

## STM32Cube embedded software for STM32F1 series including HAL drivers, USB, Ethernet, File System, RTOS and Graphics

Data brief

### Features

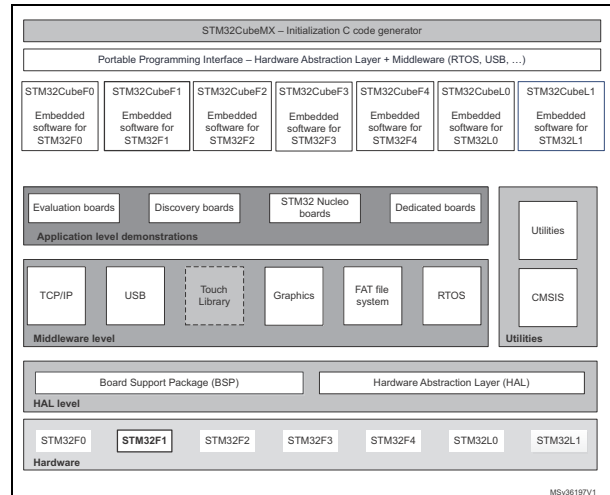
- Consistent and complete embedded software offer that frees the user from dependency issues
- Maximized portability between all STM32 series supported by STM32Cube
- More than 120 examples for easy understanding
- High quality HAL using CodeSonar® static analysis tool
- STM32F1-specific middleware including USB Host, USB Device and TCP/IP stack
- Free user-friendly license terms
- Update mechanism that can be enabled by the user to be notified of new releases

### Description

STM32Cube™ is an STMicroelectronics original initiative to ease developers' life by reducing development efforts, time and cost. STM32Cube covers STM32 portfolio.

STM32Cube includes the STM32CubeMX which is a graphical software configuration tool that allows generating C initialization code using graphical wizards.

It also comprises the STM32CubeF1 platform which includes the STM32Cube HAL (an STM32 abstraction layer embedded software, ensuring maximized portability across STM32 portfolio), plus a consistent set of middleware components (RTOS, USB, TCP/IP, FatFS and graphics). All embedded software utilities come with a full set of examples.



STM32CubeF1 gathers in one single package all the generic embedded software components required to develop an application on STM32F1 microcontrollers. Following STM32Cube initiative, this set of components is highly portable, not only within STM32F1 series but also to other STM32 series.

STM32CubeF1 is fully compatible with STM32CubeMX code generator that allows generating initialization code. The package includes a low level hardware abstraction layer (HAL) that covers the microcontroller hardware, together with an extensive set of examples running on STMicroelectronics boards. The HAL is available in open-source BSD license for user convenience.



## STM32CubeF1 package

STM32CubeF1 package also contains a set of middleware components with the corresponding examples. They come in very permissive license terms:

- CMSIS-RTOS implementation with FreeRTOS open source solution
- TCP/IP stack based on open source LwIP solution
- FAT File system based on open source FatFs solution
- STemWin, a professional graphical stack solution available in binary format and based on our partner solution SEGGER emWin
- Full USB Host and Device stack supporting many classes.

A set of application projects implementing all these middleware components is also provided in the STM32CubeF1 package.

STM32CubeF1 is included in the STM32Cube package (see figure on cover page). Please note that STM32Cube initiative is progressively deployed on all STM32 series.

## Ordering Information

STM32CubeF1 is available for free download from <http://www.st.com/stm32cube>.

## Revision history

**Table 1. Document revision history**

Date	Revision	Changes
09-Jan-2015	1	Initial release.

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