Arduino Nano 33 Sense Board (BLE)

> NB: Pins A2 an A3 on the CCI board are probably not working.

Intro

The Arduino NANO 33 BLE Sense board has been designed to offer a power savvy and cost effective solution for makers seeking to have Bluetooth Low Energy connectivity in their projects. It has a number of sensors built in to the board such as an *Inertial Measurement Unit (IMU)*, *Digital Microphone*, *Gesture Sensor*, *Pressure and Temperature Sensor* and a *Relative Humidity Sensor*.

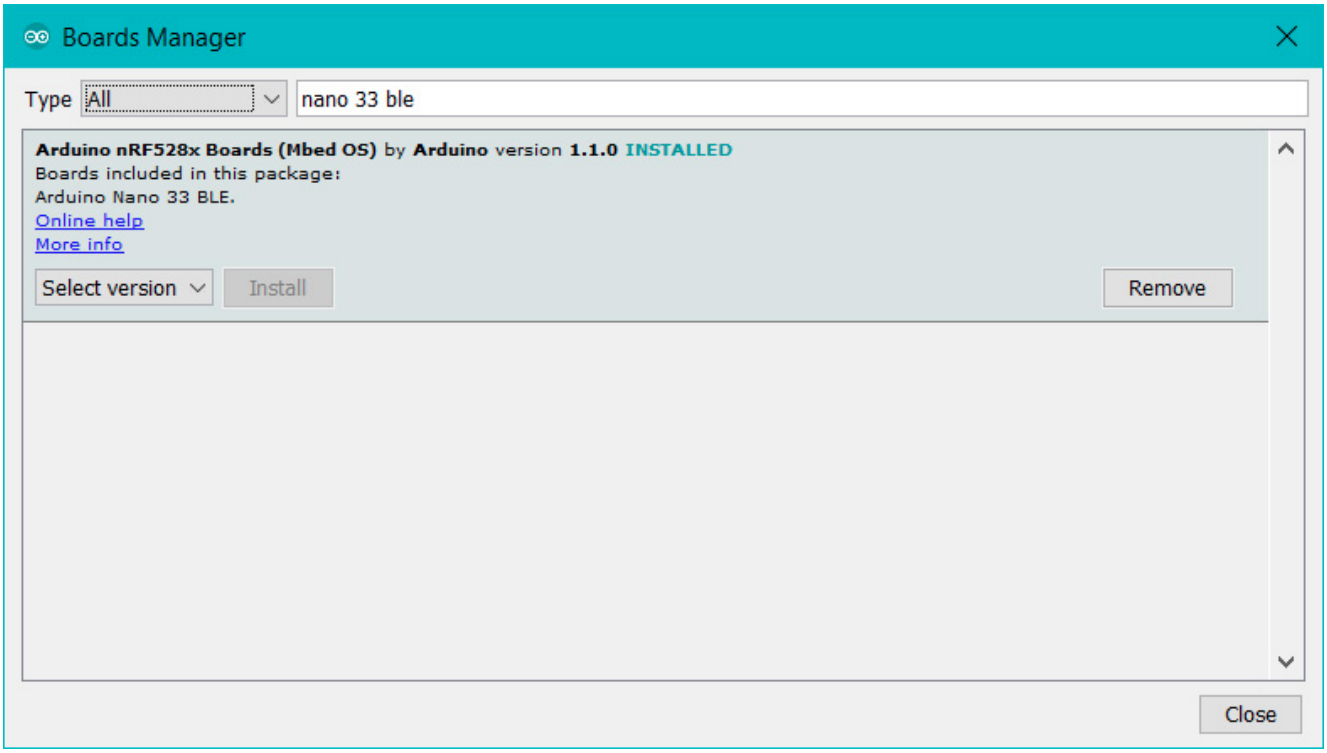
The brains of the board is the NINA B306 module and the Nordic nRF52840 that contains a Cortex M4F microcontroller (ARM). The USB connector of the board is directly connected to the native USB of the NINA B306 module. This routing enables you to use the Arduino NANO 33 BLE Sense as a client USB peripheral (acting as a mouse or a keyboard connected to the computer) or as a USB host device so that devices like a mouse, keyboard, or an Android phone can be connected to the Arduino NANO 33 BLE.

Specification

Thing	Type
Connectivity	BLE 5.0
Chip	NINA-b3 (nRF52840)
Clock	64 MHz
Memory	1 MB (Flash), 256 SRAM
Interfaces	USB, SPI, I2C, I2S, UART
Voltages	5V Input (USB), 4.5-21V Vin, 3.3V Operating
Pinout	14 Digital, 6 PWM, 8 Analog
Dimensions	18 x 45mm

Installation

You need to install the Arduino nRF528x mbed Core to your Ardiuno IDE before you can upload code to your board. This is done by going to *Tools > Boards > Boards Manager* and searching for *nano 33 ble*:



You may also need to install a G++ compiler if you don't have this already installed. (See relevant steps for your machine). If you do see a compiler error in the Arduino IDE, after having installed GCC, you may need to **re-install** the nRF528x mbed core. To do this delete this folder `/Users/username/Library/Arduino15/packages/arduino` and then re-install the core above.

PLEASE NOTE:

The microcontroller on the Arduino NANO 33 BLE Sense runs at 3.3V, which means that **you must never apply more than 3.3V to its Digital and Analog pins.** Care must be taken when connecting sensors and actuators to assure that this limit of 3.3V is never exceeded. **Connecting higher voltage signals, like the 5V commonly used with the other Arduino boards, will damage the Arduino NANO 33 BLE Sense.**