Arduino for ODROID-GO - Weather Station

- Make sure that you've followed the **Arduino setup** guide.
- The webpage supports IE 11+, Edge 13+, Firefox 47+, Chrome 49+, Safari 9.1+, Opera 41+, IOS Safari 9.3+, Android Broswer 4.4+, Chrome for Android 53+

You can have a portable Weather station in your hand.

Requirements

Make sure that you have these products:

- ODROID-GO
- Weather board 2
- A MicroUSB cable

Setup the development environment for Arduino on your system.

Before proceeding with this guide, **attach** Weather board 2 to ODROID-GO and **connect** it to the PC via micro USB cable.

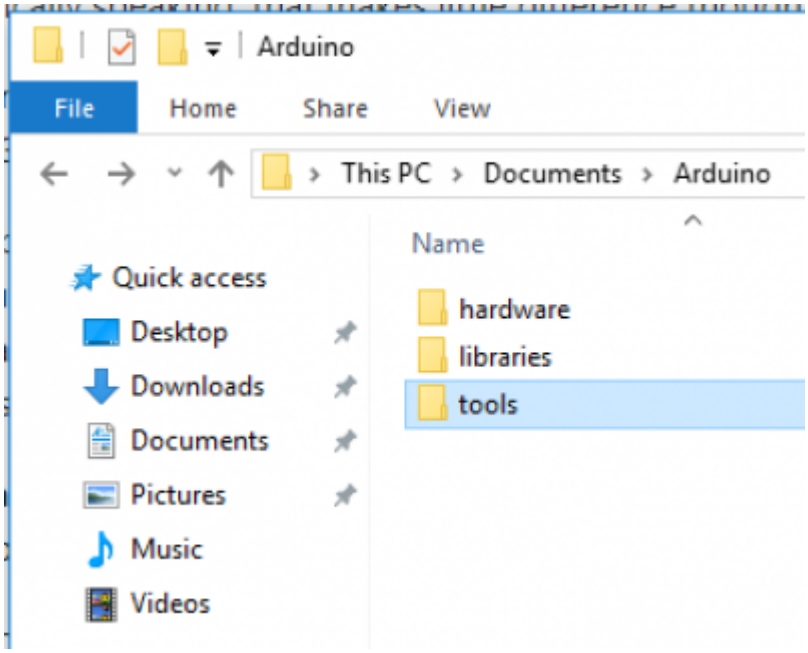
Setup SPIFFS

- Visit to see full documentation about SPIFFS.
  - https://github.com/me-no-dev/arduino-esp32fs-plugin

SPIFFS stands for **SPI Flash File System**. ODROID-GO has a small (but enough to use) flash memory which you can upload data by using this tool.

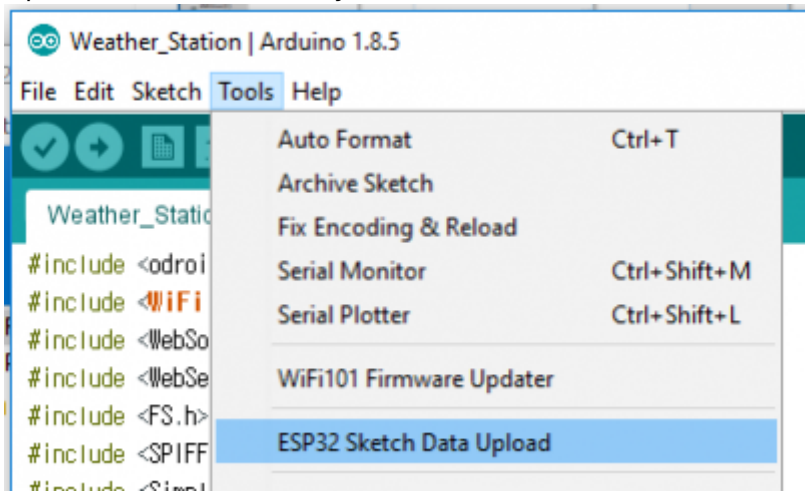
Download a compressed file from this link (ESP32FS-1.0).
Extract the **ESP32FS** directory to:

- Windows: %USERPROFILE%\Documents\Arduino\tools
- Linux: ~/Arduino/tools



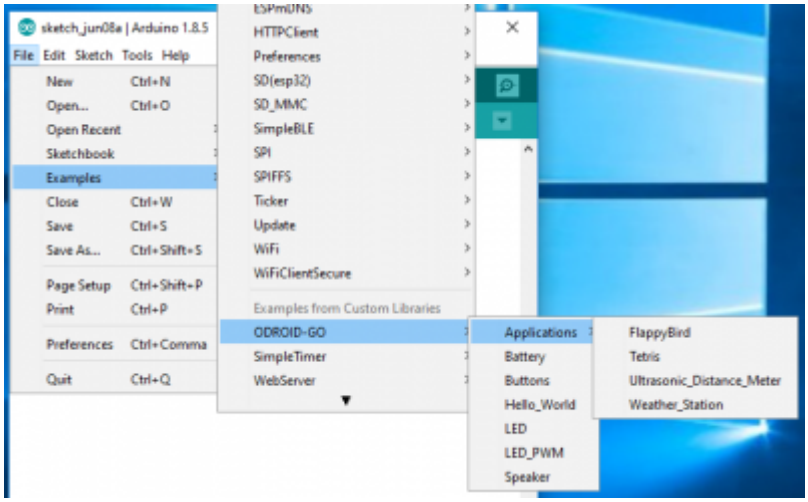
Create the **tools** directory before extracting if it doesn't exist.

Open **Arduino IDE**, and you can see the **Tools → ESP32 Sketch Data Upload** menu.

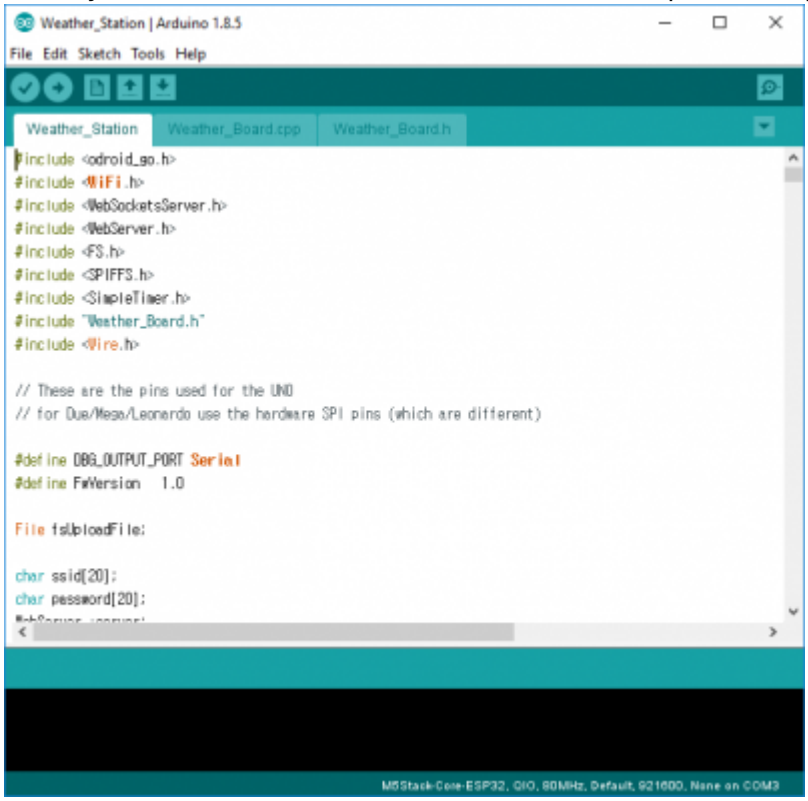


Import the sample to the IDE

Click the **Files → Examples → ODROID-GO → Applications → Weather_Station** menu to import the Weather station example.



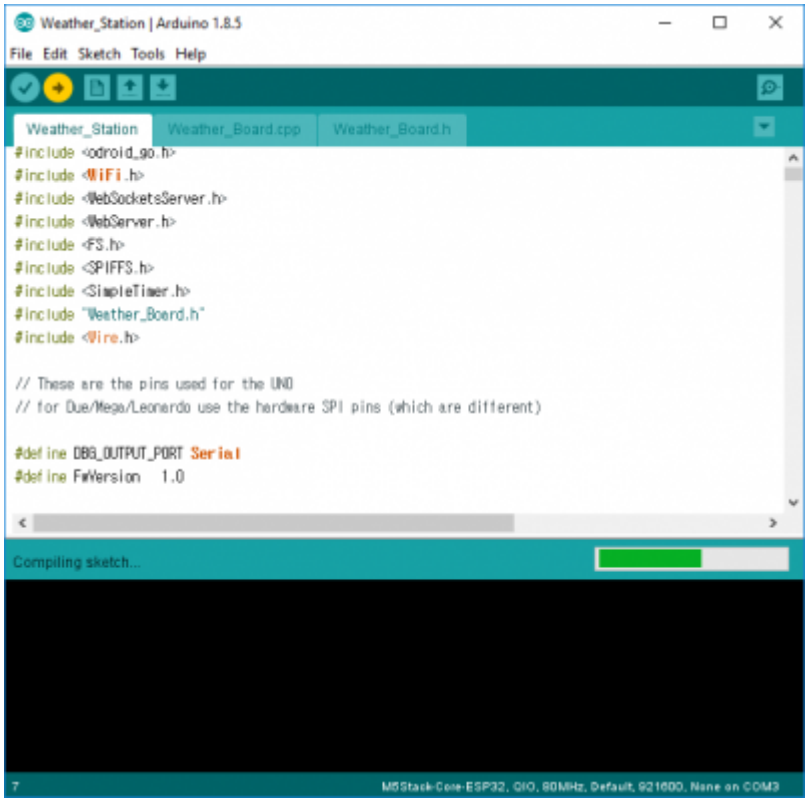
Then, you can see the new window with the example code appear.



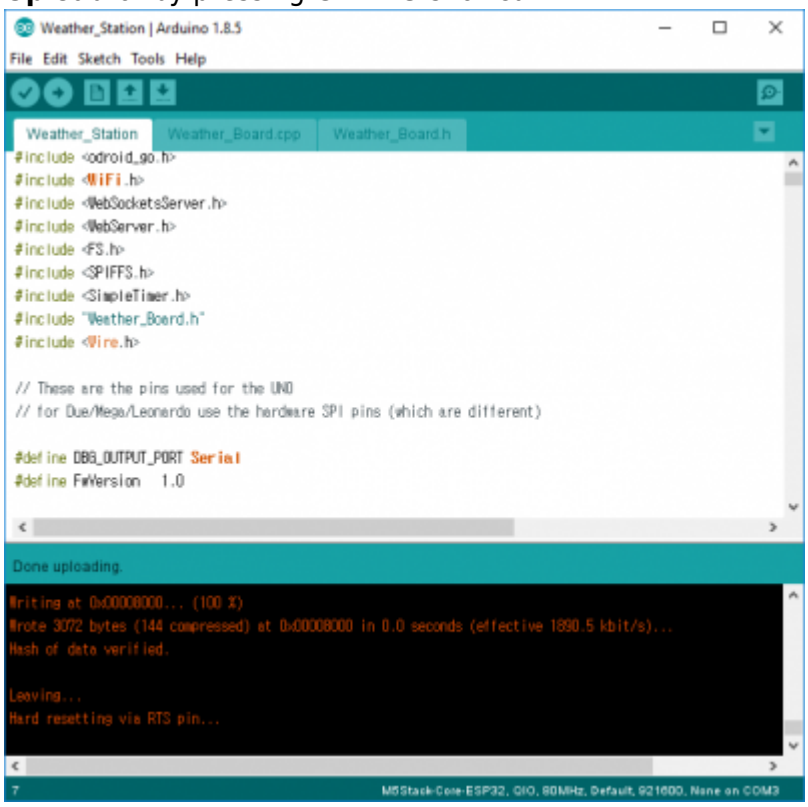
Compile and upload the binary

- This guide assume that the port number is **COM3**. It might be different from yours.

Verify and compile the sketch. This can be done by clicking **Sketch → Verify/Compile** menu or by pressing **CTRL-R** shortcut.



If the compiling completes without any issue, upload the compiled binary by clicking **Sketch → Upload** or by pressing **CTRL-U** shortcut.

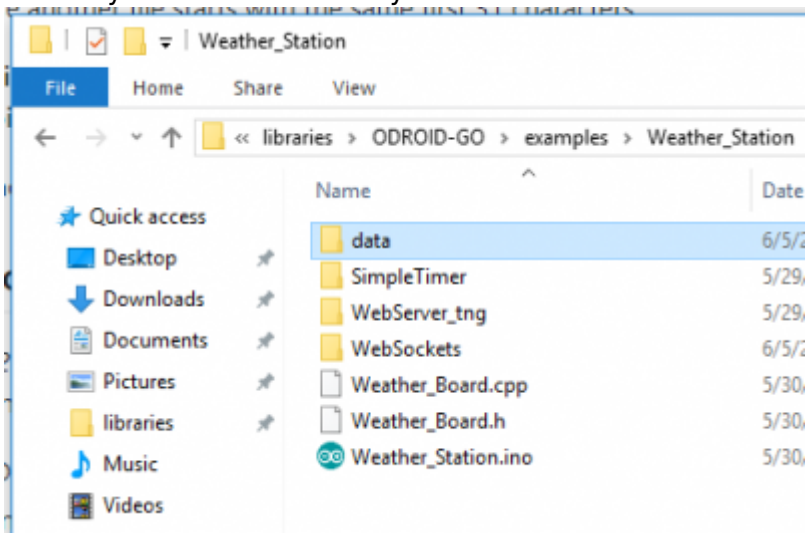


You can **omit** the compile process since its done automatically when you just upload without doing a compile before.
You will know the uploading is complete by the message: “Hard resetting via RTS pin...”.

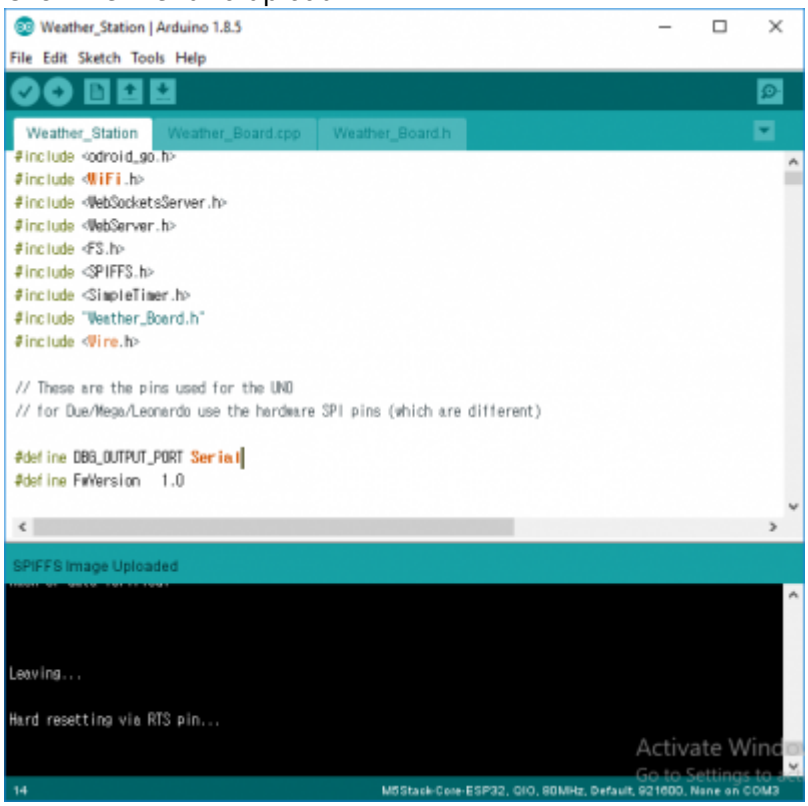
Upload the data

This example has a web server program to serve measurements via a web page.
To see that page, you have to upload **the web page data** to the ODROID-GO's flash memory.
SPIFFS lets you do that.

If you click the **Tools → ESP8266 Sketch Data Upload menu**, SPIFFS utility will find the **data** directory in the current library and send it.



Click the menu to upload.



The uploading is complet when the message “Hard resetting via RTS pin...“ is displayed.

Check if it works

After the upload completes, ODROID-GO reboots automatically.

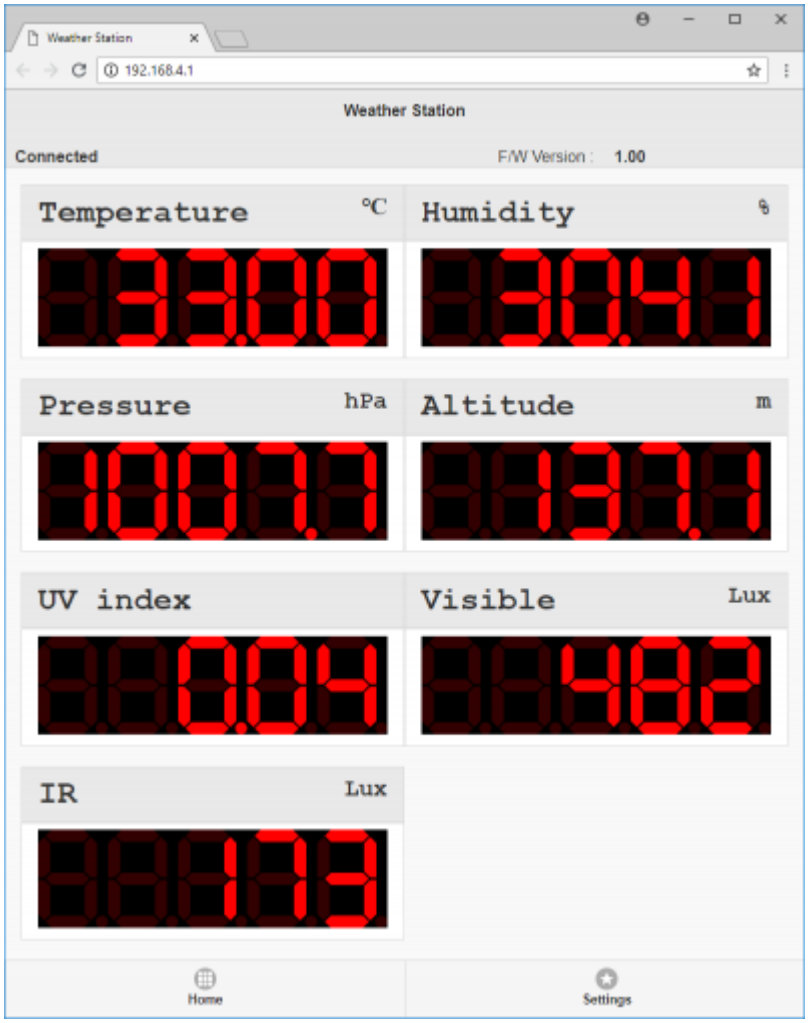
The screen showing each data measurement appears on the ODROID-GO, and after few seconds, the **blue LED** in the middle of the board turns on.

Visit with your device - PC / mobile

The blue LED indicates that the **web server** on the board is ready so that you can connect to it and read the data from the ODROID-GO's access point.

Find the Wifi AP named **ODROID_GO_****** and connect to it.
The default password is **12345678**.

Open a web browser and navigate to **192.168.4.1**. This IP address is set by default.
You can see the web GUI showing each measurement, and the **blue LED now keeps blinking** after the socket communication starts.



You can **set the Wifi configurations** such as SSID, IP address, and password.