nRF52 DK

Development Kit for Bluetooth Low Energy, ANT and 2.4GHz applications
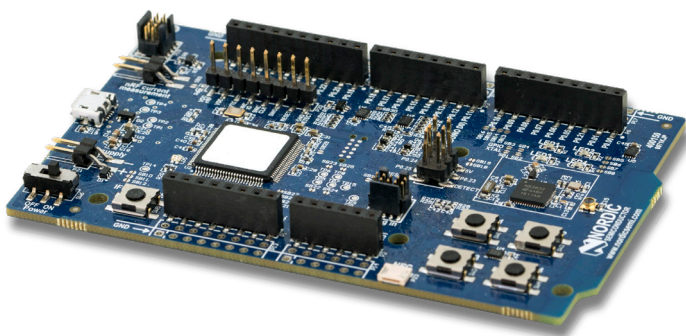
Product Overview

The nRF52 DK is a single-board development kit for *Bluetooth*®
Low Energy, ANT™ and 2.4GHz proprietary applications using
the nRF52 Series SoC. This kit supports development for the
nRF52810 and the nRF52832 SoC.

The kit is compatible with the Arduino Uno Revision 3 standard,
making it possible to use 3rd-party shields that are compatible
to this standard with the kit.

It supports the standard Nordic tool-chain software using Keil,
IAR and GCC. Program/Debug option is Segger J-Link OB for
standard tool-chain. The kit gives access to all I/O and inter-
faces via connectors and has 4 LEDs and 4 buttons which are
user-programmable.

A range of software examples are available from the nRF52
Software Development Kit (SDK) to support Bluetooth LE, ANT
and 2.4GHz applications.

KEY FEATURES

- Affordable, Rapid prototyping and development
  solution for nRF52 Series SoCs
- Supports Bluetooth LE, ANT and 2.4GHz
  proprietary development
- ARM® Cortex™ M4F
- DSP Instruction set
- Arduino Uno Rev. 3 compatible connector for use with 3rd
  party shields
- All I/O and interfaces available via connectors
- Segger J-Link OB Program/Debug supported
- Support for Program/Debug of external target boards
- Integrated PCB antenna
- Connector for external NFC antenna
- Connector for RF measurements
- Pins for power consumption measurements
- Coin-cell battery holder
- 3.6v -1.7v, battery and USB, external
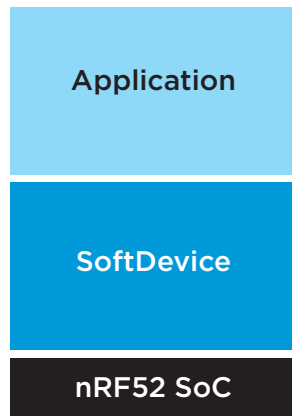
APPLICATIONS

- Internet of Things (IoT) - Sensors and Hubs
- Wearables — Sensors and Hubs
- Appccessories — Sensors and Hubs
- Desktop peripherals
- Remote controls
- Sports & Medical
- Smartwatch
- Smarthome sensors
- Toys
- Industrial sensors
- A4WP wireless charging control
- Beacons

KIT CONTENT

- nRF52 DK board
- 2032 battery
- NFC antenna

nRF52 Series software architecture

The nRF52 Series software architecture offers a clean separation between application code and Nordic's embedded protocol stacks (called SoftDevices). There are no compile, link and run-time dependencies as the protocol stack and associated de-bugging challenges are no longer an issue. Application code can be developed and compiled independently of the protocol stack. This simplifies overall development efforts and reduces the possibility and complexity of bugs during development.

Application
SoftDevice
nRF52 SoC

SoftDevices

The nRF52 DK is supported by a range of protocol stacks. These Nordic protocol stacks are known as SoftDevices and complement the nRF52 Series SoCs. SoftDevices can support Bluetooth low energy, ANT and Bluetooth low energy/ANT combinations. SoftDevices are pre-compiled binary files for nRF52 Series SoCs and are available from Nordic Semiconductor as downloads*. This brings maximum flexibility to application development and allows the latest stack version and associated features to be programmed into the nRF52 Series SoC.

nRF52 DK compatible SoftDevices

S132	Bluetooth low energy concurrent central/ peripheral/ broadcaster/observer stack
S212*	ANT stack
S332*	Bluetooth low energy concurrent central/ peripheral/ broadcaster/observer stack/ ANT stack

*ANT related SoftDevices (s212,s332) for the nRF52 Series are now obtained from ANT Wireless. This applies to both ANT only and ANT/Bluetooth low energy combo SoftDevices. For more information on this please contact : ANTstacks@thisisant.com

nRF52 Series Software Development Kit

The nRF52 Software Development Kit (SDK) is available from Nordic Semiconductor to support the nRF52 Series SoCs. The nRF52 SDK contains a wide range of software modules, complete examples and useful utilities. The nRF52 SDK is a great starting point for beginning building your applications.

SoftDevices* and the nRF52 SDK are available to download at www.nordicsemi.com

The nRF52 DK is supported by a number of tool-chains. Nordic offers support for the following:

- Keil MDK
- IAR Workbench
- GCC

About Arduino Uno Rev 3 connector standard

The Arduino Uno Rev. 3 is a popular HW format for simple, rapid prototyping using Arduino Uno compatible shields. Shields conforming to the Arduino Uno Rev. 3 standard can be used with the nRF52 DK.

RELATED PRODUCTS

nRF52832	Bluetooth low energy and 2.4GHz proprietary multi-protocol SoC

ORDER INFORMATION

nRF52-DK	Development Kit for Bluetooth low energy, ANT and 2.4GHz applications

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For more information
Visit nordicsemi.com for the complete product specification about this and any other wireless ULP products.

About Nordic Semiconductor
Nordic Semiconductor is a fabless semiconductor company specializing in ULP short-range wireless communication. Nordic is a public company listed on the Norwegian stock exchange.

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