ZM series IC card reader user’s manual

Guangzhou Zhongda Microelectronics,Inc.

Thank you for using our ZM series IC card reader!

In order to better perform its functions, please read this manual carefully before using it, and keep this manual in case you need to check.

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The contents of this manual may be revisedwithout prior notice, if there are other users’ questions, please contact our company.

1. Product Overview

ZM series IC card reader is a card reader that supports contact smart cards, contactless smart cards, magnetic stripe cards, and second generation ID cards , without installing any other drivers.

ZM series IC card reader can both read and write IC cards, SAM cards, second generation ID cards. The reader is connected to the terminal through the USB interface. The reader can be applied to second generation ID card reader, electronic wallet, access control, time and attendance, meeting attendance, highways, gas stations, car parks, bus and other charging system.

2. Product Features

- ◆ Interface Standard: USB interface;
- ◆ Power supply: 5V±5%;
- ◆ Take power: USB;
- ◆ Operating Temperature: 0 - 50℃;
- ◆ Relative humidity: 10% - 80%;
- ◆ IC card life: More than 10 million times (valid card);
- ◆ Contactless IC card communication distance: Less than 10cm;
- ◆ For health care, finance, insurance, customs, taxation and other areas;
- ◆ Applicable development environment: WINDOWS, can be used with a variety of end-use;

3. Technical Specifications

◆ Contactless cards in the CPU interface, there are the following two kinds of standard operating mode: (1) ISO 7816 standards, (2) SLE 4442 standard.

Contact CPU card using the ISO7816 standard. Contact memory card using SLE4442 standards.

◆ The CPU interface contactless cards, there are following two kinds of operation: (1) ISO / IEC 14443-3 standard (M1), (2) ISO / IEC 14443-4 standards.

Contactless card using ISO/IEC 14443-4 standard (CPU card).

Non-contact memory card using ISO / IEC 14443-3 standard (Type A-M1 card).

4. Instructions for use

- magnetic stripe cards

Figure 1 Magnetic stripe card swipe schematically

- Contact IC cards

Figure 2 Contact IC card

- Contactless IC cards, second generation ID Cards

Figure 3 Contactless IC card

➢ SAM Card Interfaces

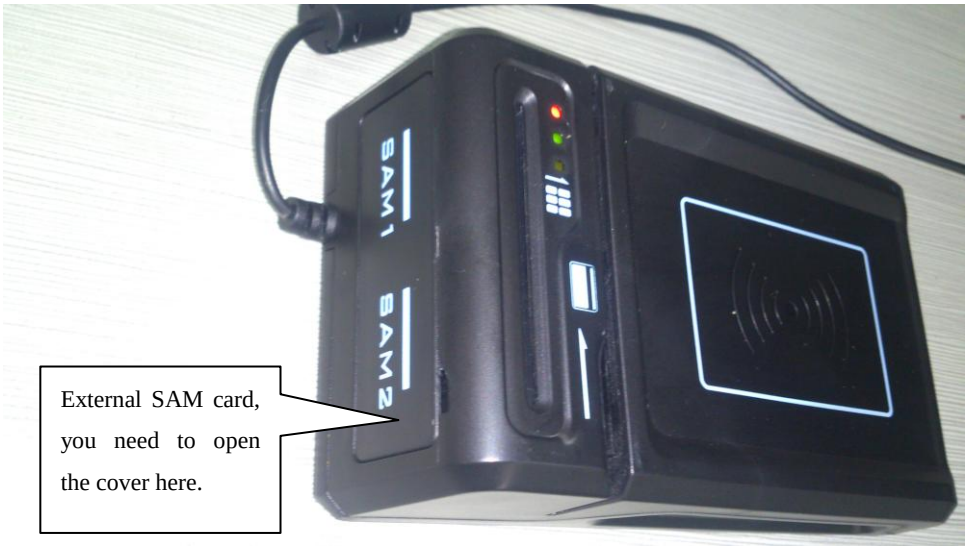

Figure 4 External SAM card

Note:

The reader has a total of four SAM card interfaces, two built-in SAM card interfaces and two external SAM card interfaces. External SAM card cover need to follow these steps to open。

1，Pry the cover along the gap, then you can install SAM card;

2，when installing, first install the gap at the back cover, and then beat the other side, can be successfully installed.

5. Precautions

◆ When operating contactless cards, cards should be placed on the front side of the reader, which is the RF area with a identify on it, to ensure proper reading and writing opetations of the card.Cards should stay long enough in the RF area to avoid failure reading and writing operation.

◆ When operating contactless cards, barrier metal should not appear between the reader and contactless cards, for barrier metal will shield the RF field.

◆ The reader is electronic product, please avoid water, in case of internal short circuit and machine damage.

◆ Do not leave paper clips,pins or other metal residues in the IC card socket.

6. Failure Analysis and Maintenance

Reader in daily use, attention should be maintained in order to ensure its reliable operation and prolong life.Maintenance method is as follows:

After used for a long time, when the IC card reading or writing error occurs repeatedly, It needs to clean the IC card contact points by inserting and pulling the IC card in and out of the IC socket, usually 5-6 times can be finish cleaning.

If user cannot figure out the reader’s failures, dashing local service point to get in touch with our sales or service department, Do not disassemble or repair by yourself, so as to avoid unnecessary losses.

7 FCC STATEMENT

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.