

PRODUCTS

Bluetooth® low energy
 μBlue™ Bluetooth low energy ICs/solutions


ANT™
 Single chip ANT™ ICs/solutions


2.4GHz RF
 Ultra low power 2.4GHz RF ICs/solutions


Sub 1-GHz RF
 Low power sub 1-GHz RF ICs/solutions

nRF51422
 ANT SoC
 Active

Replacement products ▼

[OVERVIEW](#) [DEVELOPMENT TOOLS AND SOFTWARE](#) [DOWNLOADS](#)

The nRF51422 is supported by the following development tools and software:

Product	Brief description
nRF51422 DK	nRFgo Development Kit for nRF51422
nRF51422 EK	nRFgo Evaluation Kit for nRF51422

3rd Party Supporting Products

Product	Brief Description
BAL-NRF01D3	BAL-NRF01D3, 50 ohm integrated balun - Datasheet
BAL-NRF01D3	BAL-NRF01D3, 50 ohm integrated balun - Application Note

The hardware tools in the nRF51 series tool chain consist of an evaluation kit and a nRFgo compatible development kit, in addition to application specific reference designs.

The software support are split in two major parts: SoftDevices containing wireless protocol stacks; and the nRF51 Software Development Kit (SDK) forming a common code base for all nRF51 devices.

nRF51422 Evaluation Kit (nRF51422-EK)

The evaluation kits gives you the lowest cost entry point to development with the nRF51422.

The kit operates stand alone, and is based around a small module with headers for all I/O pins, 2 buttons, 2 LED's as well as a built in Segger on board programming and debugging over USB solution. This board is accompanied by an USB dongle with identical except for access to I/O pins. This board can act as wireless peer device or it can act as a very small Software development platform in itself. The kit also contains 5 IC samples. The evaluation kit is supported by the ANT stack offered as a SoftDevice as well as (limited) library and code example support in the nRF51 Software Development kit supporting all nRF51 series devices.


 Please note that programming and debugging functionality on the evaluation kit is limited to the devices in the kit itself. To be able to program and debug on your own hardware, you will need a standalone programmer/debugger (Jlink lite or Jlink Pro) which are included in the nRF51422 Development Kit as well as available for purchase on www.segger.com

 For more details please download the [nRF51422 Evaluation Kit User Guide](#) (this link requires mypage login)

nRF51422 Development Kit (nRF51422-DK)

The nRF51422 development kit is nRFgo compatible and enables you to do more advanced development especially when integrating with external circuitry. The development kit provides you nRFgo compatible modules with PCB antennas as well as SMA connectors for RF measurements, USB dongles to act as peer devices and a stand alone segger Jlink Lite programmer and debugger that enables programming/debugging on the nRFgo modules as well as on your own prototype/engineering hardware.

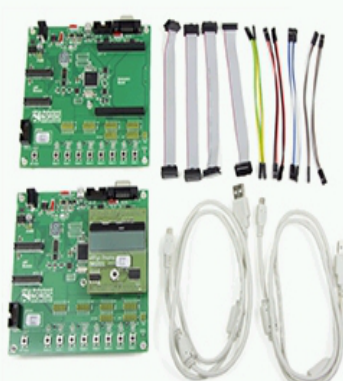


The development kit is supported by the ANT stack available as a SoftDevice and an extensive library and code example support in the nRF51 Software Development Kit supporting all the devices in the nRF51 series.

 For more details please download the [nRF51422 Development Kit User Guide](#) (this link requires mypage login)

nRFgo

The base for the nRFgo development platform is a starter kit which contains 2 nRFgo motherboards as well as all necessary patch and USB cables for more advanced prototyping. The nRFgo mother board is a large and stable platform which gives you access to all I/O pins, 8 buttons and LED's as well as a large extension module socket that maps all the I/O pins of the nRFgo development kit modules that plugs into the nRFgo motherboard. The nRFgo development kits enables you to program the nRFgo modules themselves or your own engineering samples either through the nRFgo motherboard itself or included stand alone programmers/debuggers.



The advantage of the nRFgo development platform is that it can be used across all nRF51 series devices as well as older (nRF24L and nRF8000) series of nRF devices. If you have used other nRF devices there is no need to replace the nRFgo starter kit and even if you are new to nRF devices but plan to use different variants nRFgo gives you a common HW platform to work on across your products. nRFgo mother board is complimented by a nRFgo studio a PC program enabling you to control and program a number of attached nRFgo kits, run various tests and control supply level to the development kits.

 For more details please download the [nRF51422 starter kit user guide](#). (this will require that we put the user guide out separately, not as part of the installer as today) (this link requires mypage login, if you don't already have a mypage account, choose 'new user' and follow the instructions)

Software

 The nRF51 series are supported by an extensive offering of Software. By using nRF51 devices you get free access to pre-qualified *Bluetooth* low energy as well as ANT protocol stacks for use in your nRF51 applications. The wireless protocol stacks are paired with the nRF51 Software Development Kit (SDK) which forms a common code base for all devices in the nRF51 series.

SoftDevices

A SoftDevice is precompiled and linked binary software implementing a wireless protocol. While it is software, application developers have minimal compile-time dependence on its features. The unique hardware and software supported framework, in which it executes, provides run-time isolation and determinism in its behavior. These characteristics make the interface comparable to a hardware peripheral abstraction with a functional, programmatic interface.

The SoftDevice Application Program Interface (API) is available to applications as a high-level programming language interface, for example, a C header file.

 Please refer to Appendix A in the nRF51 reference manual for more details. SoftDevices are either available as downloads (*Bluetooth* low Energy) or preprogrammed in nRF51 devices (ANT).

nRF51 Series Software Development Kit

 The nRF51 Software Development kit (SDK) offers you C source code containing *Bluetooth* low energy and ANT+ device profiles, wireless communication as well as application examples, Nordic Semiconductors proprietary 2.4 GHz stack for human interface devices (Gazell) as well as libraries for all the peripherals found on the nRF51 series SoCs. The nRF51 SDK is built on the ARM® CMSIS standard and supports the following SW development tools chains:

- Keil ARM MDK
- GCC
- IAR xxx

 Since all nRF51 devices are code compatible across *Bluetooth* low energy, ANT and 2.4GHz, the common application and peripheral sections of the nRF51 SDK enables you to develop and maintain a common code base across the three technologies as well as different nRF51 devices.