

How can I secure my access control system ?



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Objective

I currently have an access control system, but I would like to upgrade it with removable secure elements to ensure better maintainability and long-term security.

What is a SAM ?

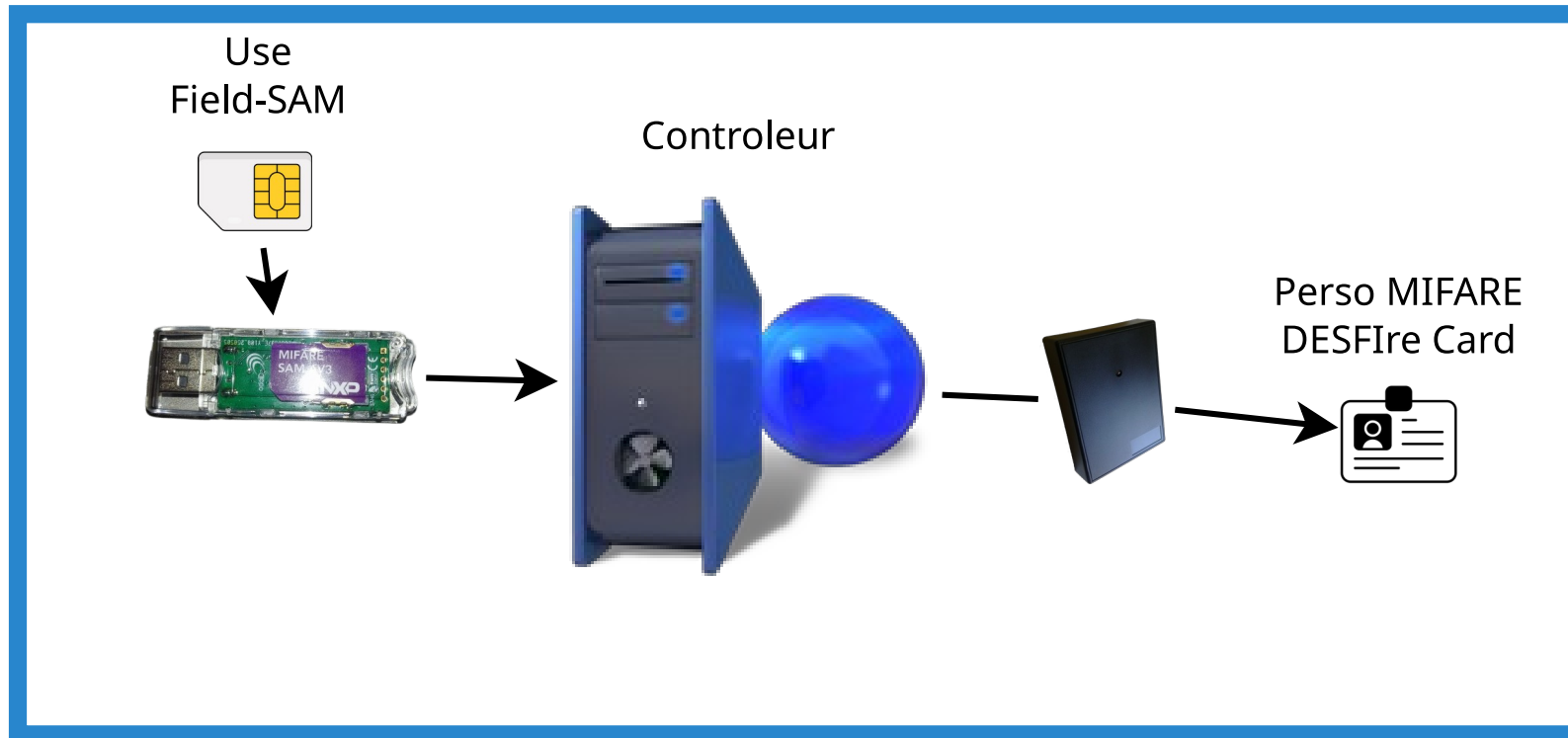
SAM is a Secure Access Module

- It is a secure hardware component that contains encryption keys (secrets)
- it enables the authentication of access badges
- and the creation of a secure channel between the controller (central server) and the card
- this prevents the key from being copied
- it is a secure storage device
- it's a smart card



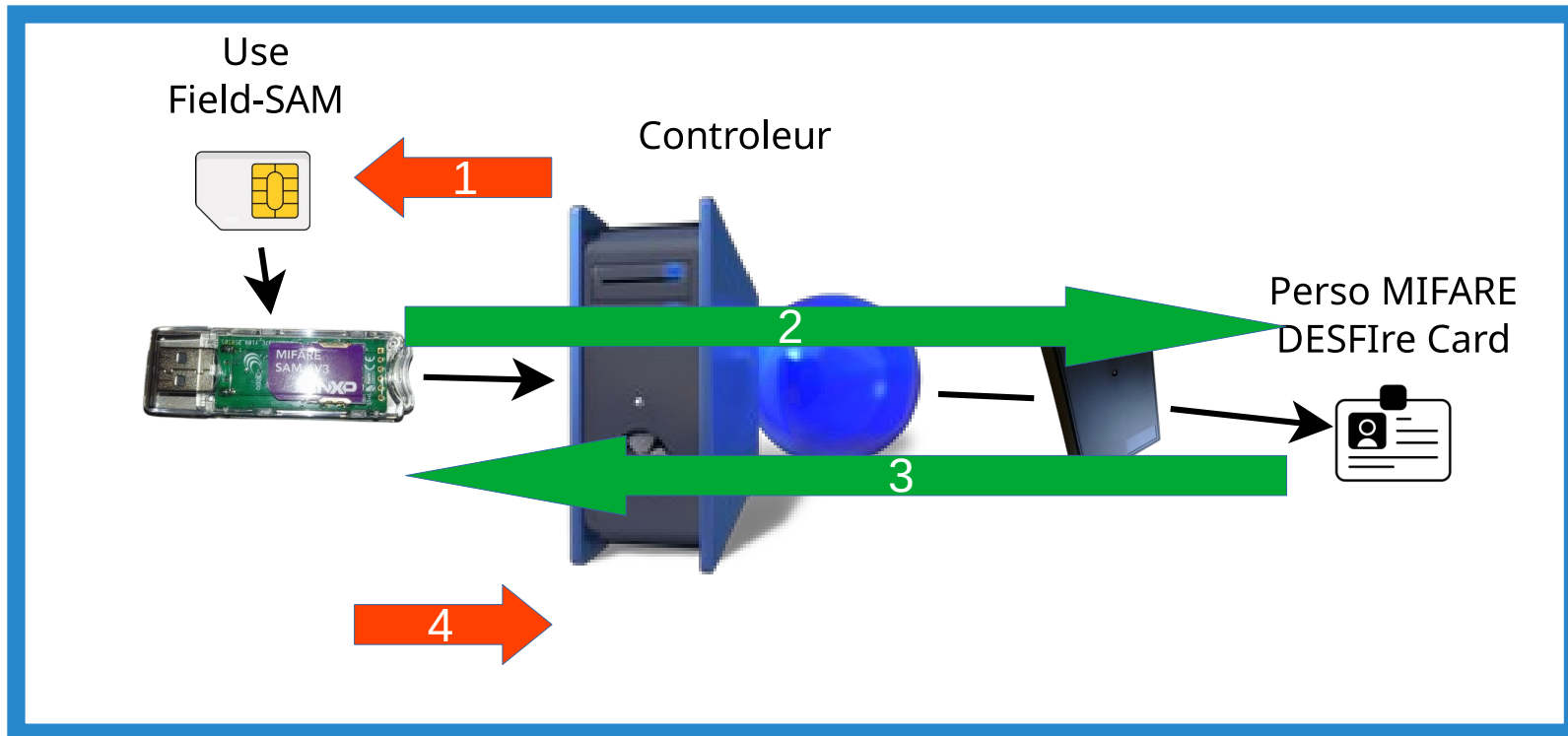
Presentations

USE CASE : AccessControl with MIFARE DESFire Card



The state machine

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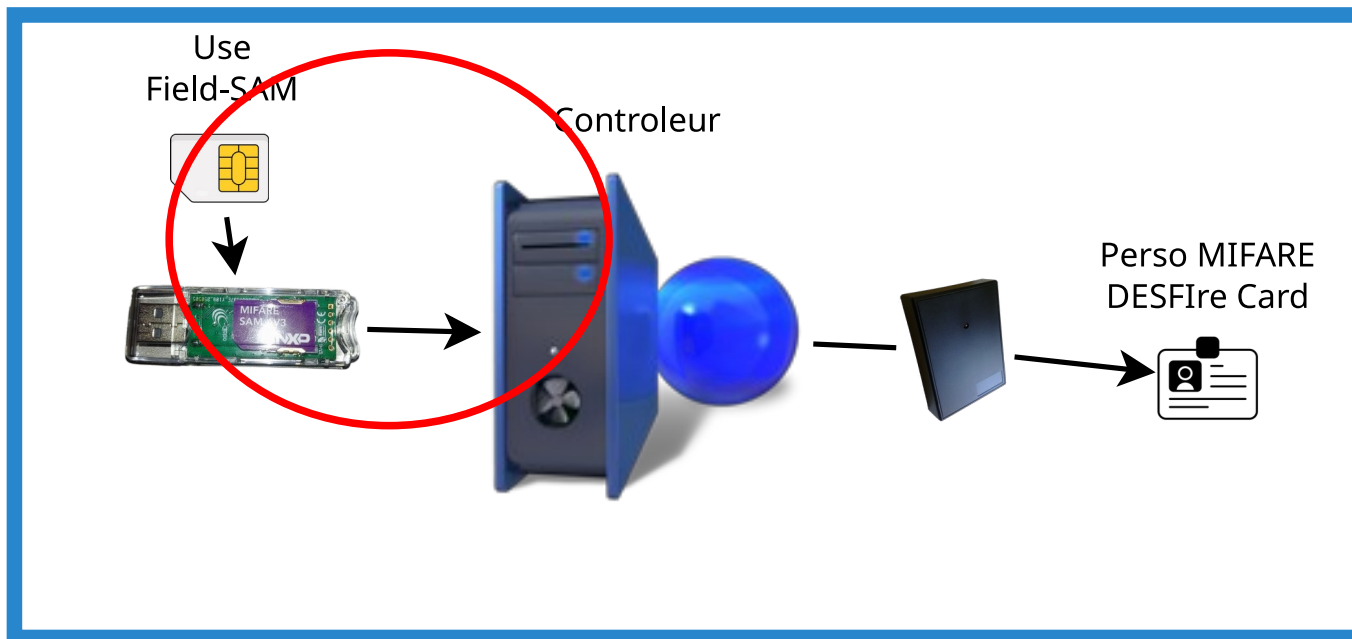


We have a simplified diagram of SAM

- 1) The controller sends the data to the SAM
- 2) The SAM encrypts the data and sends it to the DESFire card (In that case, the badge reader is transparently)
- 3) The card sends encrypted data to the SAM (In that case, the badge reader is transparent)
- 4) The SAM decrypts the data and sends it to the controller

The critical point

USE CASE : AccessControl with MIFARE DESFire Card



- When the controller and the SAM communicate, it is essential that the communication is secure.
- This measure is designed to prevent information from being transmitted in plain
- Most devices on the market do not support this specification.
- To address this, we will use mutual authentication to create a secure channel between the reader and the controller. The data will be full secure, and your access control system will be reliable.

The critical point

How to ?

- By using ODALID's CryptoKey2 module, this module directly integrates a SAM slot to enable secure transactions with the DESFire card.
- This module features a USB interface for integration with all modern controllers.
- ODALID also provides transparent badge readers to ensure 100% secure access control that complies with ANSSI standards



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