# Optimized Secure Solution for authentication in IoT


## STSAFE-A – The optimized secure element for device protection in Internet of Things environments

With the deployment of an increasing number of connected devices, Internet offers more exposure for exploiting network weaknesses, making security a major concern.
This security market is currently expanding from largely deployed brand protection solutions against counterfeits or clones, IT security and TPM to now include the demand for the Internet of Things.
Objects involved in smart homes, smart cities, and smart grids are now adopting solutions based on secure elements such as those used in printers, PCs, game controllers, phone accessories, batteries, and luxury goods.

### KEY FEATURES

- State-of-the-art security relying on CC EAL5+ hardware
- Security functions
  - Authentication
  - Encryption
  - Secure channel
  - Firmware upgrade
- USB Type-C standard compliant

### KEY BENEFITS

- Full turnkey solution with secure OS and personalization services
- Optimized for small platforms
- Easy integration using libraries compatible with standard MCUs

### KEY APPLICATIONS

- Smart home
- Smart city
- Smart grid
- Docking stations
- Printers and ink cartridges
- PCs and game accessories
- Industrial tools
- PCB components

## STSAFE-A

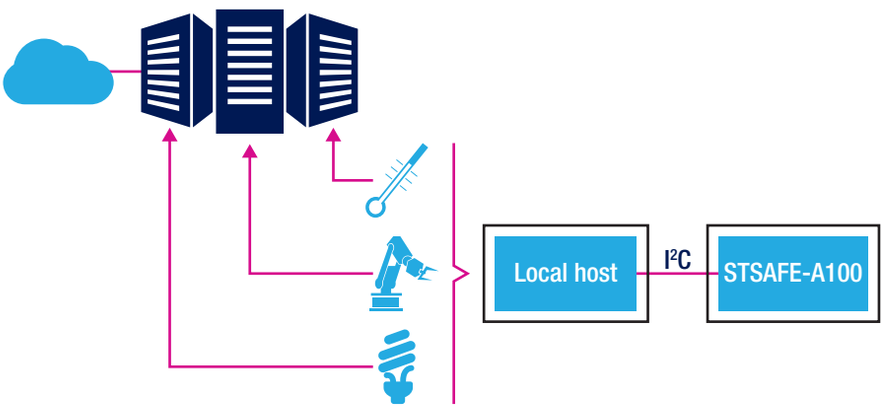
### Secure turnkey solution for the Internet of Things

Running on a Common Criteria EAL5+ platform, STSAFE-A is a highly secure authentication solution whose security is certified by independent parties. Its command set is tailored to address strong authentication, establish a secure channel in the scope of a TLS session, verify signatures, and offer secure storage as well as decrement counters for usage monitoring.

It is particularly well suited for applications heavily exposed to fraud and counterfeiting attacks, such as printers, game controllers, phone accessories, and Internet of Things networks and devices.

By offering a complete solution ranging from an internally-developed secure operating system embedded in the secure microcontroller, example code for integrating solutions in the applicative environment, and personalization services for storing confidential customer data in the secure microcontroller, ST offers seamless integration of security measures for customers who might not be experts in secure systems.

## STSAFE-A TURNKEY SOLUTION FOR INTERNET OF THINGS DEVICES




### System on Chip

- Hardware
- Embedded software
- Pre-personalization

### Tools & demo kit

- Compatible with Nucleo expansion board
- Comprehensive set of software libraries

### Host library

- Comprehensive set of software libraries