ST25TA SERIES

NFC Forum Type 4

ST25

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

Device summary

Part number	RF interface	Memory size	Data protection (128 bit password)	20 bit Counter	Package	RF status output	Trust25 digital signature
ST25TA512B	ISO 14443A Type A	512 bit	Yes	Yes	SBN12 *, SBN075	No	Yes
ST25TA02KB	ISO 14443A Type A	2 Kbit	Yes	Yes	SBN12 *, SBN075	No	Yes
ST25TA02KB-P	ISO 14443A Type A	2 Kbit	Yes	Yes	UFDFPN5, SBN12*, SBN075	Yes (CMOS positive GPO)	Yes
ST25TA02KB-D	ISO 14443A Type A	2 Kbit	Yes	Yes	UFDFPN5, SBN12 *, SBN075	Yes (Open Drain GPO)	Yes
ST25TA16K	ISO 14443A Type A	16 Kbit	Yes	No	SBN12 *	No	No
ST25TA64K	ISO 14443A Type A	64 Kbit	Yes	No	SBN12 *	No	No

SBN075 : Sawn 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

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