

# M24SR series

## Dynamic NFC/RFID tags

## NFC forum type 4 & I<sup>2</sup>C EEPROM



### Dynamic NFC/RFID tags with I<sup>2</sup>C and 13.56 MHz ISO14443 RF interfaces with RF status and RF disable

ST's innovative family of Dynamic NFC/RFID tags which is part of ST25 product family provides new features and capabilities. The EEPROM memory bank can be accessed either by a low-power I<sup>2</sup>C interface or by an ISO 14443 RF interface operating at 13.56 MHz. It also features RF status and RF disable functions. In addition, the family features a 128-bit password data protection mechanism.



#### KEY FEATURES

- Industry-standard interfaces:
  - I<sup>2</sup>C: 1 MHz, from 2.7 to 5.5 V
  - ISO 14443: 106 Kbit/s data rate, up to 10 cm remote access range
- 2-Kbit, 4-Kbit, 16-Kbit and 64-Kbit EEPROM user memory
- 64-bit unique identifier
- 128-bit password protection
- 13.56 MHz carrier frequency
- RF status digital output
- RF disable input

#### TWO WORLDS CONNECTED

The ability to program or read a memory using either an RF or a wired interface offers new functions and capabilities for your products.

Potential applications include:

- Consumer electronics
- Medical equipment
- Industrial equipment
- Metering
- Computers and peripherals

#### KEY BENEFITS

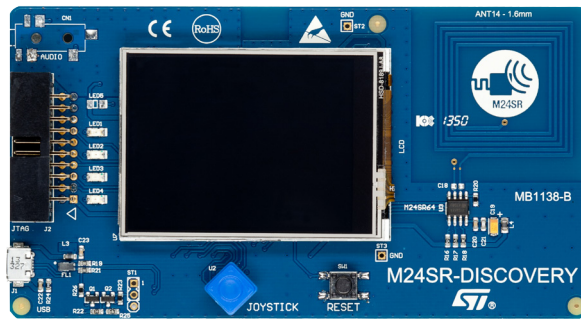
- Most flexible solution for parameter and firmware updates
- High-reliability EEPROM
- Flexible password protection scheme
- Simple and cost effective
- New functions and capabilities for device calibration, product activation, traceability information management, asset tracking and identification

## DEVICE SUMMARY

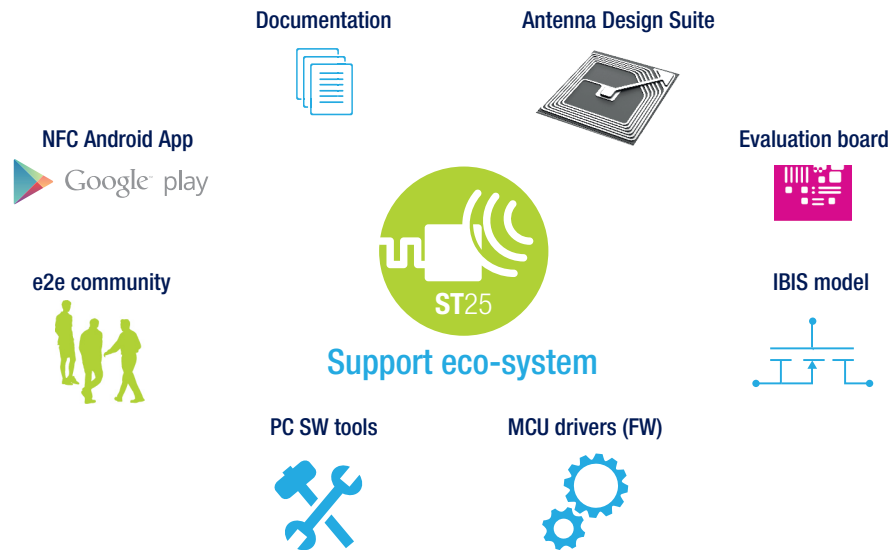
Part number	RF interface	Serial interface	Memory size	Clock frequency	Data protection (password)	Package	RF status output	RF disable input
M24SR02-Y	ISO 14443	I <sup>2</sup> C	2 Kbit	1 MHz	128 bit	S08, TSSOP8, UDFFPN 8	Yes	Yes
M24SR04-Y	ISO 14443	I <sup>2</sup> C	4 Kbit	1 MHz	128 bit	S08, TSSOP8, UDFFPN 8	Yes	Yes
M24SR16-Y	ISO 14443	I <sup>2</sup> C	16 Kbit	1 MHz	128 bit	S08, TSSOP8, UDFFPN 8	Yes	Yes
M24SR64-Y	ISO 14443	I <sup>2</sup> C	64 Kbit	1 MHz	128 bit	S08, TSSOP8, UDFFPN 8	Yes	Yes

## REFERENCE DESIGN KITS

- NFC/RFID tag, STM32F1 MCU, color display, Bluetooth/audio module and audio headset (order code: M24SR-DISCO-PREM)
- Dynamic NFC tag expansion shield based on M24SR for STM32 Nucleo (order code: X-NUCLEO-NFC01A1)



## M24SR DISCOVERY KIT AND M24SR MATRIX PICTURES



## TECHNICAL SUPPORT

ST's dynamic NFC/RFID tag family offers a simple and cost-effective implementation. ST can provide supporting material for integrating the antenna in your application: application notes, reference designs, antenna computation tools, e-presentations and e-learning.

Visit [www.st.com/nfc-rfid](http://www.st.com/nfc-rfid)



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