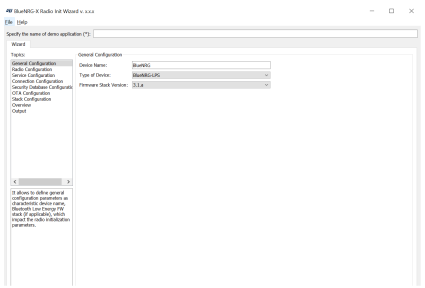
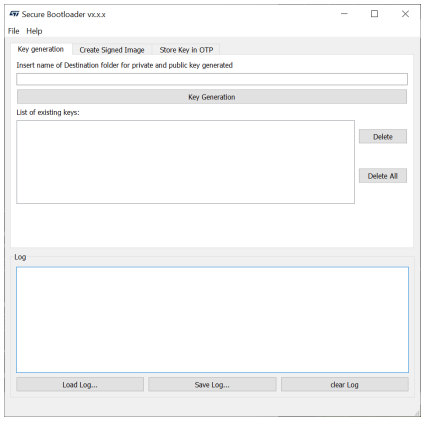
STSW-BNRGLP-DK

Data brief

BlueNRG-LP, BlueNRG-LPS DK SW package





Features

- SW package supporting BlueNRG-LP, BlueNRG-LPS Bluetooth® low energy (LE) systems-on-chip
- Bluetooth LE stack binary library and APIs, events callbacks interface
- Bluetooth LE middleware
- BlueNRG-LP, BlueNRG-LPS Bluetooth LE demonstration applications
- BlueNRG-LP, BlueNRG-LPS CMSIS files
- BlueNRG-LP, BlueNRG-LPS peripheral drivers and related examples
- BlueNRG-LP, BlueNRG-LPS 2.4 GHz radio proprietary driver and examples
- BlueNRG-LP, BlueNRG-LPS SDK and HAL drivers
- BlueNRG-LP, BlueNRG-LPS navigators PC application
- BlueNRG-LP, BlueNRG-LPS radio init parameters wizard PC application
- Secure bootloader GUI
- Support for BlueNRG-LP, BlueNRG-LPS kit platforms

Description

The STSW-BNRGLP-DK software package provides a Bluetooth LE binary library with a complete set of APIs and related events callbacks to access the Bluetooth LE functionality offered by the BlueNRG-LP, BlueNRG-LPS devices. The SW package also provides a set of Bluetooth LE demonstration applications regarding some typical Bluetooth low energy working scenarios. Each demonstration application comes with a complete set of header and source files.

The STSW-BNRGLP-DK SW package contains a complete set of peripheral drivers (header and source files), which allow interfacing with the device peripherals (ADC,GPIO, I²C, timers, RTC, SPI, SysTick, UART and WDG) and a low level driver to access the proprietary BlueNRG-LP, BlueNRG-LPS 2.4 GHz radio to send and receive packets without using the Bluetooth link layer.

The 2.4 GHz radio examples are built on top of the low level driver and can be used as reference examples for building other applications that use the BlueNRG-LP, BlueNRG-LPS radio.

The software package also includes the BlueNRG-LP, BlueNRG-LPS navigators PC application, which provide an interactive, simple and user-friendly interface to select and run demonstration applications for the resources available in the BlueNRG-LP, BlueNRG-LPS DK SW package, without the need for further hardware. It also provides a 3D view of all available BlueNRG-LP, BlueNRG-LPS kits and information about the related HW components.

The BlueNRG-X radio init parameters wizard included in the package allows the definition of the proper values required for correct BlueNRG-LP, BlueNRG-LPS Bluetooth LE stack initialization based on the specific user application scenario. A configuration header file generated from the chosen parameter values is then used in the specific user software application folder.

Product summary	
Software package for BlueNRG-LP BLE stack v3.x family	STSW-BNRGLP-DK
Low power Bluetooth® smart systems on chips	BlueNRG-LP / BlueNRG-LPS
Evaluation platform based on BlueNRG-LP	STEVAL-IDB011V1/ STEVAL-IDB011V2/ STEVAL-IDB010V1
Evaluation platform based on BlueNRG-LPS	STEVAL-IDB012V1
Applications	Wireless Connectivity

The Secure Bootloader PC application exploits the secure bootloader framework functions of the BlueNRG-LP, BlueNRG-LPS devices UART bootloader. It allows generating the authentication keys, signing a binary image and activating the secure bootloader through OTP.

Revision history

Table 1. **Document revision history**

Date	Version	Changes
16-Jul-2020	1	Initial release.
12-May-2021	2	Added references to Secure Bootloader GUI.
12-Apr-2022	3	Added references to BlueNRG-LPS, STEVAL-IDB011V2 and STEVAL-IDB012V1.
30-Mar-2023	4	Added references to STEVAL-IDB010V1.