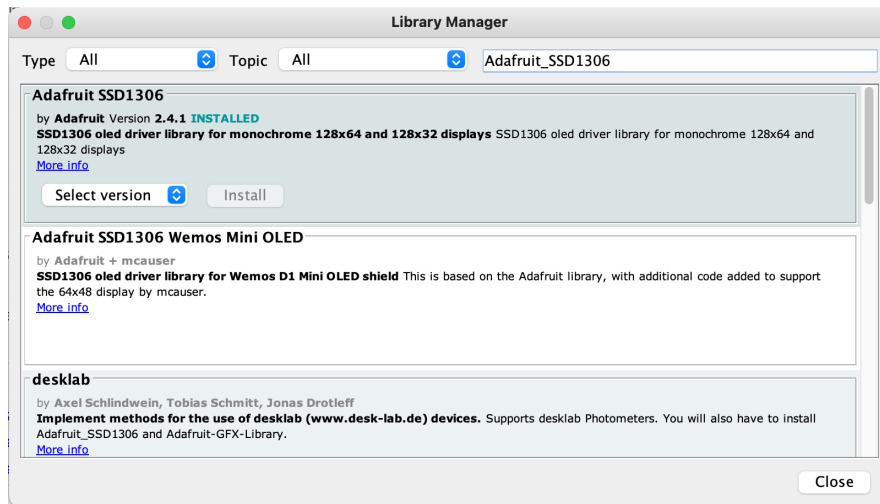
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- iii. Follow these instructions to explore the Arduino IDE to become familiar with the development environment:

https://learn.adafruit.com/adafruit-huzzah32-esp32-feather/using-with-arduino-ide?gclid=Cj0KCQiA7NKBbDBARIsAHbXCB5GnkD4yG51qA3T9K4C4KRPI1aXt-MNbFUO23pokQBnMbwLa1Yg-FsaAmKIEALw_wcB

2. Use Arduino IDE library manager to install **three** required libraries:

- Adafruit_SSD1306 (128x32 OLED)
- Adafruit_GFX Library
- Adafruit_SH110X (128x64 OLED)



3. Unzip Serial Telnet

- a. Contents should look like this:

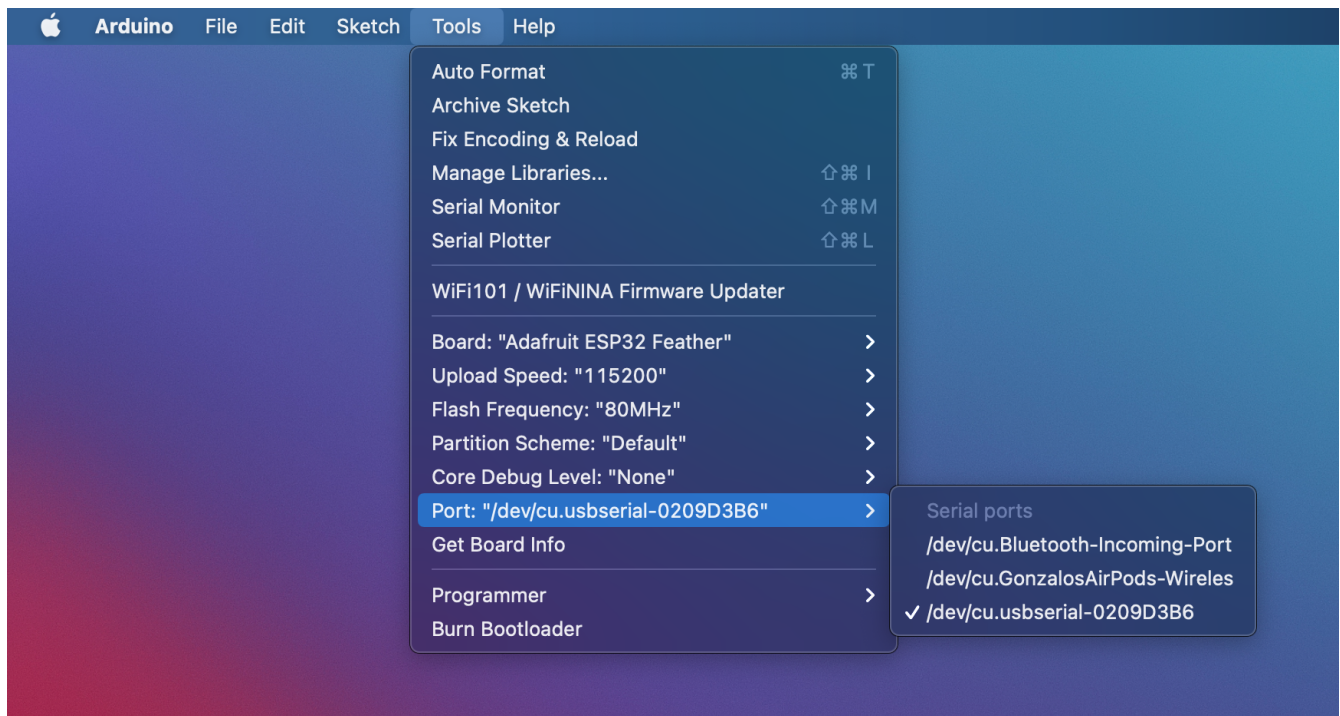


- b. Open the SerialTelnet file with Arduino IDE:
SerialTelnet.ino




4. Plug Feather in to your computer with a USB micro cable

- a. Select board, upload speed, and serial port corresponding to your hardware.
Your serial port address may be different in your environment



5. Compile and upload the sketch using Arduino IDE.
 - a. Note you can choose to comment line 6 if you are not using an [OLED](#)



```

SerialTelnet | Arduino 1.8.13
SerialTelnet | Commandline.h | SDL_Arduino_INA3221.cpp | SDL_Arduino_INA3221.h
1 #include <WiFi.h>
2 #include <Preferences.h>
3 #include "esp_wifi.h"
4 #include "Commandline.h"
5
6 #define OLED
7
8 // enable the OTA handler
9 //#define OTA_HANDLER
10
11 //#define MINIEVAL
12
13
14 #ifdef OLED
15 #include <SPI.h>
16 #include <Wire.h>
17 #include <Adafruit_GFX.h>
18 #include <Adafruit_SSD1306.h>
19
20 Adafruit_SSD1306 display = Adafruit_SSD1306(128, 32, &Wire);
21
22 #if defined(ESP32)
23 #define BUTTON_A 15
24 #define BUTTON_B 32
25 #define BUTTON_C 14
26 #endif
27
28 #include "SDL_Arduino_INA3221.h"
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6. Hard resetting via RST pin should be the last line in the terminal once the code has successfully uploaded

```

SerialTelnet | Arduino 1.8.13
SerialTelnet Commandline.h SDL_Arduino_INA3221.cpp SDL_Arduino_INA3221.h
1 #include <WiFi.h>
2 #include <Preferences.h>
3 #include "esp_wifi.h"
4 #include "Commandline.h"
5
6 #define OLED
7
8 // enable the OTA handler
9 // #define OTA_HANDLER
10
11 // #define MINIEVAL
12
13
14 #ifdef OLED
15 #include <SPI.h>
16 #include <Wire.h>
17 #include <Adafruit_GFX.h>
18 #include <Adafruit_SSD1306.h>
19
20 Adafruit_SSD1306 display = Adafruit_SSD1306(128, 32, &Wire);
21
22 #if defined(ESP32)
23 #define BUTTON_A 15
24 #define BUTTON_B 32
25 #define BUTTON_C 14
26 #endif
27
28 #include "SDL_Arduino_INA3221.h"
29
Done uploading.
Crystal is 40MHz
MAC: 40:f5:20:46:c4:8c
Uploading stub...
Running stub...
Stub running...
Configuring flash size...
Auto-detected Flash size: 4MB
Compressed 8192 bytes to 47...
Wrote 8192 bytes (47 compressed) at 0x0000e000 in 0.0 seconds (effective 7834.6 kbit/s)...
Hash of data verified.
Compressed 15856 bytes to 10276...
Wrote 15856 bytes (10276 compressed) at 0x00001000 in 0.9 seconds (effective 139.6 kbit/s)...
Hash of data verified.
Compressed 667072 bytes to 398594...
Wrote 667072 bytes (398594 compressed) at 0x00010000 in 35.1 seconds (effective 152.2 kbit/s)...
Hash of data verified.
Compressed 3072 bytes to 128...
Wrote 3072 bytes (128 compressed) at 0x00008000 in 0.0 seconds (effective 1548.4 kbit/s)...
Hash of data verified.
Leaving...
Hard resetting via RTS pin...
1 Adafruit ESP32 Feather on /dev/cu.usbserial-0209D386

```

7. Troubleshooting tips:

- a. If you have upgraded your Mac to Big Sur, you may run into this issues with pySerial (*Preferences.h: No such file or directory* during sketch verification or *esp.wifi.h: No such file or directory*)
 - i. <https://github.com/espressif/arduino-esp32/issues/4408>
 1. See [suggested fix within](#)
8. Test with Tile within Eval Kit, following the [quickstart guide](#)