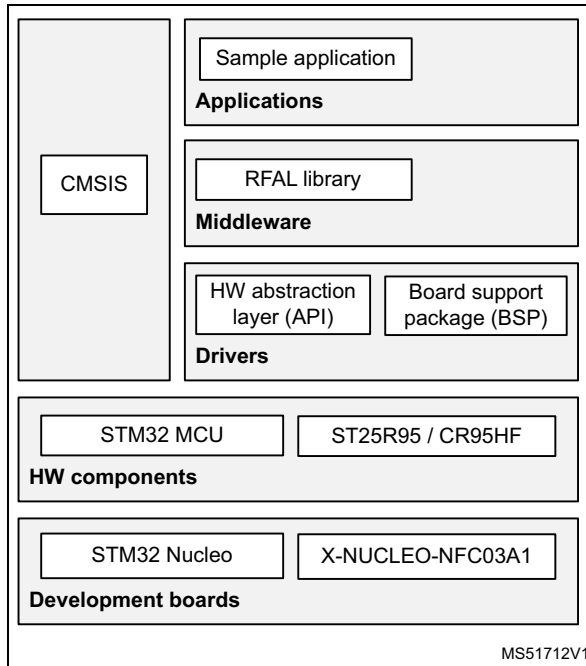


## ST25R95 and CR95HF near field communication transceivers software expansion for STM32Cube

Data brief



### Description

The X-CUBE-NFC3 software includes the drivers for ST25R95 and CR95HF, running on STM32 microcontrollers. It is built on top of STM32Cube™ software technology, easing portability across different STM32 MCUs.

The software comes with examples of implementation of such drivers, running on the X-NUCLEO-NFC03A1 board plugged on top of NUCLEO-L476RG, NUCLEO-F401RE or NUCLEO-F103RB boards.

### Features

- Complete middleware to build applications using the ST25R95 and CR95HF near field communication transceivers
- Easy portability across different MCU families, thanks to STM32Cube™
- Sample application to detect several NFC tag types
- Free, user-friendly license terms
- Sample implementation available on the X-NUCLEO-NFC03A1 expansion board, plugged onto one among NUCLEO-L476RG, NUCLEO-F401RE or NUCLEO-F103RB boards
- Complete RF/NFC abstraction (RFAL) for all major technologies including data exchange protocols



## 1 What is STM32Cube?

STMCube™ initiative was originated by STMicroelectronics to ease developers' life by reducing development efforts, time and cost. STM32Cube covers STM32 portfolio.

The STM32 microcontrollers are based on Arm<sup>®(a)</sup> core(s).

STM32Cube Version 1.x includes:

- The STM32CubeMX, a graphical software configuration tool that allows to generate C initialization code using graphical wizards
- A comprehensive embedded software platform, delivered per series (such as STM32CubeF4 for STM32F4 Series)
  - The STM32Cube HAL, an STM32 abstraction layer embedded software, ensuring maximized portability across STM32 portfolio
  - A consistent set of middleware components such as RTOS, USB, TCP/IP, Graphics
  - All embedded software utilities coming with a full set of examples

## 2 How does this software complement STM32Cube?

The proposed software is based on the STM32CubeHAL, the hardware abstraction layer for STM32 microcontrollers. The package extends STM32Cube by providing a Board Support Package (BSP) for the X-NUCLEO-NFC03A1 expansion board for STM32 Nucleo and some middleware components for HF reader and NFC application drivers (RFAL).

The drivers abstract low-level details of the hardware, and allows the middleware components and applications to access NFC tags and NFC enabled mobile phones in a hardware independent fashion.

The package also includes a sample application that developers can use to start experimenting with the code. The sample is developed to detect NFC tags of different types.

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

### 3 Revision history

Table 1. Document revision history

Date	Revision	Changes
23-May-2016	1	Initial release.
15-Jan-2019	2	Added ST25R95, hence updated document title and image on cover page. Updated <a href="#">Features</a> , <a href="#">Description</a> , <a href="#">Section 1: What is STM32Cube?</a> and <a href="#">Section 2: How does this software complement STM32Cube?</a> .

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