



## Blend Micro - an Arduino Development Board with BLE

SKU: 113990059

(images/product/Blend Micro\_02.jpg)



([https://www.kickstarter.com/projects/seeed/wio-link-3-steps-5-minutes-build-your-iot-applicat/description?ref=banner\\_depot](https://www.kickstarter.com/projects/seeed/wio-link-3-steps-5-minutes-build-your-iot-applicat/description?ref=banner_depot))

### Description



Blend Micro is our first integrated development board, we have "blend"ed Arduino with Bluetooth 4.0 Low Energy (aka BLE or Bluetooth Smart) into a single board. It is targeted for makers to develop low power Internet-Of-Things (IoT) projects quickly and easily.

The micro-controller unit (MCU) is Atmel ATmega32u4 (<http://www.atmel.com/devices/atmega32u4.aspx>) and the BLE chip is Nordic nRF8001 (<http://www.nordicsemi.com/eng/Products/Bluetooth-R-low-energy/nRF8001>). Blend Micro runs as BLE peripheral role only, it allows BLE central role devices to establish connection with.

#### Current supported BLE central devices:

iOS 7

- iPhone 4s
- iPhone 5 (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 7
- (please report any other Android 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

## Features

- First BLE + Arduino board under Arduino AtHeart (<http://arduino.cc/en/ArduinoAtHeart/HomePage>) program
- Works with Nordic Bluetooth Smart SDK for Arduino (<https://devzone.nordicsemi.com/index.php/arduino>)
- Software development using Arduino IDE
- Over-the-Air download of sketch to Blend Micro (available soon)
- Supported by our free Android App (<http://redbearlab.com/app/android>) and iOS App (<http://redbearlab.com/app/ios>)

## Technical Specification

Microcontroller	Atmel ATmega32u4 ( <a href="http://www.atmel.com/devices/atmega32u4.aspx">http://www.atmel.com/devices/atmega32u4.aspx</a> )
Wireless Chip	Nordic nRF8001 ( <a href="http://www.nordicsemi.com/eng/Products/Bluetooth-R-low-energy/nRF8001">http://www.nordicsemi.com/eng/Products/Bluetooth-R-low-energy/nRF8001</a> )
Operating Voltage	3.3V
Input Voltage	5V (USB) 3.3-12V (VIN) Note: Use either one power source at a time.
Clock Speed	8MHz
Connectivity	Bluetooth 4.0 Low Energy micro-USB Serial (TX/RX) I2C SPI
Flash Memory	32KB (of which 4 KB used by bootloader)
SRAM	2.5KB
EEPROM	1KB
Dimensions	43.6 x 18.4 x 4.3mm (83 x 58 x 25mm with packaging)
Weight	4g (19g with packaging)
Power Consumption	2mA (average - using Interrupt mode)
I/O Pins	24

## Document

- Add-on for Arduino IDE (<https://github.com/RedBearLab/Blend/releases>)
- Get Nordic nRF8001 SDK for Arduino (<https://github.com/NordicSemiconductor/ble-sdk-arduino>)
- Get RBL nRF8001 Library (added some simple APIs) (<https://github.com/RedBearLab/nRF8001>)
- Download the signed driver here for Windows (includes up to Windows 8 PC) (<http://support.atmel.com/bin/customer.exe?=&action=viewKbEntry&id=1624>)

## Overview

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(<http://www.seeedstudio.com/depot/Arduino-t-1.html?ref=pinfo>)

Designer: RedBearLab  
(<http://redbearlab.com/>)  
Other Products From This  
Designer



(<http://www.seeedstudio.com/depot/Maker-Pro-t-1672.html?ref=pinfo>)

(<http://www.seeedstudio.com/depot/RedBearLab-m-52.html?ref=pinfo>)  
Weight: 19 g

## Document

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[Download the signed driver here for Windows \(includes up to Windows 8 PC\)](#)