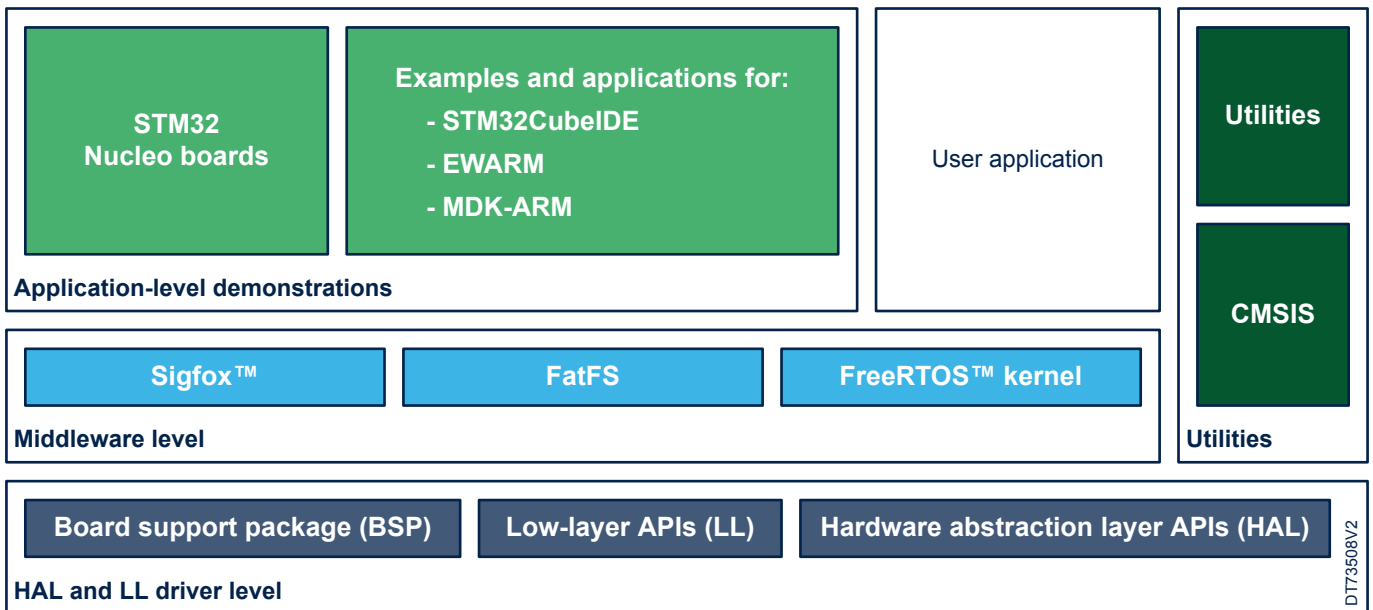


STM32Cube embedded software for STM32WL3x microcontrollers including LL and HAL drivers, Sigfox™, FatFS, and FreeRTOS™ kernel



Product status link

[STM32CubeWL3](#)



## Features

- Software package supporting the STM32WL3x product line microcontrollers
- Sub-GHz radio proprietary driver and examples
- Sigfox™ binary libraries, APIs, and demonstration applications
- CMSIS files
- Low-layer and hardware abstraction layer peripheral drivers and related examples
- Support for the Nucleo boards

## Description

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 [STM32CubeMX](#), a graphical software configuration tool that allows the generation of C initialization code using graphical wizards.

It also comprises the [STM32CubeWL3](#) MCU Package, composed of the STM32Cube hardware abstraction layer (HAL) and the low-layer (LL) APIs, a consistent set of middleware components such as Sigfox™ binary libraries with a complete set of APIs, FreeRTOS™ kernel, and FatFS generic file system module.

The STM32CubeWL3 gathers in one single package all generic embedded software components required to develop an application on [STM32WL3x product line](#) microcontrollers.

Additional sub-GHz radio demonstrations are also provided to show more complex and advanced scenarios such as low-power manager integration.

## 1 General information

### 1.1 Ordering information

STM32CubeWL3 is available for free download from the [www.st.com](http://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 all-in-one development tool with peripheral configuration, code generation, code compilation, and debug features
  - [STM32CubeCLT](#), an all-in-one command-line development toolset with code compilation, board programming, and debug features
  - 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
- [STM32Cube MCU and MPU Packages](#), comprehensive embedded-software platforms specific to each microcontroller and microprocessor series (such as STM32CubeWL3 for the STM32WL3x product line), 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, FatFS, and Sigfox™
  - 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

STM32CubeWL3 runs sub-GHz demonstration applications, including Sigfox™ binaries, on STM32WL3x product line microcontrollers based on the Arm® Cortex®-M0+ processor.

STM32CubeWL3 is delivered under the [SLA0048](#) software license agreement and its Additional License Terms.

*Note:* Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.



## Revision history

**Table 1. Document revision history**

Date	Revision	Changes
29-Mar-2024	1	Initial release.
14-Nov-2024	2	Full integration of STM32CubeWL3 in STM32Cube: <ul style="list-style-type: none"><li>• Updated the cover image</li><li>• Updated <a href="#">Features</a> and <a href="#">Description</a></li><li>• Updated <a href="#">Ordering information</a> and <a href="#">License</a></li><li>• Added <a href="#">What is STM32Cube?</a></li></ul>

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