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BLE Nano with MK20 USB board

BLE Nano with MK20 USB board: ultra-compact BLE development board with nRF51822 and versatile programming for IoT prototyping.

SKU	UPDATED	PRICE
113990087	2024-08-09 02:07:26	$32.90(Excl. VAT)



Overview



The BLE Nano is the smallest Bluetooth 4.1 Low Energy development board, featuring Nordic nRF51822 SoC with ultra-low power consumption. Supporting 1.8V to 3.3V, it offers multiple programming options and easy firmware deployment via the MK20 USB board.

Key Features

BLE Nano is the smallest Bluetooth 4.1 Low Energy (BLE) development board in the market. The core is Nordic nRF51822 (an ARM Cortex-M0 SoC plus BLE capability) running at 16MHz with ultra low power consumption.

Developing a Bluetooth Smart enabled 'appcessory' (accessory device + companion application) is easier than ever. You can quickly produce protypes and demos target for Internet of Things (IoT) and other interesting projects. BLE Nano could operate under 1.8V to 3.3V, therefore it works with a lot of electronic components.

Features

- Smallest BLE development board, only 18.5mm x 21.0mm
- **Nordic nRF51822 SoC** supports both BLE Central and BLE Peripheral roles
- Ultra low power consumption
- Support voltage from 1.8V to 3.3V
- Software development using mbed.org, GCC, Keil or Arduino
- Lots of libraries and examples available
- Easy firmware deployment with our MK20 USB board or Over-the-Air download (available soon)
- Work with our free **Android App** and **iOS App**

Current supported BLE central devices:

iOS 7

- iPhone 4s
- iPhone 5 & 6 (all models)
- iPod touch 5
- iPad 3/4/mini/Air

Android 4.3 or above (4.4 recommended for stability) with Bluetooth 4.0 hardware support

- Nexus 4
- Nexus 5
- Nexus 7
- **other compatible Android devices reported by our users** (please report any other Android devices supported)

Windows Phone 8.1

- Nokia Lumia 630 (please report any other Windows Phone devices supported)

Windows 8.1 with built-in Bluetooth 4.0 or USB dongle

Mac OSX 10.9.2 with built-in Bluetooth 4.0 or USB dongle

Linux with BlueZ 5.1 with built-in Bluetooth 4.0 or USB dongle

Programming

There are three options to program your BLE Nano with MK20 USB Board.

Nordic nRF51822 BLE SDK
If you want the full power of nRF51822, you should use **Nordic nRF51822 BLE SDK**, we provide a product key for all registered users* of our BLE Nano to download the SDK.
We have prepared a guide "**Firmware Development with nRF51822 SDK**" to show you how to use the SDK with ARM GCC.

mbed's Bluetooth Low Energy API
The **mbed platform**, developed by **ARM**, provides free software libraries and online tools for professional rapid prototyping of products based on ARM microcontrollers. Their Bluetooth Low Energy Development Team has released the **mbed BLE API together with some samples**. Our "**Getting Started with nRF51822**" guide shows you how to start programming with mbed.

Arduino Library for nRF51822
We have developed an Arduino library for nRF51822 which will be open-sourced and publicly available in the future; it is still at pre-release stage but we invite all interested registered users* of our BLE Nano to access the pre-release library. Please refer to our "**Getting Started with nRF51822**" guide for more details.

* You will find a product registration card inside the BLE Nano box with the instruction on how to register.

BLE Nano

Specification

MK20 USB Board

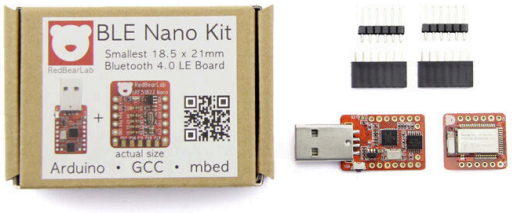
The MK20 (Freescale MK20DX128VFM5) USB board acts as a dongle, it accepts 5V from USB port and regulates to 3.3V via the onboard LDO which can be used to power BLE Nano. It appears on your computer as both a serial port and a removable mass storage disk. Please refer to the guide Getting Started with BLE Nano to learn how to deploy firmware using MK20 USB board.

Since the BLE Nano can work as low as 1.8V, we have designed the MK20 USB board to run at 1.8V as well, simple short the switch S, then the regulator will outputs 1.8V instead. This would allow your BLE Nano to work with 1.8V components.

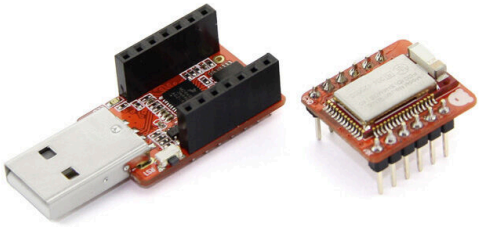
Support

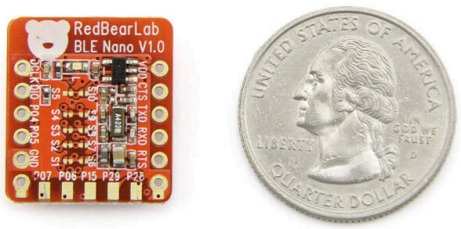
- **Forums for BLE Nano**
- For more information on: **http://redbearlab.com/blenano**
- For techsupport, please visit **https://redbear.cc/contact-us/**.

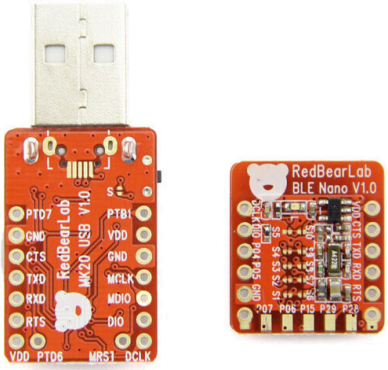
Product Gallery

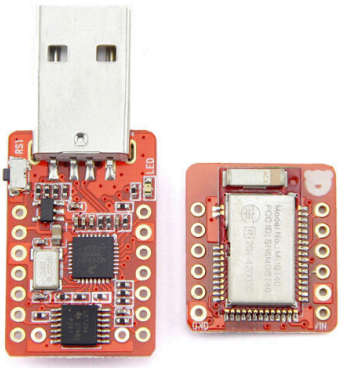












Specification

Microcontroller	Nordic nRF51822
CMSIS-DAP Chip	Freescale MK20

Operating Voltage	1.8V to 3.3V
Input Voltage	1.8V-3.3V (VDD) 3.3V-13V (VIN) Cause: Use either one power source ata atime, otherwise you will damage the board.
Clock Speed	16MHz
Connectivity	Bluetooth 4.0 Low Energy Serial (TX/RX) I2C SPI
Flash Memory	256KB
SRAM	16KB
Dimensions	18.5 x 21.0mm
I/O Pins	11

Compliance & Logistics

HSCODE	8517691090

Resource Links

- https://www.seeedstudio.com/BLE-Nano-with-MK20-USB-board-p-2127.html

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