

H663

USB PC/SC OEM CONTACTLESS READER/WRITER MODULE WITH SUPPORT FOR 1 EXTERNAL SMARTCARD AND 4 SAM SLOTS

H663 is a reader/writer module compliant with 13.56MHz RFID and NFC standards (ISO 14443, ISO 15693) also able to drive up to 5 contact smartcards (ISO 7816). Its small footprint and single 5V power supply make H663 the ultimate interface to be integrated in validators, ATM or vending

KEY FEATURES

H663 is dedicated to integrators who need to process contactless smart cards (or NFC objects operating in card emulation mode) and / or contact smart cards (including SAMs), with the urge for fastest transaction speed.

RFID AND NFC MADE EASY

H663 is PC/SC compliant on its USB link. Smartcards, contactless cards, RFID labels and NFC tags are operated through a single software interface in a convenient and standard way

RFID AND NFC MADE EASY

Two versions of H663 exist: H663A is designed to drive an unbalanced antenna through a 50Ω-matched line (more than one antenna possible through an external analog switch). On the other hand, H663S features a balanced output stage for a direct connection to the antenna.

SMARTCARDS AND SAMs

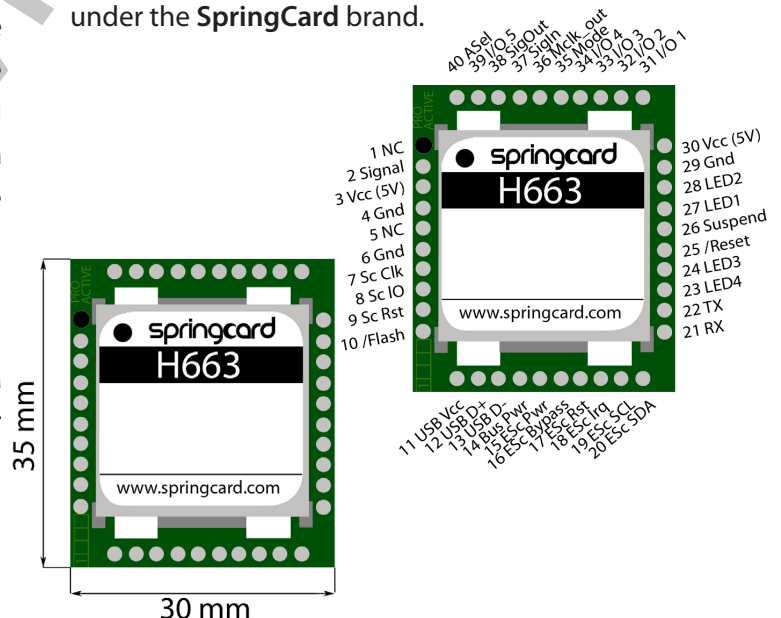
H663's smartcard interface is able to drive one SAM without any other external component. Used together with an external smartcard multiplexer, H663 can handle up to 4 SAMs and 1 ID-1 smartcard.

A FEW TYPICAL APPLICATIONS

- Ticketing, transports, road toll,
- Payment, POS, ATM,
- Identity, citizen card,
- Loyalty, entertainment, events,
- Access control
- and more

SPRINGCARD & PRO ACTIVE

Established in 2000, **Pro Active** is an innovative provider of smartcard-related solutions, and one of the leaders in the contactless-reader market. Its contact and contactless products are designed and manufactured in France, and distributed worldwide, under the **SpringCard** brand.



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A PRO ACTIVE BRAND
Pro Active

H663

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EXTERNAL SMARTCARD AND 4 SAM SLOTS

TECHNICAL SPECIFICATIONS

Contactless smartcard interface	
Standards	ISO/IEC 14 443 A and B, T=CL ISO/IEC 15 693
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)
Supported cards (partial list) : <ul style="list-style-type: none"> ▪ NXP (Philips) ICODE1, ICODE-SLI, etc ▪ Texas Instrument TagIT ▪ NXP (Philips) MIFARE Classic, Plus, UltraLight, DESFIRE, SmartMX, ProX, NTAG ▪ Infineon SLE66 family ▪ ST MicroElectronics SR, SRI, SRIX families ▪ HID iClass, Inside PicoTag ▪ ASK CTS256/CTS512 ▪ Calypso (CD97, CD21, GTML, etc) And virtually any ISO/IEC 14443 A or B compliant smartcard, ISO/IEC 15693 compliant RFID label, or NFC device (ISO/IEC 18092 / 21481) running in card emulation mode	

Contact / SAM smartcard interfaces	
Number of interfaces	1 SAM without external components up to 4 SAM and 1 smartcard through Inside Secure AT83C26 smartcard multiplexer
Standards	ISO/IEC 7816, T=0 & T=1
Smartcard power	1.8V, 3V or 5V (class A, B, C) through AT83C26
Clock frequency	4 MHz
Card baud rate	Up to TA1=96 (

NB: the H663 needs an external antenna to operate.

The antenna has to be designed carefully, depending on your own specifications (size constraints, expected operating distance) but with limited flexibility due to the requirements of the ISO standards and the EMC regulations.

SpringCard has a strong experience in antenna design. Don't hesitate to contact us for consultancy.

USB interface	
Standard	USB 2.0 full speed (12Mbps)
Power supply	Bus powered (announcing 500mA)
Default configuration is PC/SC	

Power	
Vcc	5.0 V DC (± 0.2V)
Consumption	- xxx mA standby mode - xxx mA typical - xxx mA max (not including the power drained by the smartcard / SAMs)

PC /SC mode	
Standard USB CCID profile	
Windows driver	2000/XP/Vista
Linux driver	Supported by PCSC-lite CCID driver
API and SDK	100% PS/SC compliant - Free SDK

I/Os and host interface	
I/Os	4 LEDs outputs (active low) 4 General purpose input/output

Environment and safety	
Operating temperature	-20 → +70°C
Storage temperature	-40 → +85°C
MTBF	500 000 hours
CE mark	EN50082 / EN55022 class B
Other standards	RoHS, FCC part 15 pending

This device is a contactless coupler; it uses inductive coupling (magnetic field) to power the cards and to communicate with them. Precaution must be taken to keep the antenna far from any source of perturbation (e.g. other readers, computers, etc). Installing the antenna near a metal surface (aluminium or steel plate, etc) means shorter operating distance and increased power consumption. SpringCard has a long experience in antenna integration. Do not hesitate to contact us if you need any assistance.

ORDER CODE

PART #	Description
-	H663S : H663 for balanced antenna
-	H663A : H663 for unbalanced antenna(s)
-	H663 : H663 with ISO 7816 enabled

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