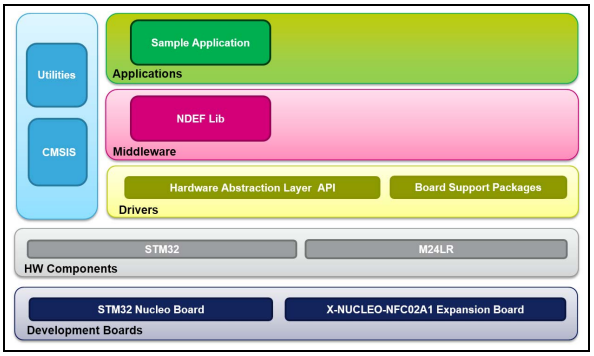
X-CUBE-NFC2

Dynamic NFC/RFID tag IC software expansion for STM32Cube

Data brief



Features

- Complete middleware to build applications using the dynamic NFC/RFID tag IC M24LR04E-R
- Easy portability across different MCU families, thanks to STM32Cube
- Sample application example to write the NDEF (NFC Data Exchange Format) file with URI (Uniform Resource Identifier) data
- Free, user-friendly license terms
- Implementation examples available on board X-NUCLEO-NFC02A1 plugged on top of either NUCLEO-F401RE or NUCLEO-L053R8

Description

The X-CUBE-NFC2 software includes all the dynamic NFC/RFID tag IC drivers, running on STM32, for the device M24LR04E-R. It is built on top of STM32Cube software technology, easing portability across different STM32 microcontrollers.

The software comes with examples of implementation of such drivers, running on the X-NUCLEO-NFC02A1 board plugged on top of either NUCLEO-F401RE or NUCLEO-L053R8.

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.

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 the STM32 microcontroller. The package extends STM32Cube by providing a Board Support Package (BSP) for the X-NUCLEO-NFC02A1 expansion board for STM32 Nucleo and some middleware components for NDEF application drivers.

The drivers abstract low-level details of the hardware and allow the middleware components and applications to access NDEF data in a hardware independent fashion.

The package also includes an application example that the developer can use to start experimenting with the code. The sample example was developed to write the NDEF file with URI data. Other NDEF application drivers included in the middleware are:

- NDEF AAR (to add AAR, Android Application Record, in the tag)
- NDEF Email (to manage NDEF file that represents Email)
- NDEF Geo (to manage NDEF file that represents geo-location)
- NDEF MyApp (to manage the NDEF file of a private application)
- NDEF SMS (to manage NDEF file that represents SMS)
- NDEF Text (to manage Text NDEF file)
- NDEF Vcard (to manage NDEF file that represents Vcard)

3 Revision history

Table 1. Document revision history

Date	Revision	Changes
26-Jan-2016	1	Initial release.