GENXXX Development kit

Table of contents

Development kit content

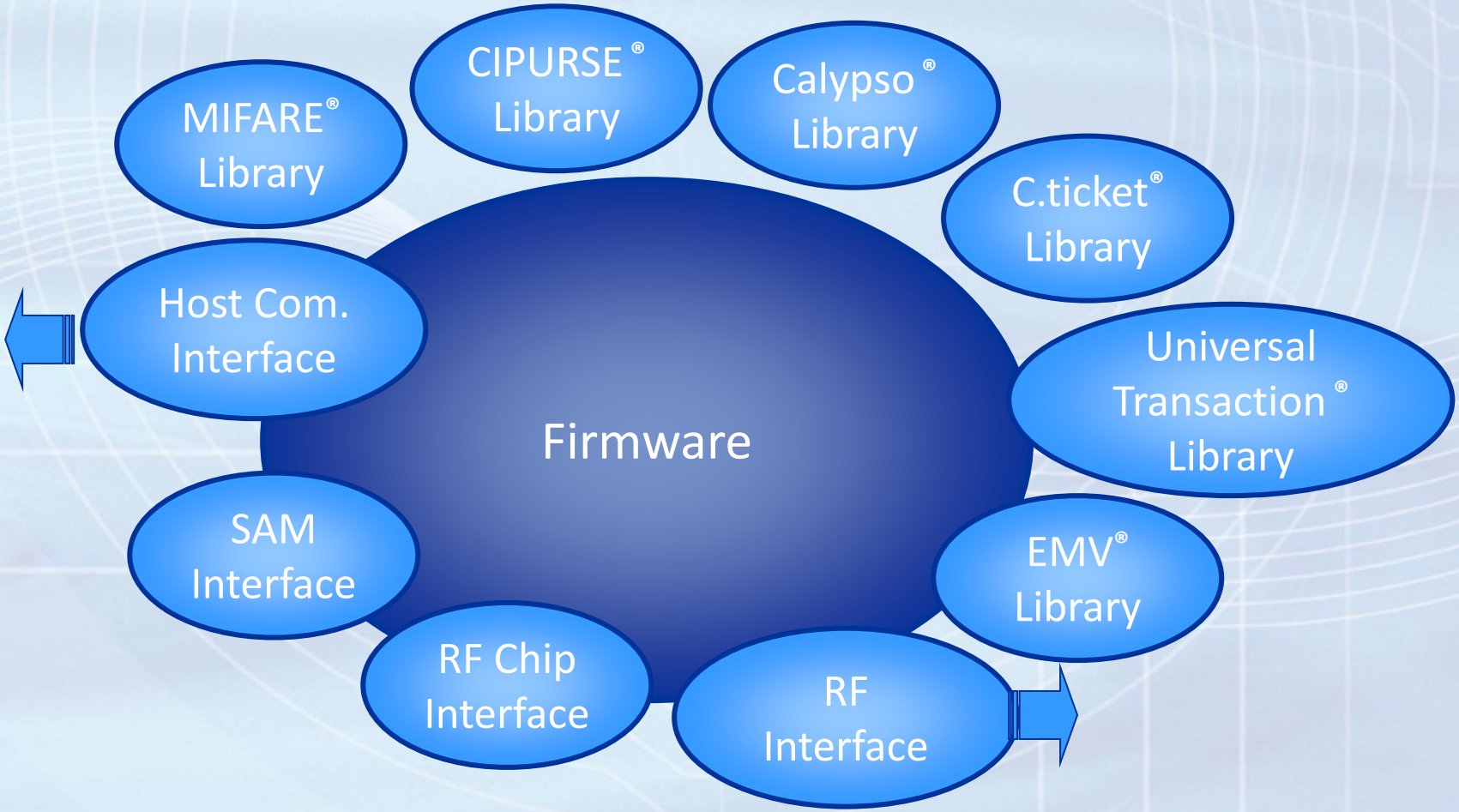
- 1 reader or coupler + antenna (RDR518, CPL508, RDR519, CPL519, UCM108, CPL108, CPL118, MTB108, CPL528, PLG548, CPL548)
- 1 Security Application Module (SAM C1) with test keys (KVC02)
- 1 Security Application Module (Mifare NXP SAM® AV2) with test keys (DevKit)
- 2 Calypso CD97®, 2 Calypso CLAP®, 2 Calypso Basic® with test keys (KVC02)
- 2 Mifare Classic®, 2 Mifare Plus®, 2 Mifare DESFire®
- 6 C.ticket®: 2 ST25TB-ASK, 2 ST25TB512-AT, 2 Mifare Ultralight®
- 1 file archive (to download) containing drivers, applications, libraries and documentation
- 1 FDC102 Field Detector Card

Development kit description

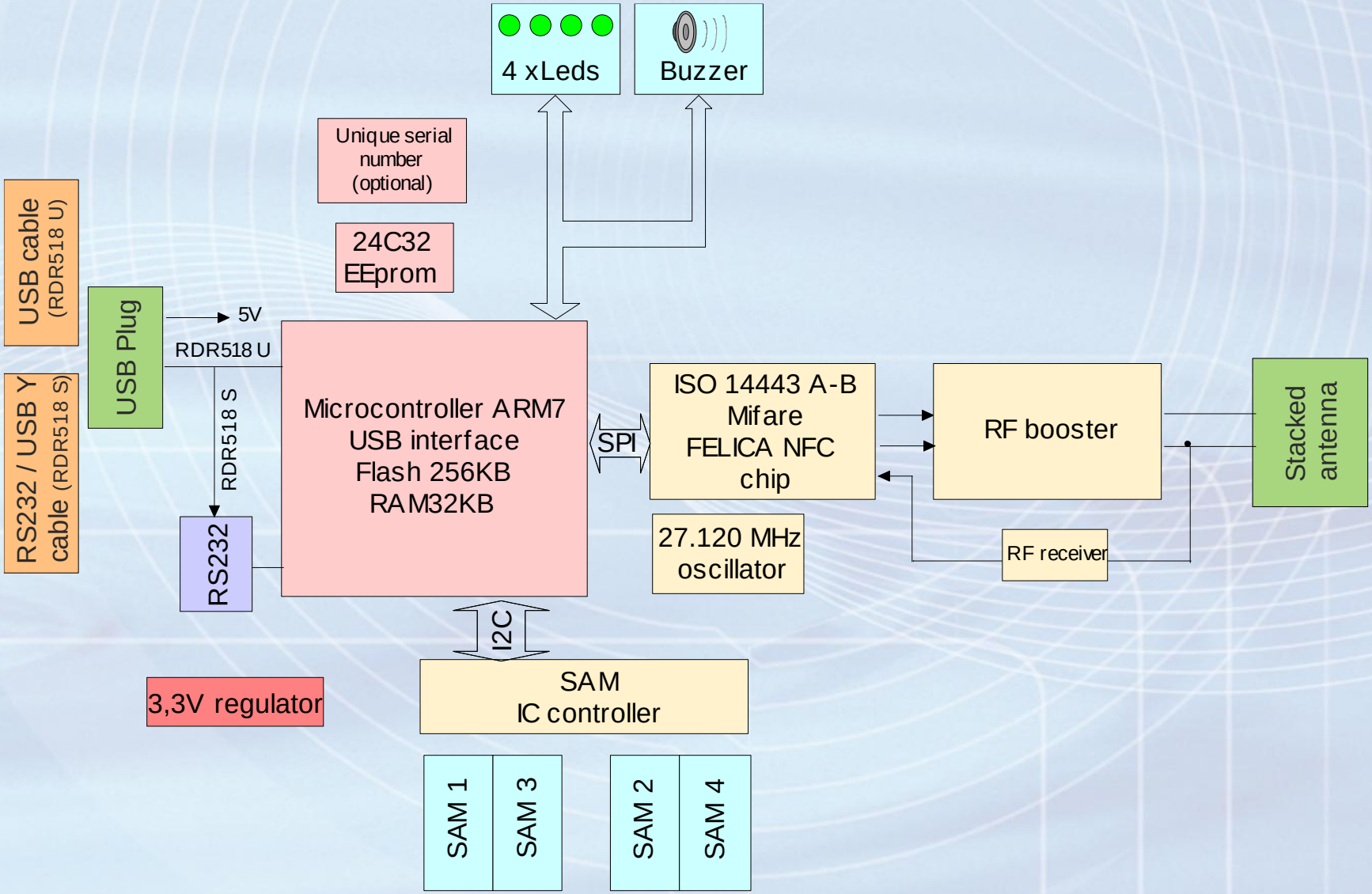
GENXXX functionalities

- ISO 14443 A/B/B', Felica, Mifare®
- High speed RF communication 106 up to 848 kb/s
- Cryptographic security with integrated SAM + Mifare® ASIC
- Calypso compliant
- Serial, TTL or USB2 full speed host interface
- High power RF interface
- Up to 4 programmable LEDs

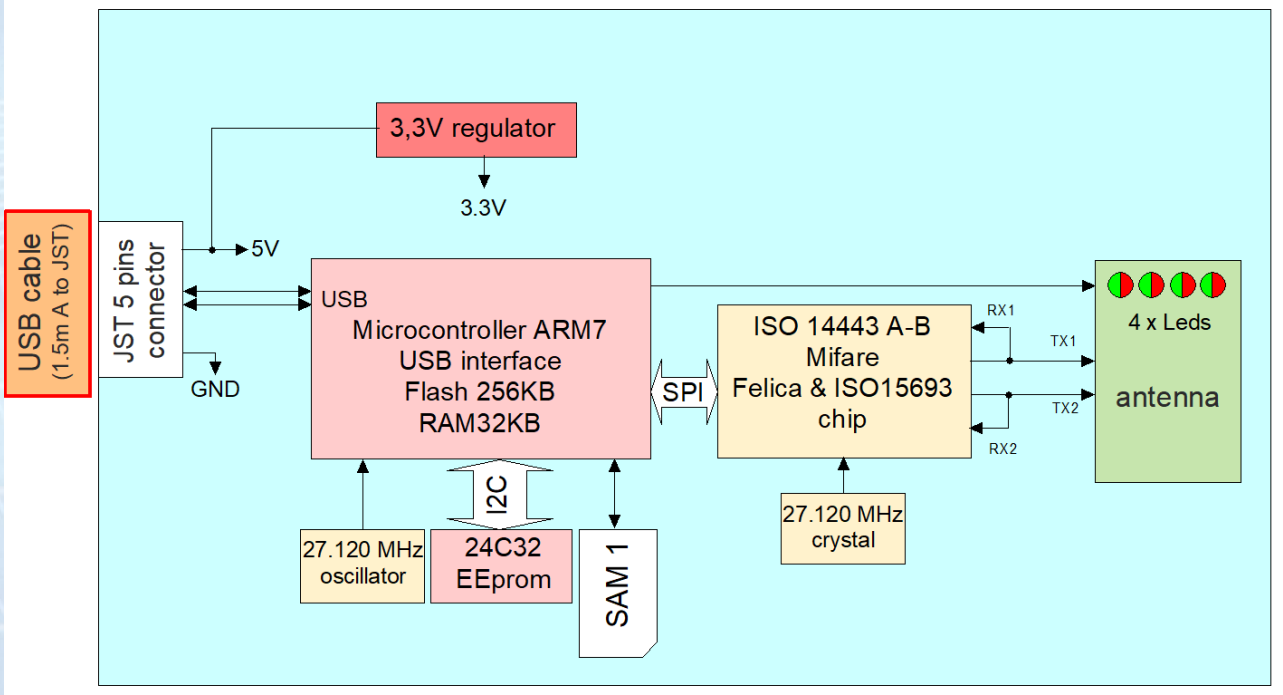
GENXXX firmware architecture



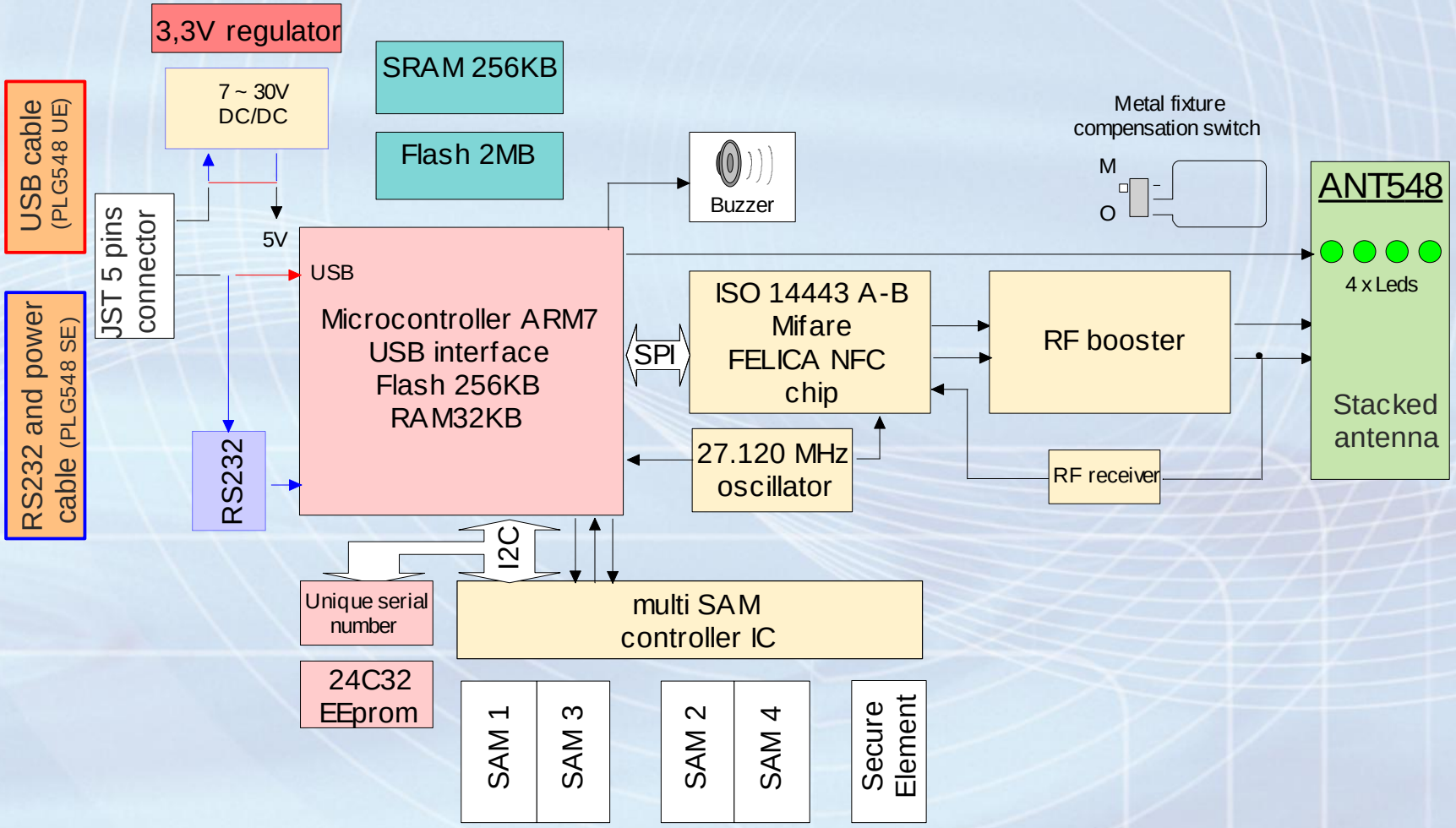
RDR518 hardware architecture



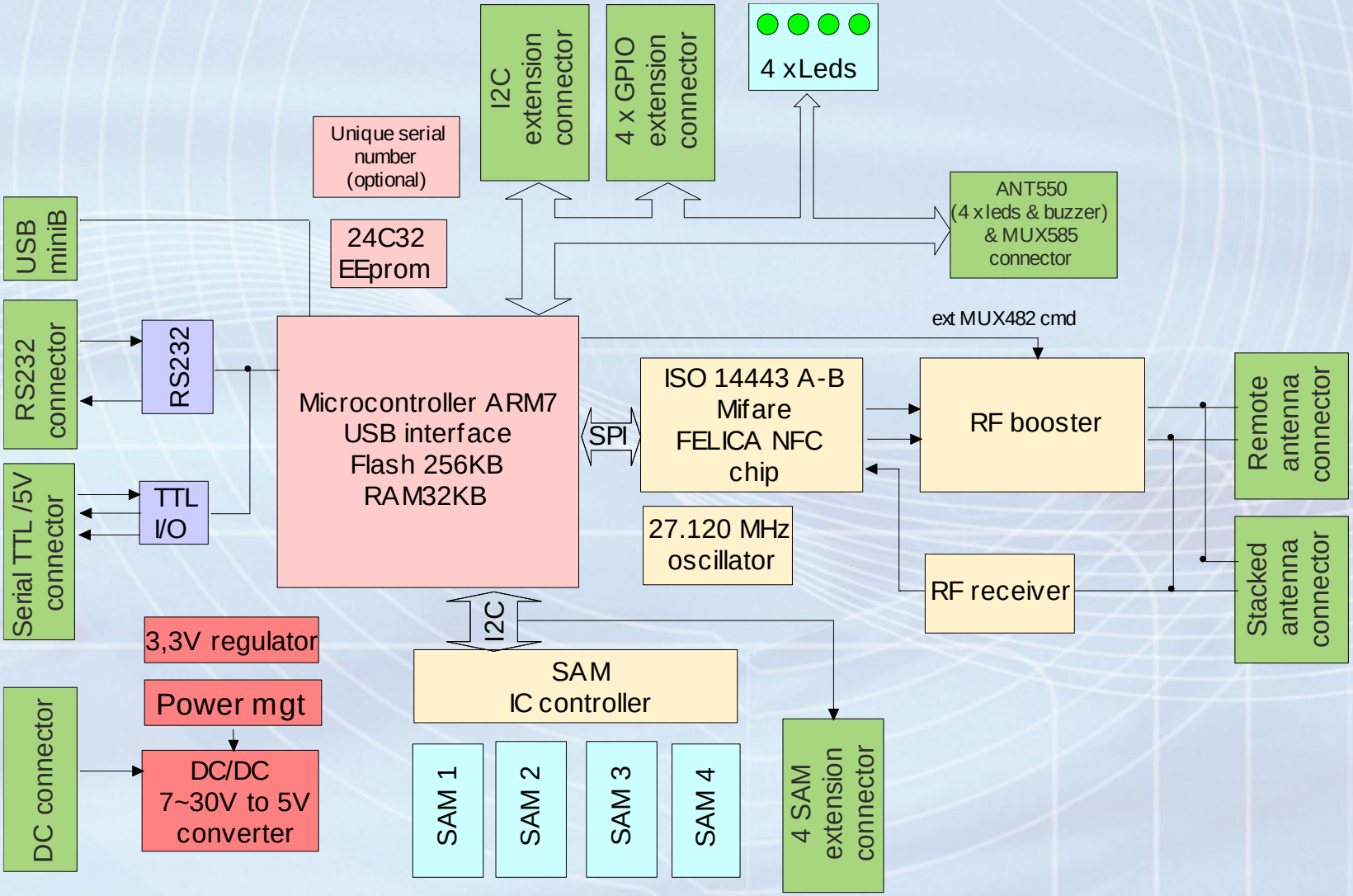
RDR519 hardware architecture



PLG548 hardware architecture



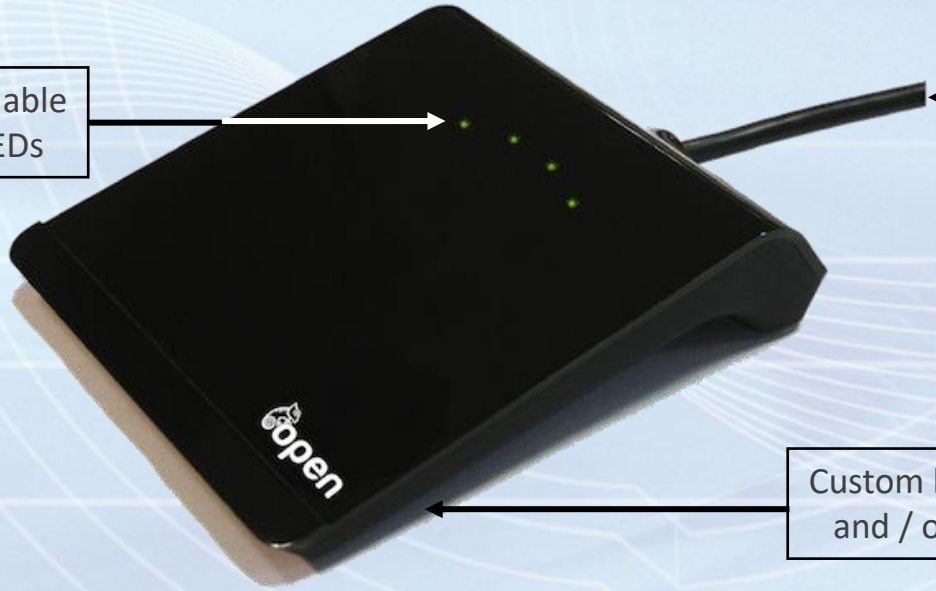
CPL528 hardware architecture



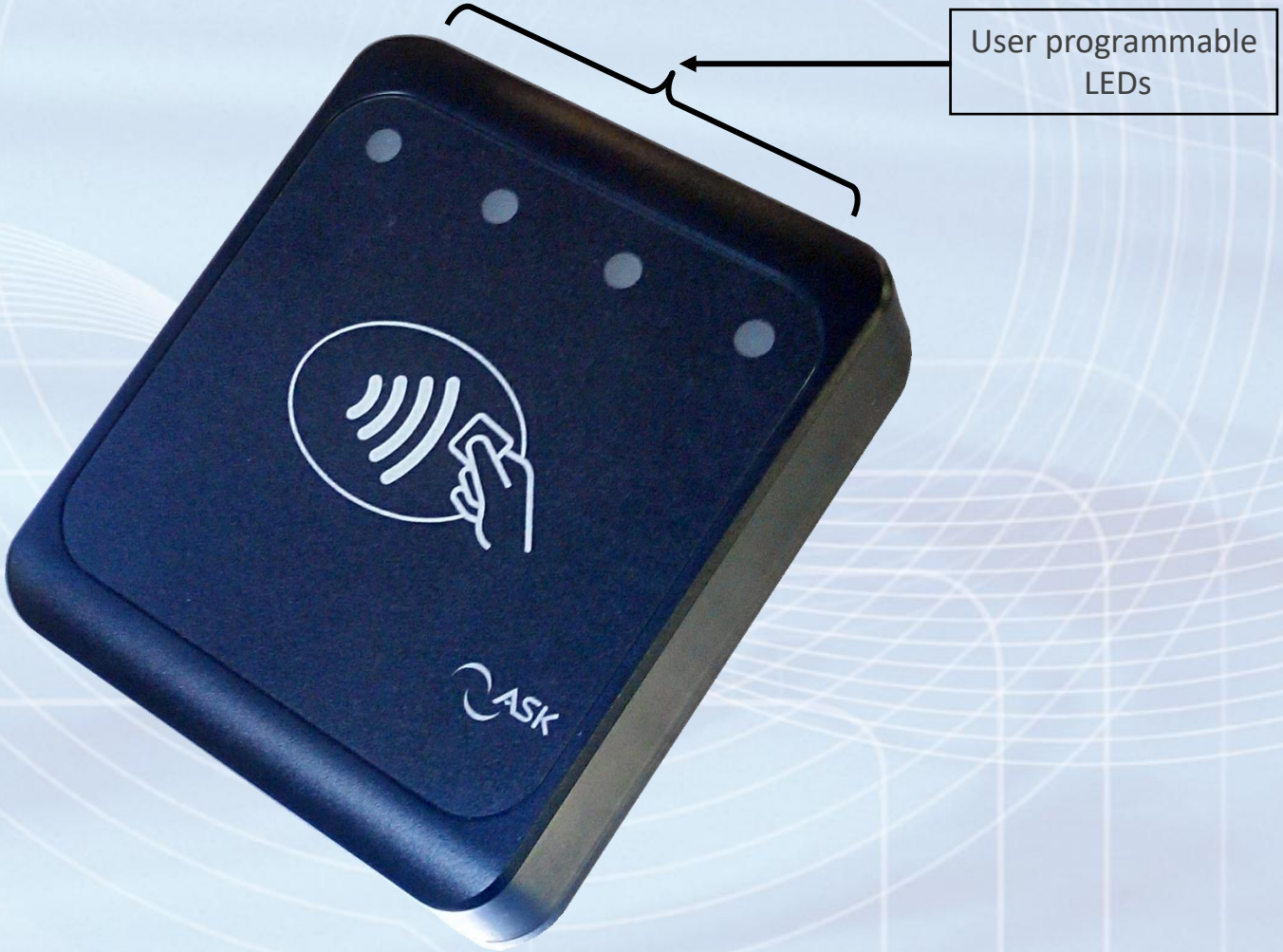
RDR518

PARAGON ID

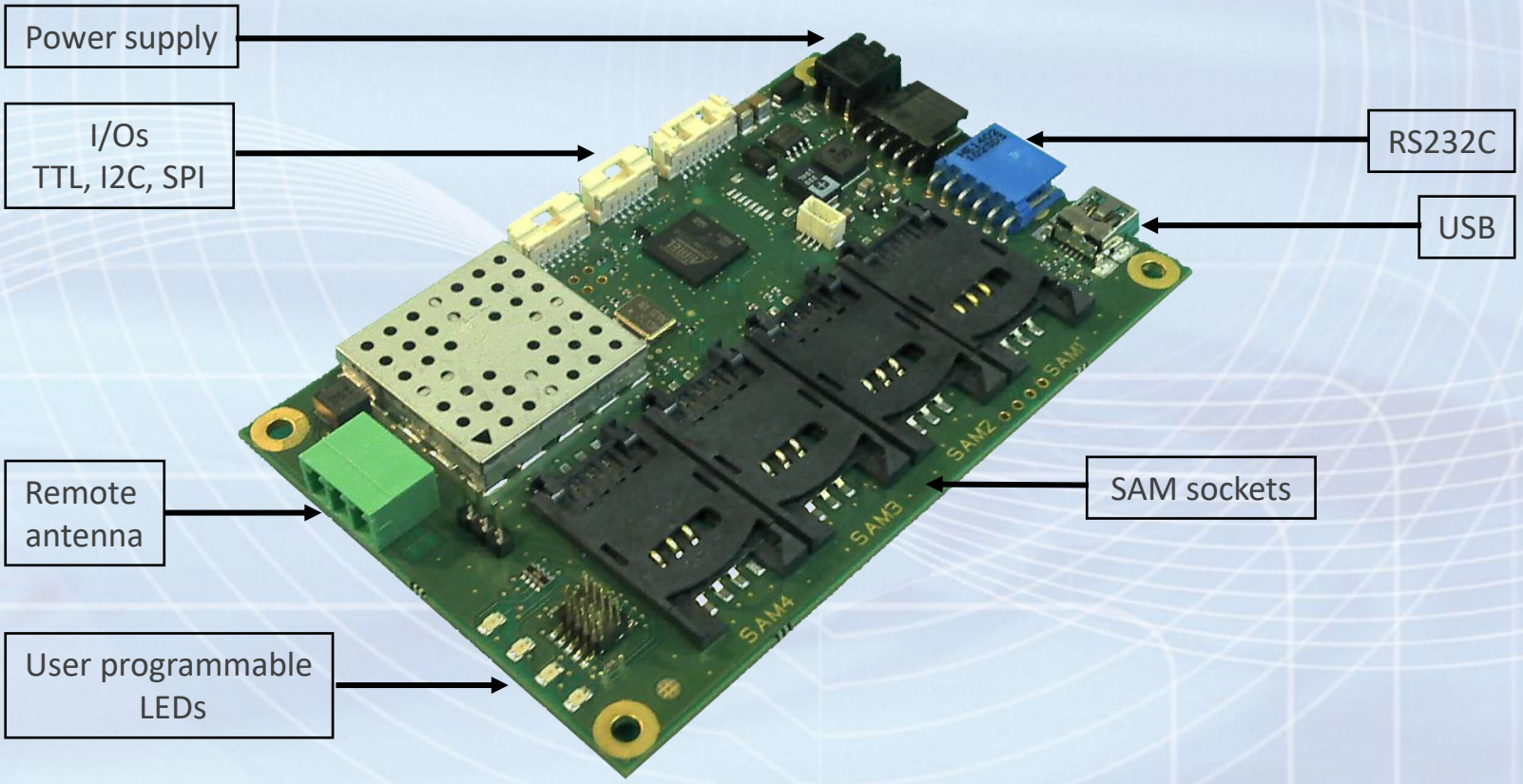
RDR519



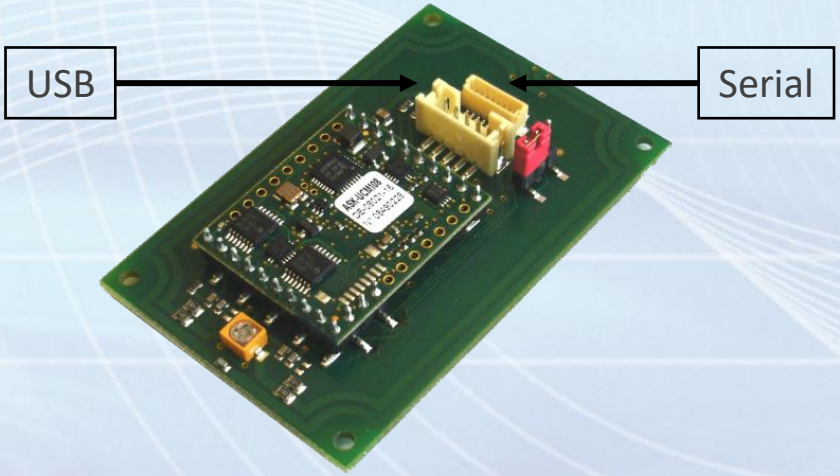
PLG548

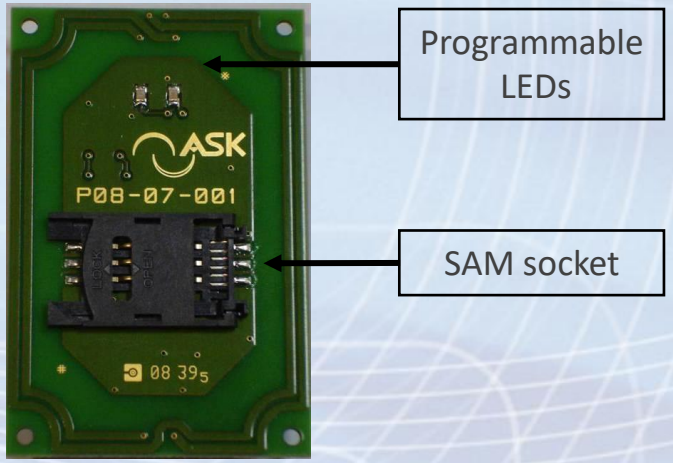


CPL528



CPL108





Software installation

- Download the file archive from the provided web link.
- Unzip the file archive to desired medium/directory.

- Some applications and tools require standard “Setup” (see “RD-MU-07024_XX_Evaluation applications user manual.pdf)

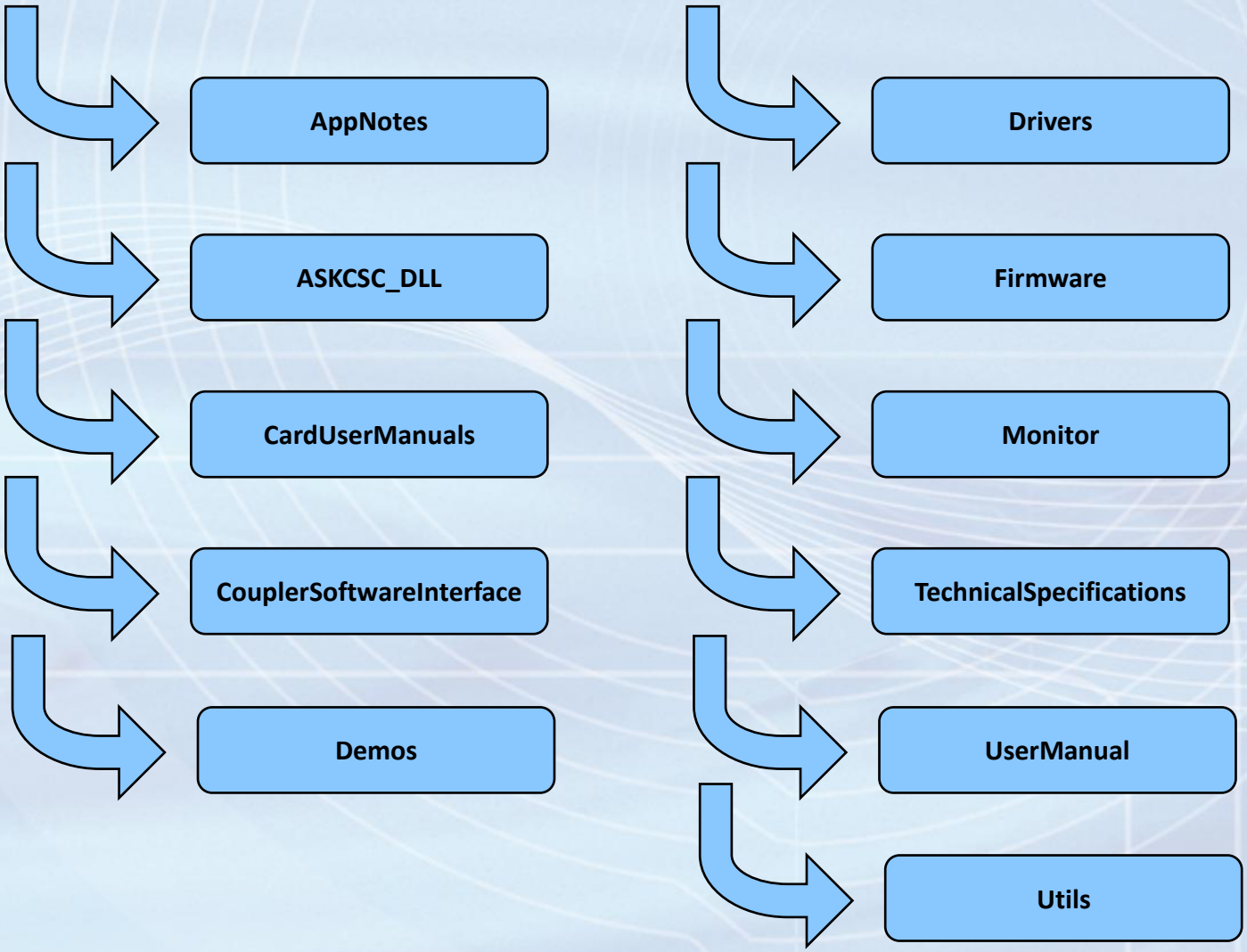
Driver installation

- Use the Windows standard way, through the Device Manager or use the provided installers (see “Drivers” directory)

Media content

- Documentation
  - User manuals
  - Technical specifications
  - Card & C.ticket® User Manuals (CD97, Mifare®, ST25B…)
  - Application Notes
- Software
  - Drivers & demonstration applications
  - API DLL, Tools and documentation

Media content



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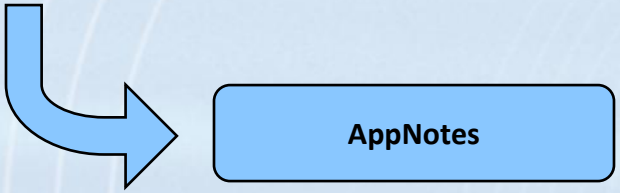
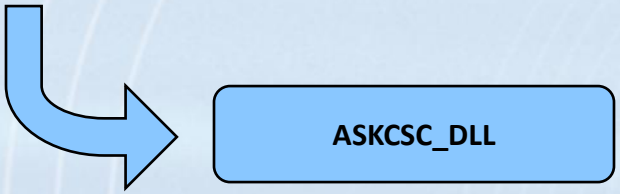


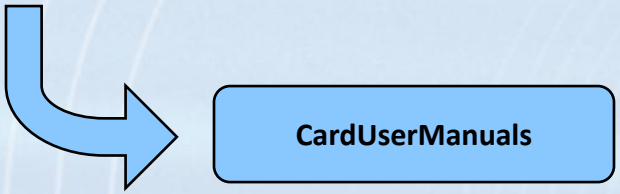
- Communication Scenarii
- SAM C1 KVC 02 Mapping
- Applicative Security on CTx
- ASK CSC downloading
- ASK MONITOR CSC Sequences Scripting
- Managing field exposure on CTS256B & CTX512B
- Java examples
- GENXXX USB interfaces
- …

Media content



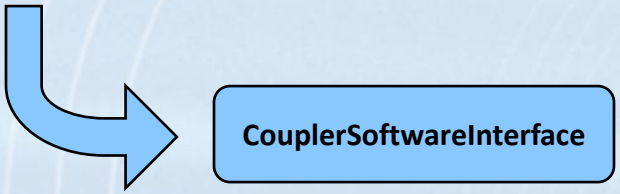
- Application Programming Interface (API)
- Distributed as binaries and full source code (Windows, Linux & OS X)
- Low level functions: coupler communication, card handling, SAM operation, LEDs.
- Calypso high level functions
- Mifare® high level functions (Classic, Ultralight, Ultralight C, Ultralight EV1, Plus & DESFire)

Media content



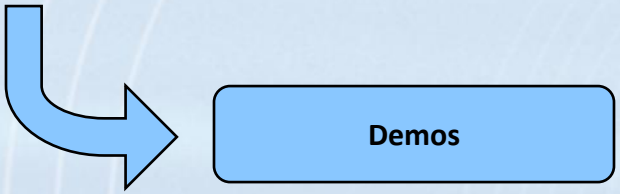
- Calypso CD97 external specifications
- Calypso CLAP & Basic external specifications
- CTS512B and CTM512B user manuals
- Mifare Classic® user manual
- Mifare Ultralight® functional specifications

Media content



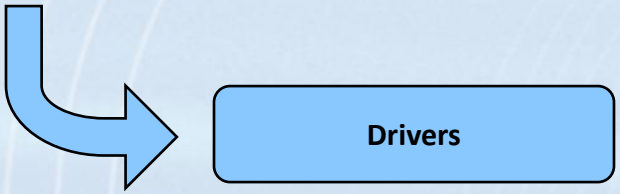
- GEN5XX coupler software interface
- Communication protocol description
- Class oriented high-level protocol
  - Download class : Flash update and EEPROM configuration
  - System class : card, SAM and UI low level handling
  - Calypso classes : Calypso high level commands
  - Mifare® classes

Media content



- User manual of the evaluation applications
- Polling: card detection and identification
- Visucard: display a Calypso card mapping
- CTx512B evaluation application
- ASKMifare: Mifare cards read and write
- Calypso Demo: transport and e-purse
- ASKPCSC: PCSC utility

Media content



- USB CDC driver for GEN5XX on Windows.

Notes:

- The drivers are Microsoft WHQL certified.
- The PC/SC CCID driver for GEN5XX is provided by OS.

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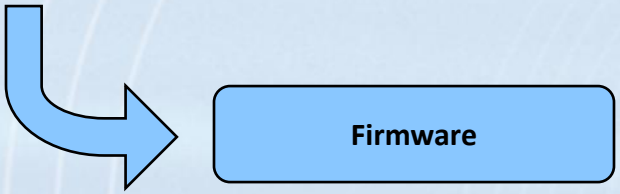
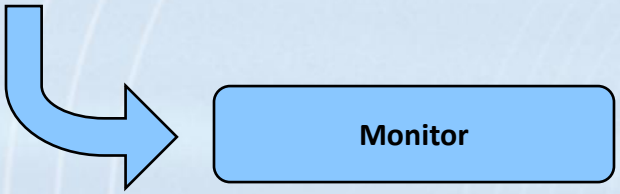


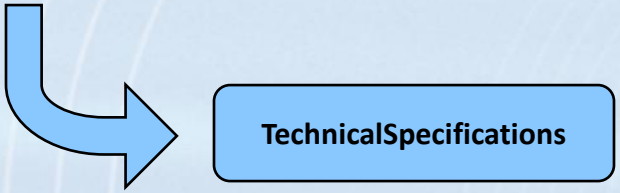
- GEN5XX firmware binary files
- Version history

Media content



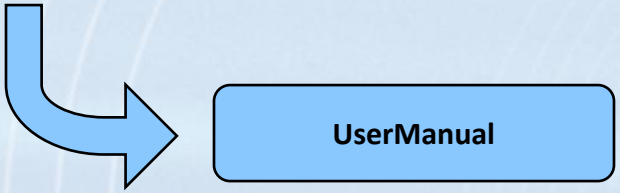
- Windows utility
- Communication with couplers/readers
- Low level communication handling
- Send and Receive functions
- SAM and cards communication
- High level commands with script capabilities
- Flash Firmware download and EEPROM configuration

Media content



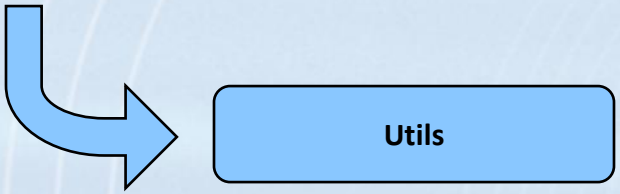
- RDR519 & CPL519
- RDR518 & CPL508
- PLG548 & CPL548
- CPL528 coupler
- CPL108 & CPL118 couplers
- UCM 108 universal module
- MTB108 coupler evaluation board
- OEM antennas: integration and tuning procedure

Media content



- Reader user manuals
- Software installation manual

Media content



- AskCdcCcid: allows the switch between CDC and CCID USB modes for GEN5XX Readers
- SAMAV2InitDevKit: allows the initialization of a SAM AV2, to be used with GENXXX Development Kit examples

Web: https://www.paragon-id.com

Support: https://paragon-id.com/en/content/technical-support