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 I²C 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.

**Dynamic NFC/RFID tags with I²C and 13.56 MHz ISO14443 RF interfaces with RF status and RF disable**

**KEY FEATURES**
- Industry-standard interfaces:
  - I²C: 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.

**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

Potential applications include:
- Consumer electronics
- Medical equipment
- Industrial equipment
- Metering
- Computers and peripherals
**DEVICE SUMMARY**

<table>
<thead>
<tr>
<th>Part number</th>
<th>RF interface</th>
<th>Serial interface</th>
<th>Memory size</th>
<th>Clock frequency</th>
<th>Data protection (password)</th>
<th>Package</th>
<th>RF status output</th>
<th>RF disable input</th>
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</thead>
<tbody>
<tr>
<td>M24SR02-Y</td>
<td>ISO 14443</td>
<td>I'C</td>
<td>2 Kbit</td>
<td>1 MHz</td>
<td>128 bit</td>
<td>S08, TSSOP8, UFDFPN 8</td>
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<td>M24SR04-Y</td>
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<td>I'C</td>
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<td>1 MHz</td>
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<td>I'C</td>
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<td>1 MHz</td>
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<tr>
<td>M24SR64-Y</td>
<td>ISO 14443</td>
<td>I'C</td>
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<td>1 MHz</td>
<td>128 bit</td>
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</tr>
</tbody>
</table>

**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)