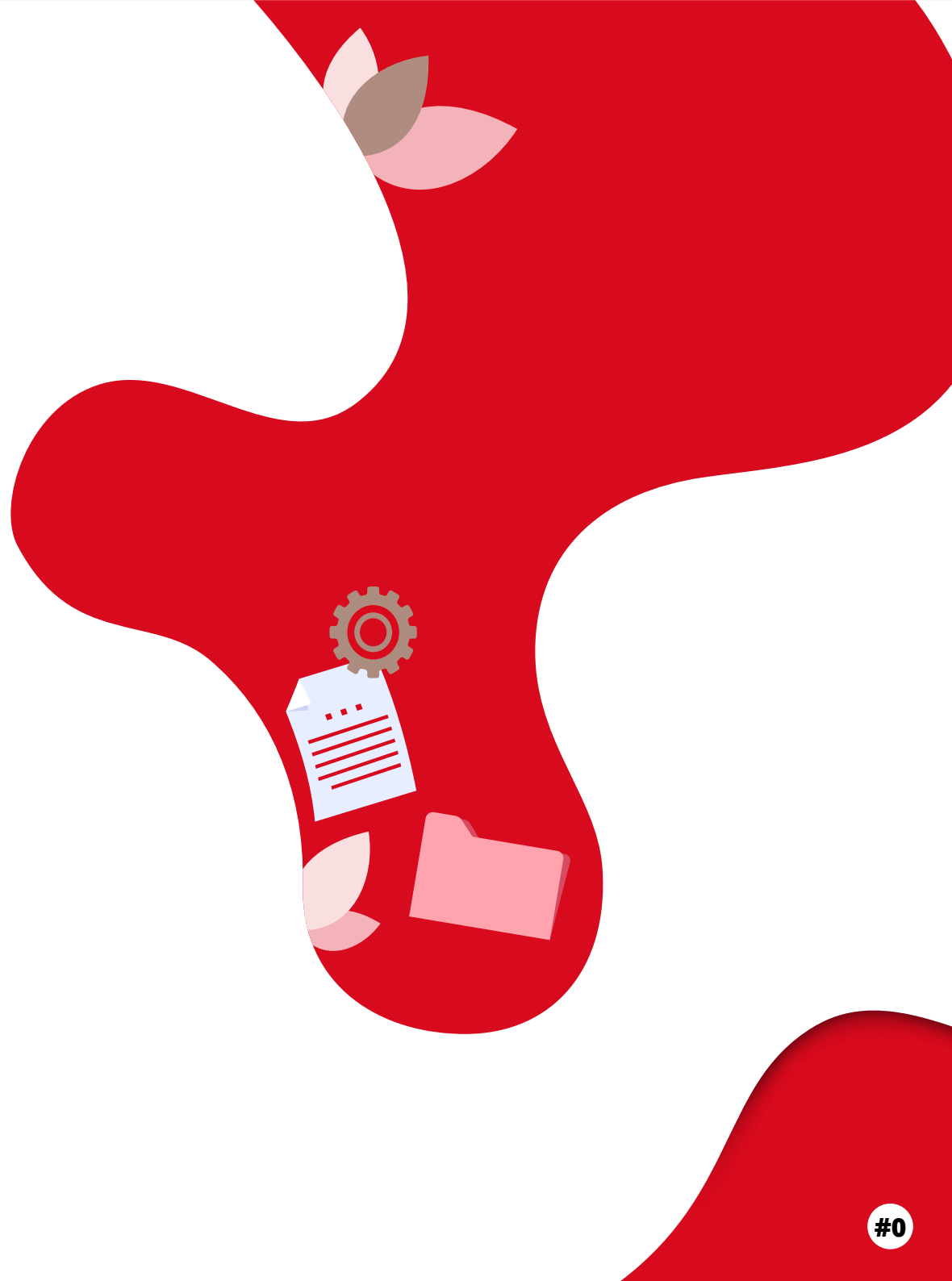


PUCK One

Reader - Coupler
NFC / RFID USB
SIM / SAM slot

PFL22016-AA





PUCK

USB HF NFC / RFID READER

WHAT IS THE PUCK ?

Combined with a desktop or laptop computer running Windows, macOS or Linux, the PUCK is ideal for personalization or contactless card reading applications: micropayment, transport, loyalty, eID, company badge.

It also allows interaction with a smartphone, 13.56 MHz HF RFID tags or labels, and in general with the entire NFC Forum ecosystem.

- > The PUCK is delivered with its USB-A / USB-C cable.
- > A simple design, with customizable light crown and logo, suitable for all environments.
- > Its latest-generation electronic components and its NXP NFC PN5180 modulation achieve excellent radio performance results.





PUCK

NEW MODES, NEW USES



Size (D x H)
Ø 7.8 x 2.8

PUCK USE CASES

- # Loyalty programs
- # Logistics
- # Library
- # Storage & Inventory
- # Order preparations
- # Product traceability
- # E-passport & other e-documents
- # Micro-payment, electronic wallet
- # Authentication
- # Badge formatting & personalization



PUCK One

PUCK ADVANTAGES

LAST
GÉNÉRATION
READER

SPEED OF
TRANSACTIONS

ALWAYS MORE EFFICIENT

- > Communication with cards at 848 kbit/s and passage extended APDUs (eAPDUs) up to 64 kB which decreases transaction time with cards supporting this communication mode.
- > Support for the latest versions of standards :
 - EMV-*ready*
 - CEN/TS 16794-*ready* (AFIMB / RCTIF 5)
- > Monitoring NFC Forum specifications.
- > Compatibility with Apple VAS (Wallet) and Google Smart Tap (Google Pay)

ALWAYS MORE COMPATIBLE

- > New features include the ISO / IEC 18000-3M3 RFID protocol, without renouncing the old card protocols (Innovatron, ST SR, ASK, CTS, ...).





PUCK One

COMPATIBLE CARDS

COMPATIBLE CARDS ISO / IEC 15693 & 18000-3M1 (NFC-V)

NXP : the entire ICODE SLI and SLI2 (not ICODE1)

Infineon : the entire my-d Vicinity

ST MicroElectronics : range ST25TV, M24LR

Texas Instrument : range TagIT HF

COMPATIBLE CARDS ISO / IEC 18000-3M3 (EPC HF)

NXP : range ICODE-EPC

STANDARDS COMPLIANT CARDS

PUCK complies with all the standards for near field communication at 13.56MHz, it is immediately compatible with all NFC or RFID chips which comply with the same standards.

COMPATIBLE CARDS JIS : X6319-4 (NFC-F)

Sony : range FeliCa Lite & Lite-S

CARDS USING A PROPRIETARY PROTOCOL

Calypso protocol

Innovatron : CD97, GTML

Innovision/Broadcom :

Topaz, Jewel

ST MicroElectronics :

SR176, SRI512

ASK/Paragon ID :

CTS256, CTS512

Inside Contactless

PicoPass / HID iClass

Silicon Craft : SI43NT

EM Marin : EM4134

COMPATIBLE CARDS ISO / IEC 14443 (NFC-A or NFC-B) NXP

: the entire range

MIFARE®, included MIFARE

UltraLight®, MIFARE

Classic®, MIFARE Plus®,

DESFire®, SmartMX, and the

entire range NTAG

Infineon : range my-d

Proximity, my-d Move, range

SLE et SLS

ST MicroElectronics : range

ST25TA, ST25TB, CD21, M24SR

Atmel/Microchip : range

AT88SC

NFC PASS

PUCK is able to read and retrieve NFC pass information from Apple Wallet and GooglePay applications in your smartphones. Try it out by downloading your demo pass from springpass.springcard.com

COMPATIBILITY BETWEEN A CARD AND A READING SYSTEM COVERS THREE LEVELS

ANALOGUE LEVEL COMPATIBILITY

This point covers the correct energy transmission and good radio link quality.

PROTOCOL COMPATIBILITY

The electronic chip on the card and the reader must speak the same language.

PUCK implements the latest standard versions and respects the EMV and CEN / TS 16794 (AFIMB / RCTIF 5) implementation recommendations for maximum compatibility.

APPLICATION LEVEL COMPATIBILITY (TRANSACTION)

It covers the link security (optional) and the chip informations access.

In Smart Reader and RFID Scanner mode, the reading templates allow the PUCK to access as an "intelligent reader" to the data from most chips on the market.

In PC / SC mode, PUCK operates in transparent mode (pass-through) and gives to applications running on the host computer full access to the functions of the chip.





PUCK One

SLOT SIM/SAM

SECURE AUTHENTICATION WITH SAM

Thanks to the NXP MIFARE® SAM AV2, the PUCK One supports authentication insurance with contactless cards (MIFARE DESFIRE®, MIFARE Plus®, etc.) and thus ensures a secure communication channel with these cards (encryption, CMAC).

Value-added solution integrators can use the SAM AV2 into the PUCK One to complete their software distribution or communication with their servers in the cloud.

THE PUCK CAN SUPPORT 2 SAM :

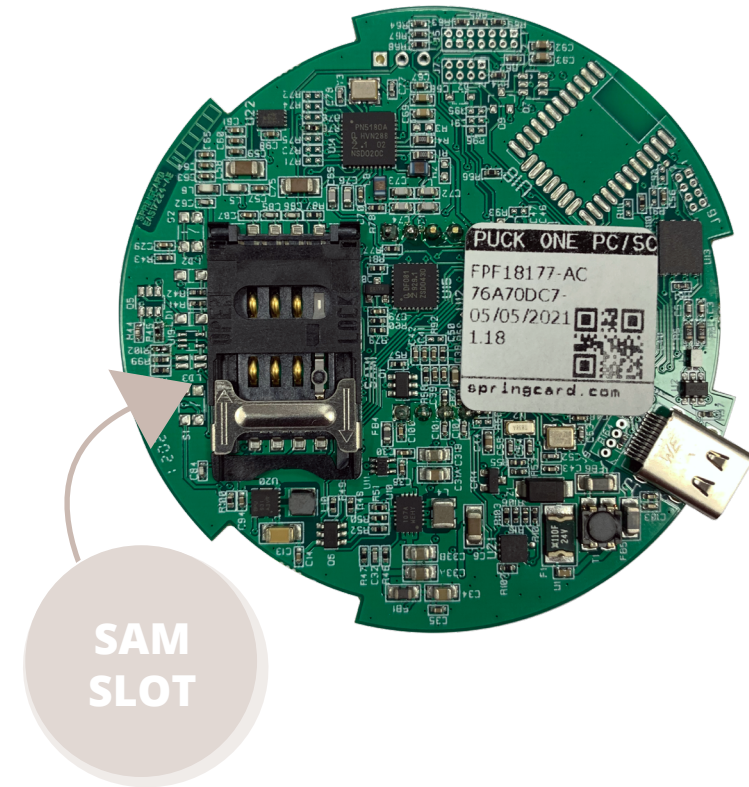
- > An integrated NXP MIFARE® AV2 SAM
- > An HSP-compatible SAM slot whose format and characteristics are as follows:

1 ID-000 slot for SIM or SAM smartcard
ISO / IEC 7816 (3 and 4): 4 MHz frequency, supports the two protocols T=0 and T=1, up to TA1=96

A SAM provides features to store keys securely.

It allows authentication and data encryption between:

- > The contactless card and the SAM
- > The SAM to the terminal





PUCK One

SPRINGCARD COMPANION

SpringCard Companion

Connect to companion.springcard.com

More

- Reuse the service

My Products

- Team products
- Flash history
- Associated

My Configurations

- List
- Create new
- Team configurations
- Import

Springcard.com

- Go on the site
- Privacy policy
- Terms of Service
- Technical support

Connect to SpringCard Companion

Options

- Your Account and plan
- Pricing
- Request for a new password
- Set new password
- Disconnect (alexandra.p@springcard.com)

[Privacy policy, terms and conditions of use](#)

Get the best of SpringCard Companion by using Springcard's cloud services.

Associated with the SpringCard Companion software, the companion.springcard.com service centralizes your information and your settings securely.

No longer take the risk of losing your configurations, and exploit the full potential of directly configuring your SpringCard reader by NFC or BLE thanks to this single c

SPRINGCARD COMPANION HOME INTERFACE

SPRINGCARD COMPANION

Our SpringCard Companion software is also a local web server accessible from companion.springcard.com.

SpringCard Companion allows you to configure your PUCK in one click and store your configuration data. Once the PUCK is connected on the PC, the software communicates through the web with the connected reader in USB.





PUCK One

TEMPLATES AVAILABLE

READING NDEF STRUCTURED DATA

Reading URLs (SmartPoster) or any specific business data, as long as it is stored in a structure compliant with the NFC Forum RTDs from all compliant tags (Type 1, 2, 3, 4A and 4B, 5). Receiving peer-to-peer push messages (SNEP).

READING OF SMARTPHONES AND OF NFC OBJECTS

Secure reading of Apple VAS (PassKit / Wallet NFC) and Google VAS (Smart Tap / Google Pay) passes with storage of ECC keys in the secure element.



Secure reading of Orange NFC Retail and Orange NFC Office passes, or NFC passes SpringCard SpringBlue.

READING THE PROTOCOL SERIAL NUMBER (ID)

Carrier frequency: 13.56MHz
ISO / IEC 14443 (NFC-A and NFC-B, including the entire NXP range MIFARE), ISO / IEC 15693 and 18000-3M1 (NFC-V), ISO / IEC 18000-3M3 (EPC HF), JIS : X6319-4 (NFC-F).
All tags consistent with NFC Forum : Type 1 (Innovision / Broadcom Topaz and compatible), Type 2 (including NXP NTAG, Infineon my-d, ...), Type 3 (Sony FeliCa Lite and Lite-S), Type 4 (including NXP DESFire®, STMicroelectronics ST25TA and M24SR, ...) and Type 5 (including NXP ICODE, Texas Instrument TagIT, STMicroelectronics ST25TV and M24LR, ...).

Transportation Cards "B"
(Calypso Innovatron historical protocol) and STMicroelectronics transport tickets (SR176, SRI512, ...) and ASK / Paragon ID (CTS256 and CTS512).

READING DATA STORED IN MEMORY

APDUs 7816-4 exchange for querying ISO/IEC 14443-4 cards (T=CL / ISO-DEP) or Innovatron (SELECT APPLICATION, SELECT FILE, READ BINARY or READ RECORD).

NXP DESFire®, NXP MIFARE Classic® and compatible, NXP MIFARE Plus® and compatible.

Direct access to memory areas of wired logic chips : all NFC Forum Type 2 compatible chips (including NXP MIFARE UltraLight®, NXP NTAG, Infineon my-d, ...) and ISO / IEC 15693-3 / NFC Forum Type 5 (including NXP ICODE, Texas Instrument TagIT, STMicroelectronics ST25TV and M24LR).

ADDITIONAL FEATURES

Formatting the output in decimal with Lühn key (ski passes).

Verification of the authenticity (anti-clone function) of most of the chips in the NXP (NTAG DNA, MIFARE®, etc) and ST.

DESFire® authentication before reading the ID for cards in Random-ID (random protocol identifier).



PUCK One

FOR FURTHER

QUICK UPDATE AND WITHOUT HANDLING WITH COMPANION: ONCE THE PUCK CONNECTED TO THE SOFTWARE, THE UPDATE IS MADE IN A FEW SECONDS

THE PUCK DOES CARDS EMULATIONS

CUSTOMIZATION THE LEDS COLORS: 100% CONFIGURABLE WHICH ALLOWS THE PUCK TO BE ADAPTED TO THE COLOR OF YOUR COMPANY

EXCHANGES NFC IN PEER TO PEER

TECHNICAL DOCUMENTATIONS [DOCS.SPRINGCARD.COM](https://docs.springcard.com)

HE IS ABLE TO STORE DATA USERS OR LICENSE KEYS

POSSIBILITY TO CUSTOMIZE THE READER'S FRONT LOGO



PUCK One

TECHNICAL DATA

PUCK ONE	
ISO / IEC NFC / RFID standards	14443 A&B PCD (NFC-A, NFC-B), 15693 (NFC-V), 18000-3M1 & 3M3, 18092 (NFCIP-1), 14443 A PICC (card emulation)
Carrier frequency	13.56MHz (RFID HF, NFC)
RF field level	Typ : 3 A/m à 0cm, 1.5 A/m à 5cm
Antenna	Integrated, balanced, diameter 7cm
Baudrate operating distance	Typ : 0-5cm, up to 10cm 26kbps (15693), 106 / 212 / 424 / 848kpbs (14443), 106 / 212 / 424kbps (18092)
Technologies Non-ISO RF	NFC Forum Tag, types 1, 2, 3, 4 & 5 (Read / Write), type 4 (emulation) NXP (Philips) MIFARE®, BroadComm (Innovision) Jewel & Topaz, ThinField (Kovio) RF Barcode, ST SR & LR, ASK CTS, Atmel CryptoRF, ... Calypso's FeliCa Innovatron radio protocol (NFC-F) : simple mode only HID iClass, Inside PicoTag : serial number only
Host Interface	USB 2.0 full speed (12Mbps) – compliant with USB 3.0 and 1.1
Light	R,G,B LEDs
Sound	Buzzer
Connector	USB-A / USB-C
Temperature	Operation -20 / +70°C, storage -40 / +85°C,
Humidity	non-condensing 0-90%
Approvals	Radio : EN 300 330, EMC : EN 301 489, Security : EN 60 950-1, CE mark, FCC Id class, B part, 15 (pending) RoHS, DEEE
MTBF	500 000 hours
Size	Diameter : 7.8cm / Height : 2.8cm
Weight gross / net	Weight : 140g / 75 g
Cable	Cable : 1.8m
Garanties	2 years

ABOUT SPRINGCARD

springcard®

CONTACTLESS & 13.56MHZ RFID & NFC SOLUTIONS AND READERS

SpringCard is a French company that designs and manufactures contactless readers by combining different technologies.

With 20 years of field experience in systems with 13.56 MHz, we offer more than just technical skills.

PARIS (FR) - ANGERS (FR) - SAN DIEGO (USA)



www.springcard.com