

# Arduino IDE Configuration

The Arduino IDE needs to have the Seeed SAMD21 core and various libraries installed, there are brief instructions below. If you have not carried out such changes to the Arduino IDE before I suggest you get the assistance from someone who is experienced. I cannot provide support for the Arduino IDE.

## Seeed XIAO SAMD21 support

Full instructions for setting up the Arduino IDE for XIAO SAMD21 support are here;  
<https://wiki.seeedstudio.com/Seeeduino-XIAO/>

In the Arduino IDE preferences, Additional Board Manager URLs section add;  
[https://files.seeedstudio.com/arduino/package\\_seeeduino\\_boards\\_index.json](https://files.seeedstudio.com/arduino/package_seeeduino_boards_index.json)  
Then in the IDE boards manager search for 'Seeed SAMD boards' and install it.

## Libraries needed

You need to install the following libraries;

### LMIC Low Power

Download the library from here;

[https://github.com/CongducPham/LMIC\\_low\\_power](https://github.com/CongducPham/LMIC_low_power)

Unzip the downloaded file and follow the installation instructions at the above link;  
Copy the lmic (folder) into your Arduino libraries folder. Then you need to ensure the #define LMIC\_LOWPOWER line in the lmic libraries lmic/src/lmic/config.h file is uncommented, so it looks like this around line 96 of the config.h file;

```
//added by C. Pham  
#define LMIC_LOWPOWER
```

### RTCZero

From Tools\Manage Libraries search for 'RTCZero' and install it.

### Arduino Low Power

From Tools\Manage Libraries search for 'Arduino Low Power' and install it.

### ArduinoJson 6.x

From Tools\Manage Libraries search for search for 'ArduinoJson' and install it.

### CayenneLPP

From Tools\Manage Libraries search for search for 'CayenneLPP' and install it.

### Seeed BME280

From Tools\Manage Libraries search for search for 'Grove – Barometer Sensor BME280' and install it.

## Remove Old Libraries

If you have other LMIC libraries installed you will need to remove them as they will conflict with the LMIC Low Power library required for the **25 LMIC low power OTAA XIAO SAMD21 FRAM** sketch. The same applies to the CayenneLPP library, there is one included in the TheThingsNetwork library and this might conflict with the stand-alone CayenneLPP library.

***February 2023***