

Integration Manual for the Kaba MiFare RFID Reader Module

FCC ID NVI-RMS0001

About this manual

Validity

This manual describes the MiFare RFID Reader Module into hosts, e.g. KABA B-web 93 00

Addressees

This manual is written exclusively for specialists.

The descriptions in this manual are intended for personnel trained by the manufacturer. The information in this manual cannot substitute the product training.

The contents of this manual is intended for use by the following groups of people:

- **Project manager**
Project manager who is responsible for the system and entrusted with project planning and realization.
- **Fitter**
Person specialized in mounting and installation.
Person who has an adequate technical training and sufficient experience and who has been authorized by the manufacturer after completing the training on the product.
- **Service technician**
Specialist for initial set-up and maintenance of the installation.
Person who has an adequate technical training and sufficient experience and who has been authorized by the manufacturer after completing the training on the product.
- **Network administrator**
Realizes the set-up of the device within the network and makes sure that the devices are accessible within the network.
- **Software partner**
Specialists for connecting the system to the user software by defining operating and booking sequences, programming the customer applications and setting the parameters of the devices.

NOTICE!

For reasons of device safety, some of the activities might only be carried out by the SERVICE PERSON.

Only persons of the groups "Fitter" and "Service technician" have the status of a SERVICE PERSON according to DIN EN 60950-1:2006.

Contents and purpose

The contents are limited to the assembly and installation of the hardware.

ESD (electro static discharge) protective measures

CAUTION

- Danger for electronic components due to electrostatic discharge.
- Improper handling of printed circuit boards or components can cause damages that lead to complete failures or sporadic errors.
- During installation and repair of the device, the ESD protective measures must be considered.

Please consider the following guidelines before the installation or maintenance of the device:

- Always carry an ESD antistatic wristband when dealing with electronic components. Connect one part of the wristband with a discharge socket or an unvarnished grounded metal component. This way, static charges are discharged from your body securely and effectively.
- Only touch the printed circuit boards at the edges. Do not touch the printed circuit board itself or the connector.
- Place all dismantled components on an anti-static surface or in an anti-static container.
- Avoid contact between printed circuit boards and your clothing. The wristband only protects the printed circuit boards against electrostatic discharge from the body, but there is still a risk of damage through electrostatic discharge from your clothing.
- Transport and dispatch dismantled modules only in electrostatically shielded protective bags.

Dimensions:



Description

The RM's Mifare is a RFID Reader/Writer with serial communication interface and a illumination unit for lighting behind a symbol. The illumination module consists of an analog current source, controlled by the Host-System via separate I2C Bus.

The RFID carrier frequency is 13,56MHz and the targeted RFID system is Mifare (ISO 14443).

The carrier frequency is derived from a 27.12 MHz quartz oscillator connected to the RFID chip. Communication from reader to tag is done with ASK (Amplitude Shift Keying), from tag to read with load modulation. Supported RFID data rates are 106kbit, 212kbit, 424kbit and 848kbit. Subcarrier frequency is 847.5kHz. Maximum antenna output current is 100mA. The antenna design is symmetrical with an impedance of 40Ω according to Mifare datasheets.

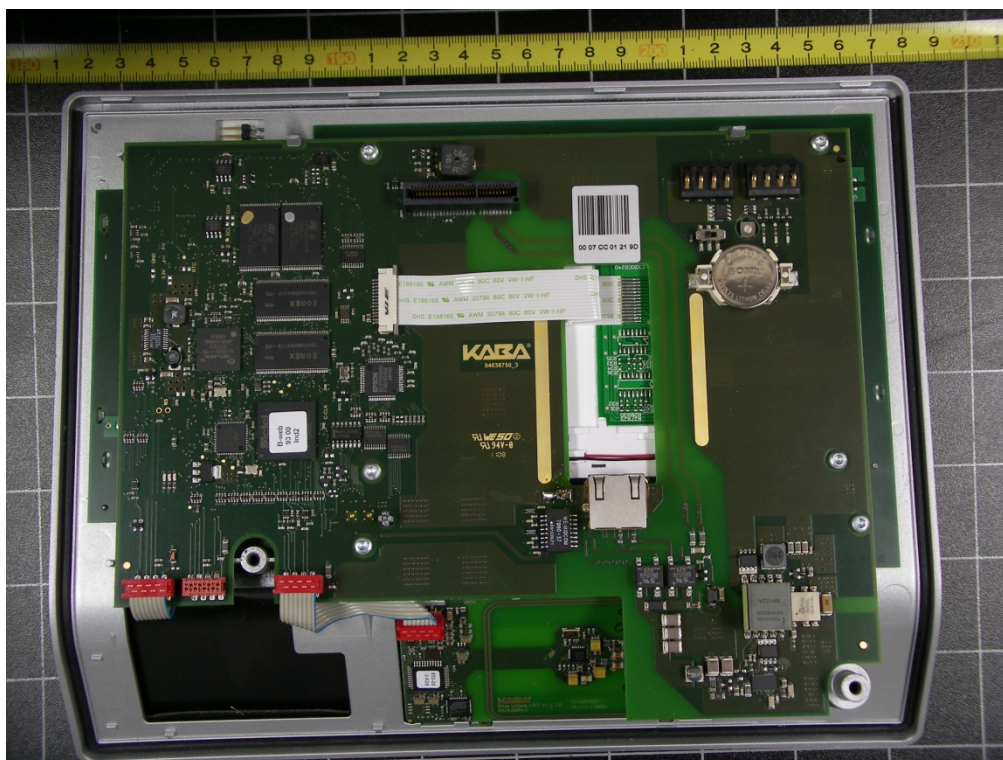
Power is supplied from a Host-System (regulated and current limited 5VDC±5%.) with a maximum current consumption of 550mA.

The device is intended to be mounted as a peripheral device via ribbon cable to a Host-system (e.g. KABA B-web 93 00).

The RM's Mifare includes a microcontroller with an 8MHz quartz oscillator. The microcontroller controls the RFID Transceiver chip and a KABA specific security chip clocked by 4MHz (half of the microcontrollers 8MHz).

The Host-System communicates via serial communication interface directly with the microcontroller.

Integration into KABA B-web 93 00



Labeling

Using a permanently affixed label, the modular transmitter must be labeled with its own FCC identification number, and, if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module.

This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID NVI-RMS0001 or contains FCC ID NVI-RMS0001”. Any similar wording that expresses the same meaning may be used.