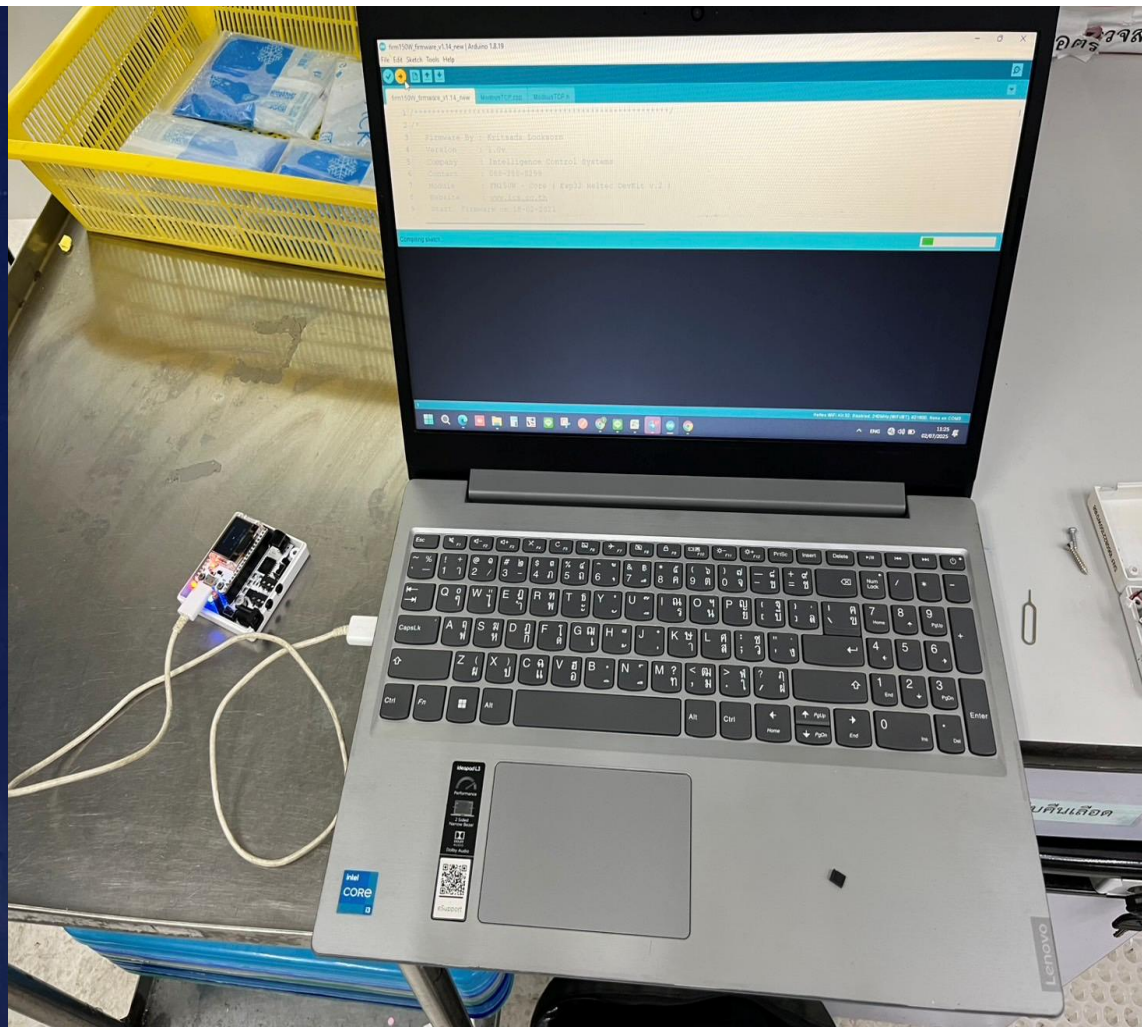
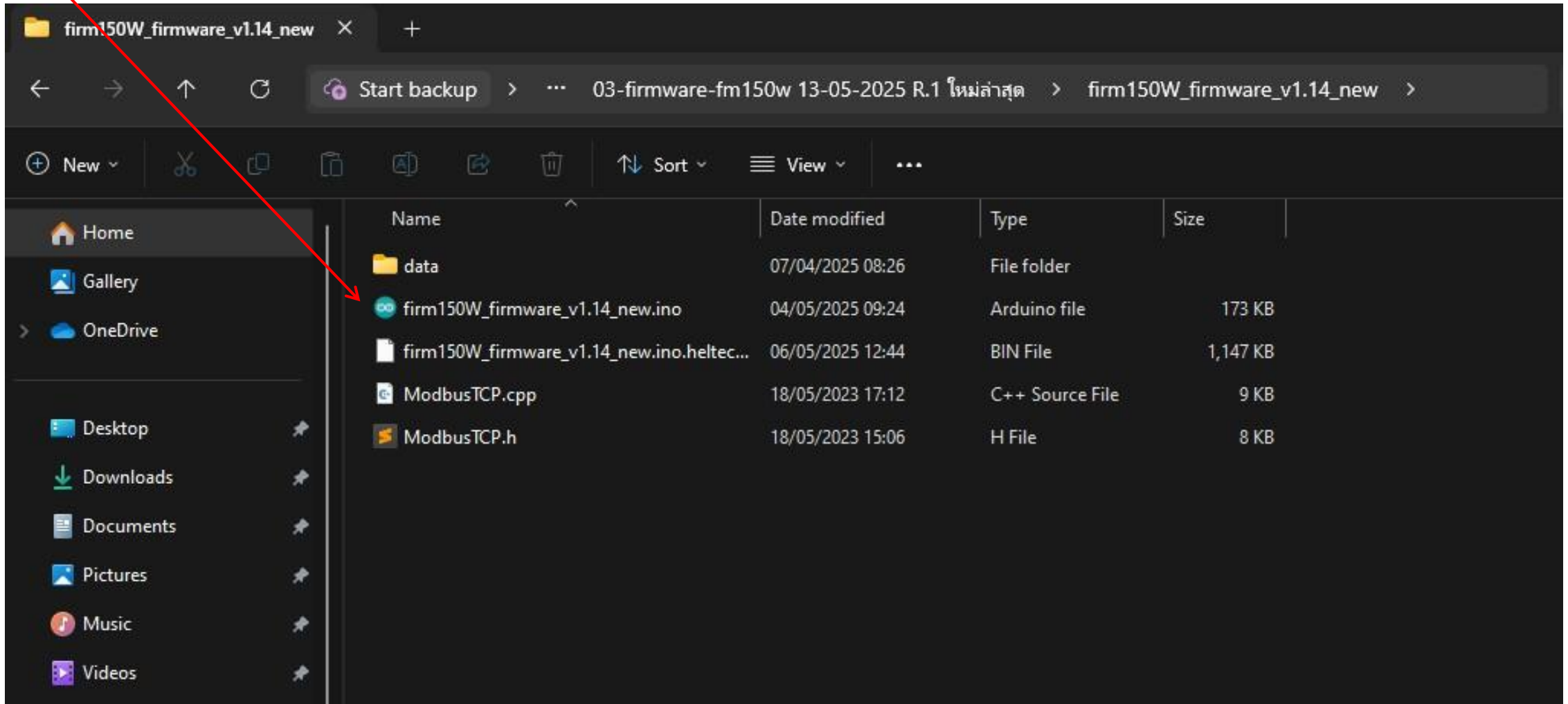


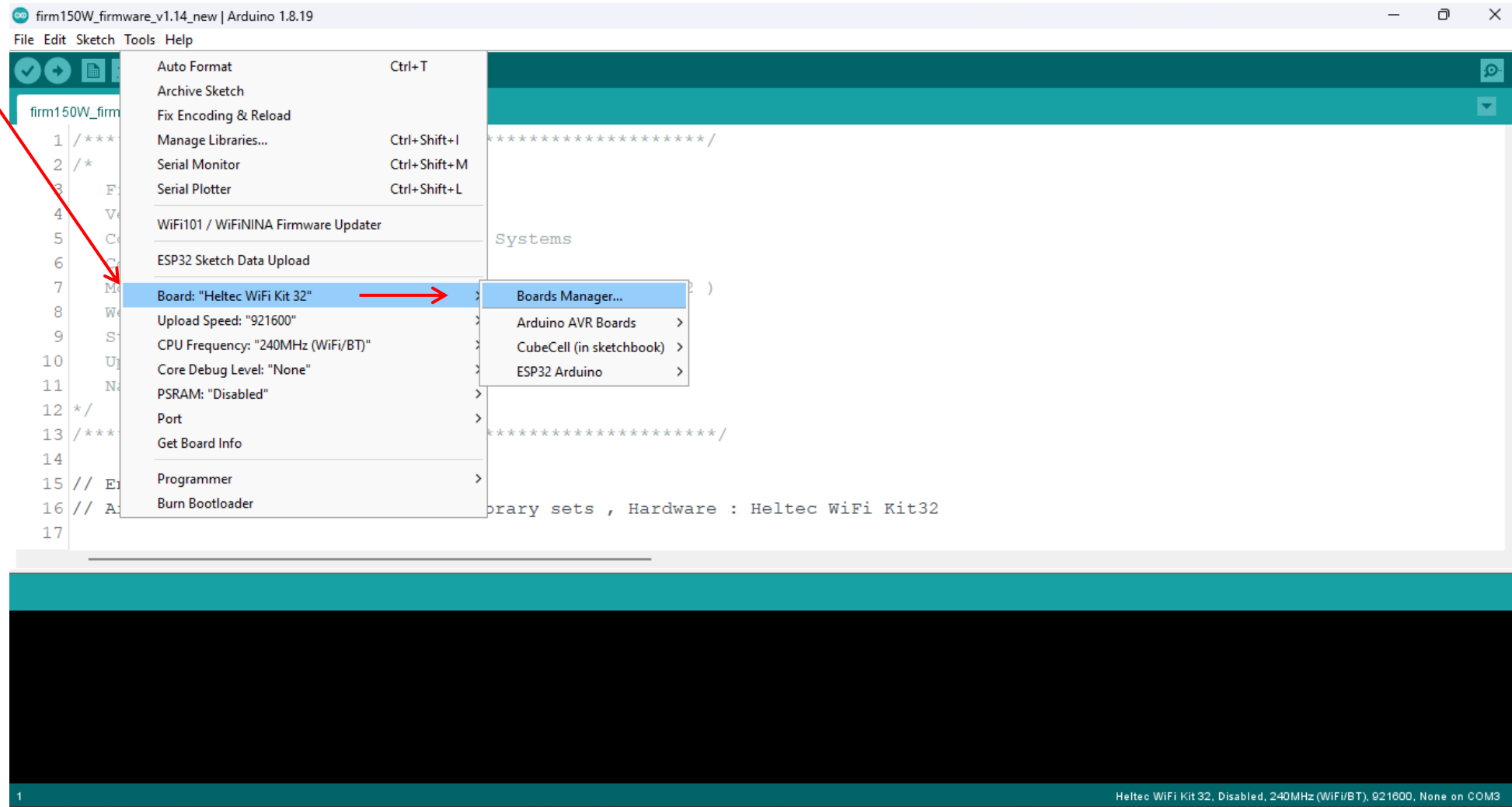
วิธีอัปเดต firmware FM-150W



1.ไปที่ Folder firmware FM150W แล้วไปเปิด firmware



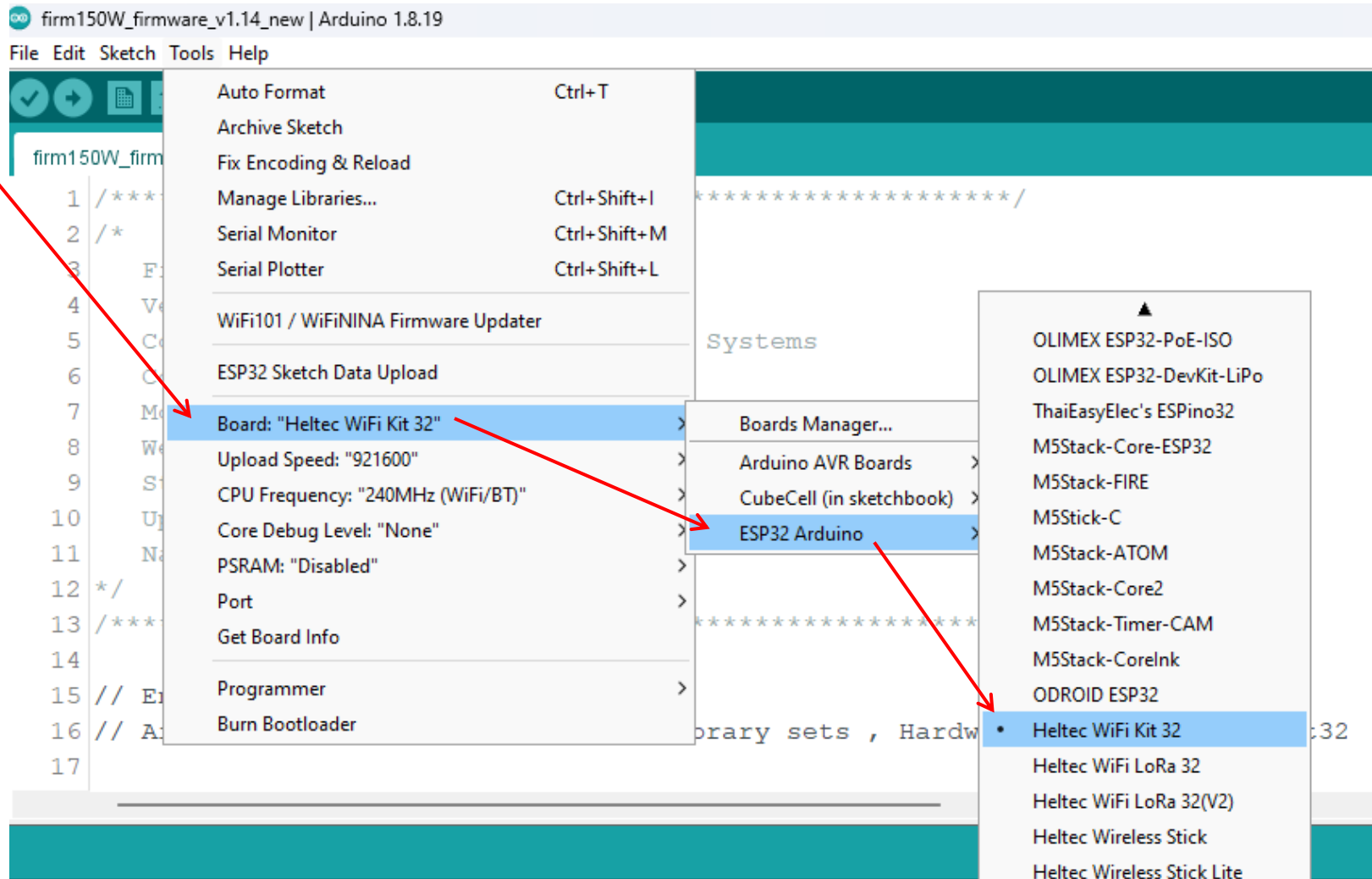
2.Board Heltec Wifi Kit 32 แล้วไปที่ Boards Manager



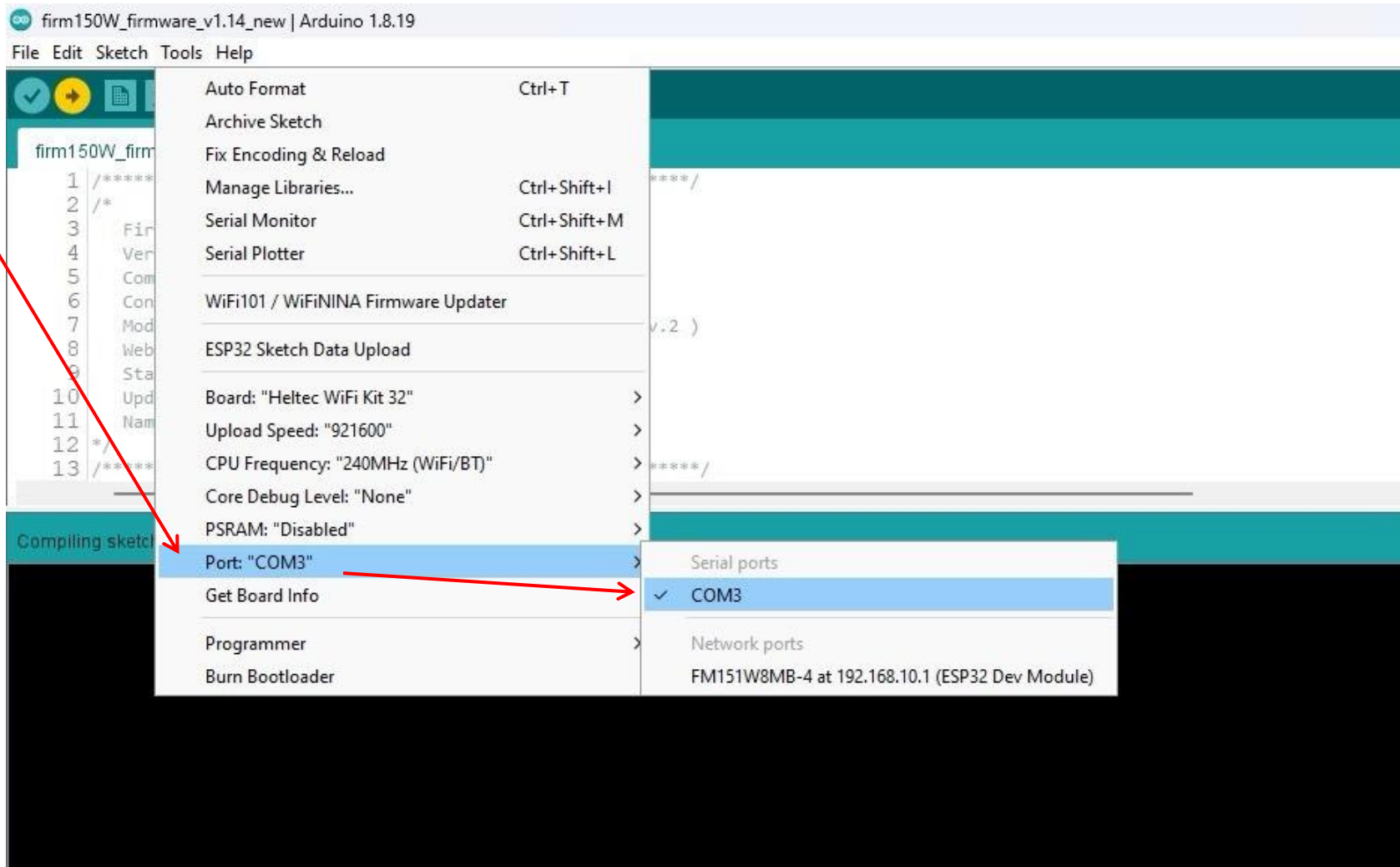
3. Boards Manager 2.0.2 หรือ 2.0.8

The screenshot shows the Arduino IDE interface with the Boards Manager window open. The window title is "Boards Manager". The "Type" dropdown is set to "All" and the search filter is "ESP32". Under the "Arduino ESP32 Boards" section, the package "esp32" by "Espressif Systems" is listed with the version "2.0.2 INSTALLED". A red box highlights this package and its version. Below it, another red box highlights the "Select version" dropdown menu and the "Install" button. A red arrow points from the title of the slide to the "2.0.2 INSTALLED" text. At the bottom of the window, there is a red text box with the Thai text: "ถ้ายังไม่ได้เลือกเวอร์ชันให้เลือกเวอร์ชันแล้ว Install".

4.Board แล้วเลือก Heltec Wifi Kit 32

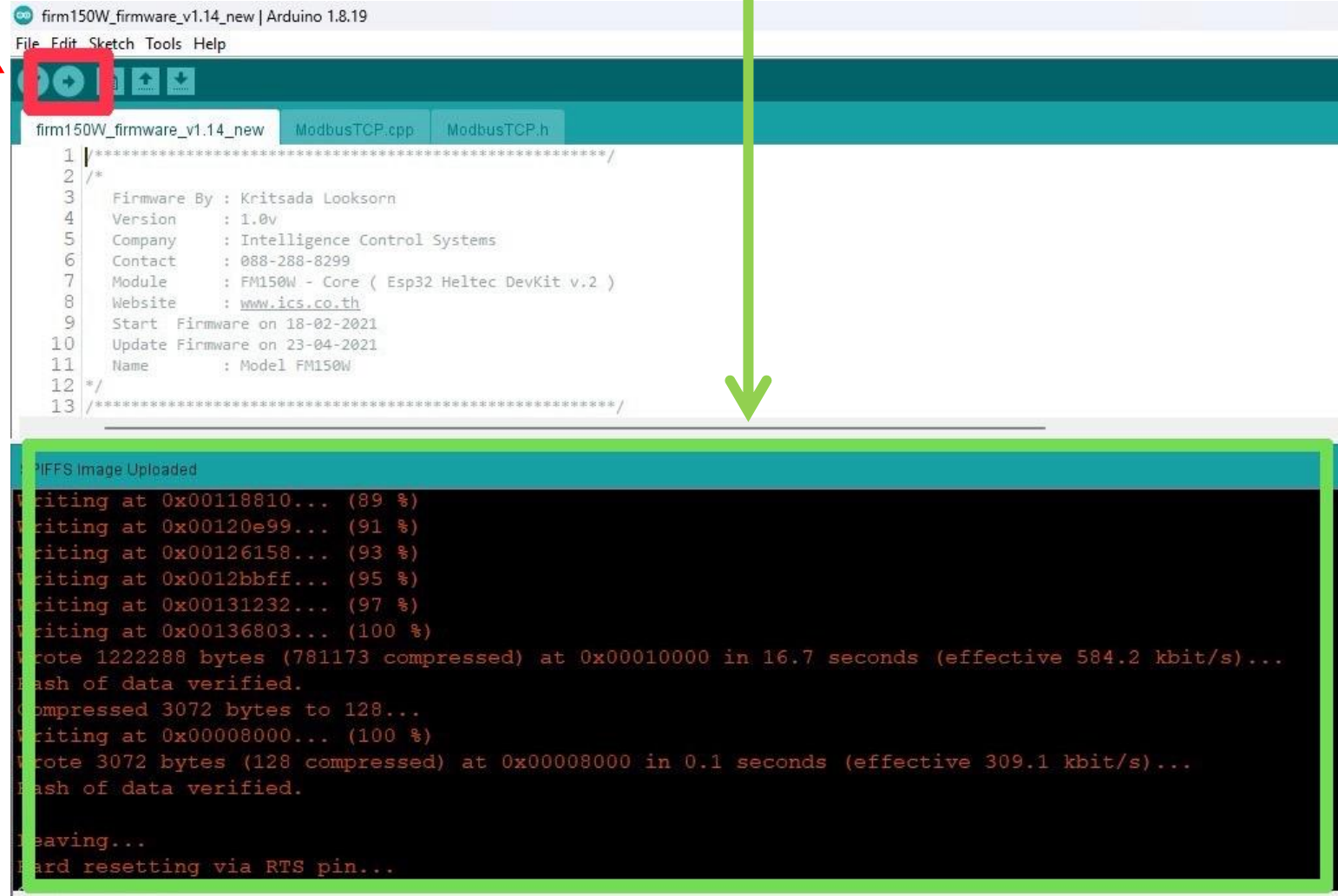


5.เลือก Port COM3 หรือ COM อื่นๆ



6. กดตรงนี้อัพเดท firmware

6.1 ถ้านานะอัปเดตสมบูรณ์



The screenshot shows the Arduino IDE interface. The top toolbar contains several icons, with the upload icon (a right-pointing arrow) highlighted by a red box. A red arrow points from the text '6. กดตรงนี้อัพเดท firmware' to this icon. Below the toolbar, the code editor displays the firmware source code, including a comment block with metadata such as 'Firmware By : Kritsada Looksonn', 'Version : 1.0v', and 'Company : Intelligence Control Systems'. A green arrow points from the text '6.1 ถ้านานะอัปเดตสมบูรณ์' to the serial monitor window at the bottom. The serial monitor shows the progress of the upload, with messages like 'Writing at 0x00118810... (89 %)', 'Wrote 1222288 bytes (781173 compressed) at 0x00010000 in 16.7 seconds (effective 584.2 kbit/s)...', and 'Flash of data verified.'.

```
firm150W_firmware_v1.14_new | Arduino 1.8.19
File Edit Sketch Tools Help
firm150W_firmware_v1.14_new ModbusTCP.cpp ModbusTCP.h
1 |*****/
2 |/*
3 | Firmware By : Kritsada Looksonn
4 | Version : 1.0v
5 | Company : Intelligence Control Systems
6 | Contact : 088-288-8299
7 | Module : FM150W - Core ( Esp32 Heltec DevKit v.2 )
8 | Website : www.ics.co.th
9 | Start Firmware on 18-02-2021
10 | Update Firmware on 23-04-2021
11 | Name : Model FM150W
12 |*/
13 |*****/

PIFFS Image Uploaded
Writing at 0x00118810... (89 %)
Writing at 0x00120e99... (91 %)
Writing at 0x00126158... (93 %)
Writing at 0x0012bbff... (95 %)
Writing at 0x00131232... (97 %)
Writing at 0x00136803... (100 %)
Wrote 1222288 bytes (781173 compressed) at 0x00010000 in 16.7 seconds (effective 584.2 kbit/s)...
Flash of data verified.
Compressed 3072 bytes to 128...
Writing at 0x00008000... (100 %)
Wrote 3072 bytes (128 compressed) at 0x00008000 in 0.1 seconds (effective 309.1 kbit/s)...
Flash of data verified.
Leaving...
Hard resetting via RTS pin...
```

7. วิธีอัปเดต Firmware หน้าเว็บ 7.1 เลือก SPIFFS แล้ว กด ok

The image shows two side-by-side screenshots of the Arduino IDE interface. The left screenshot shows the 'Tools' menu with 'ESP32 Sketch Data Upload' highlighted. The right screenshot shows the 'Filesystem' dialog box with 'SPIFFS' selected in the dropdown menu. A red box highlights the 'SPIFFS' selection in the dialog. Below the dialog, the terminal output shows the progress of the upload, including the message 'LittleFS Image Uploaded' and 'Wrote 1507328 bytes (604407 compressed) at 0x00290000 in 15.7 seconds (effective 770.2 kbit/s)'. Red arrows point from the text above to the 'ESP32 Sketch Data Upload' option and the 'SPIFFS' selection in the dialog.

```
firm150W_firmware_v1.14_new | Arduino 1.8.19
File Edit Sketch Tools Help
Auto Format Ctrl+T
Archive Sketch
Fix Encoding & Reload
Manage Libraries... Ctrl+Shift+I
Serial Monitor Ctrl+Shift+M
Serial Plotter Ctrl+Shift+L
ESP32 Sketch Data Upload
Upload Speed: "921600"
CPU Frequency: "240MHz (WiFi/BT)"
Core Debug Level: "None"
PSRAM: "Disabled"
Port: "COM3"
Get Board Info
Programmer
Burn Bootloader

firm150W_firmware_v1.14_new | Arduino 1.8.19
File Edit Sketch Tools Help
firm150W_firmware_v1.14_new ModbusTCP.cpp ModbusTCP.h
1 /*****
2 /*
3 Firmware By : Kritsada Looksonn
4 Version : 1.0v
5 Company : Intelligence Control Systems
6 Contact : 088-288-8299
7 Module : FM150W - Core ( Esp32 Heltec DevKit v.2 )
8 Website : www.ics.co.th
9 Start Firmware on 18-02-2021
10 Update Firmware on 23-04-2021
11 Name : Model FM150W
12 */
13 /*****/

LittleFS Image Uploaded
->Writing at 0x0036b7b6... (75 %)
->Writing at 0x0036f957... (78 %)
->Writing at 0x00373a3c... (81 %)
->Writing at 0x00377a37... (83 %)
->Writing at 0x0037ba32... (86 %)
->Writing at 0x0037fa2d... (89 %)
->Writing at 0x00383a28... (91 %)
->Writing at 0x00387a23... (94 %)
->Writing at 0x0038bale... (97 %)
->Writing at 0x0038fa19... (100 %)
->Wrote 1507328 bytes (604407 compressed) at 0x00290000 in 15.7 seconds (effective 770.2 kbit/s).
->Hash of data verified.
->
->Leaving...
->Hard resetting via RTS pin...
```