X-NUCLEO-NFC02A1

Dynamic NFC tag expansion board based on M24LR for STM32 Nucleo

Data brief

Features

- M24LR04E-RMN6T/2 Dynamic NFC/RFID tag
- Up to 4 Kbit memory with NDEF support
- 31 mm x 30 mm 13.56 MHz double layer inductive antenna etched on the PCB (ANT14)
- Compatible with STM32 Nucleo boards
- Equipped with Arduino™ UNO R3 connector
- Self powered or powered through the Arduino™ UNO R3 connectors
- 3 general purpose LEDs
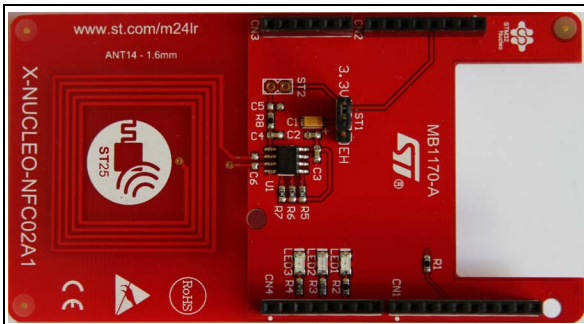
Description

The X-NUCLEO-NFC02A1 board contains the M24LR04E-R. It is a Dynamic NFC/RFID Tag IC with a dual-interface Electrically Erasable Programmable Read-Only Memory (EEPROM) that also features an I2C interface.

The M24LR04E-R is a 4 KByte EEPROM organized as 512 x 8 bits in the I2C mode and as 128 x 32 bits in RF mode. It can be operated either from an external power supply or directly powered by the received carrier electromagnetic field.
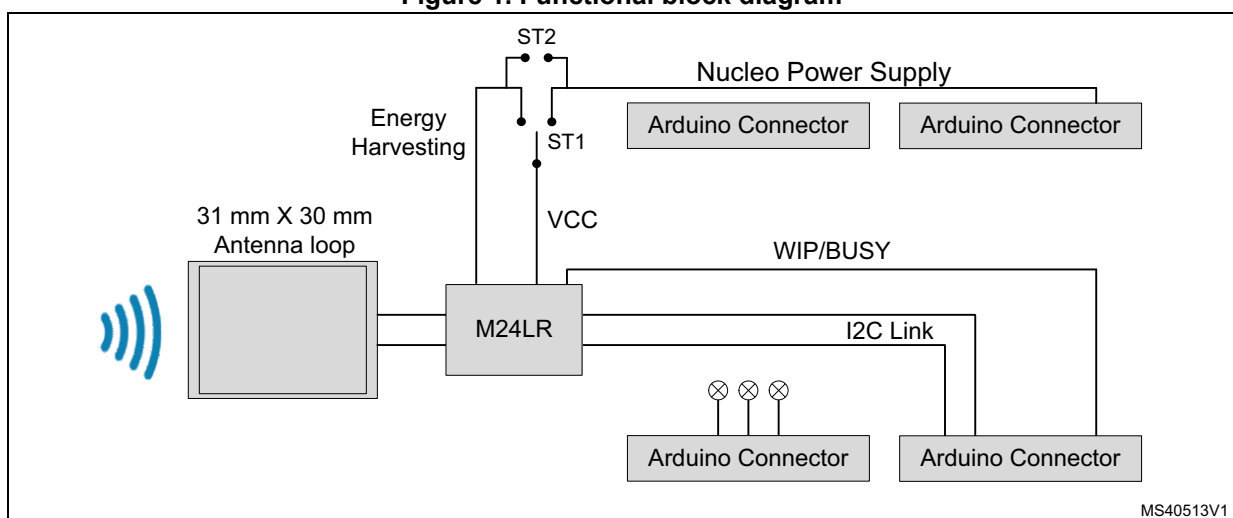
The tag provides a user configurable digital output pin toggling during either RF Write in Progress or RF Busy mode.

The M24LR04E-R provides an Energy Harvesting mode. When activated, the M24LR04E-R delivers the excess energy coming from the RF field on the Vout analog pin. In case the RF field strength is insufficient or when Energy Harvesting mode is disabled, the analog output pin Vout goes into high-Z state and Energy Harvesting mode is automatically stopped.

Figure 1. Functional block diagram

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1 Revision history

Table 1. Document revision history

Date	Revision	Changes
24-Jul-2014	1	Initial release.
07-Dec-2015	2	Updated board picture and *Figure 1*. Updated *Features* and *Description*.

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