

BlueNRG GUI SW package



Features

- Graphical user interface (GUI) PC application
- GUI tools:
 - Load history
 - Save history (csv file)
 - Save history as text (txt file)
 - Save as script (python file)
 - Save as C code (header and source files + IDE projects)
 - Stack Updater
 - IFR/device configuration
 - Flash motherboard FW
 - Bluetooth Low Energy (LE) over-the-air (OTA) firmware upgrade
 - Get version
 - Get production data
 - Set baud rate
- GUI windows:
 - ACI commands
 - ACI utilities
 - Scripts
 - Beacon
 - RF test
 - Throughput
- Standalone script launcher utility

Description

The **STSW-BNRGUI** software package consists of a graphical user interface (GUI) PC application that can be used to interact and evaluate the capabilities of the BlueNRG-MS and BlueNRG-2N Bluetooth Low Energy network processors, which are low power Bluetooth® Low Energy ICs, compliant with the Bluetooth® specifications. It also supports the BlueNRG-1, BlueNRG-2, BlueNRG-LP and the BlueNRG-LPS Bluetooth Low Energy systems-on-chip: low power Bluetooth® Low Energy ICs that are compliant with the Bluetooth® specification, both in master and slave roles.

The GUI PC application can send standard and vendor-specific HCI commands to the selected device and received events from it via the ACI commands or ACI utility window. Commands and events can also be sent and received with scripts executed through the GUI script window. The list of the sent commands and received events can be saved on a file and then reloaded.

Furthermore, this list can be saved as a simple text file or as a python script, which can be customized by user and then run through the **STSW-BNRGUI** script engine.

Product summary	
BlueNRG GUI SW package	STSW-BNRGUI
Bluetooth® Low Energy/ wireless system-on-chip	BlueNRG-MS, BlueNRG-1, BlueNRG-2, BlueNRG-2N, BlueNRG-LP, BlueNRG-LPS
Evaluation platform based on the BlueNRG-1/ BlueNRG-2/ BlueNRG-LP/ BlueNRG-LPS	STEVAL-IDB007V2, STEVAL-IDB008V2, STEVAL-IDB008V1M, STEVAL-IDB009V1, STEVAL-IDB011V1, STEVAL-IDB011V2, STEVAL-IDB012V1, STEVAL-IDB005V1, STEVAL-IDB006V1
Applications	wireless connectivity

The [STSW-BNRGUI](#), save as C code utility allows user to store the current list of APIs and events on the BlueNRG GUI sent/received packets table as header and source files (C language), which can be used as starting point for user FW development. Complete set of toolchains projects (IAR, KEIL and Atollic or Wise-Studio where applicable) is also generated in order to allow user to store them on the BlueNRG-LP, BlueNRG-LPS and BlueNRG-1, BlueNRG-2 SDK SW packages and on the BlueNRG-MS (only IAR) SDK SW package framework.

The GUI PC application provides utilities to upgrade the STM32L1xx software image on the BlueNRG-MS motherboard, as well as the BlueNRG-MS stack image and relative IFR configuration. It also allows the BlueNRG-1, BlueNRG-2, BlueNRG-2N, BlueNRG-LP and the BlueNRG-LPS hardware parameter configuration. The [STSW-BNRGUI](#) also provides the Bluetooth LE over-the-air (OTA) firmware upgrade tool for the client side upgrade procedure. It supports the beacon feature to configure an ST beacon device and the RF test window to send or stop a tone and perform Bluetooth LE packet error rate (PER) tests using Bluetooth LE direct test mode (DTM) commands.

The throughput tab allows the Bluetooth LE stack throughput performance to be evaluated.

A standalone script launcher utility is also provided in the [STSW-BNRGUI](#) software package. This utility let you run a script through a PC DOS window outside the GUI PC application context. The GUI PC application and standalone script launcher utility support all the BlueNRG-MS, BlueNRG-1, BlueNRG-2, BlueNRG-2N, BlueNRG-LP and BlueNRG-LPS platform kits.

1 STSW-BNRGUI software

Figure 1. BlueNRG GUI

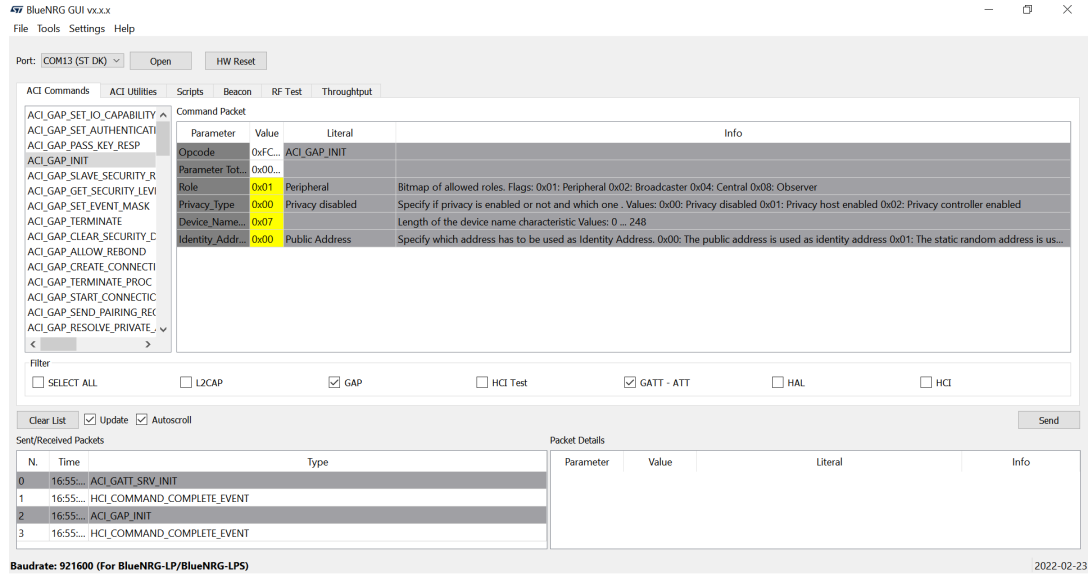
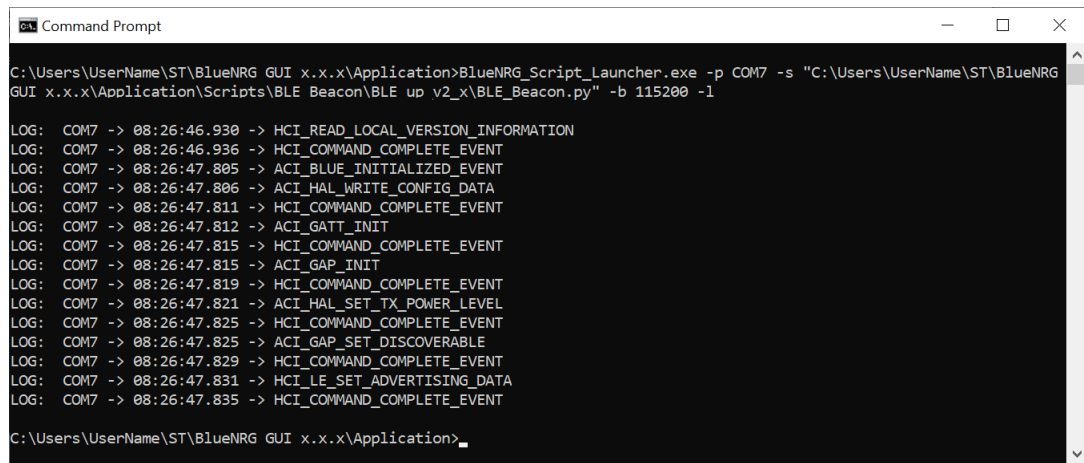


Figure 2. Script launcher utility



Revision history

Table 1. Document revision history

Date	Version	Changes
24-May-2016	1	Initial release.
24-Jun-2016	2	Added reference to BlueNRG-1 SoC.
19-Jun-2017	3	Added reference to BlueNRG-2 SoC.
29-Mar-2018	4	Updated Section Features and Section Description.
06-Mar-2020	5	Updated the cover page and .
14-Jul-2020	6	Updated the cover page and the description. Updated Figure 1 and Figure 2. Added reference to BlueNRG-LP SoC.
24-Aug-2020	7	Added reference to the BlueNRG-2N network coprocessor device.
11-Oct-2021	8	Updated Section Description .
28-Sep-2022	9	Updated Product status / summary, Section Description and Figure 1. Added reference to the BlueNRG-LPS SoC.

IMPORTANT NOTICE – READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgment.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, refer to www.st.com/trademarks. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2022 STMicroelectronics – All rights reserved