ST25TA SERIES

NFC Forum Type 4

NFC tags with ISO/IEC 14443 Type A RF interface, NDEF memory, 128-bit password protection and TruST25 digital signature

ST’s ST25TA ICs provide the NFC Forum Type 4 Tag RF interface and built-in NDEF (NFC Data Exchange Format) message support. The embedded EEPROM memory density spans from 512 bits to 64 Kbits, covering a wide spectrum of applications including content-rich virtual business cards and smart signs. The ST25TA series delivers state-of-the-art RF performance and features a user-programmable digital CMOS (or Open Drain) output that eliminates the need for an external component to trigger the host wake-up.

KEY FEATURES & BENEFITS
- ISO/IEC 14443 Type A
- NFC Forum Type 4 Tag
- 13.56 MHz carrier frequency
- 512-bit, 2-Kbit, 16-Kbit and 64-Kbit density memory
- 56-bit unique identifier
- 128-bit password protection
- Optional 20-bit counter
- Optional RF status digital output
- 5-lead UFDFPN packages
- Bumped wafer die form packages
- 25 or 50 pF tuning capacitance
- 200 years data retention
- 1 million write erase cycles
- TruST25 digital signature

KEY BENEFITS
- Wide memory density options
- High-reliability EEPROM
- Built-in NDEF format support
- Strong password protection scheme
- Read or Write operations counter
- Flexible user-programmable GPO

KEY APPLICATIONS
Smart posters, NFC business cards, consumer electronics, wireless handover, gaming, industrial, traceability, wearable electronics, computer peripherals

www.st.com/nfc-rfid
Device summary

<table>
<thead>
<tr>
<th>Part number</th>
<th>RF interface</th>
<th>Memory size</th>
<th>Data protection (128 bit password)</th>
<th>20 bit Counter</th>
<th>Package</th>
<th>RF status output</th>
<th>Trust25 digital signature</th>
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</thead>
<tbody>
<tr>
<td>ST25TA512B</td>
<td>ISO 14443A Type A</td>
<td>512 bit</td>
<td>Yes</td>
<td>Yes</td>
<td>SBN12 *, SBN075</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>ST25TA02KB</td>
<td>ISO 14443A Type A</td>
<td>2 Kbit</td>
<td>Yes</td>
<td>Yes</td>
<td>SBN12 *, SBN075</td>
<td>No</td>
<td>Yes</td>
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<td>ST25TA02KB-P</td>
<td>ISO 14443A Type A</td>
<td>2 Kbit</td>
<td>Yes</td>
<td>Yes</td>
<td>UFDFPN5, SBN12*, SBN075</td>
<td>Yes (CMOS positive GPO)</td>
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<tr>
<td>ST25TA02KB-D</td>
<td>ISO 14443A Type A</td>
<td>2 Kbit</td>
<td>Yes</td>
<td>Yes</td>
<td>UFDFPN5, SBN12*, SBN075</td>
<td>Yes (Open Drain GPO)</td>
<td>Yes</td>
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<tr>
<td>ST25TA16K</td>
<td>ISO 14443A Type A</td>
<td>16 Kbit</td>
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<td>SBN12 *</td>
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<td>64 Kbit</td>
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<td>No</td>
<td>SBN12 *</td>
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</tbody>
</table>

SBN075 : Saw and Bumped wafer (die form), 75 µm thickness

Reference design kits
The CLOUD-ST25TA02KB is a ready-to-use demo board intended to evaluate the ST25TA02KB-P (order code: CLOUD-ST25TA)

Eco-system

Support eco-system

e2e community  PC SW tools  Documentation  Evaluation board

iOS NFC Tap app  ST25 NFC Tap app  Antenna Design Suite

Technical support
The NFC/RFID tags family offers a simple and cost-effective implementation. ST can provide supporting material for integrating the antenna into your application: application notes, reference designs, antenna computation tools, e-presentations and e-learning.
Visit www.st.com/nfc-rfid