

Device and Sensors Setup

We are going to create a device from the following components. Links will redirect you to Amazon website for the UK. You will have to convert to your own region Amazon or use related website for the devices.

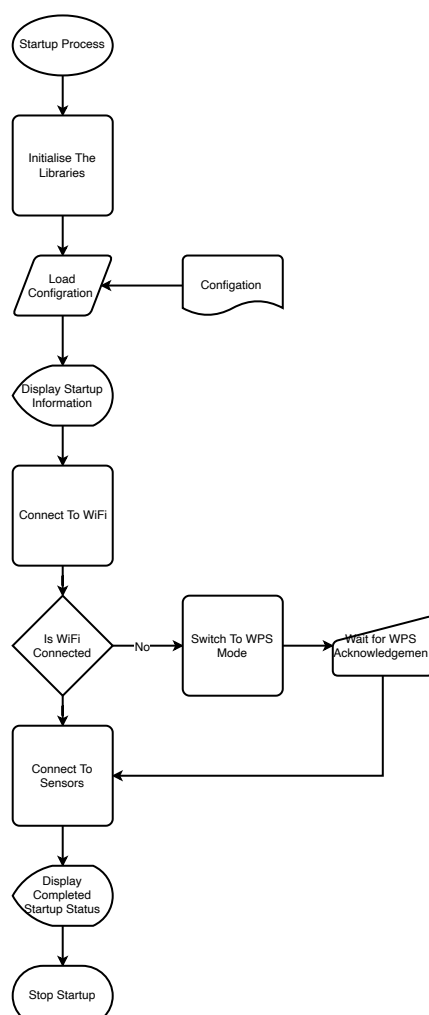
- [ESP32 Development board](#)
- [Lithium Recharge Battery](#)
- [5 U.FL Mini PCI to SMA Female](#)
- [DSD Tech DHT22](#)
- [GPS NEO-6M](#)
- [GPS External Ariel](#)
- [LiDAR Sensor](#)

The **GPS External Ariel/5 U.FL Mini PCI to SMA Female** is really only needed if you want to program the device inside a warm environment or not. I know you can sometimes get a satellite lock indoors, but its not reliable as you need line of sight for this lock.

I have added in a 3 LED's to show power on, reading devices and sending to the cloud status.

The OLED display on the ESP32 board will display the following information on startup and normal mode.

Startup Process



WPS Mode

The device will automatically switch to WPS mode under the following conditions.

1. Never linked to a router before
2. Cannot find previous router
3. Cannot connect in a timely manner to an existing router