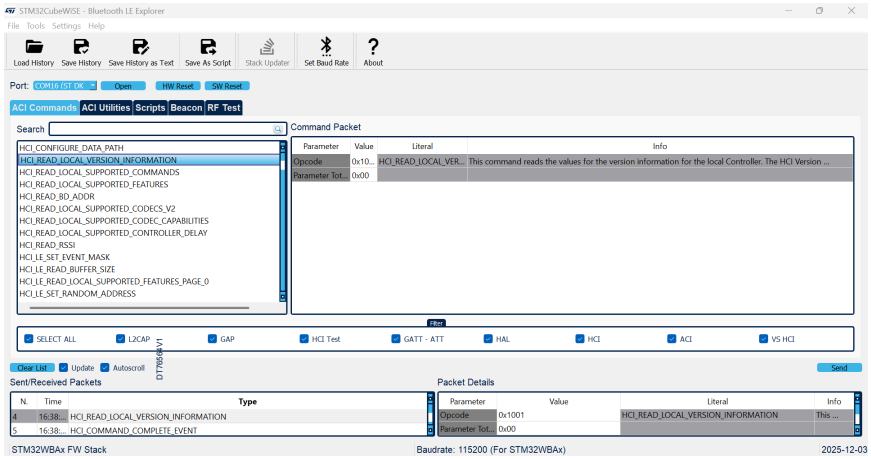
STM32CubeWiSEbe

Data brief

Graphical user interface for Bluetooth® LE evaluation of STM32WB0 and STM32WBA MCUs



DT76564V1

Product status
STM32CubeWiSEbe

Features

- Easy-to-use graphical user interface for the evaluation of Bluetooth® LE stacks on supported devices
- Supported features
  - ACI commands tab
  - ACI utilities tab
  - Beacon tab
  - Scripts tab
  - RF tests tab
  - Load history (`.csv` file)
  - Save history (`.csv` file)
  - Save history as text (`.txt` file)
  - Save as Python™ script (`.py` file)
  - Bluetooth® LE firmware upgrade over the air (FUOTA)
  - Baud rate setting
  - Selection of supported STM32 microcontroller and related Bluetooth® LE stack

Description

The STM32CubeWiSE - Bluetooth® LE Explorer (STM32CubeWiSEbe) software tool is a PC application with a graphical user interface (GUI) that interacts with the STM32WB0 and STM32WBA microcontrollers and evaluates their Bluetooth® LE stack capabilities.

The GUI PC application can, through application controller interface (ACI) commands or via the ACI utility window:

- Send standard and vendor-specific host controller interface (HCI) commands to the selected device
- Receive events from the selected device

Commands and events can also be sent and received with scripts executed through the GUI PC application script window. The list of the sent commands and received events can be saved in a file and then reloaded.

Additionally, this list can be saved as a simple text file or as a Python™ script, which the user can further customize and run through the script engine of the GUI PC application.

The GUI PC application of STM32CubeWiSEbe provides the Bluetooth® LE firmware upgrade over the air (FUOTA) capability for the client-side upgrade procedure. It also supports the beacon feature to configure a Bluetooth® LE beacon device.

The RF test window enables the transmission or cessation of a tone and facilitates Bluetooth® LE packet error rate (PER) testing using Bluetooth® LE direct test mode commands.

The STM32CubeWiSE - Bluetooth® LE Explorer software package provides a standalone script launcher to run a script through a command prompt window outside the GUI PC application context.

To use the STM32CubeWiSEbe GUI PC application or the script launcher, ensure that the BLE_TransparentMode firmware is programmed onto the device.

1 General information

STM32CubeWiSEbe interacts with STM32WB0 and STM32WBA microcontrollers based respectively on the Arm® Cortex®-M0+ and Cortex®-M33 processors, and running the Bluetooth® LE stack.

For information on Bluetooth®, refer to www.bluetooth.com.

Note: Arm and Cortex are registered trademarks of Arm Limited (or its subsidiaries or affiliates) in the US and/or elsewhere.

1.1 Ordering information

STM32CubeWiSEbe is available for free download from the *www.st.com* website.

1.2 What is STM32Cube?

STM32Cube is an STMicroelectronics original initiative to improve designer productivity significantly by reducing development effort, time, and cost. STM32Cube covers the whole STM32 portfolio.

STM32Cube includes:

- A set of user-friendly software development tools to cover project development from conception to realization, among which are:
  - STM32CubeMX, a graphical software configuration tool that allows the automatic generation of C initialization code using graphical wizards
  - STM32CubeIDE, an Eclipse®-based IDE, providing code edition, compilation, programming, and debugging capabilities
  - STM32CubeCLT, an all-in-one command-line development toolset with code compilation, board programming, and debug features
  - STM32CubeIDE for Visual Studio Code (STM32VSCode), a complete IDE based on VS Code® platform
  - STM32CubeProgrammer (STM32CubeProg), a programming tool available in graphical and command-line versions
  - STM32CubeMonitor (STM32CubeMonitor, STM32CubeMonPwr, STM32CubeMonRF, STM32CubeMonUCPD), powerful monitoring tools to fine-tune the behavior and performance of STM32 applications in real time
  - STM32CubeWiSE (STM32CubeWiSEbe, STM32CubeWiSEce, STM32CubeWiSEcg, STM32CubeWiSEre, STM32CubeWiSE8e), graphical tools designed to evaluate and test the capabilities of RF radios and protocols (Bluetooth® LE, sub-GHz, IEEE 802.15.4)
- STM32Cube MCU and MPU Packages, comprehensive embedded-software platforms specific to each microcontroller and microprocessor series (such as STM32CubeWB0 for the STM32WB0 series), which include:
  - STM32Cube hardware abstraction layer (HAL), ensuring maximized portability across the STM32 portfolio
  - STM32Cube low-layer APIs, ensuring the best performance and footprints with a high degree of user control over hardware
  - A consistent set of middleware components such as FreeRTOS™ kernel, FAT file system, and STM32_BLE (Bluetooth® LE)
  - All embedded software utilities with full sets of peripheral and applicative examples
- STM32Cube Expansion Packages, which contain embedded software components that complement the functionalities of the STM32Cube MCU and MPU Packages with:
  - Middleware extensions and applicative layers
  - Examples running on some specific STMicroelectronics development boards

2 License

STM32CubeWiSEbe is delivered under the SLA0048 software license agreement and its Additional License Terms.

Revision history

Table 1. **Document revision history**

Date	Revision	Changes
12-Feb-2026	1	Initial release.

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