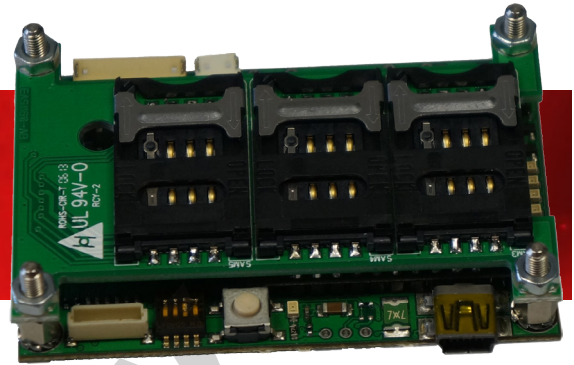


CRAZYWRITER HSP

MULTI-INTERFACE OEM CONTACTLESS COUPLER



AN OEM READER/WRITER

CrazyWriter HSP is an OEM reader/writer module, 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).

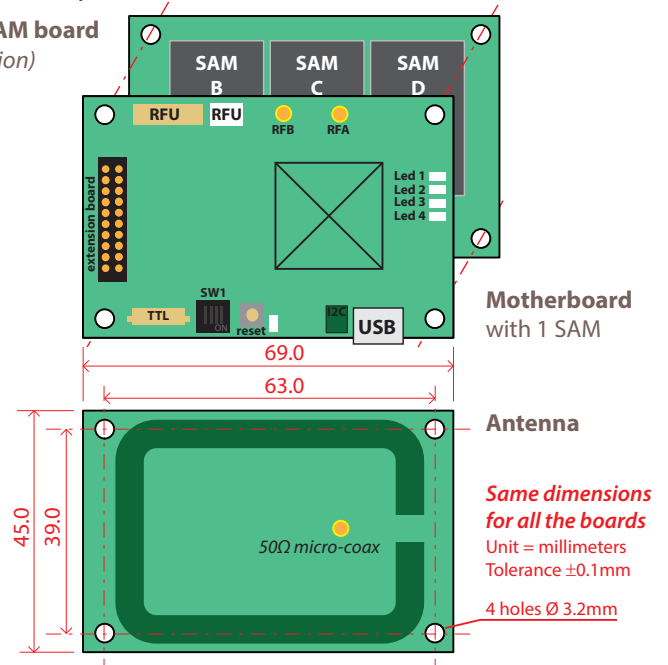
A FEW TYPICAL APPLICATIONS

- **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 12 years experience and millions of users, Springcard is your expert in RFID and NFC solutions.

3-SAM board
(option)



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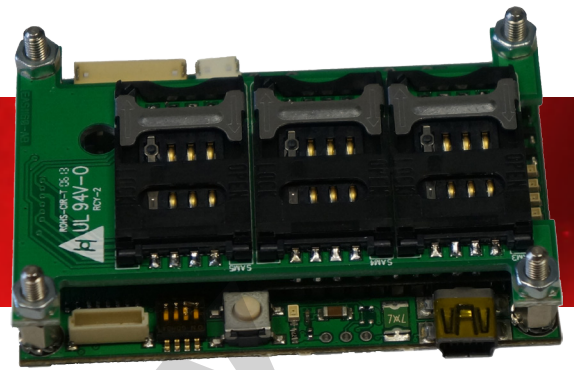
www.springcard.com

A PRO ACTIVE BRAND

Pro Active

CRAZYWRITER HSP

MULTI-INTERFACE OEM CONTACTLESS COUPLER



TECHNICAL SPECIFICATIONS

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 | <ul style="list-style-type: none"> ▪ 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) | <ul style="list-style-type: none"> ▪ 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, ASK CTS256B and CTS512B contactless disposable tickets ▪ NFC objects or mobile phones running in card emulation mode |
| Supported RFID tags and labels (partial list) | <ul style="list-style-type: none"> ▪ NXP ICODE-SLI, ▪ Texas Instrument 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 (classes A, AB, ABC) |
| 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 | 2-wire twisted cable = 5 cm 50 Ω coaxial cable = 1 m |

ORDER CODES

| PART # | Description |
|--------|---|
| SC0168 | CrazyWriter HSP mother board + 69x45 mm antenna <i>50cm micro-coax cable included, USB cable not provided</i> |
| SC0169 | 3 SAM expansion board <i>to be plugged on mother board</i> |
| SC0170 | Smartcard expansion board <i>50cm 14-pin ribbon cable included</i> |

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 address any specific requirements. Please contact Springcard if you need details, advices or custom design.

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