STM32CubeMP2 embedded software for STM32MP2 series
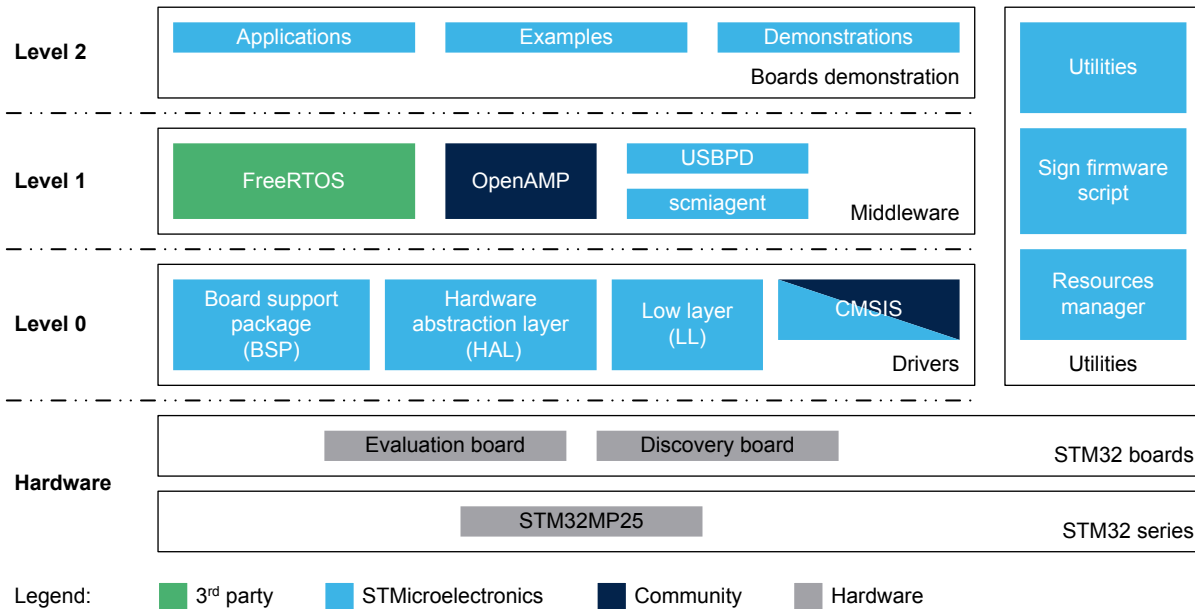
	Product status link
	STM32CubeMP2

Features

- Hardware abstraction layer (HAL), enabling portability between different STM32 devices via standardized API calls
- Low-layer API (LL), a light-weight, optimized, expert oriented set of APIs designed for runtime efficiency and so enhanced performance
- Board support package drivers (BSP), based on HAL drivers, an API set for the evaluation board and third-party components
- Collection of middleware components (such as FreeRTOS)
- Collection of examples, running on STM32MP25xx-EVx evaluation boards and STM32MP25xx-DK discovery board and allowing demonstration of a basic implementation of features from a set of peripherals.

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For further information contact your local STMicroelectronics sales office.

www.st.com

1 Description

The STM32CubeMP2 brings together, in a single package, all the generic embedded software components needed to develop applications on Arm® Cortex®-M33 microprocessors.

On top of the hardware, the STM32CubeMP2 solution is built around three levels of software components (level 0 for drivers, level 1 for middleware, level 2 for board demos), that interact easily with each other. It also includes two common components: CMSIS and Utilities, which interact with both levels.

2 General information

The STM32CubeMP2 MPU Package runs on STM32 32-bit microprocessors based on the Arm® Cortex®-M33 processor.

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

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2.1 Ordering information

STM32CubeMP2 is available for free download from *www.st.com*.

2.2 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 STM32CubeMP2 for the STM32MP2xx MPUs), 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 RTOS, FAT file system, TCP/IP, USB Host and Device, USB-PD, OpenBL, external memory loader and manager, and MCUboot
    - 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

3   Licenses

STM32CubeMP2 is delivered under the SLA0048 software license agreement and its Additional License Terms.

Revision history

Table 1. Document revision history

Date	Version	Changes
19-Jun-2024	1	Initial release.

IMPORTANT NOTICE – READ CAREFULLY