

## Class B 60730-1 and 60335-1 functional safety package with software expansion for STM32Cube

Data brief

### Features

- X-CUBE-CLASSB version 2.2.0 supports the STM32L0, STM32L1, STM32L4, STM32L4+, STM32F0, STM32F1, STM32F2, STM32F3, STM32F4 and STM32F7 Series
- X-CUBE-CLASSB version 2.3.0 supports the STM32G0, STM32G4, STM32WB (Cortex<sup>®</sup>-M4 core only) and STM32H7 (Cortex<sup>®</sup>-M7 core only) Series
- Based on STM32Cube HAL
- Optimized portability among different MCUs thanks to STM32Cube
- Partially optimized code
- Support of IAR<sup>™</sup>, Keil<sup>®</sup>, and GCC-based compilers
- Certified by UL<sup>®</sup>
- Coverage of worldwide standards (IEC, UL, CSA)

### Description

The IEC 60730-1 and IEC 60335-1 safety standards define the test and the diagnostic methods that ensure the safe operation of embedded control hardware and software for the household appliances that are under control of electronic programmable devices.

With its X-CUBE-CLASSB functional safety package based on robust built-in STM32 safety features, STMicroelectronics provides a comprehensive set of certified software libraries and documentation for manufacturers to significantly reduce the development efforts, time and cost to achieve the UL/CSA/IEC 60335-1 and the 60730-1 worldwide Class B safety certifications for their STM32-based applications. The X-CUBE-CLASSB functional safety package consists of a set of expansion software for STM32Cube (Self-Test Libraries and examples), and a safety manual *Guidelines for obtaining UL/CSA/IEC 60335 Class B certification in any STM32 application* Application Note (AN4435).



## General information

The X-CUBE-CLASSB functional safety package runs on STM32 32-bit microcontrollers based on the Arm<sup>®(a)</sup> Cortex<sup>®</sup>-M processor.



## Ordering information

X-CUBE-CLASSB is available for free download from the [www.st.com](http://www.st.com) website.

## License

X-CUBE-CLASSB is delivered under the *Mix Ultimate Liberty+OSS+3rd-party V1* software license agreement (SLA0048).

The software components provided in this package come with different license schemes as shown in [Table 1](#).

**Table 1. Software component license agreements**

Software component	Owner	License
Class B library	STMicroelectronics	Ultimate Liberty (SLA0044)
Cortex <sup>®</sup> -M CMSIS	Arm limited	BSD-3-Clause
HAL STM32	STMicroelectronics	BSD-3-Clause
BSP	STMicroelectronics	BSD-3-Clause
Project examples	STMicroelectronics	Ultimate Liberty (SLA0044)

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

## Revision history

**Table 2. Document revision history**

Date	Revision	Changes
02-Feb-2016	1	Initial release.
24-Oct-2017	2	Updated <i>Features</i> : – Added compatibility with STM32L4, STM32F1 and STM32F7 Series – Added support of GCC-based AC6 compiler Added <i>Ordering information</i> .
15-Nov-2019	3	Updated <i>Features</i> : – Added the support of the STM32L4+, STM32G0, STM32G4, STM32WB and STM32H7 Series – Discriminated between version 2.2.0 and version 2.3.0 Added <i>License</i> .

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