CRAZYWRITER

Hardware manual

Thank you for choosing SpringCard !

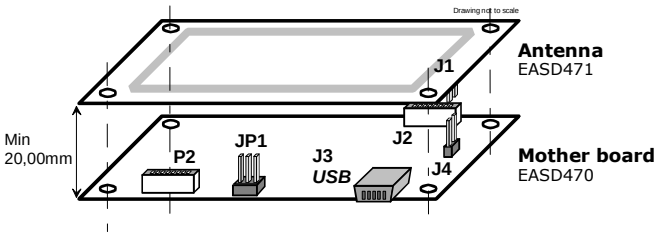
CrazyWriter is an OEM contactless smartcard reader, with 2 µSIM/SAM slots.

Thanks to its native USB interface, CrazyWriter is PC/SC compliant. The device may also be operated in legacy mode, either on USB or in RS-232 thanks to an optional interface board.

This document is the reference guide to install CrazyWriter in your equipment.

MOUNTING FOR USB OPERATION

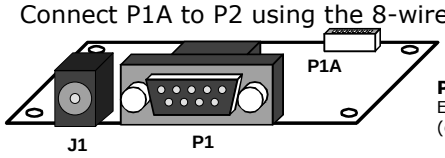
- Install *CrazyWriter Mother Board* (EASD470) in a place where you can access the µSIM/SAM slots and the USB connector easily.
- Install the antenna (either *CrazyWriter Standard Antenna* EASD471 or any compliant antenna[1]) near the "landing zone" of the contactless smartcards (distance between the smartcard and the antenna must be **0,5cm ≤ d ≤ 1,5cm** for correct operation with most smartcards).
- Connect the antenna to the mother board :
  - Short distance (d ≤ 5cm) : use a 2-wire twisted cable (J4 connector)
  - Long distance (5cm ≤ d ≤ 200cm) : use a 50Ω coaxial cable.



[1] SpringCard offers various antennas, with different sizes to accommodate most needs. We also offer a custom design service. Don't hesitate to contact us if you need a specific antenna.

MOUNTING FOR RS-232 OPERATION

- Install Mother Board and Antenna following the steps depicted in the previous paragraph.
- Install the Power+RS232 board (EASD472)
- Connect P1A to P2 using the 8-wire cable.



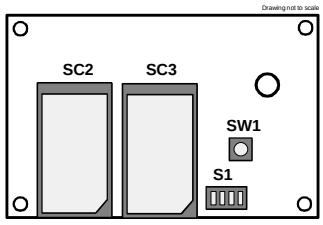
An external power supply is required in this configuration (9 – 12V DC, 500mA)

Use only the provided 8-wire cable (20cm approx.).

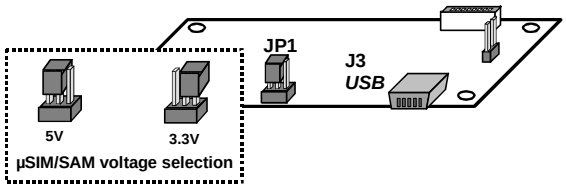
USING THE µSIM/SAM SLOTS

Install one or two µSIM/SAM is SC2 and SC3.

- SC2 is "slot 2" in legacy mode (SpringProx API), and "CrazyWriter SAM 1" in PC/SC.
- SC2 is "slot 3" in legacy mode (SpringProx API), and "CrazyWriter SAM A" in PC/SC.



Use JP1 to select the µSIM/SAM voltage as follow :



Note that both slots operate at the same voltage.

Headquarters, Europa

SpringCard
13 Voie la Cardon
Parc Gutenberg
91120 Palaiseau
FRANCE

Phone : +33 (0) 1 64 53 20 10
Fax : +33 (0) 1 64 53 20 18

Americas

SpringCard
694 Fifth Avenue
Suite 235
San Diego, CA 92101
USA

Phone : +1 (619) 544 1450
Fax : +1 (619) 573 6867

www.springcard.com

EDITOR'S INFORMATION
PRO ACTIVE SAS company with a capital of 227 000 €
RCS EVRY B 429 665 482
Parc Gutenberg, 13 voie La Cardon
91120 PALAISEAU – FRANCE

CONFIGURING THE SWITCHES

S1

Use a thin screw-driver or a sharp object to configure S1 as follow :

	1	2	3	4
USB PC/SC or Legacy[2]	**ON**	**OFF**	**ON**	**OFF**
Serial	**ON**	**OFF**	**OFF**	**ON**
USB Flash mode	**ON**	**ON**	**ON**	**ON**
USB Test mode	**ON**	**OFF**	**ON**	**ON**

DO NOT select the greyed configurations (last 2 lines) in normal operation.

INSTALLING THE DRIVER AND CONNECTING THE PRODUCT

USB operation

Follow the **CSB6 Family Quick Installation Guide** (PMUJ5P) to install the driver before connecting the CrazyWriter to your computer.

Do not connect the Power+RS232 board (EASD472) when operating CrazyWriter on USB

PC/SC driver for CSB6 Family is available at :
www.springcard.com/download/drivers.html

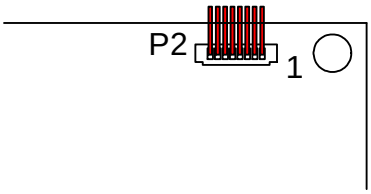
For non-Windows OS, please read :
www.springcard.com/support/pcsclite.html

Serial operation with Power+RS232 Board

- Connect the Power+RS232 board to the CrazyWriter mother board using the 8-wire cable.
- Use a DB-9 cable, certified for RS-232 (not provided), to connect the Power+RS232 to the computer (P1 connector).
- Use a 9V to 12V DC power supply, 500mA min. (not provided) to power the Power+RS232 board (J1 jack).

Serial operation using a custom cable

A custom cable can be manufactured for serial operation directly on CrazyWriter mother board (P2)



TX-RX are RS232 level (+12 / -12 V)
VCC = 5V ±10% - 500mA

For correct operation, do not use a cable longer than 20cm.

PINOUT	P2 CrazyWriter mother board (EASD470)		P1A Power+RS232 board (EASD472)	
location	*name*	*type*	*name*	*type*
1	**GND**	Ground	GND	Ground
2	**CW TX**	Out	PC RX	In
3	**CW RX**	In	PC TX	Out
4	**VCC**	Power in	VCC	Power out
5	**_RESET**	In	Not connected	
6	**GND**	Ground	GND	Ground
7	**_FLASH**	In	Not connected	
8	Not connected		Not connected	

_RESET : Active low. If not used, leave this pin unconnected, or pulled up to VCC by a 10K resistor.

_FLASH : Used to upgrade the firmware (Active low). In normal operation, leave this pin unconnected, or pulled up to VCC by a 10K resistor.

You must reset the device after changing _FLASH pin level (apply a low pulse on _RESET, or cycle power).

SDK for CrazyWriter
Go to
www.springcard.com/download/sdks.html

For PC/SC operation, choose :
SDK PC/SC : sample software and documentation

For Legacy operation on Windows, choose :
SDK for CSB classic and legacy
For Legacy operation on another OS or without OS, choose : SDK K531

[2] Choice between PC/SC and Legacy mode is made by non-volatile software configuration. The procedure is depicted at
www.springcard.com/support/csb6legacy.html