

RFID
JOURNAL
LIVE!

20 **YRS**
2003 - 2022

MAY 17 - 19, 2022
MANDALAY BAY | LAS VEGAS, NV

BEST NEW PRODUCT

STMicroelectronics ST25TN Series NFC Tags Bringing Authentication To The Mass Market!

Jim Barlow

ST Microelectronics

Business Development/Technical Marketing NFC/RFID



RFID JOURNAL LIVE!



ST25TN512 / 01K

RF Tag	ISO/IEC 14443-A NFC Type 2 106kb/s	EEPROM Up to 1664-bit
		Augmented NDEF
		7 Byte Unique Identifier
		TruST25 Digital signature



UFDPN5



SBN12 / SBN075

Die form, sawn and Bumped inkless 8" wafer, 120µm/75µm thickness

Use cases

- Authentication, accessory recognition, smart poster, data protection
- NFC consumer engagement, NFC token

Key Features

- ISO/IEC 14443-A and NFC Type 2 Tag
- High speed operations (106kb/s)
- **Memory configuration** : 512-bit and 1280-bit (up to 1664-bit depending on features usage)
- 24-bit Unique Tap Code (UTC) with anti-tearing
- Customizable Augmented NDEF with UID and UTC
- TruST25 digital signature



Key Benefits

- Tiny DFN5 package (1.7x1.4mm)
- 50pF internal RF tuning capacitor allowing small antenna design
- 40 years data retention, 100K cycles erase/write
- Low cost application



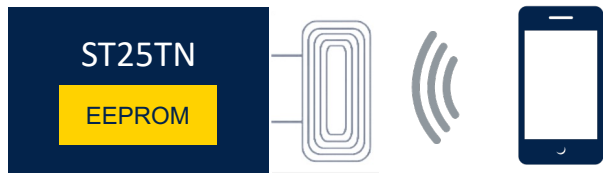
life.augmented



RFID JOURNAL LIVE!

Advanced NDEF message services

- The Augmented NDEF feature is a contextual automatic NDEF message service, allowing the tag to respond dynamic content without an explicit EEPROM update.
- Native operation : no mobile application required !
- Each ANDEF attribute can be enabled/disabled during the tag configuration
- The ANDEF separator character can be selected during the tag configuration



`https://www.server.com / Custom_field (UID) / UTC`

Static field – NDEF URL
Programmed once into the tag memory
Webserver managed by the customer

Dynamic fields – ASCII characters
Automatically added at each “tap”
Each attribute can be enabled/disabled

✓ All attributes are extracted from the URL by the server and used inside the application.

✓ Warning can be highlighted in case of doubtful / not expected values.

RFID JOURNAL LIVE!

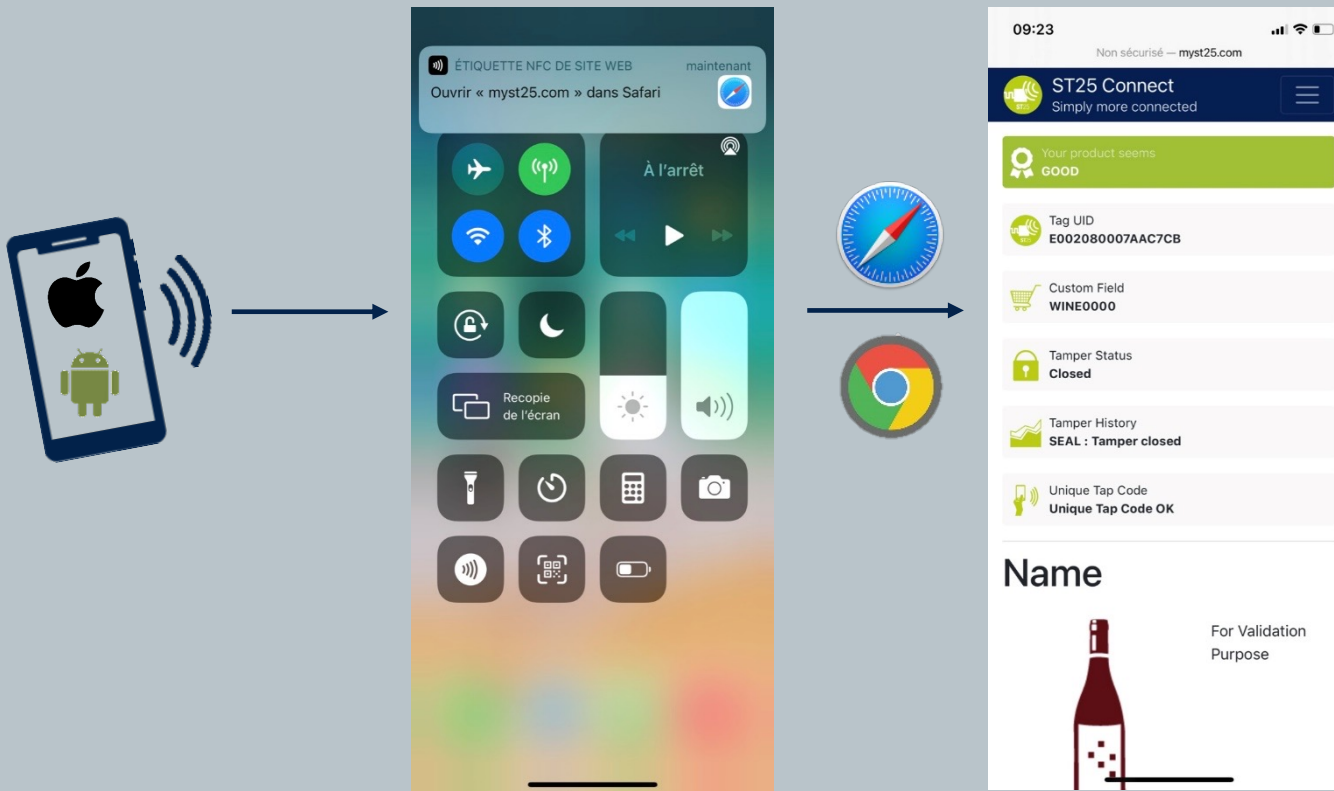
Chip proven authenticity services

- TruST25™ encompasses industrialization processes and tools deployed by STMicroelectronics to create and write Digital Signature in house and that benefits from Secure product environment (HSM FIPS140-2)
- TruST25 is a STMicroelectronics trademark
- Digital Signature allows applications to verify the authenticity of a product
- A dedicated application note AN5660 describes the digital Signature and how to read and verify the TruST25™ Digital Signature. Application note distributed under NDA



RFID JOURNAL LIVE!

ST25 Webserver Reference Available – NO Phone App Required!!



- Open-source webserver: www.myst25.com
- Augmented NDEF experience – 14 Bytes!
- Developed in HTML5 and PHP7.0 – Uses MySQL database
- Source code Available

ST25TN INNOVATIVE FEATURES

- ST state-of-the-art patented technology
- Bringing Affordable Authentication to Established Standards
 - Full compliancy with NFC Forum Type 2 tag and ISO/IEC 14443 type A specifications
- Authentication With or Without a Phone App!
 - 14 Byte Custom Data Through Augmented NDEF
- Product identification and protection
 - 7 bytes unique identifier
 - TruST25 digital signature
 - 3-digit unique tap code



THANK YOU

