

Evaluation kit for RX95HF NFC transceiver

Data brief

Features

- Ready-to-use printed circuit board:
 - RX95HF-VMD5 13.56 MHz RF transceiver for NFC A type 4 or ISO18092 tag emulation
 - STM32F103RFT6 64LQFP 32-bit microcontroller, with 768 Kbytes of Flash memory
 - 47 x 34 mm 13.56 MHz inductive antenna etched on PCB and associated circuitry
 - USB miniB connector for board powering
- LED indicating the presence of an RF field
- Joystick for menu selection
- JTAG connector for microcontroller firmware upgrade and debug
- LCD screen (board MB895)
- USB cable: Type A / mini B
- Associated Firmware and Android application
 - On-board firmware for NFC 14443A Tag emulator (NDEF, URL)
 - Android application for smartphone used as an NFC PCD (firmware uploader)

Figure 1. EVAL-RX95HF RF transceiver board alone

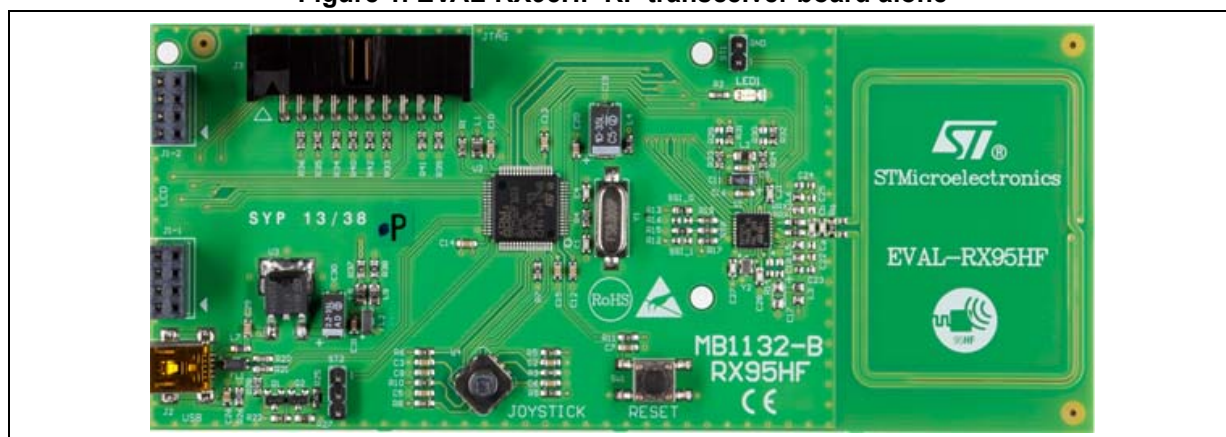


Figure 2. EVAL-RX95HF RF transceiver board with LCD screen plugged

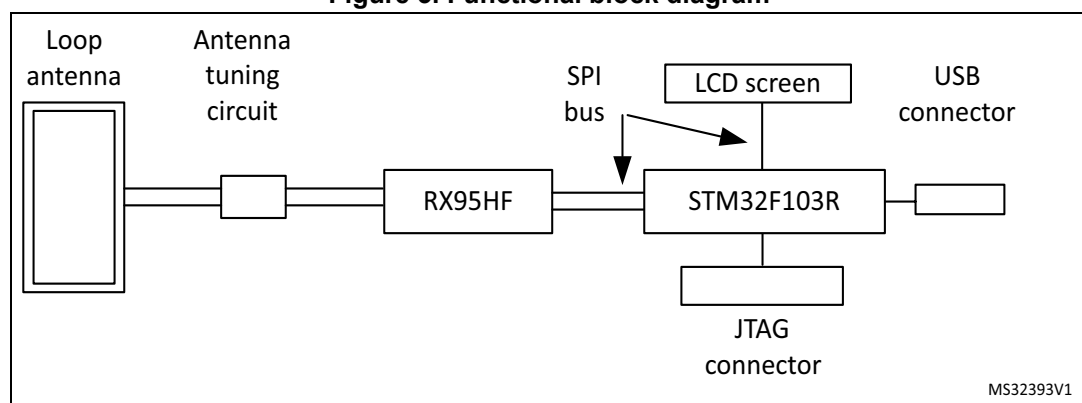


Description

The EVAL-RX95HF is an evaluation kit for RX95HF NFC transceiver. This component is a 13.56 MHz near field communication transceiver for tag emulation and could be used with an NFC Reader (NFC smartphone, CR95HF) to exchange NDEF messages (URI, VCARD, URL) or establish a Proprietary Data exchange protocol communication. The communication protocol is based on ISO/IEC 14443 Type A.

The EVAL-RX95HF is powered through the USB bus. It includes an RX95HF transceiver for tag emulation, a 47 x 34 mm 13.56 MHz inductive etched antenna and its associated tuning components. The RX95HF communicates with the STM32F103RF 32-bit MCU via the SPI bus.

Figure 3. Functional block diagram



The EVAL-RX95HF is delivered with the following firmware and software which can be downloaded from <http://www.st.com> and Google Play:

- STM32 EVAL-RX95HF-application-firmware: on-board demonstration firmware
- Android application RX95HF_application for firmware upgrade

A complete description of the firmware and Android application can be found in application notes posted on ST web site.

Revision history

Table 1. Document revision history

Date	Revision	Changes
31-Oct-2013	1	Initial release.

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

ST PRODUCTS ARE NOT DESIGNED OR AUTHORIZED FOR USE IN: (A) SAFETY CRITICAL APPLICATIONS SUCH AS LIFE SUPPORTING, ACTIVE IMPLANTED DEVICES OR SYSTEMS WITH PRODUCT FUNCTIONAL SAFETY REQUIREMENTS; (B) AERONAUTIC APPLICATIONS; (C) AUTOMOTIVE APPLICATIONS OR ENVIRONMENTS, AND/OR (D) AEROSPACE APPLICATIONS OR ENVIRONMENTS. WHERE ST PRODUCTS ARE NOT DESIGNED FOR SUCH USE, THE PURCHASER SHALL USE PRODUCTS AT PURCHASER'S SOLE RISK, EVEN IF ST HAS BEEN INFORMED IN WRITING OF SUCH USAGE, UNLESS A PRODUCT IS EXPRESSLY DESIGNATED BY ST AS BEING INTENDED FOR "AUTOMOTIVE, AUTOMOTIVE SAFETY OR MEDICAL" INDUSTRY DOMAINS ACCORDING TO ST PRODUCT DESIGN SPECIFICATIONS. PRODUCTS FORMALLY ESCC, QML OR JAN QUALIFIED ARE DEEMED SUITABLE FOR USE IN AEROSPACE BY THE CORRESPONDING GOVERNMENTAL AGENCY.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2013 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com