STSAFE-A
For Strong Authentication
Securing Internet of Things
A turnkey and optimized solution
### Security Functions & Needs

<table>
<thead>
<tr>
<th>Services</th>
<th>Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Authentication</strong></td>
<td><strong>Data Storage</strong></td>
</tr>
<tr>
<td>Device recognition &amp; authenticity verification</td>
<td>Secure provisioning &amp; secure storage</td>
</tr>
<tr>
<td>How to ensure only authorized devices are connected to the host?</td>
<td>How do I ensure critical assets in the device are not compromised?</td>
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<tr>
<td><strong>Data Exchange</strong></td>
<td><strong>Code Execution</strong></td>
</tr>
<tr>
<td>Secure Data Exchanges</td>
<td>Secure Code Execution</td>
</tr>
<tr>
<td>How do I protect my communication from intrusions and spying?</td>
<td>How can I make sure the devices function as intended?</td>
</tr>
</tbody>
</table>

![STSAFE-A Logo](image)
STSAFE-A

Easy-to-use security services for IoT developers

- Authentication
- Secure communication
- Secure storage
- Personalized for customers (MOQ: 5k)
Optimized secure solution for connected devices

- Authentication
- Data & certificates storage
- TLS secure channel key establishment
- Signature verification
- USB Type-C and QI charging authentication
- EAL5+ Common Criteria certified chip
- LPWAN compliant LoRa and Sigfox
- Seamless integration with GP MCU
- Personalization services (MOQ: 5K)
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Documents and Development tools

Documents

- Databriefs
- Datasheet
  - Use case description
  - Electrical characteristics
  - Package information

Expansion board

- Activated STSAFE-A with default configuration
- Directly compatible with STM32 X-Nucleo boards

Host library

- SW that runs on GP MCU (e.g. STM32):
  - STSAFE driver and command wrapper
  - Example codes available for main use cases

- X-NUCLEO-STSA100
- STM32DBL375 Discovery Board
- STM32 LoRA™ Discovery Kit
Access your STSAFE kit online

for a Seamless Security Development on IoT Devices

STSAFE-A100 Open Development kit
- Product datasheet
- Expansion board
- Software package with driver and examples

Authentication
- Secure connection establishment
- Secure data storage
- Personalization services
STSAFE-A

Personalization Flow

Fabrication & personalization phases

Production ➔ Pre-personalization ➔ Package ➔ Personalization

ST factory personalization

Hardware Security Module

Configure administration and transport keys

Compute customer secrets
• Put secret keys
• Store certificates

Personalize product:

Interaction with customer
• Configuration
• Customer certificate

Activate product

CUSTOMER

Approved by