

# Z-2 USB MF

## Desktop RFID reader/writer 13.56MHz with USB connection

### User Manual

#### 1. OVERVIEW

Adapter **Z-2 USB MF** is a device that can read serial numbers from MIFARE tokens (cards, key fobs etc.) of ISO/IEC 14443 Type A standard, read and write protected memory sectors of MIFARE Classic 1K/4K and Ultralight. It exchanges the data with a computer system via USB interface.

#### 2. FACTS

- Adapter can not only read MIFARE token serial numbers, but also read and write protected memory sectors of MIFARE™ Classic 1K/4K and Ultralight tokens;
- Connects to computer systems via USB;
- Allows the users to perform firmware updates on their own;
- Can be used in loyalty and reward points schemes, payment systems, access control systems, rental shops, ID systems, customisation, and other applications using RFID-based technologies. Software Development Kit (SDK-Z2USB MF) is available, allowing to quickly start working with the adapter.

#### 3. MOUNTING AND CONNECTION

- Please set the adapter onto your desk in a convenient location to present the cards;
- Connect the adapter to your PC via supplied USB cable;
- Install the device drivers from a supplied CD onto your PC.

#### 4. OPERATION

After the driver installation is complete, the PC detects the device as a new virtual COM port, which then can be used to exchange data between adapter and that PC.

If adapter is powered up and operational, its LED shines red.

When a token is placed into adapter working zone, the LED shortly changes colour to green and the buzzer sounds.

When a token is held within adapter working zone, a green LED is lit and data exchange session between the adapter and the token ensues. The session includes reading the serial number from, or reading/writing data from protected memory sectors of, a MIFARE token.

To verify proper adapter operation, please use HyperTerminal or similar software supporting serial port connectivity.

- Set up a serial connection with the following parameters: Baud rate 9600, Data bits 8, Parity NONE, Stop Bits 1, Flow control NONE.
- To display the adapter information, press "1" button on your keyboard.
- Each adapter has its own serial number. The user requires it to update adapter firmware.
- When the adapter is touched by a token, its type and Wiegand-26 formatted serial number are displayed.

## 5. SPECIFICATIONS

Operational Frequency: ..... 13.56 MHz;  
Ability to store information into token memory: ..... YES;  
Supported token types: ..... MIFARE (Classic 1K/4K, Ultralight);  
Working distance: ..... up to 4 cm;  
PC connection interface: ..... USB;  
Distance between the adapter and the PC: ..... up to 1.8 m;  
Token read feedback: ..... bicoloured LED and buzzer;  
Device power supply: ..... USB;  
Casing material: ..... ABS plastic with coating;  
Dimensions, mm: ..... 110 x 80 x 25

## 6. OPERATING CONDITIONS

Ambient temperature: 5...40°C.  
Humidity: Up to 80% at 25°C.

This device should be operated in absence of: atmospheric precipitation, direct sunlight, sand, dust and water condensation.

Device specifications may differ from described in this manual when operating under non-recommended conditions.

## 7. PACKAGE CONTENTS

- Adapter Z-2 USB MF ..... 1  
- Drivers disk Windows ..... 1  
- Cable USB A/B ..... 1

## 8. LIMITED WARRANTY

Device is covered by limited warranty for 24 months.

The warranty becomes void if:

- this Manual is not followed;
- device has physical damage;
- device has visible traces of aggressive chemicals exposure;
- device circuits have visible traces of tamper by unauthorised parties.

While covered, the Manufacturer will repair the device or replace any broken parts, free of charge, where fault is caused by manufacturer's defect.

## 9. CONTACTS

### European & Global Wholesale Distribution Center

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The symbol of crossed-through waste bin on wheels means that the product must be disposed of at a separate collection point. This also applies to the product and all accessories marked with this symbol. Products labeled as such must not be disposed of with normal household waste, but should be taken to a collection point for recycling electrical and electronic equipment. Recycling helps to reduce the consumption of raw materials, thus protecting the environment.

