

## K531-232

OEM CONTACTLESS READER/WRIter MODULE WITH ANTENNA AND RS232 INTERFACE



Ready-to-use ISO/IEC 14443-A/B reader / writer with antenna and RS-232 interface that can be embedded in virtually any kind of appliance

### KEY FEATURES

K531-232 is dedicated to integrators who need to work with any ISO 14443-A/B cards such as Mifare, DESFire, Calypso and more.

Thanks to its asynchronous serial communication interface, K531-232 is really easy to operate from any microcontroller or host computer.

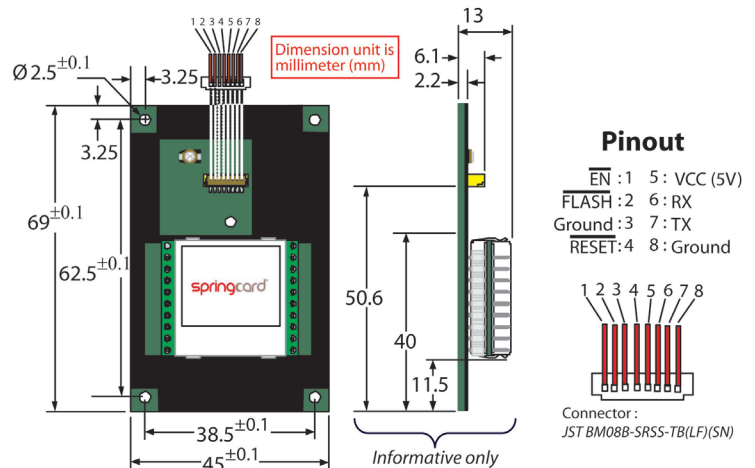
K531-232 has many features that make it the only product on the market to provide such flexibility at low cost.

- Metallic bonnets to protect from radiations
- Ferrite on antenna to protect other components from radiations
- Embedded T=CL protocol, ISO/IEC 14443 A & B compliance from layer 1 to 4. Able to read/write all files/sectors of Mifare, DESFire,...
- High level function set
- High speed communication

### A FEW TYPICAL APPLICATIONS

- vending machine,
- card printer,
- access control gate
- enrollement station,
- and more

### DETAILED VIEWS



PIN Assignments		Notes
1	/EN - Not used	Must be left unconnected
2	/FLASH - 5V : normal operation 0V : firmware upgrade	Can be left unconnected
3	Ground	
4	/RESET - 5V : normal operation 0V : module reset	Can be left unconnected
5	VCC (5V)	
6	RX (RS-232)	Host to module
7	TX (RS-232)	Module to host
8	Ground	

### SPRINGCARD & PRO ACTIVE

Established in 2000, **Pro Active** is an innovative provider of smartcard-related solutions, and one of the leaders on the contactless-reader market.

**SpringCard** distributes **Pro Active's** contact and contactless products worldwide, under a single brand name.

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**Pro Active**

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### TECHNICAL SPECIFICATIONS

Contactless smartcard interface	
Standards	ISO/IEC 14443 A and B, T=CL
RFID carrier	13.56 MHz
Operating distance	typical 5 cm - up to 8cm depending on card and antenna
Card baud rate	106, 212 or 424 kbit/s
Supported cards ( <i>partial list</i> ): NXP (Philips) MIFARE Classic & UltraLight NXP (Philips) DESFIRE, SmartMX, ProX Infineon SLE66 family ST MicroElectronics SR, SRI, SRIX families ASK CTS256/CTS512 Calypso (CD97, CD21, GTML, etc) And virtually any ISO 14443 A or B compliant smartcard	

Serial Interface	
RX/TX pins (RS232)	asynchronous serial communication 8 data bits, 1 stop, no flow control 9600, 38400 or 115200bps
Power supply	5 V DC
Consumption	200mA typical
Connector	JST: BM08B-SRSS-TB(LF)(SN) Corresponding female connector ( <i>not provided</i> ): JST: SHR-08V -S -B

Hardware specifications	
Dimensions (LxWxH)	45 x 69 x 15 mm
Weight	≈ 14g
Housing	Metallic bonnets on K531 Ferrite shield on antenna

Environment and safety	
Operating temperature	-20 → +70°C
Storage temperature	-40 → +85°C
MTBF	500 000 hours
CE mark	EN50082 / EN55022 class B <sup>1</sup>
FCC	Part 15
Other standards	RoHS

<sup>1</sup>Safety: EN60950: 2001 ; EN 50364 : 2001, EMCEN 301 489-03 v1.4.1 ; EN 301 489-01 v1.6.1.

### ORDER CODES

PART #	Description
K531-232	ISO 14443-A/B OEM module with antenna and RS232 interface

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