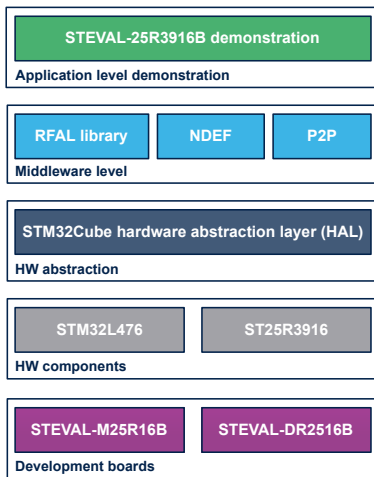


Firmware for the STEVAL-25R3916B kit



Product status link

[STSW-ST25R018](#)

Features

- Reader/writer demonstration
 - Tag inventory, read and write
 - Support of all NFC standard protocols
 - Dynamic power output (DPO)
 - NFC Forum NDEF messages
- Card emulation demonstration
 - NFC Forum Type 4A Tag emulation (all tag types supported in USB mode)
 - NFC Forum NDEF messages
 - Dynamic power output (DPO)
 - Possibility to be written by a reader or by a smartphone
- Peer to peer (P2P) demonstration
 - Initiator and target roles
 - Active and passive modes
 - NFC Forum NDEF messages
 - Message reception from a peer device (reader or smartphone)
- Automatic antenna tuning (AAT) demonstration
 - Configures variable capacitances to get the best performance from the antenna
 - Fast, fully automated algorithm
- USB mode: control of the device with a PC to run the full set of ST25R3916B demonstrations
 - Based on STM32Cube software libraries and methodologies

Description

The [STSW-ST25R018](#) package contains the source files to compile firmware for the STEVAL-25R3916B board.

The firmware includes the RFAL driver for the ST25R3916B high performance NFC universal device and EMVCo reader, running on an STM32L476 microcontroller.

The package is built on top of STM32Cube software libraries and methodology, and provides several examples of the capabilities of the ST25R3916B device.

The USB mode features allow the user to run the full set of ST25R3916B demonstrations with a PC on which the software has been installed (using [STSW-ST25R010](#), the software installer for STEVAL-25R3916B GUI).

[STSW-ST25R018](#) is available for free download from www.st.com.

1 General information

The STM32L476 microcontrollers are based on Arm® cores.

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



1.1 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
 - 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 STM32CubeWB for the STM32WB Series), 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 RFAL, NDEF, P2P
 - 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

2 License scheme

The STSW-ST25R018 package is delivered under the Mix_MyLiberty software license agreement (SLA0052), and its additional license terms.

Revision history

Table 1. Document revision history

Date	Version	Changes
13-Jan-2023	1	Initial release.

IMPORTANT NOTICE – READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgment.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, refer to www.st.com/trademarks. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2023 STMicroelectronics – All rights reserved