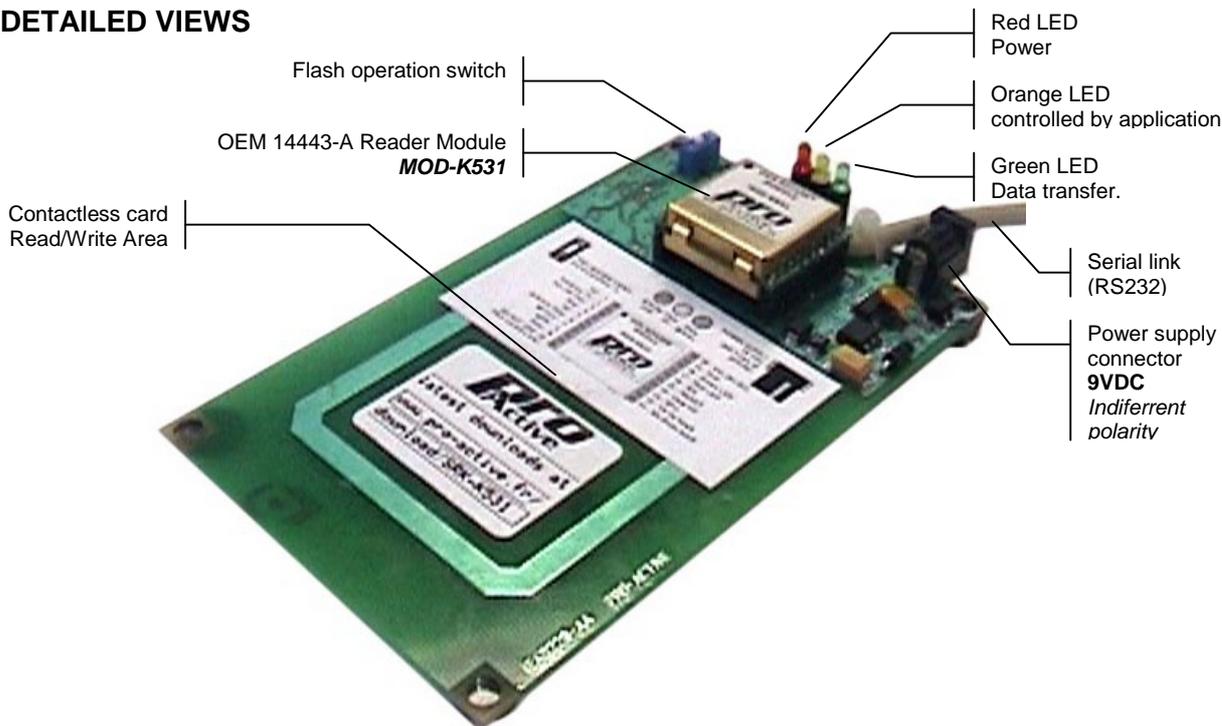


SRK-K531 : OEM 14443-A READER STARTER KIT

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DETAILED VIEWS



FEATURES

Description Starter kit for the MOD-K531 ISO14443-A OEM Reader module.
Order code **SRK-K531**

Including:

- 2 x **K531-K** ISO14443-A OEM Reader module
- 1 x **CSB-4.2S-K** starter kit motherboard
- 1 x **ANT-K531** ISO14443 Antenna for K531
- 2 x **MIF-DESFIRE** DESFIRE contactless cards
- 2 x **MIF-TAG4K** MIFARE® 4K contactless cards
- 2 x **MIF-TAG1K** MIFARE® 1K contactless cards
- 1 x **EASE050** Antenna Cable Kit (8Wires + Connector)
1 x Source code package
3 x months of technical support
(source code and technical support are available after registration. See **Registration** below)

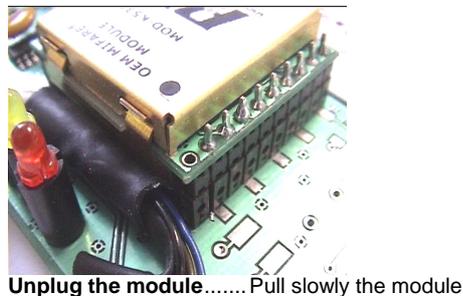
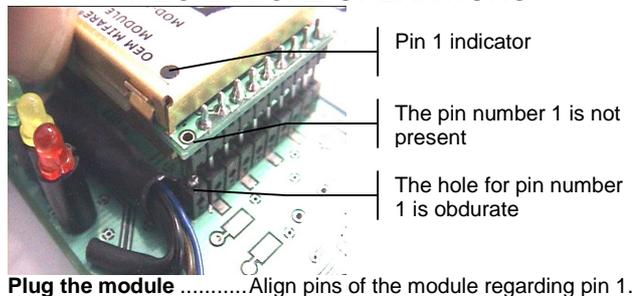
Power supply 9V DC → 12V DC
Consumption 120mA

Reading range 0 cm → 6 cm

Temperature range 0°C → +45°C
Dimensions L : 140mm, w : 85mm, h : 20mm
Weight 150 g
Chipset RC531 Philips®
ISO compliance ISO14443-A/B
Compliance MIFARE® Classic
MIFARE® UltraLight
MIFARE® Pro / ProX
MIFARE® DESFire

LEDs Controlled by application
Connections Power Jack
Serial link cable (1.80m) with female SUB-D 9 points
RS232 Parameters Transmission Speed : 38400, 115200
Parity : none
Data : 8
Stop : 1

MECHANICAL OPERATIONS



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DATASHEET SRK-K531 : OEM 14443-A READER STARTER KIT

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RS232 OPERATIONS

The OEM 14443-A Reader Starter Kit can operate with a RS232 terminal such as HyperTerminal.

RS232 Parameters Transmission Speed : 38400, Parity : none, Data : 8, Stop : 1

AVAILABLES COMMANDS

Info Retrieve version and RC chipset ID
poll Poll for 14443-A tags (ESC to quit)
tag Select Mifare or 14443-A tag
read Read Mifare 1k or 4k tag
halt Mifare or 14443-A halt command
reset Reset the module
help Display a list of some available commands
rf_on Activate the RF field
rf_off De-activate the RF field
rc_on Open access to the RC chipset
rc_off Close access to the RC chipset
rc_reset Reset the RC chipset
rc_config Configure the chipset with start-up values
tcl_rats Open a T=CL 14443-A session
tcl_stop Send the T=CL 14443-A « deselect »
tcl_pps Send a T=CL 14443-A PPS request

keys Load default keys to RC RAM
keys_e2 Load default keys to RC EEPROM
keys[A|B]n=(key_data) keys command immediately followed by key type 'A' or 'B' and index of this key from '0' to 'F'.
 (key_data) can be 12 bytes in hexadecimal, or 6 letters.

regs Display RC register values

led=RG[Y] Control leds outputs, where R, G and optionally Y are to be replaced a number between 0 and 3 :
0 : Off **1** : On **2** : Fast blink
3 : Slow blink (for MOD-K531_OEM)
3 : Default action (for MOD-K531_CSB4)

115200 Switch the module to high speed communication.
38400 Switch the module to normal speed communication.
const=(configuration_structure_data)
 Where the structure data is :
Serial configuration BYTE

PBK	PNS	RFU	SBO	SOD	SEO	SNC	SHB
<i>MSB</i>				<i>LSB</i>			

PBK Blink LEDs before any action from host if set to 1
PNS **WARNING ! CURRENT ACTION CAN NOT BE INTERRUPTED IF SET TO 1. ALWAYS SET THIS BIT TO ZERO.**
RFU Reserved for future use.
SBO Use binary protocol in bus mode only if set to 1
SOD Don't use OSI protocol if set to 1
SEO No serial echo if set to 1
SNC Serial speed can't be changed by software if set to 1
SHB Start-up in high speed if set to 1

Address to be used in multi-point protocol BYTE

Action to be entered on start-up BYTE

RFU BYTE

SEQUENCE EXAMPLES

Read a tag 1 . Present a 14443-A or MIFARE® tag in the antenna area.
 2 . **keys**
 3 . **tag** → You should obtain specific data of your tag (Serial number, ATQ, SAK)
 4 . **read** → You should obtain the content of the different sectors of the tag.

Store a key To store the key 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF as key B in position 2 :
keysB2=FFFFFFFFFFFF

Configure LEDS To switch on the green LED switch off the yellow LED and make the red LED blinking fast :
led=210

Polling at Start-up To ensure a continuous polling of any tag at start-up enter the following command then reboot the module :
const=00004F00
reset
Recover default configuration
 Hit "Enter" key until ">" appears
const=00000000
reset

SOFTWARE OPERATIONS

The starter kit needs the "SpringProx.dll" to operate with the samples applications. This DLL and demonstration softwares are available on our web site at :
<http://www.pro-active.fr/download/csb>

Available samples applications are :
MIFARE Tool Allow you to select read / write your contactless cards.
Electronic Purse Tool... Demonstration of counter on a MIFARE® 1K contactless card.

SPECIFIC DEVELOPMENTS

A specific firmware for the OEM 14443-A Reader Module is available, giving instant MIFARE® Tag ID reading on the RS232 line.
 For more details ask Pro-Active for the Application Note :
 PMX2010.

REGISTRATION

To obtain 3 months technical support and the source code package, please send us an e-mail to this electronic address : srk@pro-active.fr
 Please, send us your : **company name, name and address, the serial number of your SRK-K531.**

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