

## SMX1300

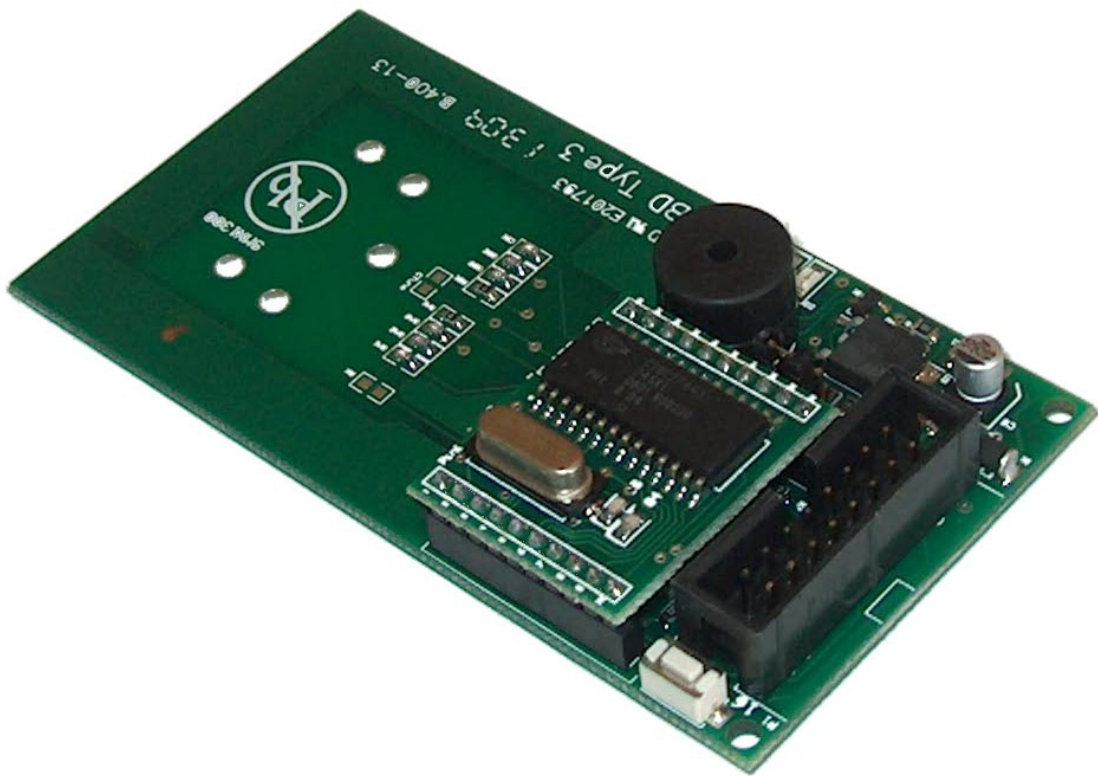
Serial RFID Mifare Reader / Writer

## SMX1300-EK

Serial RFID Mifare Reader / Writer Evaluation Kit



# HARDWARE MANUAL



## 1. INTRODUCTION

SMX1300 is a compact, ready-to-use, serial, 13.56 MHz RFID Mifare Reader/Writer. It is integrated with RS232, PCB Antenna, Buzzer and 5V regulator circuit in case direct 5V supply is not available and user can supply 9V-12V DC. SMX1300 has similar dimensions with the SM132-USB Reader/Writer.

SMX1300 is ideal for users who want to implement very quick solution for Mifare RFID applications as everything required is integrated on the SMX1300 board.

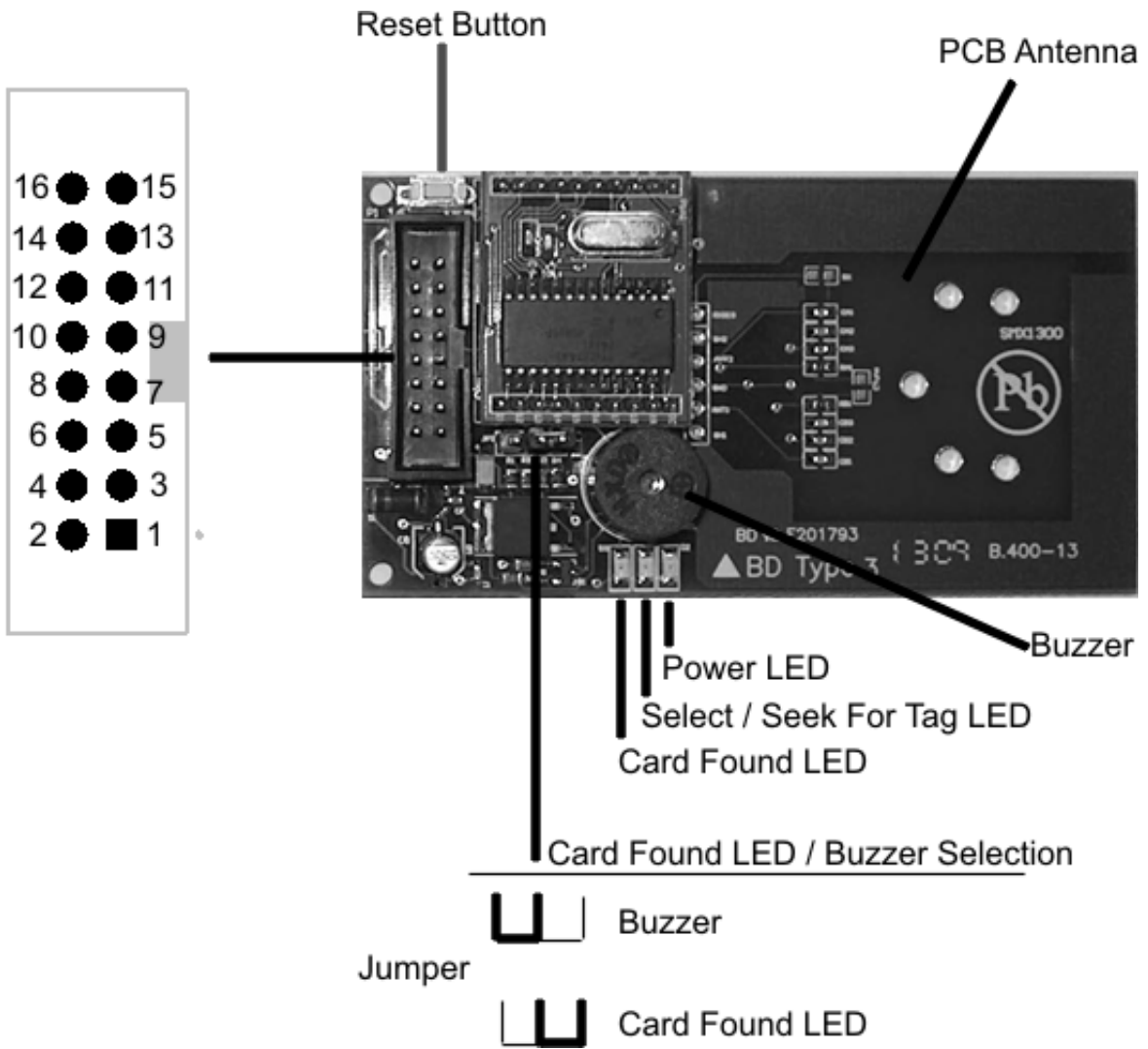
**SMX1300 can work with SM130/ SM132-USB firmware ( i.e. “UM 1.3” ) thus for firmware details and communication protocol please investigate firmware manual or SM130 datasheet.**

SMX1300-EK is an evaluation kit includes SMX1300 reader, PC connection board, Mifare tags, Serial Cables, DC Adapter and Software CD including software tools and SDK, Software Development Kit for quick evaluation and demonstration.



**SMX1300-EK** – Serial RFID Mifare Reader/Writer Evaluation Kit

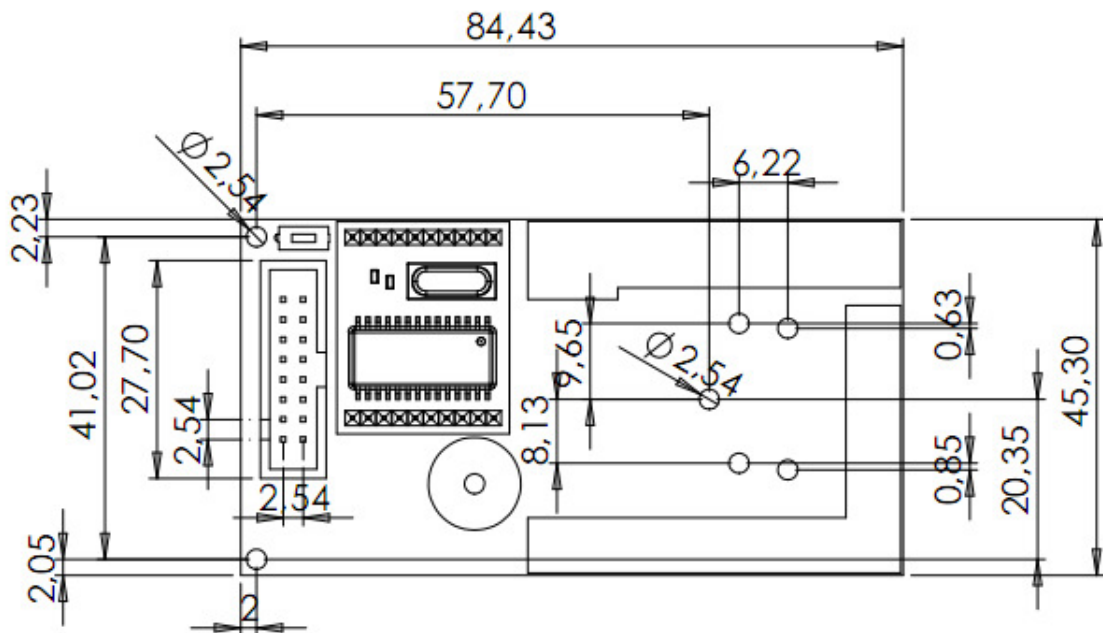
## 2. LAYOUT & PIN INFORMATION



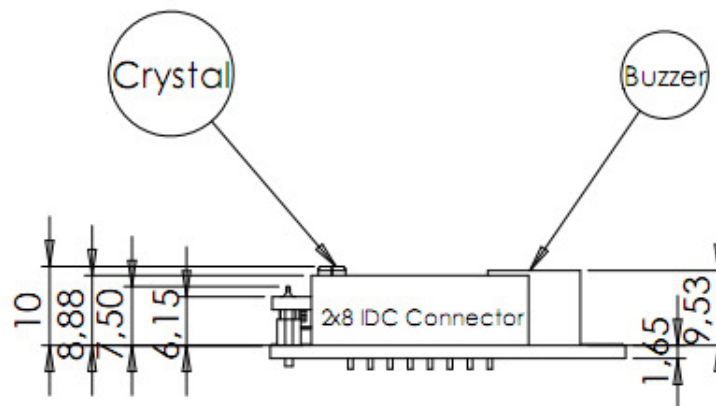
Pin #	Pin Name	Description
1	OUTPUT2	CMOS Output pin. It can be written logic 0 or logic 1 via UART or I2C bus. Not mandatory for Mifare® applications just there to expand outputs of a complete system
2	VCC	5V Supply Voltage. If user supplies 5V to the board externally, then 9V-12V input should be left unconnected. If there is no 5V supply, then user can supply 9V-12V thru the relevant pin (pin #16). In this case this pin will generate 5V from the "on board" 5V regulator. External 5V and external 9V-12V should not be supplied at the same time, user need to select one of the two options.
3	OUTPUT1	CMOS Output pin. It can be written logic 0 or logic 1 via UART or I2C bus. Not mandatory for Mifare® applications just there to expand outputs of a complete system
4	GND	Ground
5	OUTPUT0	This pin is used as "Card found". It will be on for short time to drive a LED, buzzer or trigger external circuit. This pin is connected to Card Found LED and Buzzer internally on the board
6	UART RX	UART RX pin of SMX1300 (0 – 5V CMOS). Please notice that, if UART is going to be used, then 0 ohm resistor may need to be removed on the board to disconnect RS232 signal on the board to prevent output confliction of external MCU and RS232 chip.
7	INPUT1	CMOS Input pin. Its status can be accessed via UART or I2C bus. Not mandatory for Mifare® applications just there to expand inputs of a complete system
8	UART TX	UART TX pin of SMX1300 (0 – 5V CMOS)
9	INPUT2	CMOS Input pin. Its status can be accessed via UART or I2C bus. Not mandatory for Mifare® applications just there to expand inputs of a complete system
10	I2C SCL	I2C Clock. There is 4.7K pull-up resistor is connected on the board
11	NC	No Connection
12	I2C SDA	I2C Data pin. There is 4.7K pull-up resistor is connected on the board
13	RS232 TX	RS232 TX pin of SMX1300 (+/-12V ). This pin should only be connected to RS232 device. It should not be connected to any 5V MCU or system.
14	NC	No Connection
15	RS232 RX	RS232 RX pin of SMX1300 (+/-12V ). This pin should only be connected to RS232 device. It should not be connected to any 5V MCU or system.
16	9V- 12V	External Supply pin. 9V or 12V DC can be supplied thru this pin. On board 5V regulator will generate necessary 5V to the SMX1300 internal system. If this pin is used, user should not supply external 5V. If this pin is not used, user should supply 5V externally to the relevant pin (pin #2)

SMX1300 – PinOut Table

### 3. MECHANICAL DRAWINGS



Top View - Dimensions in mm



Front View - Dimensions in mm

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## 4. SALES AND SERVICE INFORMATION

To obtain information about SonMicro Electronics products and technical support, reference the following information.



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