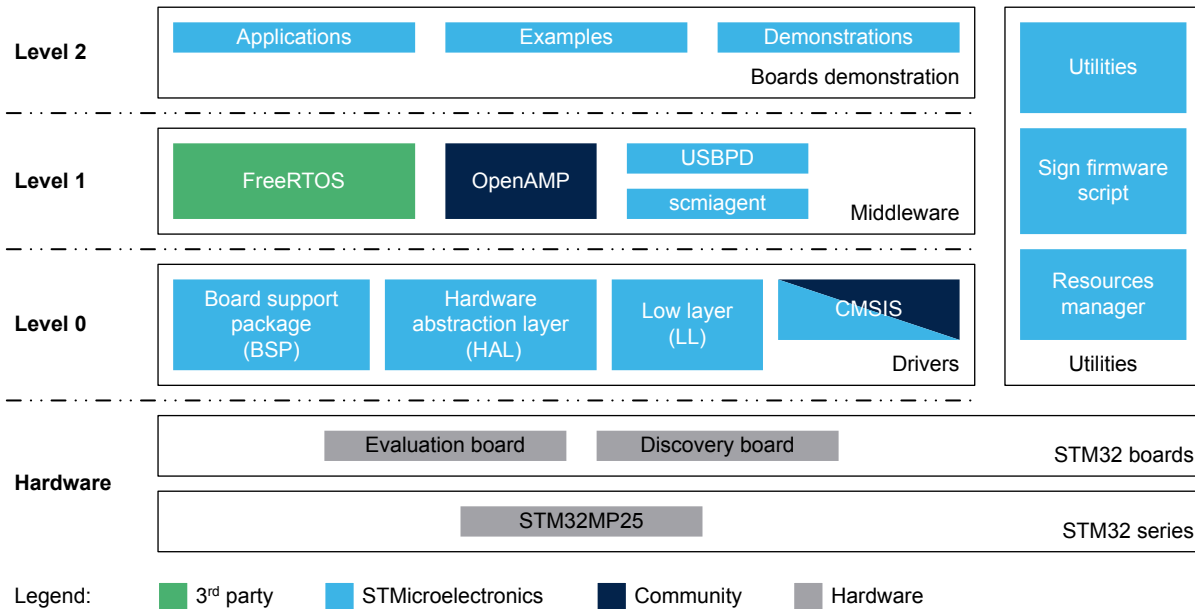


STM32CubeMP2 embedded software for STM32MP2 series



DT7417V2

Product status link

[STM32CubeMP2](#)



DT50995V1

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.

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.



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.

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