GENXXX Development kit

Table of contents

Development kit content

PARAGON ID

- 1 reader or coupler of GEN5XX platform (RDR518, CPL508, RDR519, CPL519, UCM108, CPL108, CPL118, MTB108, CPL528, PLG548, CPL548)
- 1 Security Application Module (CSAM) with test keys (KVC02)
- 1 Security Application Module (Mifare NXP SAM® AV2) with test keys
- 2 GTML, 2 GTML2 and 2 CD97 with test keys (KVC02)
- 2 Mifare Classic® 1K, 2 Mifare Classic® 4K
- 2 Mifare Plus® 2K, 2 Mifare DESFire® 2K
- 15 C.ticket® (5 SRT512, 5 Mifare Ultralight®, 5 Mifare Ultralight® C)
- 1 media containing drivers, applications, libraries and documentation
- 1 FDC102 Field Detector Card

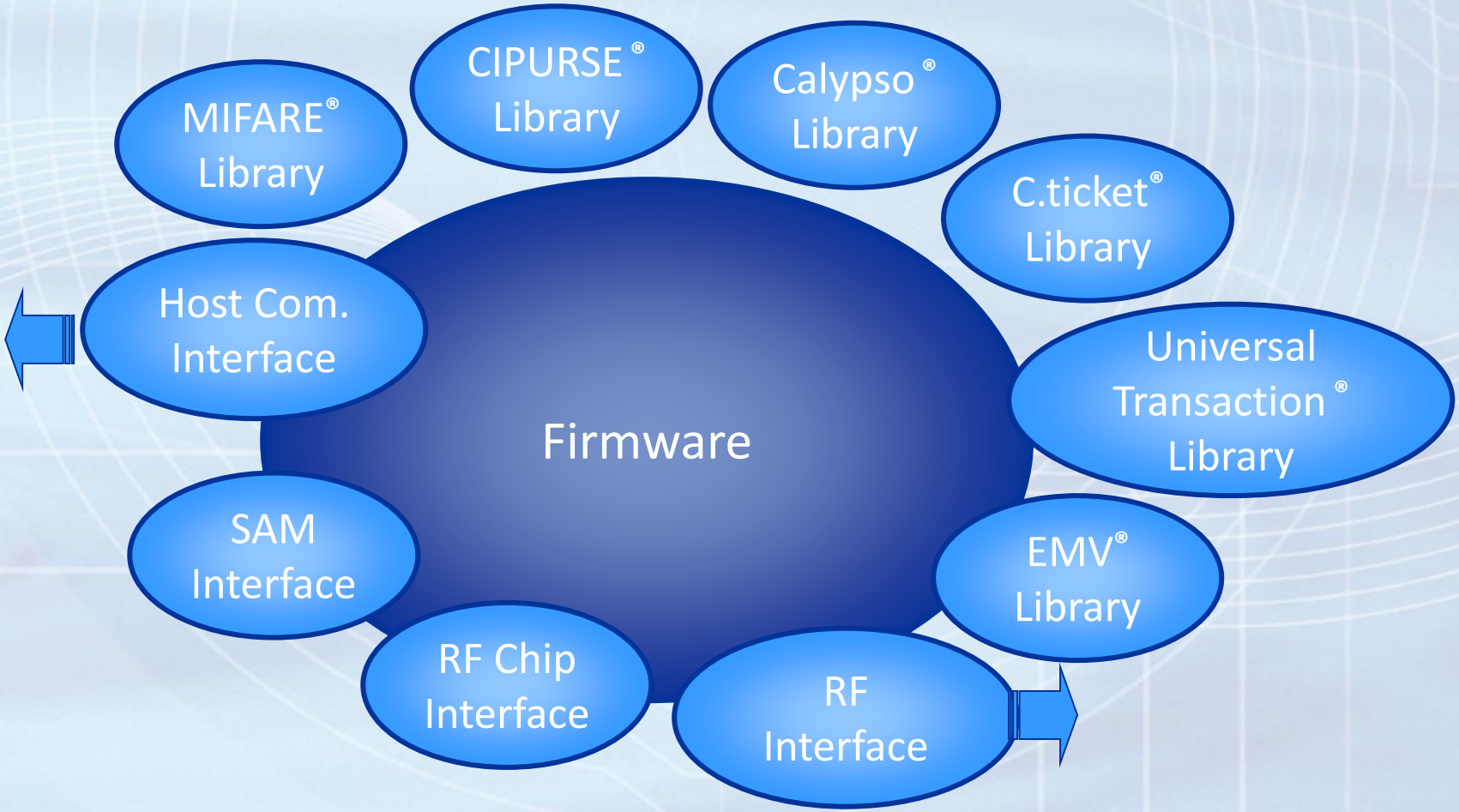
Development kit description

PARAGON ID

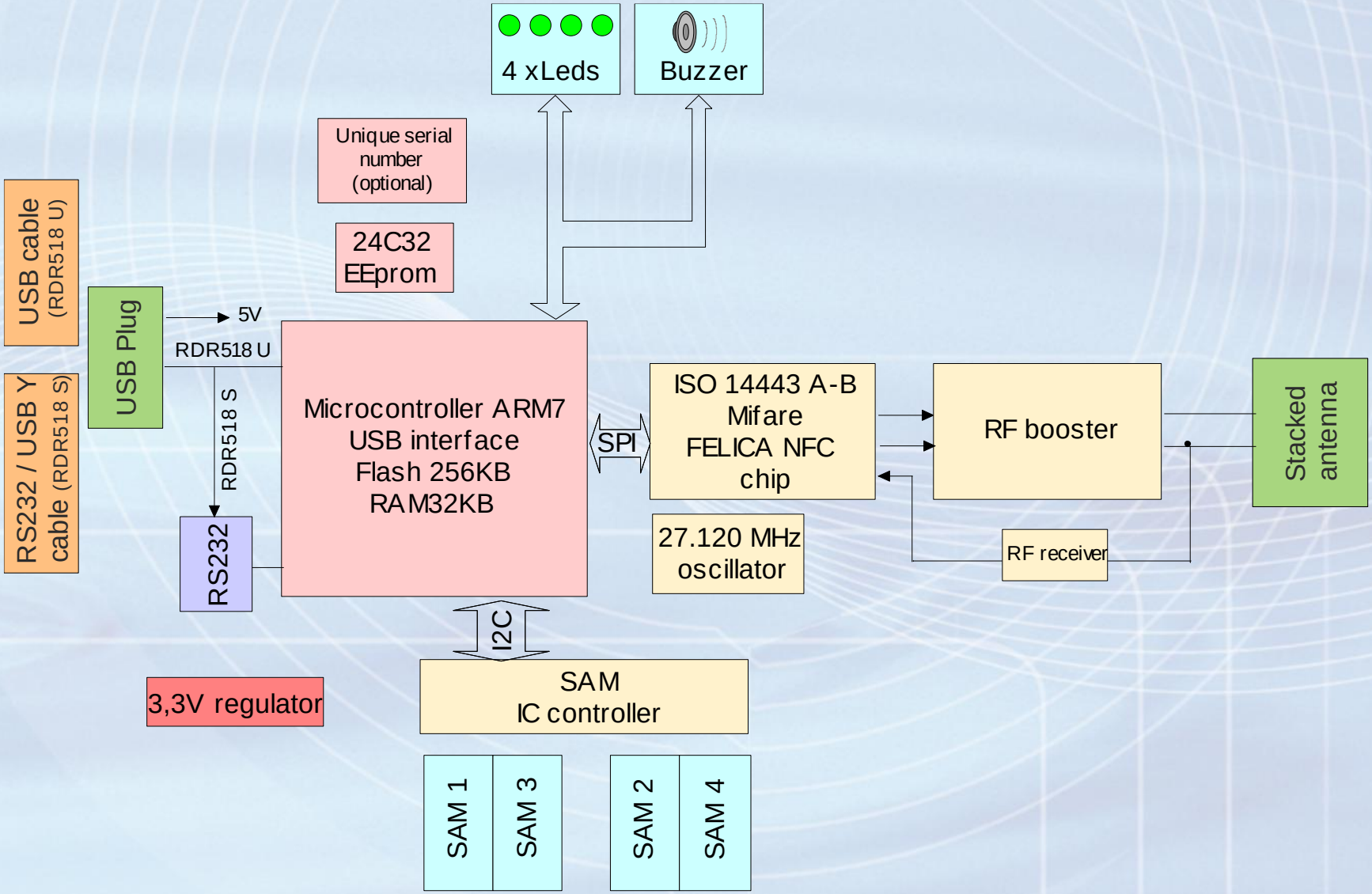
GENXXX functionalities

- 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

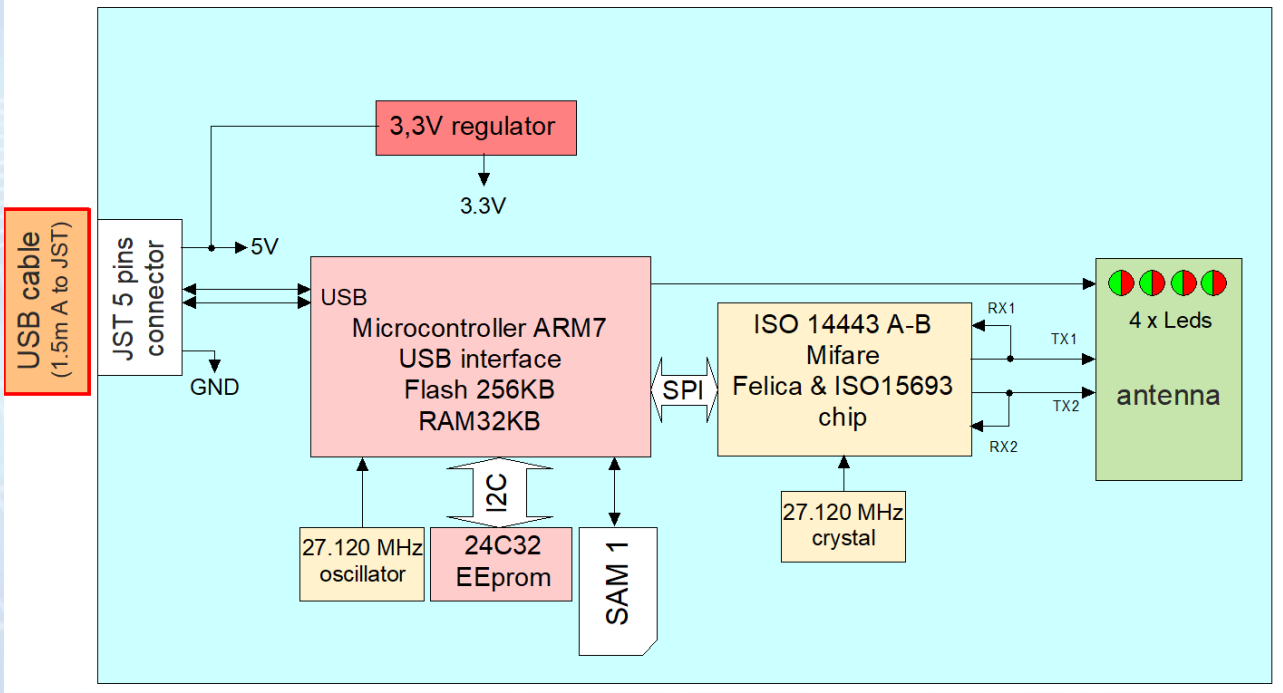
GENXXX firmware architecture



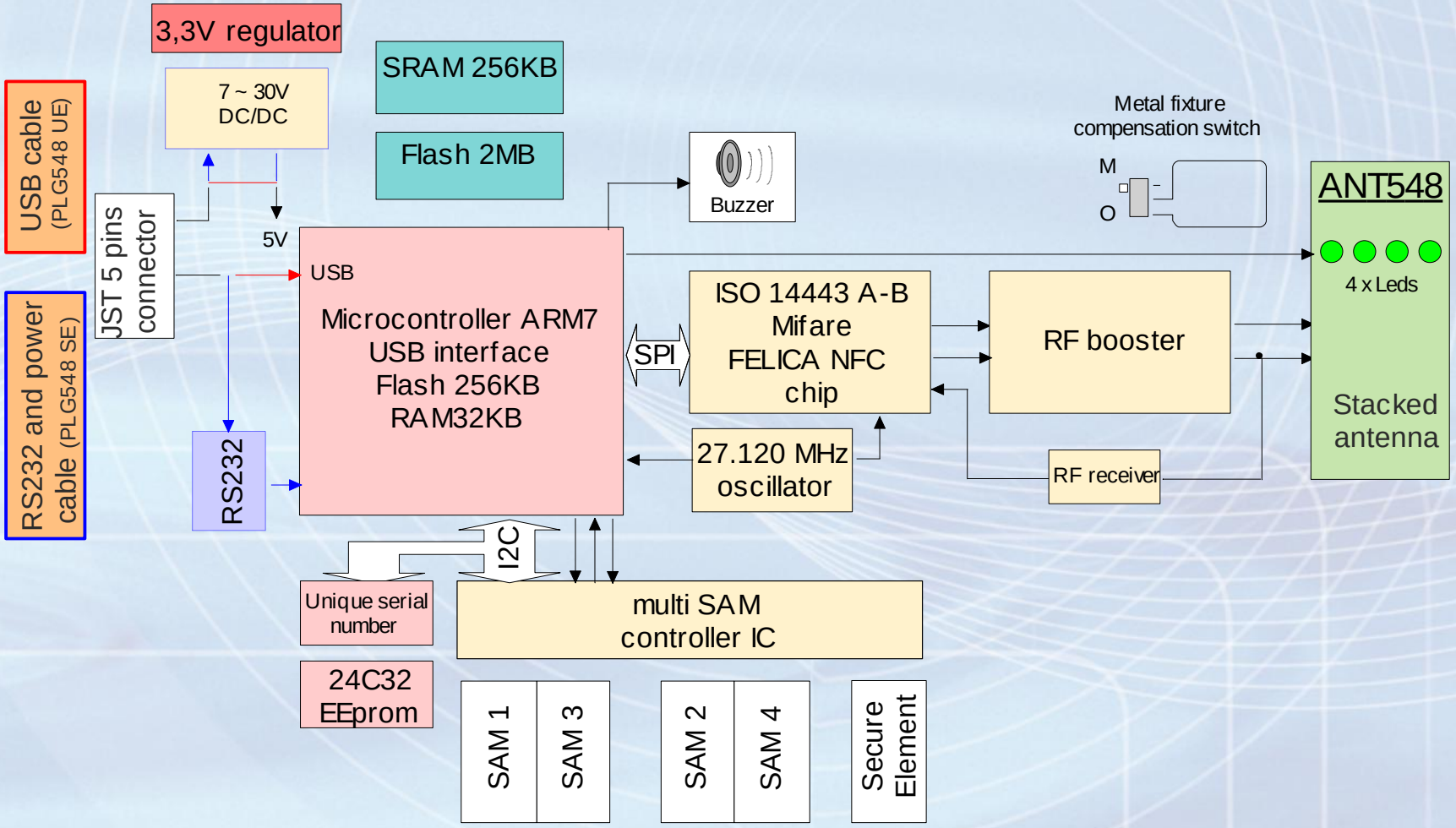
RDR518 hardware architecture



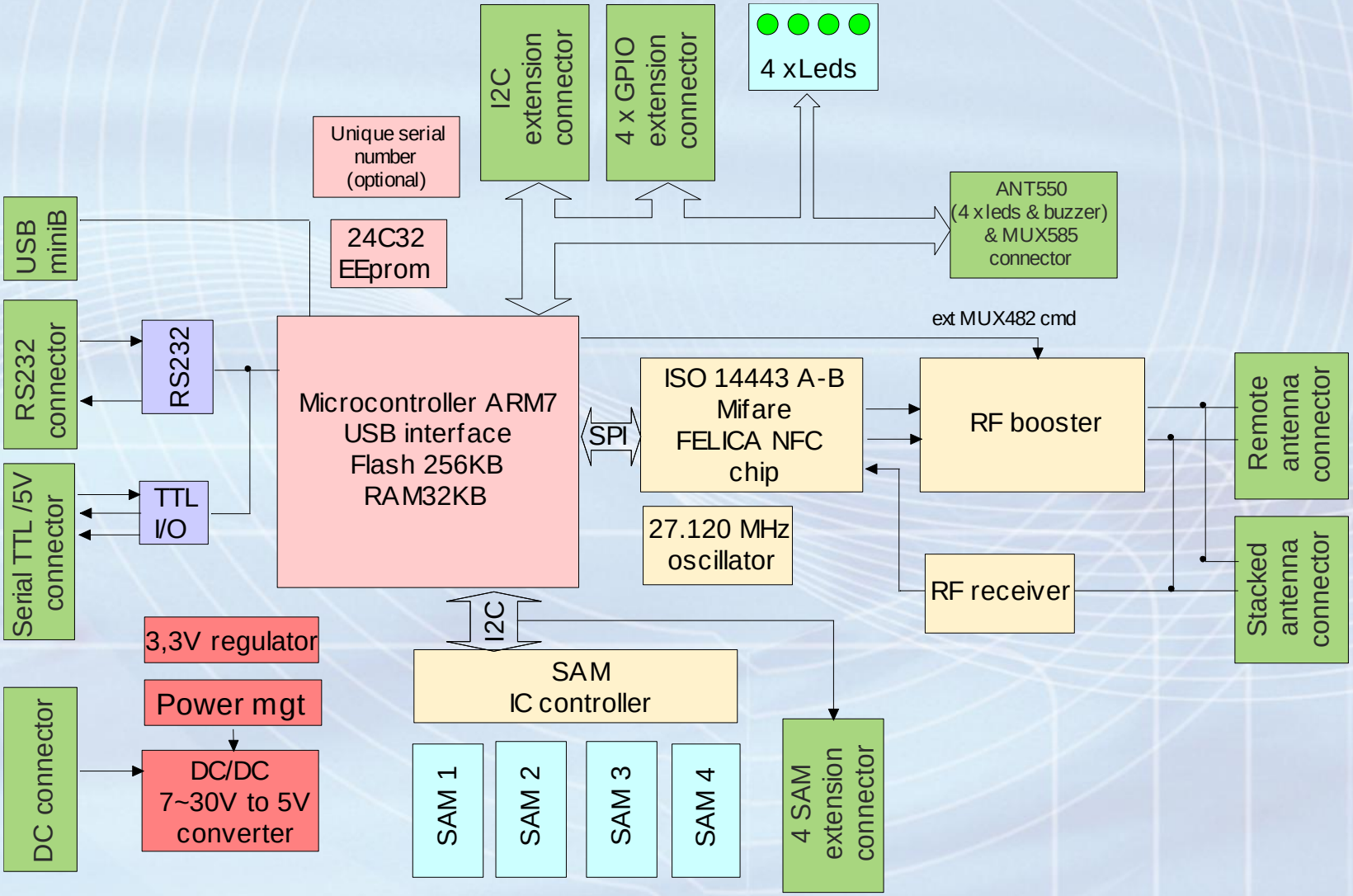
RDR519 hardware architecture



PLG548 hardware architecture



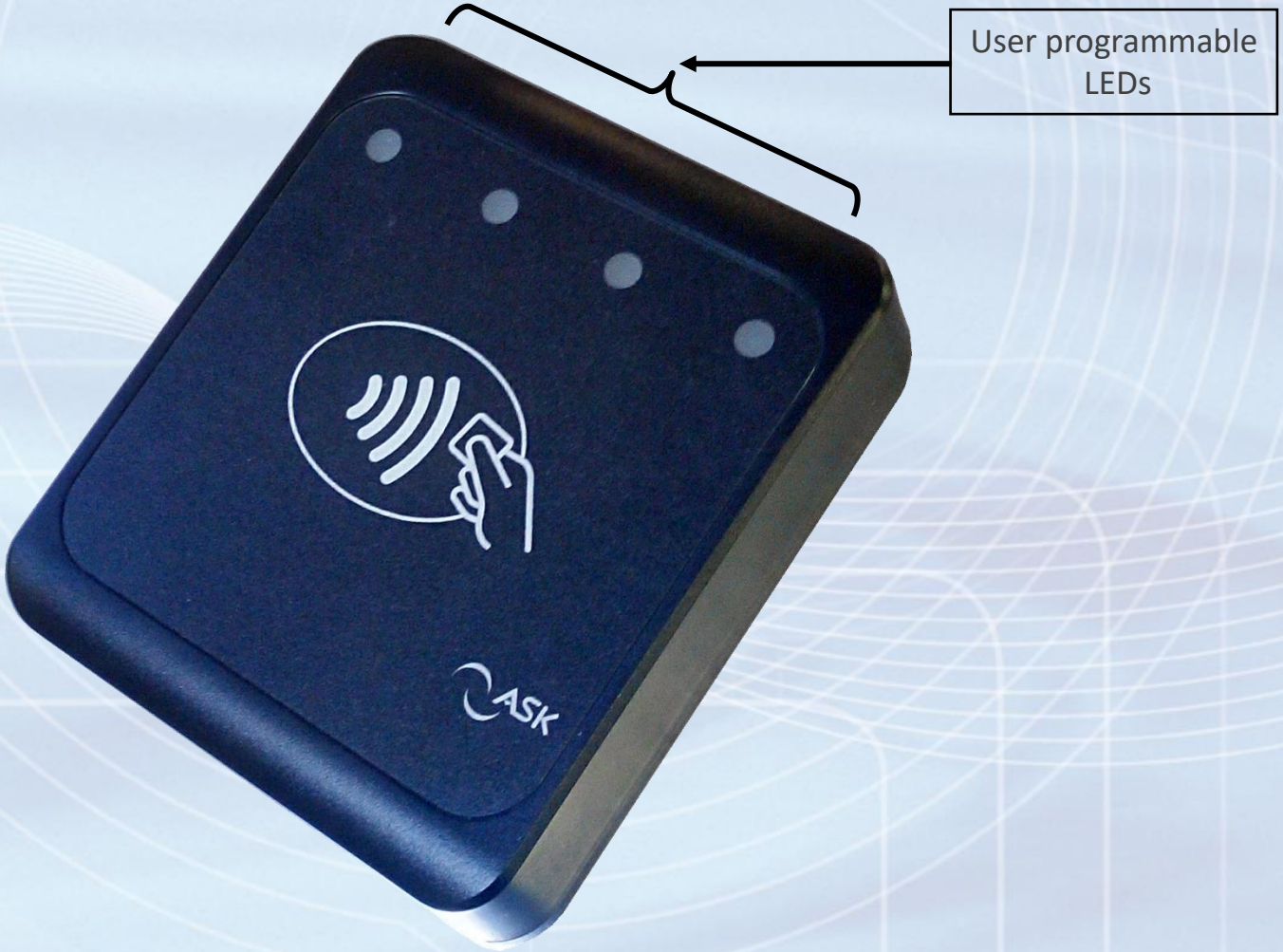
CPL528 hardware architecture



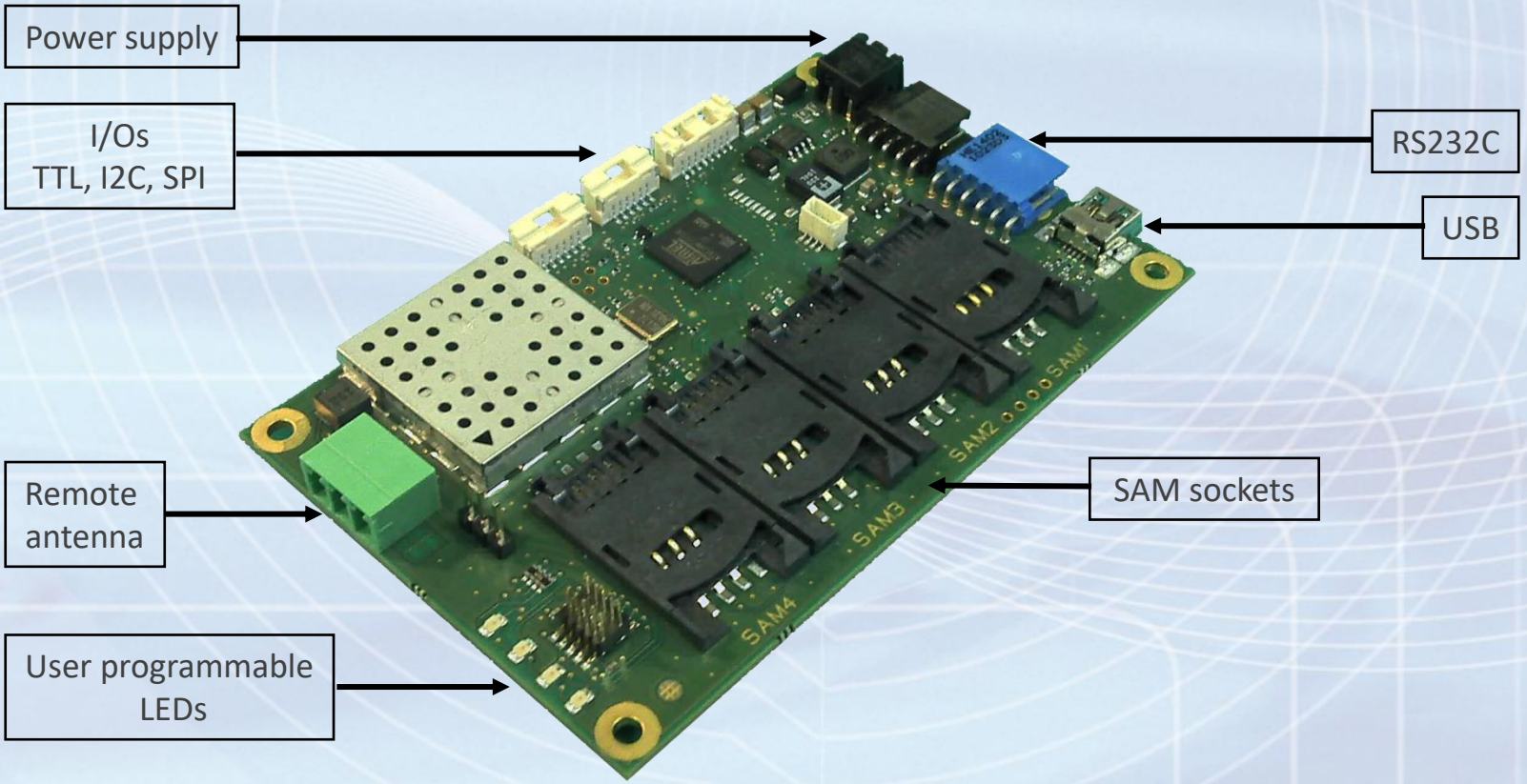
RDR518

RDR519

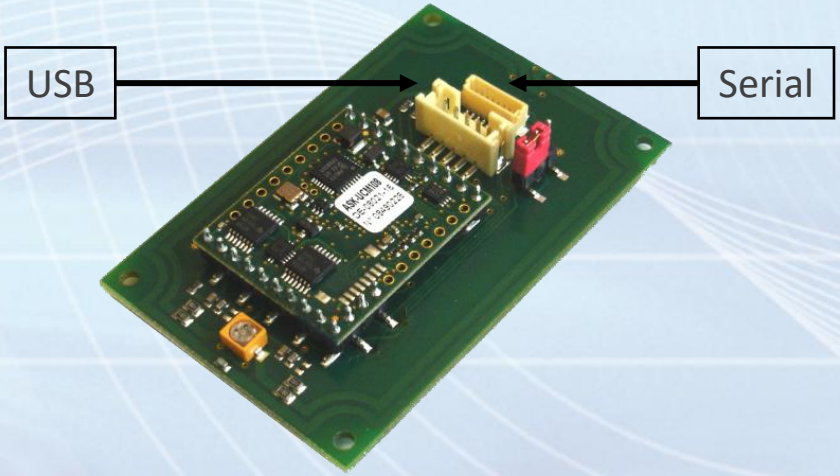
PLG548

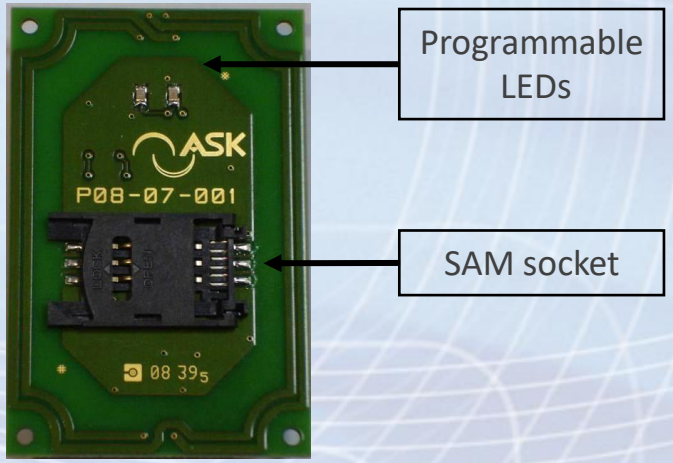


CPL528



CPL108





Software installation

- Copy the USB flash drive content to a directory on your hard drive.

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

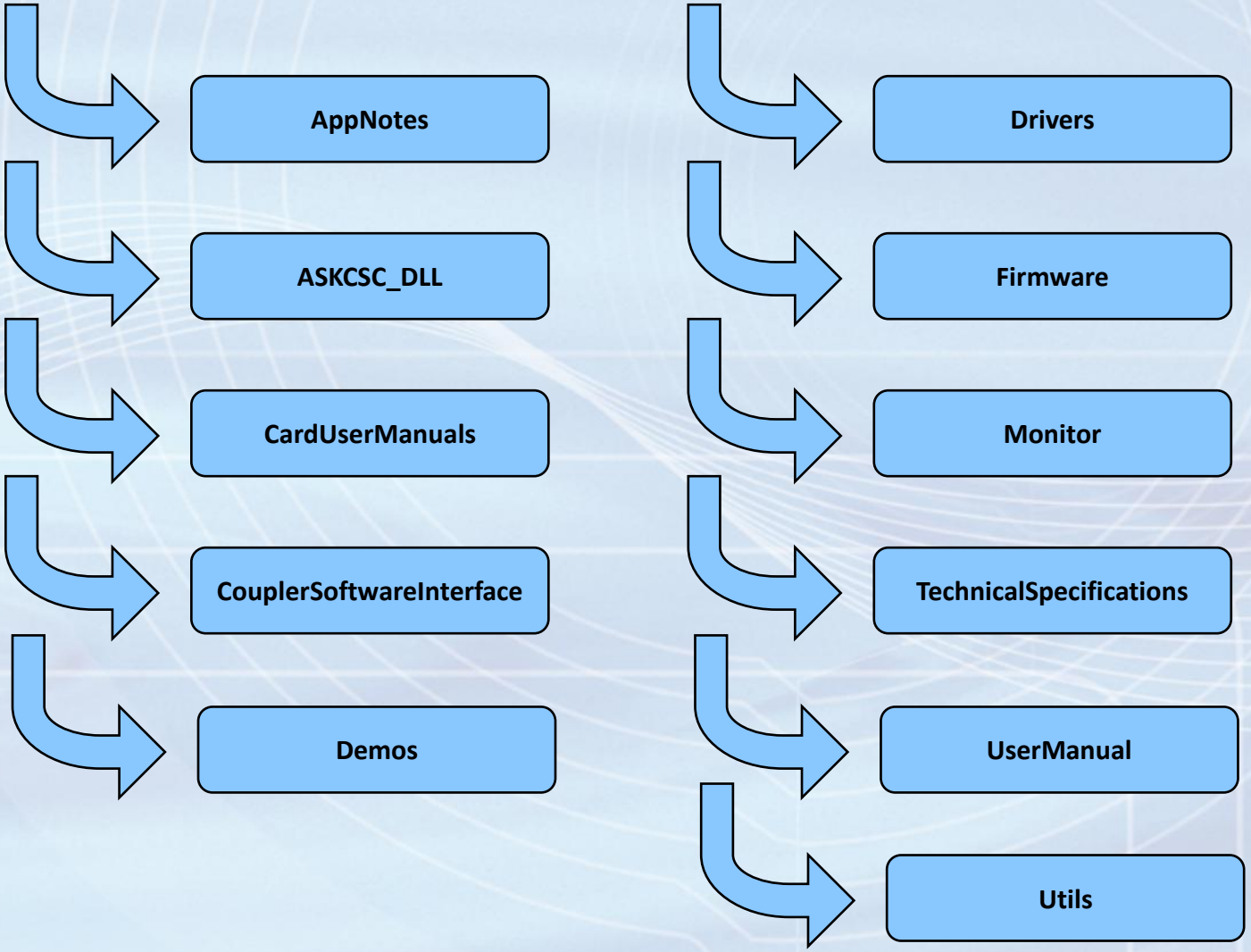
Driver installation

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

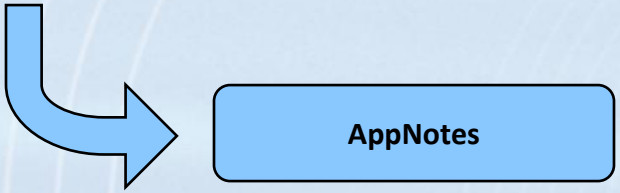
Media content

- Documentation
  - User manuals
  - Technical specifications
  - Card User Manuals (GTML, GTML2, CD97, Mifare®)
  - C.ticket® User Manuals
  - Application Notes
- Software
  - Drivers & demonstration applications
  - API DLL, Tools and documentation

Media architecture

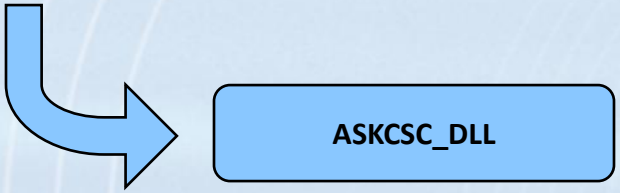


Media architecture



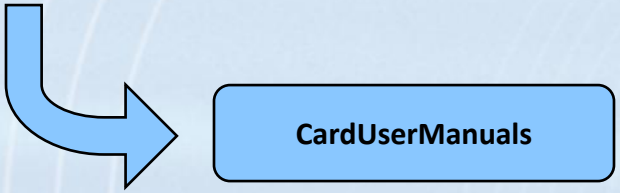
- Communication Scenarii
- C.SAM KVC 02 Mapping
- Applicative Security on CTx
- ASK CSC downloading
- ASK MONITOR CSC Sequences Scripting
- Managing field exposure on CTS256B & CTX512B
- Java examples
- GENXXX USB interfaces
- …

Media architecture



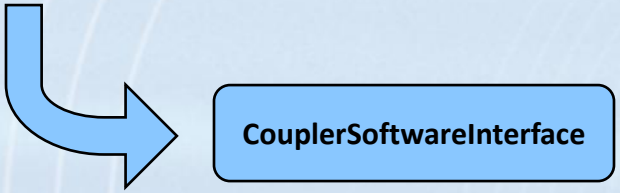
- Application Programming Interface (API)
- Distributed as binaries and full source code (Windows, Linux & OS X)
- Low level functions: coupler communication, card handling, SAM operation, LEDs.
- Calypso high level functions
- Mifare® high level functions (Classic, Ultralight, Ultralight C, Ultralight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

Media architecture



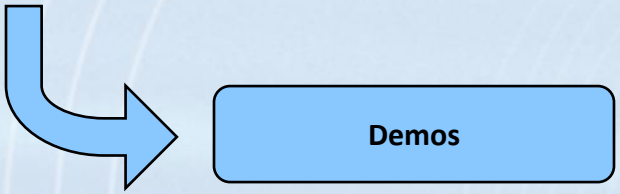
- CD97 external specifications
- GTML external specifications
- GTML2 external specifications
- CTS512B and CTM512B user manuals
- Mifare Classic® (CMC 1K) user manual
- Mifare Ultralight® (CTS512A) functional specifications

Media architecture



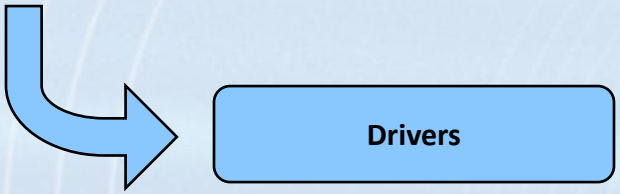
- GEN5XX coupler software interface
- Communication protocol description
- Class oriented high-level protocol
    - Download class : Flash update and EEPROM configuration
    - System class : card, SAM and UI low level handling
    - Calypso classes : Calypso high level commands
    - Mifare® classes

Media architecture



- 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 architecture

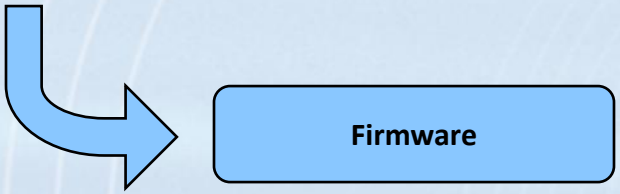


- USB CDC driver for GEN5XX

Notes:

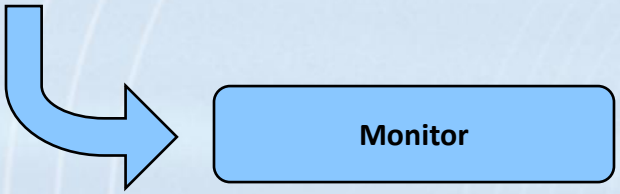
- The drivers are Microsoft WHQL certified.
- The PC/SC CCID driver for GEN5XX is provided by Microsoft.

Media architecture



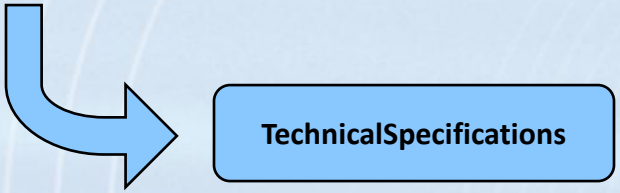
- GEN5XX firmware binary files
- Version history

Media architecture



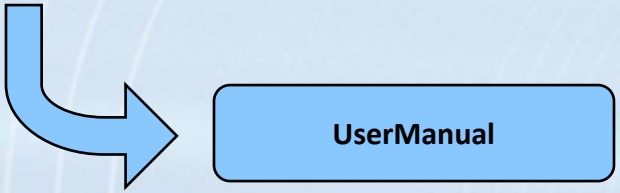
- Windows utility
- Communication with couplers/readers
- Low level communication handling
- Send and Receive functions
- SAM and cards communication
- High level commands with script capabilities
- Flash Firmware download and EEPROM configuration

Media architecture



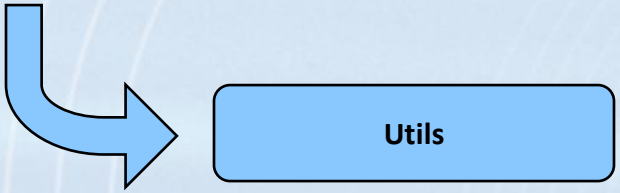
- RDR519 & CPL519
- RDR518 & CPL508
- PLG548 & CPL548
- CPL528 coupler
- CPL108 & CPL118 couplers
- UCM 108 universal module
- MTB108 coupler evaluation board
- OEM antennas: integration and tuning procedure

Media architecture



- Reader user manuals
- Software installation manual

Media architecture



- 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