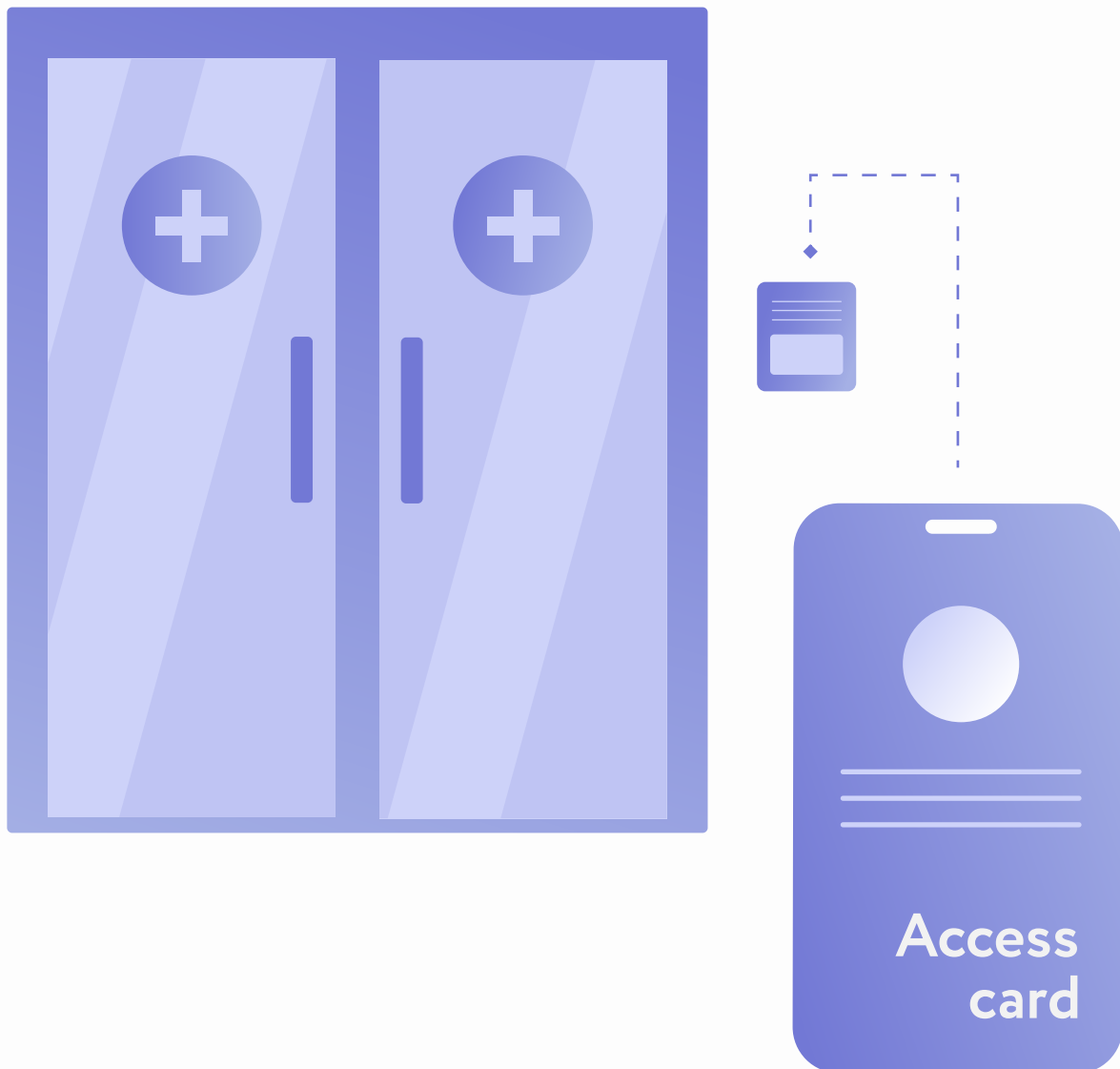


ACCESS MANAGEMENT SYSTEM FOR MEDICAL FACILITIES

Datasheet

Project objective

The access management system had to ensure full-time access control to medical premises, without stopping operation while performing updates. To ensure this, it was necessary to create a Bootloader for the Atmel SAM D20 microprocessor that would be used on custom printed circuit boards with i.MX module.



Result

The developed Bootloader firmware performs the Application Update and Bootloader Update process using designed protocol with possibility to recover in case of issues. An access monitoring device maintains 100% functionality while running updates and is fully adapted to the needs of medical facilities, considering security issues.

Scope of work

- ❖ Design and implement binary communication protocol with integrity checking
- ❖ Develop Bootloader firmware
- ❖ Provide documentation for deploying, running and rebuilding developed firmware
- ❖ Integrate the new code into the current firmware
- ❖ Test the Bootloader on provided hardware

Activities

- ❖ Requirements definition
- ❖ Firmware development
- ❖ Software development
- ❖ Testing procedures
- ❖ Documentation creation

About the project

Technologies

- ❖ C
- ❖ Python
- ❖ Free RTOS
- ❖ Atmel ATSAMD20 MCU
- ❖ Atmel studio 7.0

Platforms

- ❖ Linux



LINUX.ORG

Project size

- ❖ 1.5 people

Duration

