Graphical user interface for current consumption estimation of STM32WB0 and STM32WBA MCUs
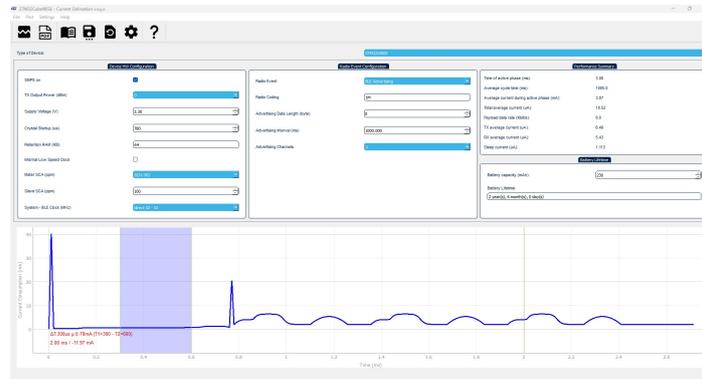

DT79627V1

Product status
STM32CubeWiSEce

Features

- Easy-to-use graphical user interface for estimating average current consumption in wireless use cases
- Supported radios/protocols
    - Bluetooth® LE protocol
- Excellent correlation with real measurements
- User-friendly, easy to configure
- PC-based application
- Supported features
    - Available input parameters:
        ◦ Device hardware configuration such as power mode and Tx power
        ◦ Radio event configuration such as Bluetooth® LE advertising and connection peripheral
    - Available output data:
        ◦ Average current estimation
        ◦ Data rate estimation
        ◦ Battery life estimation
    - Output report in PDF format
    - Configuration save and restore
    - Graphical plot of current consumption during the active phase
    - Plot export in PNG format

DB5731 - Rev 1 - February 2026
For further information, contact your local STMicroelectronics sales office.

www.st.com

Description

The STM32CubeWiSE - Current Estimation (STM32CubeWiSEce) software tool is a PC application with a graphical user interface (GUI) that predicts the current consumption of STM32WB0 and STM32WBA wireless microcontrollers under different operating conditions.

This application provides an accurate estimate of the specified RF device power consumption and the corresponding battery life under various wireless operating conditions. However, as a simulation tool, do not consider it a substitute for measurements performed on the silicon device.

1 General information

STM32CubeWiSEce 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.

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1.1 Ordering information

STM32CubeWiSEce 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

STM32CubeWiSEce 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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