STSAFE-L010

Authenticate consumables, batteries & peripherals

Entry-level solution to authenticate subparts

STSAFE-L010 is a chip designed to be directly mounted onto a consumable, peripheral, or accessory. The chip is connected via a simple I²C or ST1Wire interface to the MCU of the host device.

STSAFE-L010 includes an optimized command set that guarantees device authentication using Edwards curve cryptography and certificates.

STSAFE-L010 also provides secure counters and secure storage, which contribute to monitoring and controlling the usage of consumables, peripherals, and accessories.

STSAFE-L010 has been designed for brand and business protection. The chip effectively distinguishes authentic subparts of a specific brand from third-party alternatives (e.g., batteries, cartridges, etc.).

KEY FEATURES

- Authentication with generic or personalized certificates
- Asymmetric Edwards curves
- Large user data storage (32 Kbytes) and secure counters
- I²C or ST1Wire interface

KEY BENEFITS

- Optimized for consumables, peripherals, and accessories
- Seamless integration using libraries compatible with STM32 and other general-purpose MCUs/MPUs

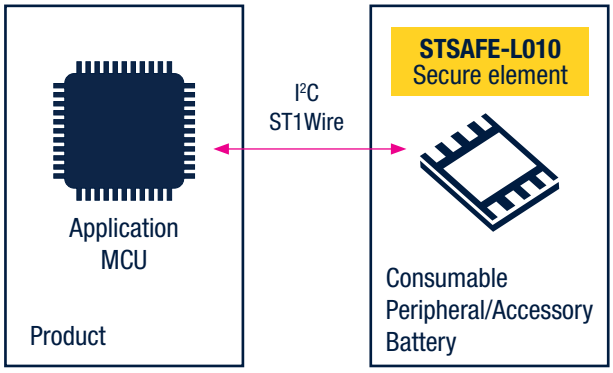
KEY APPLICATIONS

- Consumables: cartridges, tanks, filters…
- Circuit boards, subparts
- Batteries

www.st.com/stsafe-l010

Plug-and-play authentication solution

STSAFE-L010 offers effortless integration, ensuring authentication without the need for specialized security expertise.



A complete evaluation and development ecosystem

- An expansion board compatible with STM32 Nucleo boards
- STM32Cube software development ecosystem
- Generic pre-personalization STSAFE-L010 (STSAFL010DFSPL01)
- Arduino interfaces, drivers and source code examples

Browse all development resources
http://www.st.com/stsafe-l010

STSAFE-L010
DFN8 package

Product summary

Product name	Product features	Interface	Package options	Operating temperature range	NVM storage
STSAFE-L010	• Authentication with generic or personalized certificates • Asymmetric Edwards curves • Secure data storage and secure counters	I²C ST1Wire	DFN8 2 x 3 mm DFN6 1.4 x 1.6 mm Contact DFN3 4 x 3.2 mm	From -25 °C to 85 °C	32 Kbytes EEPROM