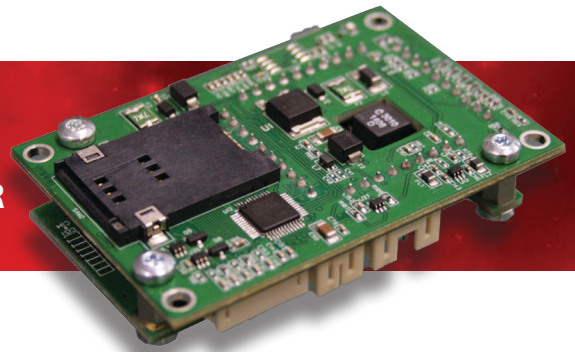# springcard®

CRAZYWRITER HSP
MULTI-INTERFACE OEM CONTACTLESS COUPLER

AN OEM READER/WRITER

CrazyWriter HSP is an OEM PC/SC reader/writer, compliant with RFID tags, contactless smartcards and NFC objects in the 13.56MHz band (ISO 14443 and 15693, Calypso).

Featuring up to 4 SAM slots and 1 optional contact smartcard interface, **CrazyWriter HSP** is the perfect coupler for card issuing or processing in secure architectures.

A READY-TO-USE INDUSTRIAL SOLUTION

Both modular and scalable, **CrazyWriter HSP** is designed for industrial applications, where ease of integration, ruggedness and reliability are the keys to success.

CrazyWriter HSP makes no compromise on speed and performances: RFID operating distance up to 10cm, card baud rate up to 848 kbps, USB 2.0 at 12 MBps.

PC/SC SMARTCARD READERS

SpringCard CrazyWriter HSP is PC/SC compliant, and brings immediate contactless card support to existing smartcard applications (the whole device is seen as 5 PC/SC reader instances: 1 contactless/RFID, 1 contact, and 4 SIM/SAM).

A FEW TYPICAL APPLICATIONS

- **Transports** : card issuing and reloading, validation and debit (at the gates, in kiosks or ticket-vending machines, in-vehicle - bus, tram, train -),
- **Card personalization**, card printers,
- **E-money**, POS, ATM, NFC transactions,
- **E-gov** : passport or ID-card issuing or checking.

SPRINGCARD

Proudly designed and manufactured in France, **SpringCard** products are distributed worldwide. With a 14-year experience and millions of users, **Springcard** is your expert in RFID and NFC solutions.
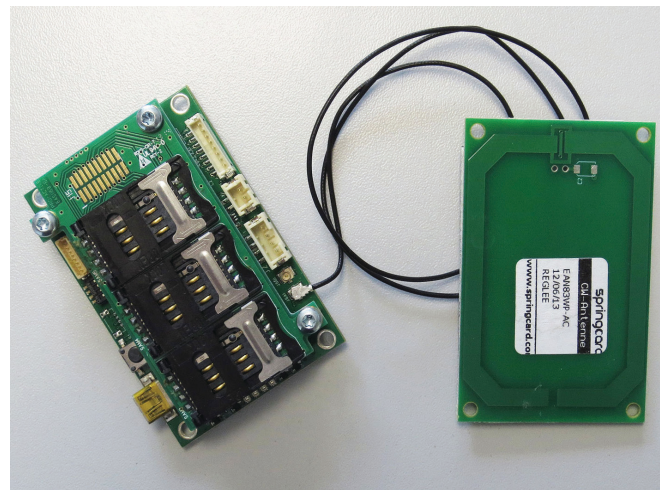
springcard®

CRAZYWRITER HSP
MULTI-INTERFACE OEM CONTACTLESS COUPLER
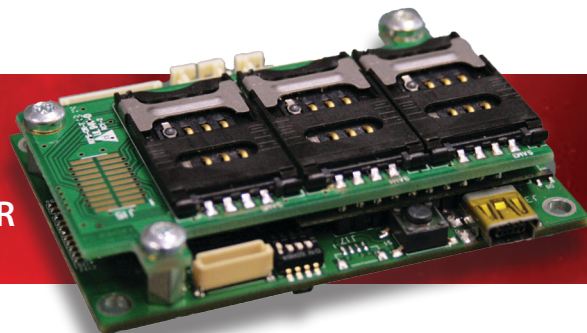
TECHNICAL SPECIFICATIONS

RFID / NFC / contactless smartcard interface	
Standards	**ISO/IEC 14443** A and B Proximity Coupling Device T=CL protocol on-board, up to 848 kbps **ISO/IEC 15693** Vicinity Coupling Device **ISO/IEC 18092** Initiator (passive mode), NFC-DEP protocol on board, up to 424 kbps
RFID carrier	13.56 MHz
Operating distance	typical 5 cm - up to 10cm vary with antenna, environment and card
Card baud rate	106, 212, 424 or 848 kbps (ISO 14443) 26 kbps (ISO 15693)
NFC Forum Tag read/write	▪ Type 1 : Innovision Jewel/Topaz ▪ Type 2 : NXP Mifare UltraLight, NTAG 203... ▪ Type 3 : Sony Felica Lite ▪ Type 4 : any T=CL smartcard
Supported contactless smartcards (partial list)	▪ NXP Mifare Classic, Desfire, SmartMX... ▪ Calypso (including Innovatron radio protocol « 14443-B' ») ▪ Infineon SLE66, ST Micro Electronics ST19, Atmel AT88, ▪ ST Micro Electronics SR179 and SriX contact-less disposable tickets ▪ NFC objects or mobile phones running in card emulation mode
Supported RFID tags and labels (partial list)	▪ NXP ICODE-SLI, ▪ Texas Intrument TagIT ▪ ST Micro Electronics LRI and MLR

Environment and safety	
Temperature	Operation: -20 / +70°C Storage: -40 / +85°C
Durability	500 000 smart card insertions 5 000 SIM/SAM insertions
MTBF	500 000 hours
CE mark	EN50082 / EN55022 class B
Other standards	RoHS, FCC pending

SIM / SAM interface	
1 ID-000 mini SIM/SAM slot integrated on main board	
Standards	**ISO 7816 (3 and 4)** Supporting both T=0 and T=1 protocols and Calypso HSP
Smartcard class	5V, 3V or 1.8V cards supported (class A, B or C)
Clock frequency	4MHz
Card baud rate	Up to 115200 bps

Smartcard + 3 SIM / SAM interfaces (option)	
3 ID-000 mini SIM/SAM slots	
Standards	**ISO 7816** Supporting both T=0 and T=1 protocols and Calypso HSP
Card baud rate	Up to 115200 bps

Hardware specifications	
Dimensions (LxWxH)	Each board = 69 x 45 x 1,6 mm
Max. distance antenna to mother	2m

ORDER CODES

PART #	Description
SC0168	**CrazyWriter HSP mother board + 69x45 mm antenna** *50cm micro-coax cable included, USB cable not provided*
SC0169	**3 SAM expansion board** *to be plugged on mother board*
SC0170	**Smartcard expansion board** *50cm ribbon cable included*

PRECAUTIONS FOR INSTALLATION
Those devices use inductive coupling (magnetic field) to power the cards and communicate with them. Precaution must be taken to keep them far from any source of perturbation (e.g. other readers, computers…). Installing the device near a metal surface will decrease the operating distance and increase power consumption. Please contact us if you need any assistance to integrate those devices.
CrazyWriter HSP can be used with customization options and various accessories to adress any specific requiremets. Please contact **Springcard** if you need details, advices or custom design.

www.springcard.com

A PRO ACTIVE BRAND