

Prox'N'Roll RFID Scanner HSP

Getting Started Guide



Overview

The Prox'N'Roll HSP RFID Scanner is a user-friendly contactless (NFC/RFID @13.56MHz) coupling device.

An RFID Scanner is a device seen as a keyboard by the computer it is connected to. Therefore, there is no need to install any driver, you just plug the Porx'n Roll RFID Scanner to your computer and it will reach precise cards data and the computer receives these data as if someone was typing them on a keyboard.

This document will guide you through exploring the available software for a successful start using your Prox'N'Roll HSP RFID Scanner.

Products covered by this guide

Order code	Description
SC15132	Prox'N'Roll RFID Scanner HSP – EU Qwerty keyboard layout
SC15133	Prox'N'Roll RFID Scanner HSP – EU Azerty keyboard layout
SC15134	Prox'N'Roll RFID Scanner HSP – EU Qwertz keyboard layout
SC16217	Prox'N'Roll PC/SC HSP – US/Canada
SC16234	Prox'N'Roll PC/SC HSP OEM (without housing)

N.B: The keyboard layout can be easily changed on the field using our Multiconf software.

Important warning

The Prox'N'Roll HSP RFID Scanner uses a magnetic field to remotely power the contactless cards, and communicate with them. Magnetic waves are distorted or absorbed by conductive materials, including metal surfaces or shells. Also, the NFC/RFID communication is likely to be perturbed by other radiating devices (such as displays, radio or wireless communication interfaces) in the nearby. Place the Prox'N'Roll HSP RFID Scanner far from all sources of perturbations.

Before you begin

SpringCard aims at making contactless devices simple to use. Even so you will win time by reading this guide before plugging the device to your computer.

Please visit the Prox'N'Roll HSP RFID Scanner’s web page to get up-to-date information regarding the device and download the last version of all documentations:

<https://www.springcard.com/en/products/proxnroll-rfid-scanner>

Plug the coupler into a USB port

Plug the Prox'N'Roll HSP RFID Scanner into one of the computer's USB ports.

Wait 10 to 120 seconds until the operating system activates the driver and enables the coupling device.

Windows takes 10 to 120 seconds the first time you plug the coupling device into the computer only. Afterwards, the coupling device will be activated in a couple of seconds.

Keep an eye on the device: the **Prox'N'Roll HSP RFID Scanner** blinks yellow until it has been enabled by the computer.

As soon as the cyan light enters a smooth “breath” sequence, the device is ready!

Precautions

As a contactless coupler, the **Prox'N'Roll HSP RFID Scanner** needs a clean power supply to remotely power the contactless cards, RFID labels or NFC tags. Do not try to operate the device through a non-powered USB hub nor through a passive USB cable extender.

Verify that everything is OK

You need a (compliant) contactless card to pass this step. Use for instance a card from the NXP MIFARE family, or any NFC Forum Tag.

SpringCard also offers contactless cards. Need a small assortment of various chips to start your developments, or a large batch to issue many cards to your users? Just contact us:

<https://www.springcard.com/en/products/cards-tags>

Verify that the Prox'N'Roll RFID Scanner is seen as a keyboard on your computer

To do so you just need to make sure that when a contactless card, an NFC tag or an RFID label is placed onto the Prox'n Roll HSP RFID Scanner the informations contained in the card appears on your computer and you should hear a beep from the device meaning that the card has been “read” by the Prox'n Roll HSP RFID Scanner.

You can also go to the Device Manager in the Control Panel of your computer and browse the Prox'n Roll HSP RFID Scanner in the device tree. Then go to input devices and standard keyboard.

Congratulations, your Prox'N'Roll HSP RFID Scanner is ready to work with!

Understanding the LEDs & beeper

U.I. status	Description
"Breathing" cyan	The device is ready, awaiting for a contactless card
Single beep+ Solid green	A contactless card is present and available for operation
Repeated beeps	The communication between the device and the card is not reliable. Move the card closer to the device. Install the device elsewhere.
Red, blinking	Malfunction (hardware error or overheating)
Yellow, blinking	The PC has not activated the device yet

FAQ

The device shows à, é, ", - etc... instead of numbers

It means that your Prox'n Roll HSP RFID Scanner is in QWERTY and not AZERTY. To modify this you need to take a look at your Device configuration (page 5)

The device shows numbers instead of @,),-

It means that your Prox'n Roll HSP RFID Scanner is in AZERTY and not QWERTY.

The device does not light at all / The device keeps blinking yellow

Verify that the driver has been correctly installed. Plug the device directly into one of the computer's USB port and not through a hub or cable expender.

The Prox'N'Roll lights blue, not cyan – it is not listed by the OS as a keyboard (Human Interface Device) but as a PC/SC coupler

Your device is a Prox'N'Roll PC/SC, not a Prox'N'Roll RFID Scanner. More details here:

<https://www.springcard.com/en/learning/reader-or-coupling-device>

The device beeps but nothing appears on my computer

It means that your Prox'n Roll is a Prox'n Roll PC/SC HSP and not a Prox'n Roll HSP RFID Scanner

The device does not 'see' my contactless card

Verify that your card is in the compliance list (basically: compliant with ISO/IEC 14443-3 or ISO/IEC 15693-3 or a NFC Forum Tag).

Verify that this card technology is enabled in the configuration (see page 5).

Verify that your card is physically compliant with the coupler's RF field level and sensitivity (basically: card's antenna compliant with ISO/IEC 14443-1, card validated with ISO/IEC 10373-6 or -7).

Contacting support

To contact SpringCard technical support, please go to:

<https://www.springcard.com/en/contact?request=support>

For a fast and efficient processing of your support requests, please provide accurate information on the environment (contactless card, operating system, driver version, firmware version, etc) and all details you have on the issue itself.

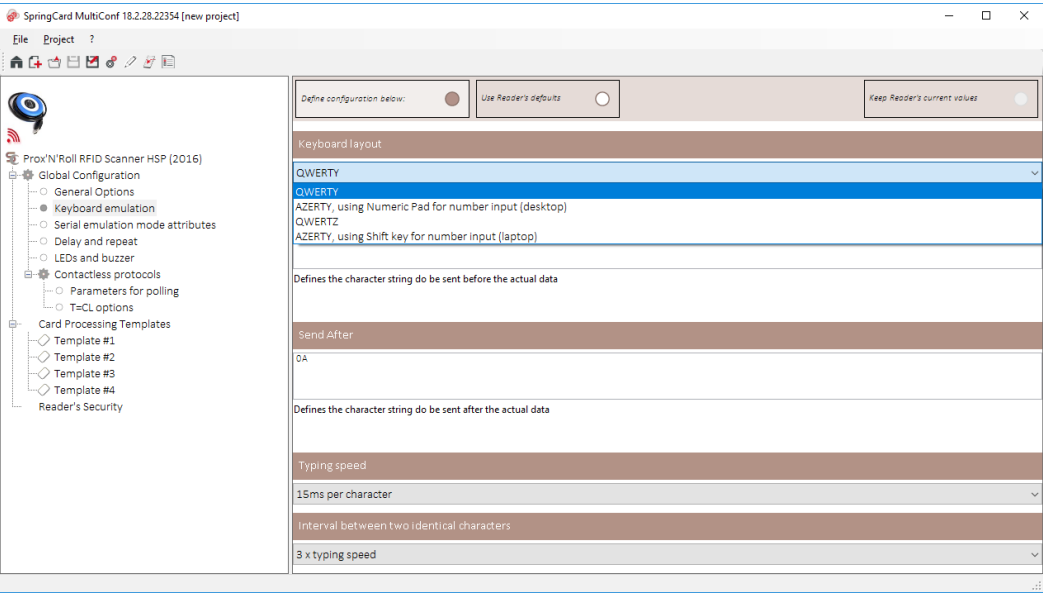
Going further – Device configuration

The Prox'N'Roll HSP RFID Scanner is highly configurable. Out-of-factory settings cover most of the use cases immediately, but advanced users may prefer to load a custom configuration into the device. For instance, it is possible to switch off the sound (beeper) or to disable some protocols, to silently ignore certain contactless cards.

To edit the configuration of the Prox'N'Roll HSP RFID Scanner, download and install **MultiConf** (part number SN14007):

<https://www.springcard.com/en/download/find/file/sn14007>

MultiConf is available only on Microsoft Windows, but once the device has been configured, its settings are preserved when connecting to another operating system.



Disclaimers – Legal notices

CE (all versions)

This product is CE marked according to the provisions of the R&TTE Directive (99/5/EC). Hereby, SPRINGCARD declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. For further information, please consult www.springcard.com.

FCC (SC16217 version only)

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antennae
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

FCC RF Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. The antenna used for this transmitter must not transmit simultaneously with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

FCC Caution

Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.

OEM integration (SC16234 version only)

This product is an OEM device, with possibility to be significantly altered by user through hardware enhancement/modifications and/or configuration changes, even at run-time. Thus, it is up to the manufacturer of the final equipment in which this device will be used to ensure compliance with regulations and standards (including CE and FCC marks) after having mounted and configured the device as it will be delivered to the end-user.

This product should be handled like a CMOS semiconductor device. The user must take all precautions to avoid build-up of static electricity while working with this device. The connectors and/or device pins should not be touched with bare hands.

Safety information

Please ensure that the product is properly used by observing the warnings and cautions below to prevent any risk and/or damage to property.

- Keep the product free of dust. It may damage mechanical and electronic parts of the product.
- Keep the product dry and away from water. It may damage the product.
- Do not use or store the product in high temperatures as this may reduce the life span of electronic devices and/or melt plastic parts of the product.
- Do not use or store the product in cold temperatures. Abrupt changes in temperatures may cause condensation and damage electronic circuits. Do not clean the product with cleaning solvents, toxic chemicals, or strong detergents as this may damage the product.
- Do not paint the product. Paint may interfere with the normal operation of the product.
- Do not drop or otherwise shock the product. It may damage the product or its internal electronic circuits.
- Do not cause impact to the product or touch it with sharp tools as this may damage the product.
- Do not disassemble, repair or modify the product as this may damage the product and invalidate the product warranty.
- Do not use the product near a microwave oven or a wireless communication device as this may cause malfunction or interference with the product.
- In any place where wireless communication is prohibited, such as hospitals or airplanes, turn off the power and refrain from using the product. In a place where wireless communication is prohibited, electromagnetic waves may cause hazards or accidents.

- Do not use the product near hazardous explosives. When there are near any explosion hazards, switch off the power supply and heed any regulations, instructions, and signs in the area.

Product warranty and disclaimer

Limited warranty

SPRINGCARD guarantees the product quality based on the technical specification stated in the product manual, and data regarding product warranty. Here, product warranty extends to the product only. SPRINGCARD will not be liable for any loss, damage of human life, or loss of property which may result from using the product beyond defective parts or flaws that occur due to problems in manufacture.

Warranty period

SPRINGCARD guarantees free-of-charge replacements of defective parts of the product or flaws that may have occurred due to problems in manufacture for a period of 2 years from the date of initial purchase.

Termination

Quality warranty of the product becomes effective on the date of initial purchase. In addition, the quality warranty of the product expires when the warranty period expires. However, in the following cases, the warranty will be terminated prematurely.

- In the event the product has been sold or transferred to a third party.
- In the event the manufacturer's name, serial number, product label, or other markings have been modified or removed.
- In the event any unauthorized person has tried to disassemble, repair, or modify the product.

Warranty service

To obtain product warranty service, contact the technical support using the contact page at www.springcard.com to receive a Return Agreement Number (RAN). Send the defective product, at your expense, to the address specified in the RAN. Take necessary measures to protect the product.

SPRINGCARD will provide free-of-charge repair or replacement service for the product when product defects occur within the scope of the product warranty and during the warranty period.

SPRINGCARD will provide charged repair or replacement service for the product when the product warranty period has been expired or when the product damage is beyond the scope of the product warranty. For further information on charged service, you may contact the support service of SPRINGCARD.

Disposal

This product (including all accessories and options) is not intended for household use. After use the device cannot be disposed of as household waste, and must be treated, recycled and disposed of in an environmentally sound manner.



EU only: in accordance with the WEEE (Waste Electrical and Electronic Equipment), SPRINGCARD can take back end of life devices.
Visit tech.springcard.com/weee for details and conditions

Disclaimer

This document is provided for informational purposes only and shall not be construed as a commercial offer, a license, an advisory, fiduciary or professional relationship between SPRINGCARD and you. No information provided in this document shall be considered a substitute for your independent investigation.

The information provided in document may be related to products or services that are not available in your country.

This document is provided "as is" and without warranty of any kind to the extent allowed by the applicable law. While SPRINGCARD will use reasonable efforts to provide reliable information, we don't warrant that this document is free of inaccuracies, errors and/or omissions, or that its content is appropriate for your particular use or up to date. SPRINGCARD reserves the right to change the information at any time without notice.

SPRINGCARD doesn't warrant any results derived from the use of the products described in this document. SPRINGCARD will not be liable for any indirect, consequential or incidental damages, including but not limited to lost profits or revenues, business interruption, loss of data arising out of or in connection with the use, inability to use or reliance on any product (either hardware or software) described in this document.

These products are not designed for use in life support appliances, devices, or systems where malfunction of these product may result in personal injury. SPRINGCARD customers using or selling these products for use in such applications do so on their own risk and agree to fully indemnify SPRINGCARD for any damages resulting from such improper use or sale.

3rd party licenses

FreeRTOS

FreeRTOS is a market leading real time operating system (or RTOS) from Real Time Engineers Ltd.

SPRINGCARD devices runs on FreeRTOS v8.2.0.

FreeRTOS is distributed under a modified GNU General Public License (GPL) that allows to use it in commercial, closed-source products.

For more information, or to download the source code of FreeRTOS, please visit www.freertos.org

Copyright information

SPRINGCARD, the SPRINGCARD logo are registered trademarks of SPRINGCARD SAS.

MIFARE, MIFARE Classic, MIFARE Plus, MIFARE UltraLight, MIFARE Desfire are registered trademarks of NXP B.V.

NFC Forum is a trademark or registered trademark of NFC Forum, Inc. in the U.S. and in other countries.

Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.

UNIX is a registered trademark of the Open Group.

Apple, the Apple logo and macOS are registered trademarks of Apple, Inc. in the U.S. and in other countries.

Windows and the Windows logo are registered trademarks of Microsoft Corporation in the U.S. and in other countries.

All other brand names, product names, or trademarks belong to their respective holders.

Copyright notice

All information in this document is either public information or is the intellectual property of SPRINGCARD and/or its suppliers or partners.

You are free to view and print this document for your own use only. Those rights granted to you constitute a license and not a transfer of title: you may not remove this copyright notice nor the proprietary notices contained in this documents, and you are not allowed to publish or reproduce this document, either on the web or by any mean, without written permission of SPRINGCARD.

Copyright © SPRINGCARD SAS 2018, all rights reserved.

Editor's information

SPRINGCARD SAS company with a capital of 227 000 €

RCS EVRY B 429 665 482

Parc Gutenberg, 2 voie La Cardon

91120 Palaiseau – FRANCE

Contact information

For more information and to locate our sales office or distributor in your country or area, please visit:

www.springcard.com