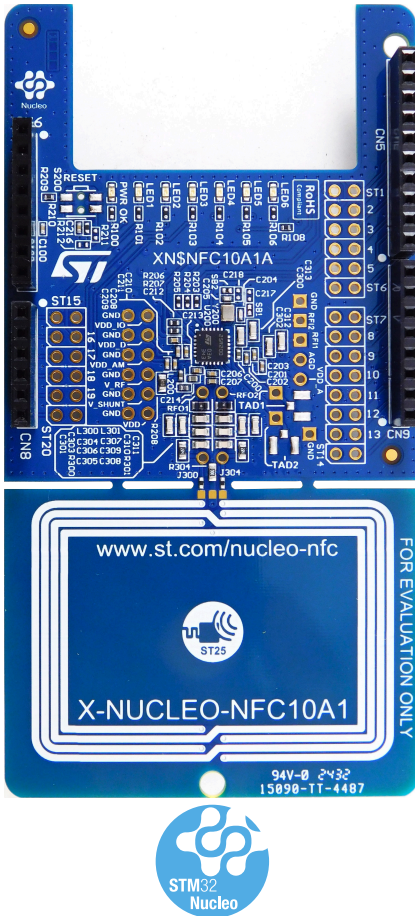


## NFC card reader expansion board based on ST25R200 for STM32 Nucleos



### Features

- On-board NFC card reader IC: **ST25R200**
- 47 mm x 34 mm, four turns, 13.56 MHz inductive antenna etched on PCB and associated tuning circuit
- Six general-purpose LEDs
- ISO 14443A and ISO14443B
- ISO 15693
- Possibility of driving two antennas in single-ended configuration
- Equipped with Arduino UNO R3 connector
- Free comprehensive development firmware library compatible with **STM32Cube** and samples for **ST25R200**
- Scalable solution for multiple board cascade
- FCC certified
- RoHS and WEEE compliant

### Description

The **X-NUCLEO-NFC10A1** NFC card reader expansion board is based on the **ST25R200** device.

The expansion board is configured to support ISO14443A/B, ISO15693.

The **ST25R200** manages frame coding and decoding in reader mode for standard applications, such as NFC, proximity, and vicinity HF RFID standards. It supports ISO/IEC 14443 type A/B and ISO/IEC 15693 RF communication protocols as well as the detection, reading and writing of NFC Forum type 1, 2, 4, and 5 tags.

It embeds a low power wake-up system capable of detecting an approaching tag. It also features a low power RC oscillator and wake-up timer to wake up the device automatically after a selected time period and check for a tag presence.

#### Product summary

NFC card reader expansion board based on ST25R200 for STM32 and STM8 Nucleos	<b>X-NUCLEO-NFC10A1</b>
High-performance NFC universal device and EMVCo reader	<b>ST25R200-BMET</b>
High-performance HF reader/NFC initiator IC software expansion for STM32Cube	<b>X-CUBE-NFC10</b>
Applications	<b>Wireless Connectivity</b>

# 1 Schematic diagrams

Figure 1. X-NUCLEO-NFC10A1 circuit schematic (1 of 3)

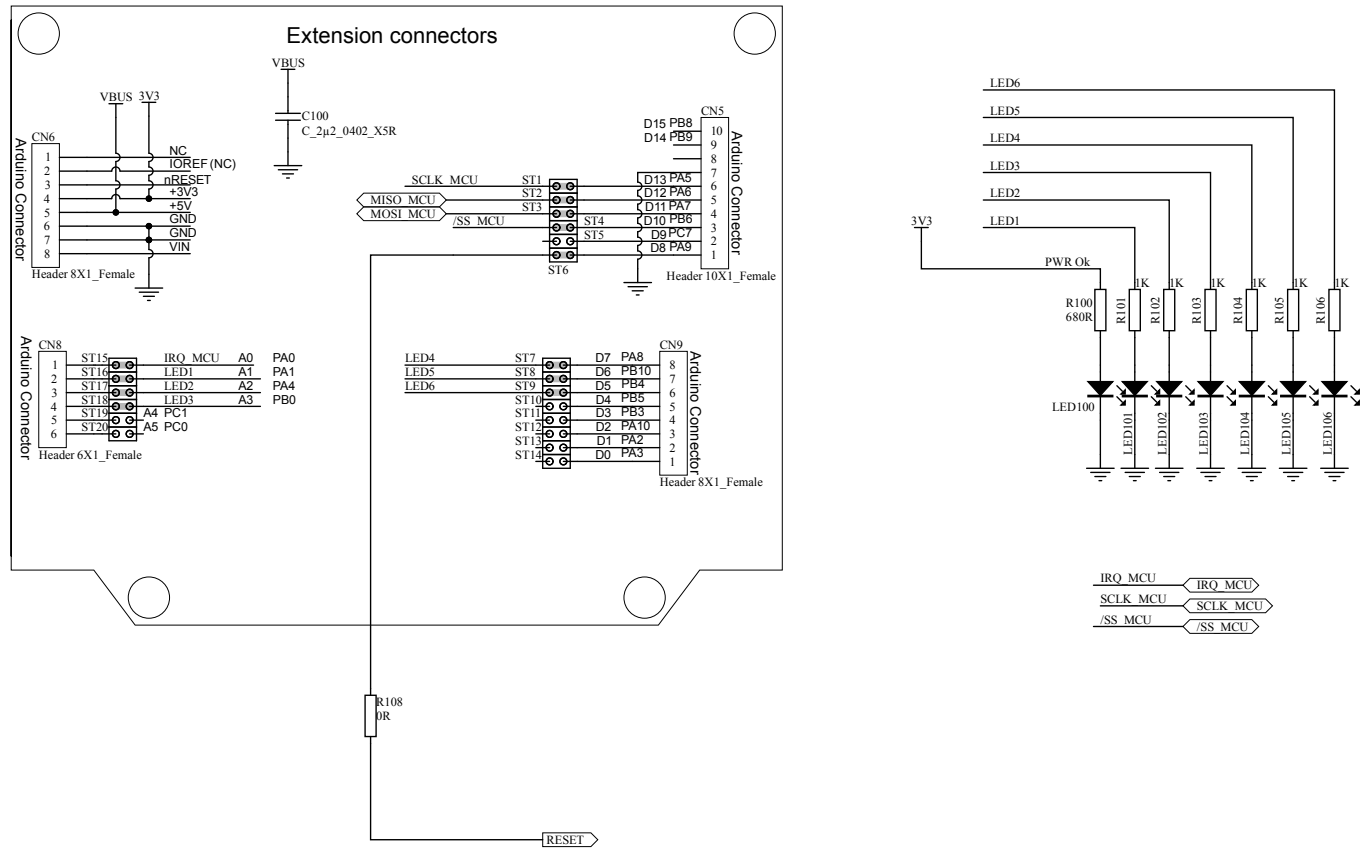


Figure 2. X-NUCLEO-NFC10A1 circuit schematic (2 of 3)

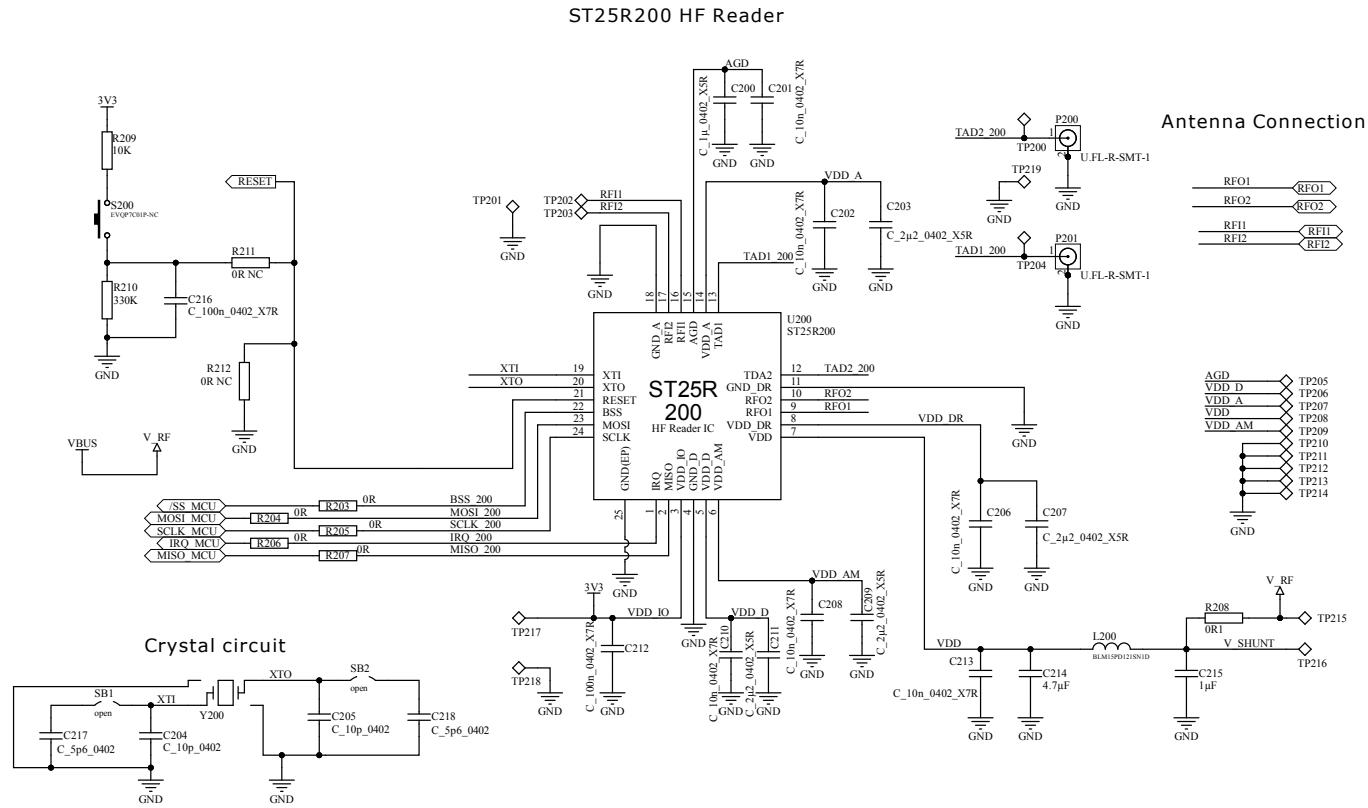
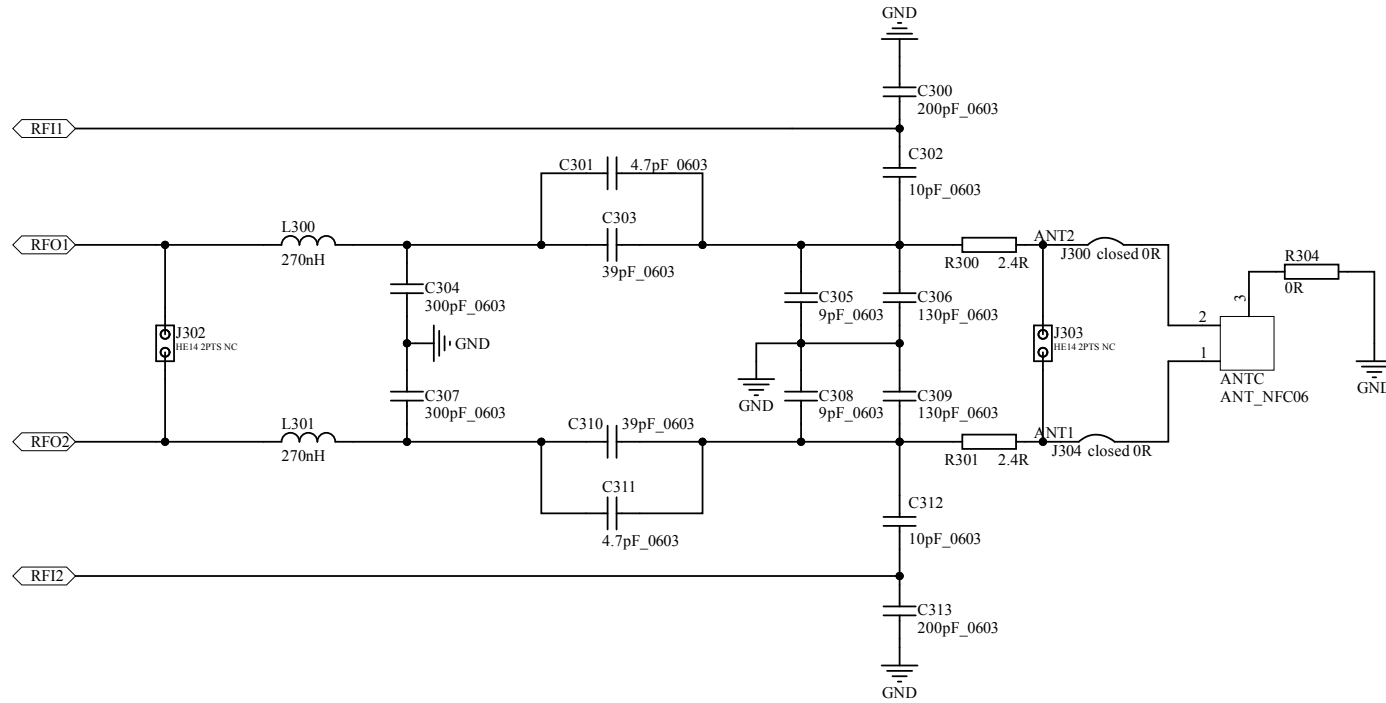


Figure 3. X-NUCLEO-NFC10A1 circuit schematic (3 of 3)

## Antenna Circuit incl. EMI Filter and Matching



## 2 Board versions

**Table 1. X-NUCLEO-NFC10A1 versions**

PCB version	Schematic diagrams	Bill of materials
XN\$NFC10A1A <sup>(1)</sup>	XN\$NFC10A1A schematic diagrams	XN\$NFC10A1A bill of materials

1. This code identifies the X-NUCLEO-NFC10A1 expansion board first version. It is printed on the board PCB.

## Revision history

**Table 2. Document revision history**

Date	Revision	Changes
17-Jul-2024	1	Initial release.
15-Nov-2024	2	Updated cover image.

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