

BlueNRG-1, BlueNRG-2 DK SW package



Features

- Bluetooth® SMART SW package supporting BlueNRG-1 and BlueNRG-2 Bluetooth® low energy (BLE) systems-on-chip
- BlueNRG-1 Navigator and BlueNRG-2 Navigator PC applications
- BlueNRG-X Radio Initialization Parameters Wizard
- Bluetooth low energy stack binary library and APIs, events callbacks interface
- BlueNRG-1 and BlueNRG-2 Bluetooth low energy demonstration applications
- BlueNRG-1 and BlueNRG-2 CMSIS files
- BlueNRG-1 and BlueNRG-2 peripheral drivers and related examples
- BlueNRG-1, BlueNRG-2 2.4 GHz radio proprietary driver and examples
- BlueNRG-1 and BlueNRG-2 SDK and HAL drivers
- BlueNRG-1 and BlueNRG-2 kit platforms support

Description

The STSW-BLUENRG1-DK evaluation SW package is based on the BlueNRG-1 and BlueNRG-2 very low power Bluetooth low energy (BLE) single-mode systems-on-chip with 160 KB and 256 KB of Flash memory, respectively, 24 KB of RAM, 32-bit core ARM® Cortex®-M0 and ADC, GPIOs, I²C, RTC, SPI, Timers, UART, WDG and RTC peripherals.

The STSW-BLUENRG1-DK SW package supports the BlueNRG-1 and BlueNRG-2 kit platforms available on relative web pages. It provides a Bluetooth low energy binary library with a complete set of APIs and related events callbacks allowing to interface with the Bluetooth low energy features offered by the BlueNRG-1 and BlueNRG-2 devices. The SW package also provides a set of BLE demonstration applications regarding some typical Bluetooth low energy working scenarios. Each demonstration application comes with a complete set of header and source files.

The following IDE toolchains are supported: EWARM Compiler 8.40.1 or later, Keil MDK-ARM v5.27 or later, WISE-Studio v1.0.0 or later.

The STSW-BLUENRG1-DK SW package contains a complete set of peripheral drivers (header and source files), which allow to interface with the device peripherals (ADC, GPIOs, I²C, RTC, SPI, Timers, UART and WDG, RTC) and the Radio low level driver which provides access to the BlueNRG-1 2.4 GHz proprietary radio to send and receive packets without using the Bluetooth link layer.

The 2.4 GHz proprietary radio examples are built on top of the Radio Low level driver and can be used as reference examples for building other applications that use the BlueNRG-1 2.4 GHz proprietary radio.

The software package also includes BlueNRG-1 and BlueNRG-2 Navigator PC applications, which provide an interactive, simple and user-friendly interface to select and run demonstration applications for the resources available in the BlueNRG-1 and BlueNRG-2 DK SW packages, without the need for any extra hardware. The BlueNRG-1 and BlueNRG-2 Navigator are two instances of the same application tailored for the respective device, allowing access to the relative HW and SW kit resources available.

Product summary	
BlueNRG-1, BlueNRG-2 DK SW package	STSW-BLUENRG1-DK
Bluetooth® low energy system-on-chip	BlueNRG-1
Bluetooth® low energy wireless system-on-chip	BlueNRG-2
Very low power application processor module for Bluetooth® low energy v5.2	BlueNRG-M2
WiSE-Studio GCC toolchain	STSW-WISE-STUDIO
Applications	Factory Automation Smart Farming Bluetooth Low Energy Mobility services Telematics and Networking

Another available PC application is the BlueNRG-X Radio Initialization Parameters Wizard that allows the definition of the proper values required for correct [BlueNRG-1](#) and [BlueNRG-2](#) BLE radio initialization, based on the specific user application scenario. A configuration header file, generated from the chosen parameter values, must then be used in the specific user software application folder.

Revision history

Table 1. Document revision history

Date	Version	Changes
24-Jun-2016	1	Initial release.
15-Jun-2017	2	Added references to: <ul style="list-style-type: none"> • BlueNRG-2 device • BlueNRG-2 Navigator PC application • BlueNRG-1 Radio Initialization Parameters Wizard PC application
08-Jun-2018	3	Added cover image. Removed references to BlueNRG-1 Flasher Utility.
20-Dec-2018	4	Updated cover image.
10-Mar-2020	5	Updated cover page image and product summary table. Added references to BlueNRG-X Radio Initialization Parameters Wizard.
13-Oct-2021	6	Updated cover image and product summary. Added references to supported IDE toolchains.
10-Nov-2021	7	Updated product summary table to include references to BlueNRG-M2.

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