



ST25TA-E

Innovative NFC tag for trusted authentication & digitization



Combines NFC and blockchain tech for superior brand protection and robust physical product digitization

The ST25TA-E tag IC authenticates physical products using its on-chip ECDSA signature —ensuring secure, robust, and unpredictable communication patterns for advanced security.

Beyond strong authentication, the ST25TA-E tag securely connects the physical and digital worlds, creating new services for brands and their customers.

The ST25TA-E tag IC stands out for its ease of integration and implementation.

KEY FEATURES

- NFC Forum Type 4 ISO/IEC 14443A
- 2-Kbit flash memory
- 68 pF tuning capacitance
- Native NDEF support
- Augmented NDEF
- Edge TruST25 digital signature (on-chip ECDSA)
- Asymmetric based cryptography
- Secure key storage: 2 slots
- 24-bit general purpose counter
- Anonymous / kill modes
- 25 years of data retention

KEY BENEFITS

- Secure & unpredictable signature
- Blockchain compliant signature
- Light weight key infrastructure

KEY USE CASES

- Traceability
- Proof of ownership & authenticity
- Fights against counterfeiting, etc.
- Personalized digital experiences

KEY APPLICATIONS

- Luxury
- Wine & spirits
- Industrial & medical
- Art

The ST25TA-E tag IC is well-suited for blockchain-based brand protection, thanks to its on-chip ECDSA signature —natively supported by blockchain-based architectures. This integration allows applications to directly utilize the chip without the need for additional data formatting.

The ST25TA-E creates an unbreakable link between a physical product and its digital counterpart. It ensures that critical data, such as certificates of authenticity, ownership records, and product traceability, are immutably stored on the blockchain.

The ST25TA-E tag is a robust solution for verifying the authenticity of products and tracking their history.



Device summary

Part number	RF interface	NFC certification	Data protection	Memory size	Privacy services	Special features	Package
ST25TA-E	ISO 14443-A / NFC Forum Type 4	Yes	Password + lock file	2-Kbit	Anonymous + kill modes	<ul style="list-style-type: none"> - Edge TruST25 digital signature - 24-bit GPO counter - Augmented NDEF 	SBN140* SBN075*

*Note

SBN075: Sawm and bumped wafer (die form), 75 µm thickness

SBN140: Sawm and bumped wafer (die form), 140 µm thickness



© STMicroelectronics - January 2025 - Printed in the United Kingdom - All rights reserved
ST and the ST logo are registered and/or unregistered trademarks of STMicroelectronics International NV or its affiliates in the EU and/or elsewhere. In particular, ST and the ST logo are Registered in the US Patent and Trademark Office.
For additional information about ST trademarks, please refer to www.st.com/trademarks.
All other product or service names are the property of their respective owners.

