PUCK

The new NFC/RFID HF family for desktop or events

CFS18112

COUPLERS AND READERS : SPRINGCARD STILL ROCKS

USB OR BLUETOOTH LOW ENERGY : YOU CHOOSE

PUCK One

TECHNICAL CHARACTERISTICS

PUCK Blue

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COUPLERS AND READERS : SPRINGCARD STILL ROCKS

Based on the whole new chipset NXP PN5180 for the NFC/RFID HF communication at 13.56 MHz and on high speed processor 32bits, the PUCK family is the new reference in terms of performance and use diversity. It is compliant with the last generation of contactless cards used for transportation, payment or identification, as well as with the NFC Forum tags and most of the tickets and RFID labels -even when they are based on an owner protocol like MIFARE. The PUCK family is adapted to existing parks and long-lasting sustainable processes. Its compliance with EMV ensures interoperability with other devices.

NEW MODES FOR NEW USES

A reader which becomes a card for a transaction with a smartphone ? A USB peripheral allowing your latop to operate in peer-to-peer like a tablet ? That's easy as PUCK ! Every product from the PUCK family can emulate a NFC Forum tag without the intervention of the laptop they are connected to ('tag emulation' mode), emulate a contactless card whose applicative runs on the laptop ('host card emulation mode' or HCE), or initiate a peer-to-peer communication «NFC Beam».

ICE HOCKEY BALL OR SAVVY GOBLIN ?

Sportsmen will see the link between the housing refined design of the PUCK family and the Ice hockey ball, called «puck» in english. The theatre enthusiasts will link it with PUCK the goblin from Midsummer Night's Dream from Shakespeare. But the PUCK is also a creature from the celtic folklore, a smart blighter, playful and quite rebelious. A trait of character that fits perfectly with SpringCard spirit !

USB OR BLUETOOTH LOW ENERGY : YOU CHOOSE

PUCK is a complete family in which each member has its own personality.

The PUCK One brings its100% plug'n play approach, an absolute compliance with every office operating systems (Windows, Mac OS X, Linux), a total interoperability with its predecessors from the Prox'n Roll family and even with all the smartcard readers of the market for the PC/SC setting.

Products from the PUCK family can read all the NFC/RFID HF tags types.

For the wireless or mobile solutions enthusiasts, the PUCK Blue is ideal for applications based on smartphones or tablets.

SECURITY, THE KEY ISSUE FOR TOMORROW'S APPLICATIONS

The PUCK products also embed a coprocessor NXP SAM AV2 to store the applicative keys without compromising with their safety.

PUCK's family products (except PUCK One) include a connector for a smartcard size Mini SIM/SAM, essential to validate transactions with some contactless cards.

PC/SC, SMART READER OR NCI ?

To the diversity of physical interfaces PUCK family adds the diversity of software interfaces, in order to adapt itself with agility to needs -and know-how- of each developper or solution integrator.

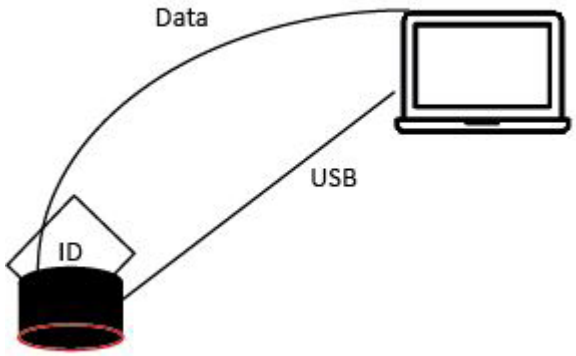
Whatever may be your implementation problematic, in a company environment, in a university, on a trade show or in a small shop, whatever may be your computing environment and your integration constraints, there is always a PUCK to help you !

Depending on your needs you will be able to configure your PUCK as you want to thanks to our new tool : SpringCard Companion !

PUCK One

NFC/RFID HF USB READER AND COUPLER WITH SAM

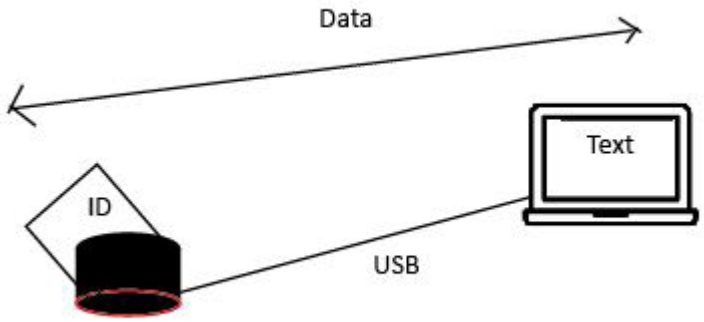
Combined with a computer or laptop under Windows, Mac OS X or Linux, The PUCK One is ideal for customisation application or contactless cards reading: micropayment, transportation, loyalty, eID, company badges. It allows you also to interact with a smartphone, tags or RFID HF labels at 13.56MHz, and broadly speaking with all the ecosystem NFC Forum compliant. RFID Scanner settings (keyboard emulation) allows you to associate the PUCK with an Android or iPad tablet for even more flexibility !



WHICH SETTING TO CHOOSE ?

PC/SC

PC/SC is the short form for Personal Computer / Smart Card. It is a set of specifications created by the smartcard and computing industry to ensure a complete interoperability at the applicative level. In PC/SC setting, the PUCK is a transparent coupler, which means that he sends orders of the application (read, write, security) to the card and feedbacks the answers without trying to process them. Thanks to its integrated SIM/SAM slot, the PUCK One is the ideal medium for secured transactions.

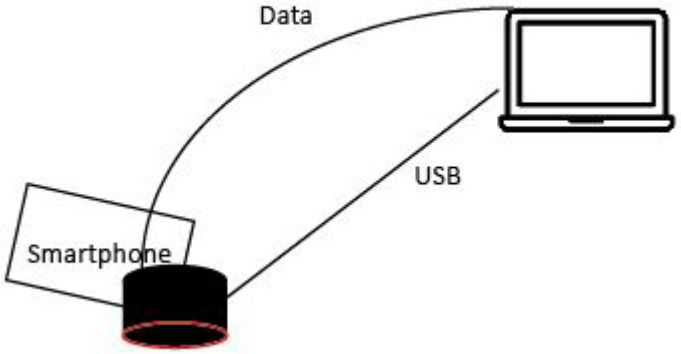


RFID SCANNER

In RFID Scanner setting, the PUCK is a smart reader. Once set to look for this or this data in several contactless card types or badges, it is performing the transaction with the card by itself and transmits only the useful data to the computer or tablet. Seen as a USB keyboard (HID keyboard profile), PUCK is as simple to use as a barcode scanner. Every existing application can operate the PUCK as an entry peripheral as easily as if data were entered by the operator.

I AM A BIT LOST...

You can also choose not to choose - for now. The PUCK One goes from one set to another easily. You can either use SpringCard Companion or put on the product a MasterCard formatted with the same software. Security is a constant concern for SpringCard, only the lawful owner can intervene on the settings of its products.



Technical Characteristics

ISO/IEC NFC/RFID standards Carrier frequency RF field level Antenna Operating distance Baudrate	14443 A6B PCD (NFC-A, NFC-B), 15693 (NFC-V), 18000-3M1 & 3M3, 18092 (NFCIP-1), 14443 A PICC (card emulation) 13.56MHz (RFID HF, NFC) Typ: 3A/m at 0cm, 1.5A/m at 5cm Integrated, balanced, diameter 7cm Typ: 0-5cm, up to 10cm 26kbps (15693), 106/212/424/848kpbs (14443), 106/212/424kbps (18092)
Host Interface	USB 2.0 full-speed (12Mbps) – compliant with USB 3.0 and 1.1
Non-ISO RF technologies	NFC Forum Tag, types 1, 2, 3, 4 & 5 (R/W), type 4 (emulation) NXP (Philips) MIFARE, BroadComm (Innovision) Jewel & Topaz, ThinField (Kovio) RF Barcode, ST SR & LR, ASK CTS, Atmel CryptoRF, ... Calypso's Innovatron radio protocol FeliCa (NFC-F) : plain mode only HID iClass, Inside PicoTag : serial number only
Light Sound	True R,G,B LEDs with advanced luminosity control 3 LEDs on the back (Battery status, Bluetooth status, Mode) 3-tone buzzer
Battery	Xxx xxxxmAh (BAT version only)
Power	Recomendation chargeur
Dimensions Cable/connector	Diameter:8.1cm/Height:3cm/Weight:ca 140g 1.8m cord – USB type C connector
Temperature Humidity	Operation -20/+70°C, storage -40/+85°C 0-90 % non condensING 0-90%
Approvals	Radio: EN 300 330, EMC: EN 301 489, Security: EN 60 950-1, CE mark FCC class B part 15 (pending) RoHS, WEEE
MTBF	500 000 hours
Warranty	2 years avec batterie ?
Contact SmartCard	ID-000 (micro-SIM) slot, ISO/IEC 7816 classes A & B (5V/3V), T=0 / T=1 up to TA1=96 (250000bps), EMV or ISO mode selected by configuration

Configuration modes

PC/SC Configuration	
USB Protocol Windows Drivers Other Drivers SDK	CCID 1.1 profile PC/SC v2.03 SpringCard UsbPC/SC driver for Windows 7/8/10 (x86,amd64) Open source PCSC-Lite driver for Linux & Mac SpringCard PC/SC SDK (free)
RFID Scanner Configuration	
USB Protocol Drivers	HID profile Supported as a standard USB keyboard by all current desktop/laptop OS
USB Setting	
USB Protocol Drivers	

Références SpringCard PUCK One
SCPUCKUSBX-000 non set (use SpringCard Companion EV software to configure the product)
SCPUCKUSBX-PCSC - set in PC/SC
SCPUCKUSBX-RDR-QY - set as a RFID Scanner / keyboard QWERTY SCPUCKUSBX-RDR-AY - set in RFID Scanner / AZERTY keyboard
SCPUCKUSBX-NCI - set in NCI

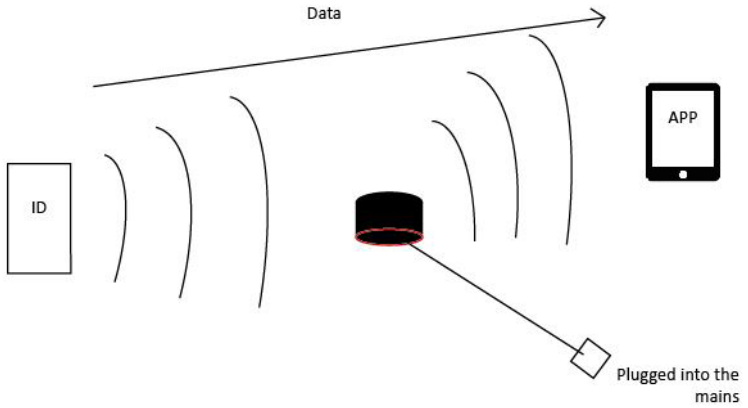
PUCK Blue

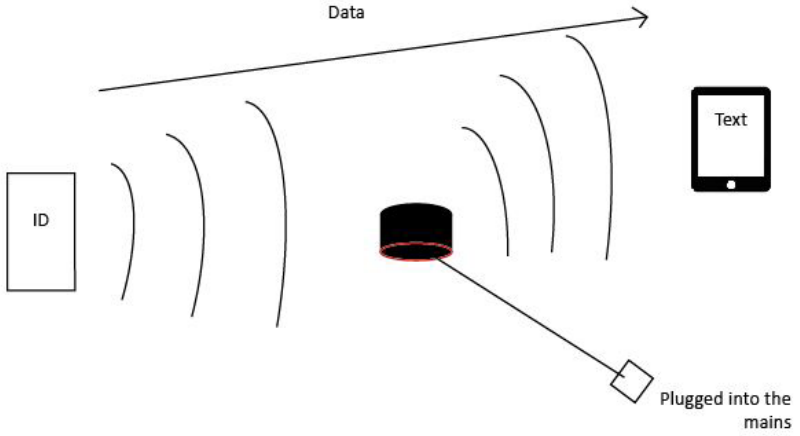
READER AND COUPLER NFC/RFID USB & BLUETOOTH LOW ENERGY

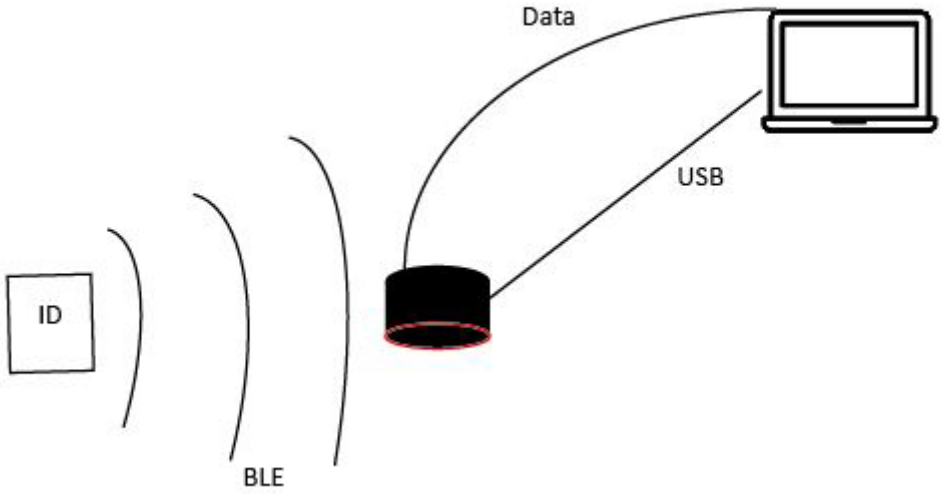
The PUCK Blue is the universal peripheral for all the applications using contactless technology, mobile NFC or RFID HF or with tablets that do not have USB interface. It is able to operate in coupler as well as in Smart Reader, associated with an Android/ iOS/Windows application or in keyboard emulation, the PUCK Blue is in the heart of new uses on selling or welcoming points. The mode is chosen actively by the user application or by a switch located underneath the device.

THE BLE TECHNOLOGY

Introduced with the 4th edition of the Bluetooth norm, the Bluetooth Smart or Bluetooth Low Energy ensures the wireless comunication between two points at middle distance (1000m) with a lower energy need compared with the previous norms.







PUCK Blue

AS A PERIPHERAL FOR TABLETS

The PUCK Blue is also a peripheral for tablets for corporate payment in corporate restaurants, or the reading of loyalty cards. You put the card on the PUCK Blue and the data is send to the connected tablet.

The PUCK Blue is a simple and complete solution for iOS/Android and PC.

AS AN INTERFACE BETWEEN APPLICATIONS AND BLE OBJECTS

The PUCK Blue is also an interface between your applications and BLE objects. In fact PUCK Blue, when it operates in BLE is detected and connected to a tablet (itself also in BLE). It means that when the smartphone is placed on the PUCK Blue, it is able to read the information.

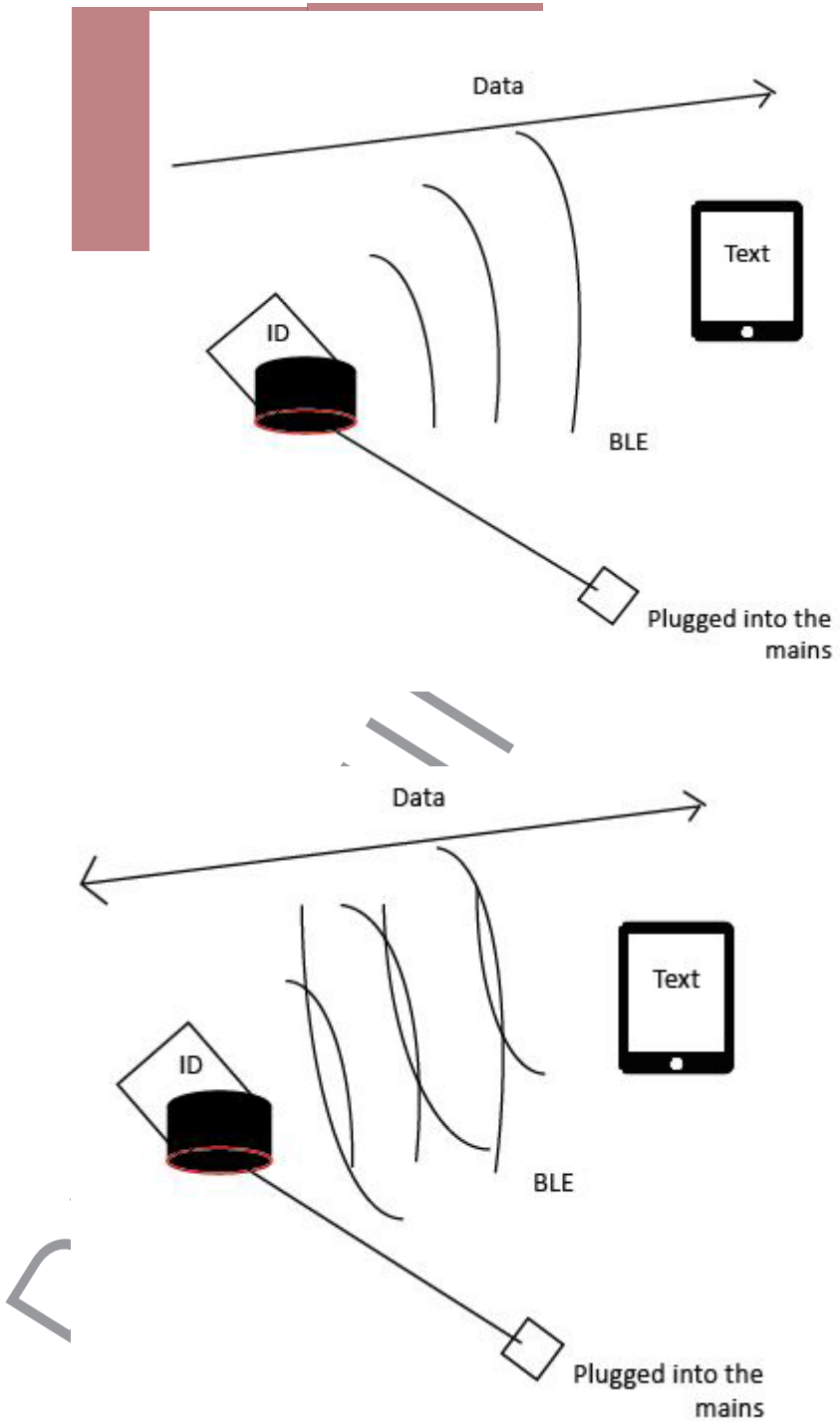
The PUCK Blue OEM can be enbedded in devices whose access should be secured. Another use possibility from the PUCK Blue is to place it at the entry of meeting rooms and when you put your corporate card or your smartphone on the PUCK you will be able to enter the room.

The PUCK Blue can be installed in corporate restaurants for you to be able to pay your meal by putting your corporate card or smartphone on the PUCK Blue. This device can allow you to stop using payment terminals which are more expensive than the PUCK.

Shops will be able to use the PUCK Blue especially to manage customer loyalty in their shops. PUCK Blue is able to read loyalty cards which will simplify your life.

The PUCK Blue can also be used in spy mode, this mode allows you to identify people around the product who carry a device connected in BLE. This functionnality doesn't change the fact that the PUCK Blue is operating in NFC. It can also read beacons which means that merchants will be able to send coupons and advertisement when customers in their shops have a phone connected to Bluetooth.

SpringBlue is an application based on Bluetooth® Smart technology compliant with PUCK Blue. This application will allow a customisable reach without changing the antenna, the readers are flexible too. SpringBlue allows you to reduce the energy consumption and the cost of your Bluetooth Low Energy applications. The typical types of uses are: loyalty programs, event access control, hand-free access control, individual vrtual wallet, virtual parking ticket, presales services.



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MTBF	500 000 hours
Warranty	2 years avec batterie ?
Buttons	Power On/Off, Bluetooth Pairing/Reset, Mode change
Bluetooth Interface	Bluetooth 4 class xxx xxxdbm

SpringCard PUCK' Blue
SCPUCKBlue without battery
SCPUCKBlueBat with battery

Configuration modes

Application Mode	
BLE Protocol SDK	Custom GATT: - PC/SC-like service (CCID) - Smart Reader service SpringCard PC/SC SDK (free) SpringCard Mobile SDK (free)
RFID Scanner Mode	
BLE Protocol	HID profile Supported as a standard USB keyboard by all current desktop/ laptop OS
Visitor Point Mode	
BLE Protocol SDK	Custom GATT SpringCard Mobile SDK (free)

springcard

SpringCard offers a wide range of products to answer the largest possible amount of needs and uses. With 18 years of experience in constactless smartcards, communication technologies and the development of mobile and embedded systems, R&D SpringCard's team is a valued partner to help you create your own solution or product.

Our locations

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