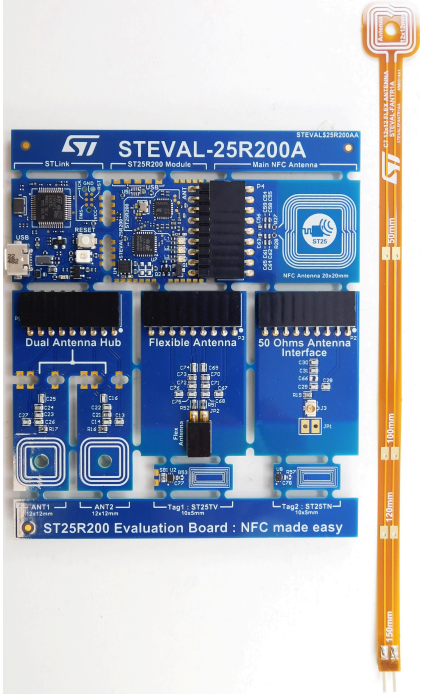
STEVAL-25R200SA

Data brief

Discovery kit for the ST25R200 high performance NFC device



Features

- On-board NFC card reader IC:ST25R200
- Operating modes: Reader/Writer
- ISO 14443A, ISO 14443B and ISO15693 compliant general-purpose NFC device
- Supports NFC Forum T1T, T2T, T4T, and T5T tag types
- Possibility of driving two antennas in a single-ended configuration
- RC low-power wake-up
- Five 13.56 MHz inductive antennas etched on the PCB and associated tuning circuits
- Two tag boards with the chip soldered and the antenna etched on PCB with its associated tuning circuit. Two sticker tags
- A board dedicated to the STLINK in-circuit debugger and programmer for the STM32
- Free comprehensive firmware library compatible with STM32Cube and examples for ST25R200
- CE, UKCA, FCC, ISED certified
- RoHS and WEEE compliant

Product summary	
Discovery kit for the ST25R200 high performance NFC device	STEVAL-25R200SA
Powerful general-purpose NFC reader for consumer and industrial applications	ST25R200
High-performance HF reader/NFC PC software package	STSW-25R020
Applications	NFC

Description

The STEVAL-25R200SA is a ready-to-use kit based on the ST25R200 high-performance NFC device for contactless applications.

The kit allows the user to evaluate the ST25R200 features and functionality in the reader/writer modes.

Presented in the form of a single divisible card (STEVAL-25R200AA) the kit consists of two boards: a main board, which embeds the ST25R200 device and an STM32G0 MCU.

Eight boards are breakable allowing evaluation of various combinations.

A companion board, which includes an STLINK in-circuit debugger and programmer for the STM32.

An antenna 20x20 mm etched on the PCB with its tuning circuit.

The complementary antennas are designed for testing various topologies, which can be substituted for the main NFC antenna.

A hub with two 12 x 12 mm tuned antennas for evaluating the ST25R200 dual antenna feature.

A board tuned for being connected to the flexible antenna is delivered with the kit.

A board is tuned for being connected to any 50-ohm NFC antenna is available on the market.

The tag boards for reader and tag system evaluation are a board, which embeds a ST25TV with its tuned 10 x 5 mm antenna and a board, which embeds a ST25TN with its tuned 10 x 5 mm antenna.

The stickers tags for easy ST25R200 reader system evaluation.

A connector is present on all modules for a quick and robust connection to the system core. It is based on the ST25R200 and the STM32, which includes hardware and software tools that enable using the entire STM32 ecosystem.

This board is powered through a micro-USB connector.

Thanks to several combinations that can be performed, this kit helps the users develop and test their applications.

The kit is FCC certified, with FCC ID: YCPR200AD1. It is also IC certified, with IC: 8976A-R200AD1; PMN: STEVAL-25R200A; HVIN: STEVAL-25R200A.

1 Schematic diagrams

Figure 1. STEVAL-25R200SA main board circuit schematic (1 of 7)

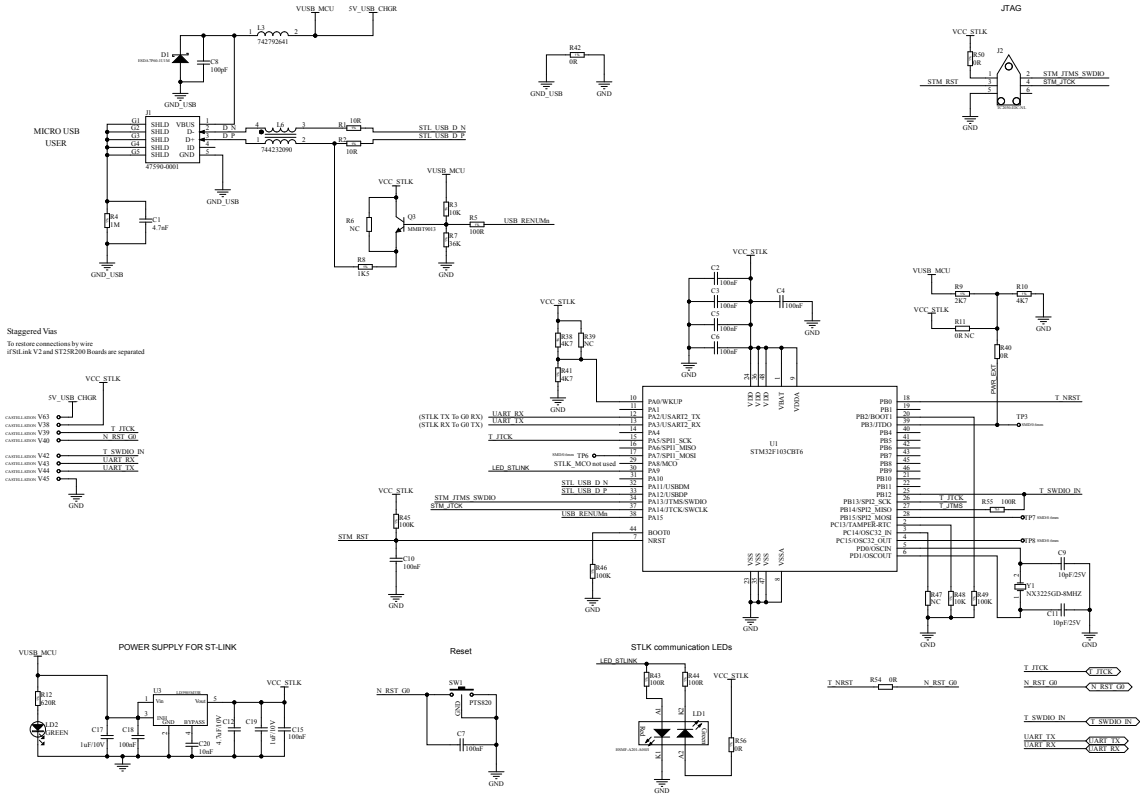


Figure 2. STEVAL-25R200SA main board circuit schematic (2 of 7)

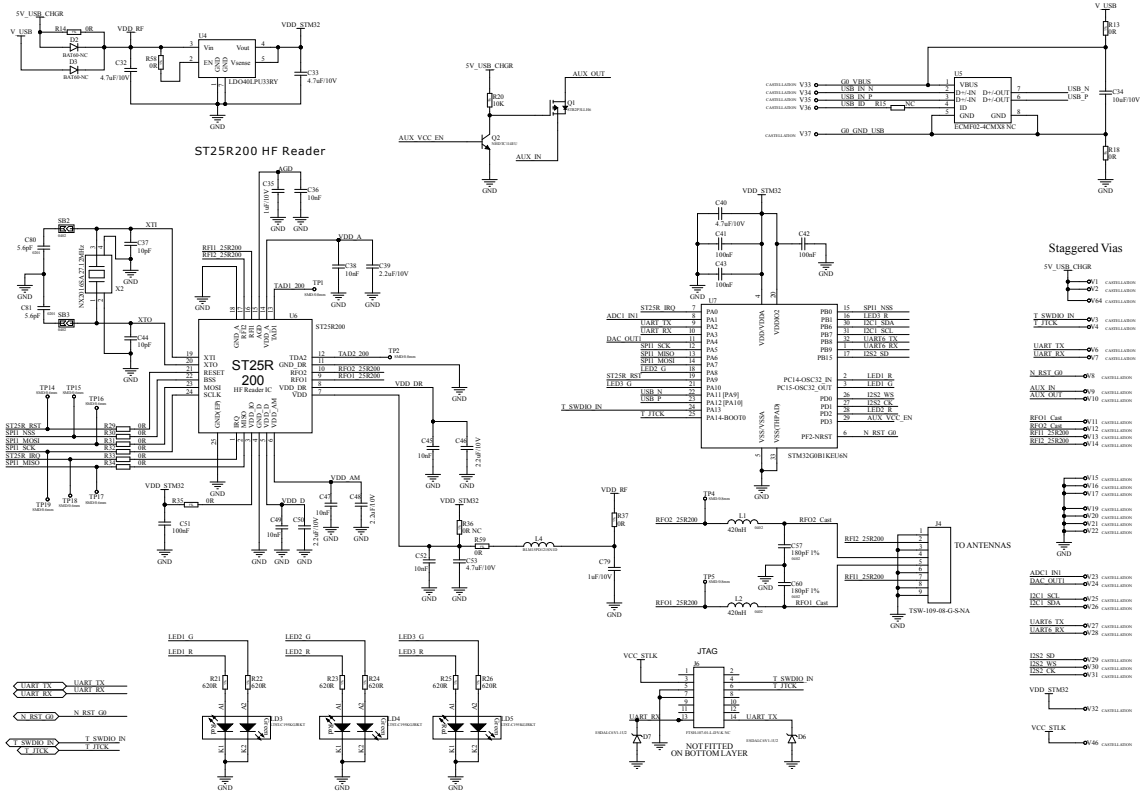


Figure 3. STEVAL-25R200SA main board circuit schematic (3 of 7)

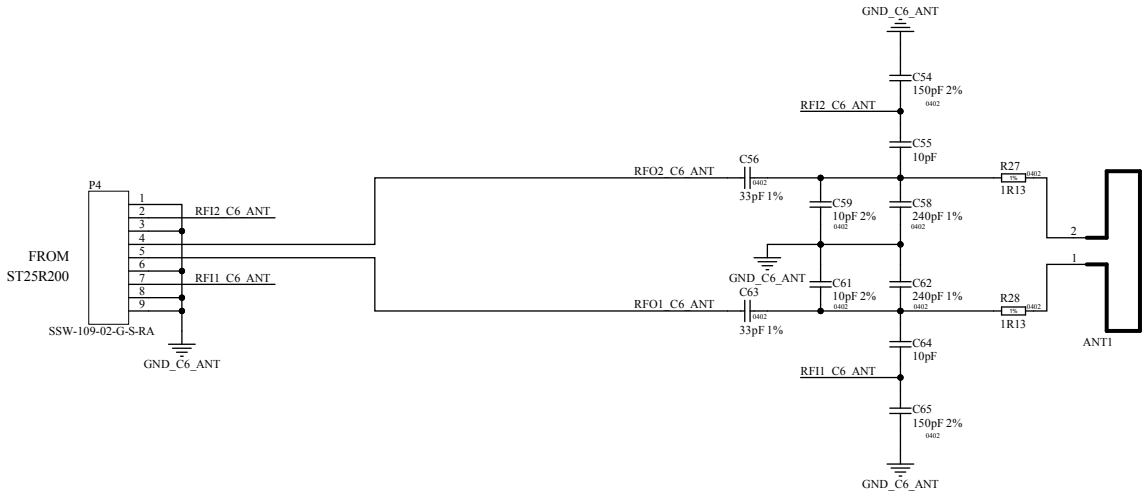


Figure 4. STEVAL-25R200SA main board circuit schematic (4 of 7)

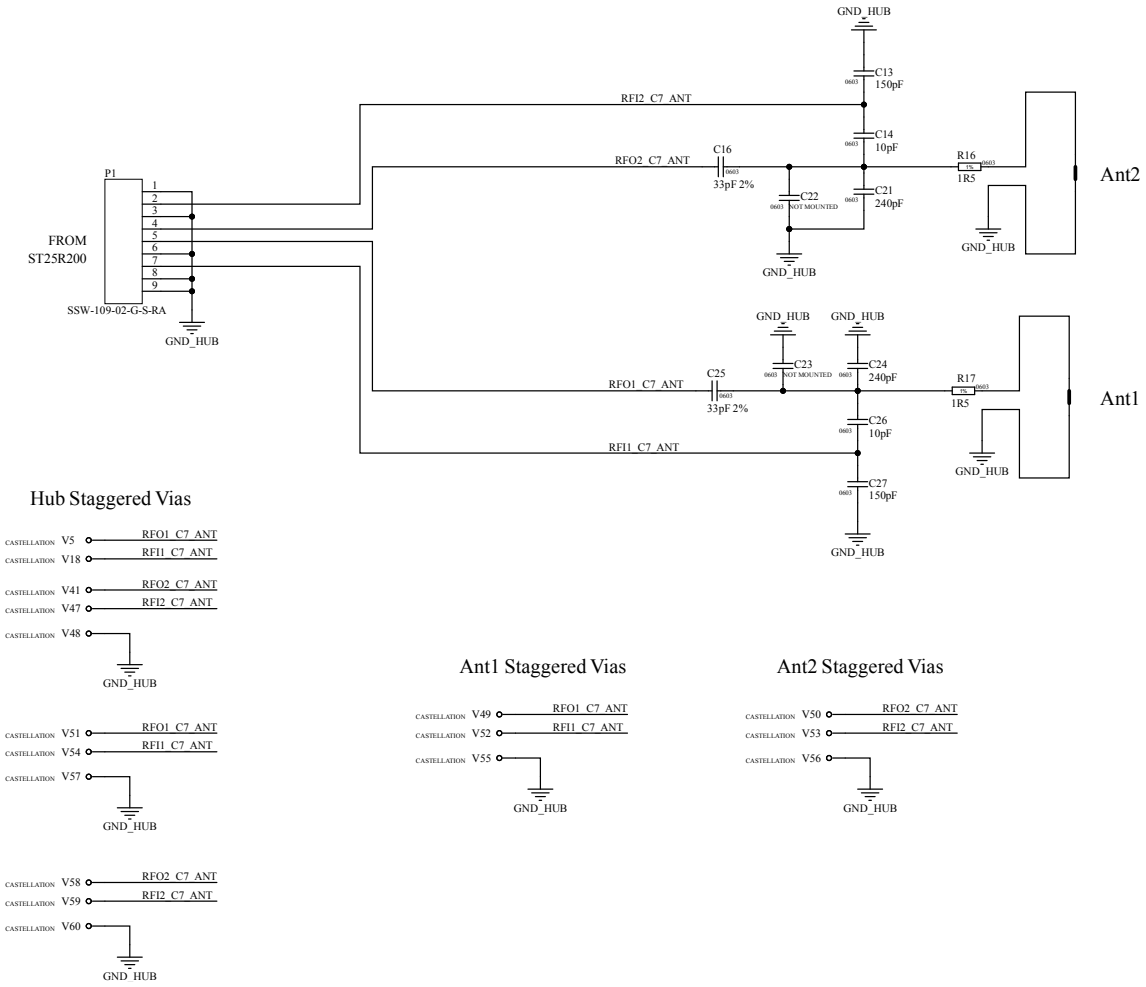


Figure 5. STEVAL-25R200SA main board circuit schematic (5 of 7)

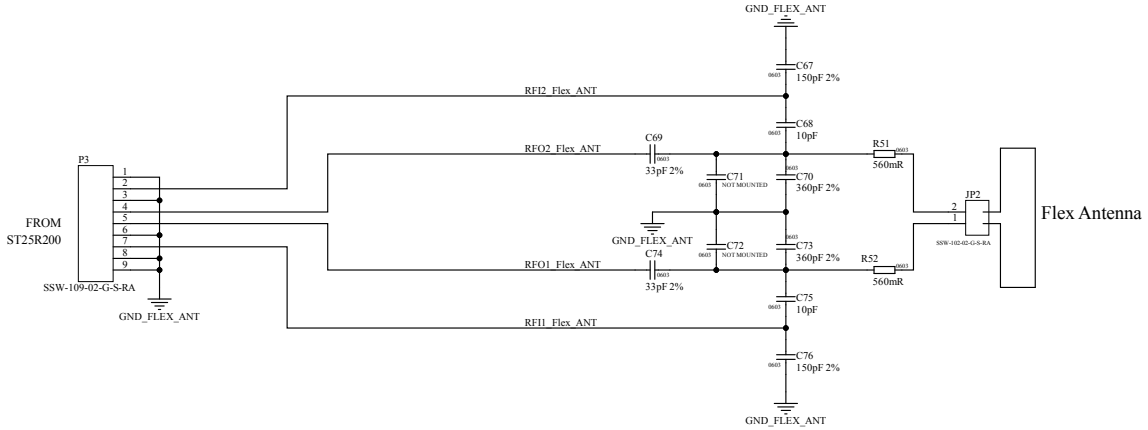


Figure 6. STEVAL-25R200SA main board circuit schematic (6 of 7)

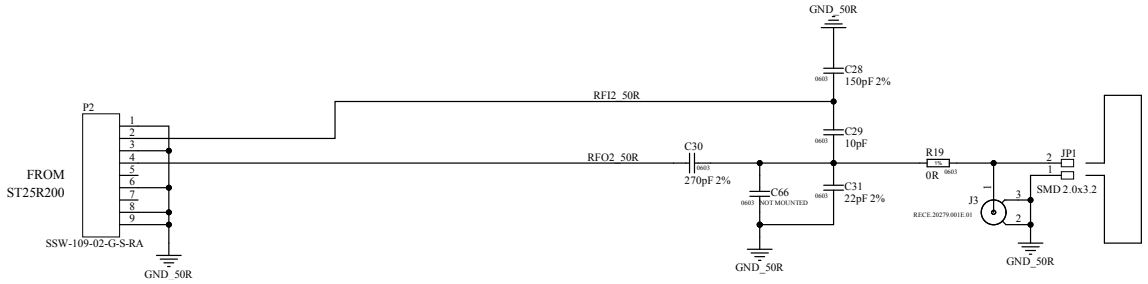
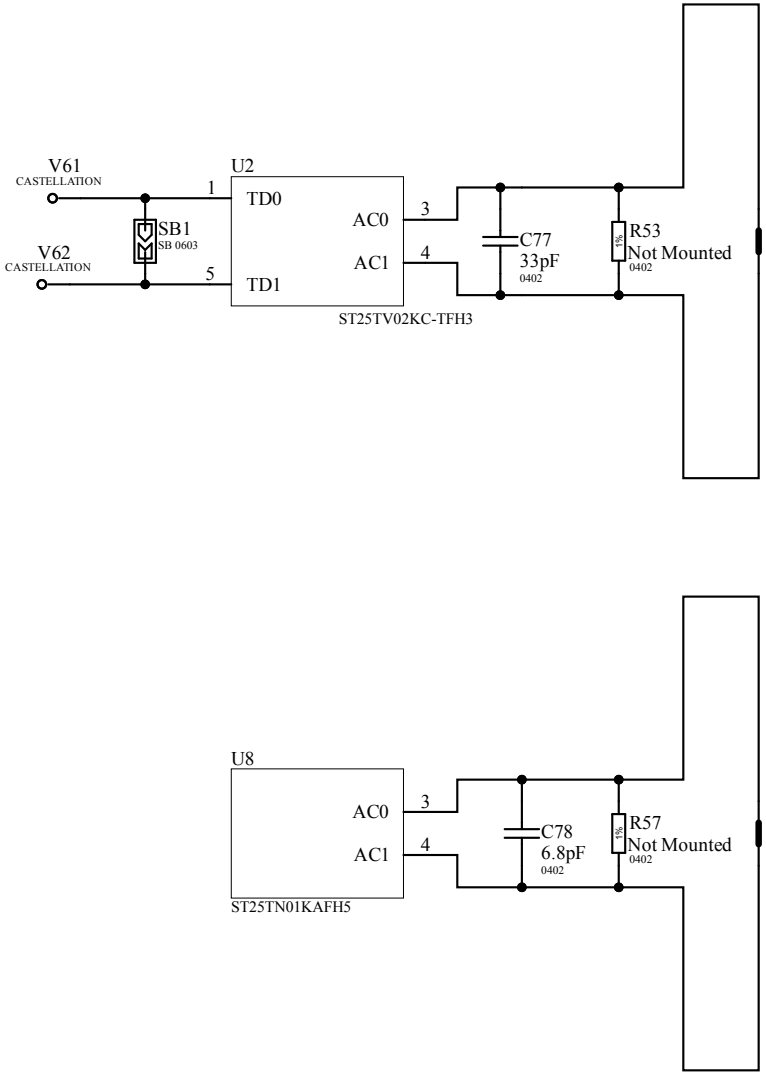


Figure 7. **STEVAL-25R200SA main board circuit schematic (7 of 7)**



2 Kit versions

Table 1. STEVAL-25R200SA versions

PCB version	Schematic diagrams	Bill of materials
STEVAL$25R200SAA (1)	STEVAL$25R200SAA schematic diagrams	STEVAL$25R200SAA bill of materials

1. *This code identifies the STEVAL-25R200SA evaluation kit first version. The kit consists of a STEVAL-25R200A whose version is identified by the code STEVAL$25R200AA and a STEVAL-FANTR1A whose version is identified by the code STV$FANTR1AA.*

Revision history

Table 2. **Document revision history**

Date	Revision	Changes
26-Sep-2024	1	Initial release.
02-Oct-2024	2	Updated Cover image.
08-Nov-2024	3	Updated Cover image.