Roger Access Control System

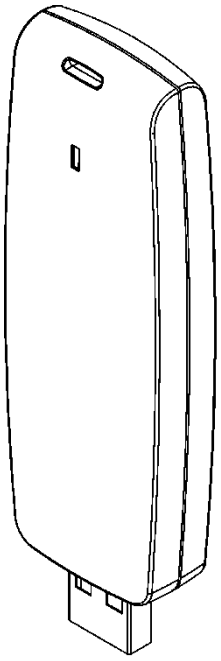
RUD-2 Proximity Reader

Operating manual

Firmware version: v2.1

Hardware version: v2.x

Document version: Rev. C



CONSTRUCTION AND USAGE

RUD-2 is a miniature reader for EM 125 kHz proximity transponders. The reader is supplied from serial USB port which is also used for communication with the device. The RUD-2 can be used as card enroll reader for access control system or any other application which requires card reader. Card can be enrolled straight from the PR Master (version 4.4.8 is required) or using dedicated Roger MiniReader 1.1.3 application. For programmers who want to integrate RUD-2 with their systems the dynamic library DLL is available.

Note: The software package for RACS access system, the Roger MiniReader program and a DLL library are free software available for download from Roger's website at https://roger.pl/en

FUNCTIONAL DESCRIPTION

The RUD-2 can be used in three different scenarios:

- as a reader for card enrolling to the RACS access system,
- as a reader for card enrolling through Roger MiniReader application,
- as a reader used in third party applications using a DLL library provided.

RACS 4 AND RACS 5 SYSTEM SUPPORT

RUD-2 can be applied as administrator reader in RACS 4 and RACS 5 to enter new identifiers in access control system. The software **PR Master 4.5** (RACS 4) or **VISO** (RACS 5) displays detected readers on the list. To read a new card into the system or change an existing one, you can use any of the devices available on the list - including the RUD-2 reader.

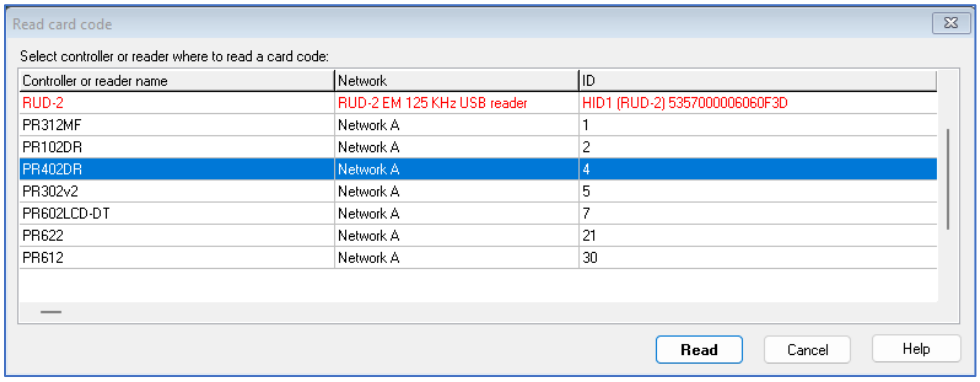


Fig. 1 PR Master reader section

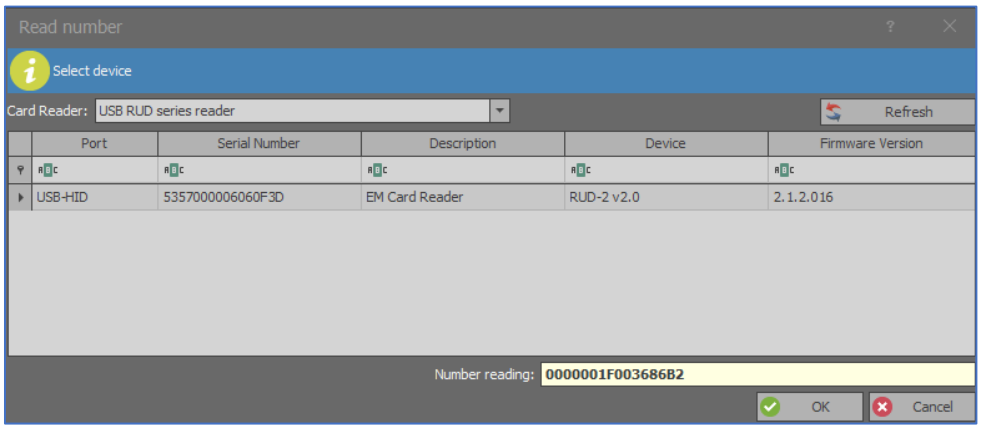


Fig. 2 VISO reader section

WORKING WITH ROGER MINIREADER PROGRAM

The Roger MiniReader displays the list of available USB readers connected to the PC. In order to read a single card, you need to select the Read single card command and then put a card close to the reader. When the code is read, it automatically appears in the Card codes window. The fact of card reading is signaled acoustically however this feature can be possibly disabled using relevant program's options (see: Options). If you use the Read multiple cards command, program will read cards in a loop and insert them to the Card codes window. In order to interrupt the reading process, you need to use the Stop reading command. The cards read can automatically be copied to the Clipboard (option: Copy card code to clipboard). By using it, the card codes can be moved to other applications or saved to a text file (option: Append card code to file).

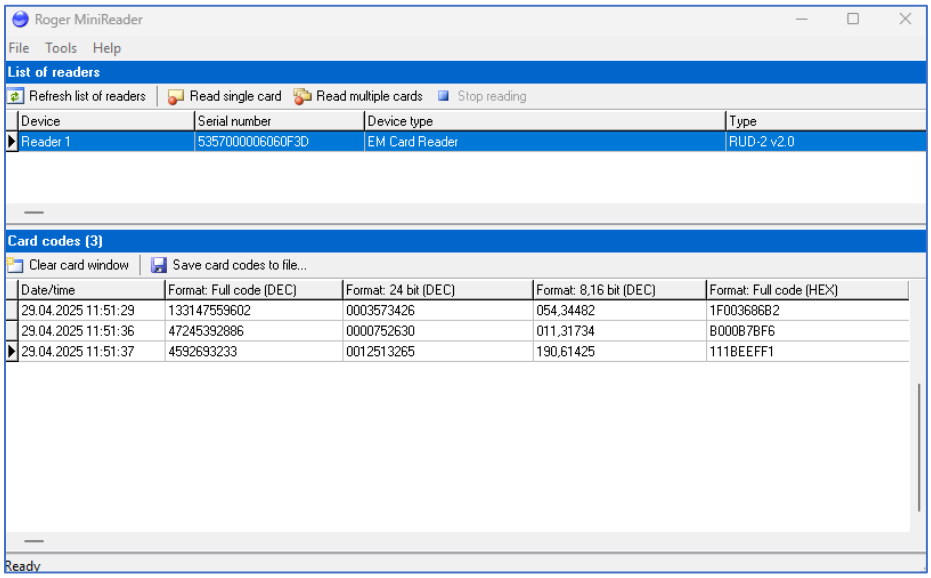


Fig. 3 Roger MiniReader main window

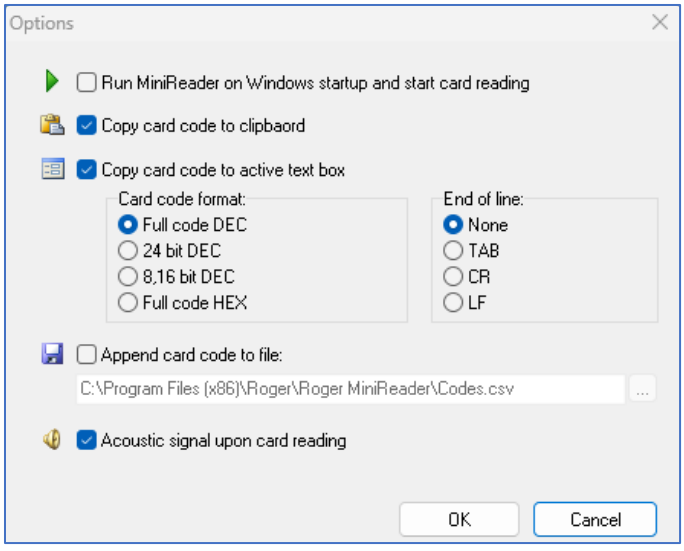


Fig. 4 Configuration window

THIRD-PARTY SOFTWARE

Support for RUD-2 readers can also be implemented in other programs. To do this you need to use a DLL library provided by reader's manufacturer. In this case, the logic of reader handling depends completely on the program's author.

LED SIGNALS

The RUD-2 interface is equipped with one signaling LED. This LED is blinking 3 times after power on and one time for every proximity card read session.

READING CARDS

The proximity card which is to be read into should be put close to the reader so that the card's surface is parallel to the reader's front surface. ISO cards have reading range upto 8 cm. Nevertheless it is a subject of serious fluctuations depending on the card's type and its characteristics. In particular, the range will be seriously reduced for miniature key fobs. You can assume that in this case you should touch a reading surface with a card and hold a card in a stable position. When the card is read, the computer will generate a short acoustic signal. After that, the reader is not able to read anything for about a second.

DEVICE INSTALLATION

RUD-2 is a USB-HID (Human Interface Device Class) device, and it's supported by 32bit and 64bit versions of Windows. RUD-2 doesn't require dedicated drivers; it's handled by OS generic USB HID driver. You may connect the device directly to the PC USB port, driver installation will start automatically.

Note: You should not disconnect a reader while the software working with it is being run. Violating this rule usually causes that the application controlling the reader may hang up and you will have to terminate it by using Windows Task Manager.

Programs provided by Roger (**PR Master**, **VISO** or **Roger MiniReader**) automatically detect that the RUD-2 reader and present it on the list of available devices.

The RUD-2 reader can be connected directly to the PCs USB socket or using a cable with magnetic stand provided together with the reader. Using this cable is convenient because when you use a magnetic stand, the reader can be located at computer's case or any other metallic part of a desk or a table.

Optionally, the RUD-2 can be connected to computer by other USB cable of a length not exceeding 5 meters. However, any modifications of original USB cables are prohibited. The only acceptable way of prolonging USB cables is by using original factory-made extension cables.

FIRMWARE UPDATE

The firmware of the reader can be updated by means of the **RogerVDM** v2.08.35278 or newer software. The file with the current firmware is available at https://roger.pl/en.

Before changing the reader firmware, make sure that the firmware downloaded from the manufacturer's website is appropriate for the updated device and that the programs which use the reader are disabled. After starting the RogerVDM program close the device selection window and in Tools menu select the proper device (RUD-2 from the list. Then indicate the access path to the location where the software file (*.bin type) is saved. After clicking the Update button the software update begins and must be carried out in accordance with the program instructions displayed during the process.

Warning: It is strongly recommended to act in accordance with program instructions, waiver of required actions connected with violations of the update rules can damage Your device. Note that firmware update process is done entirely at your own risk.

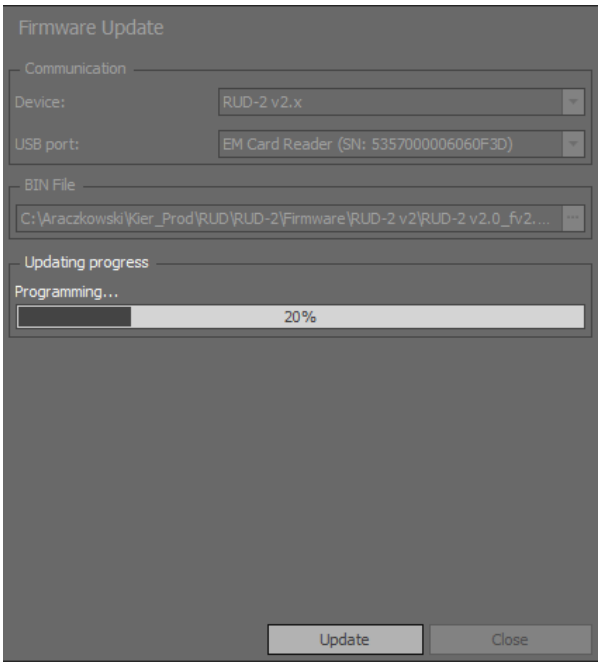


Fig. 5 Firmware update with RogerVDM

TECHNICAL DATA

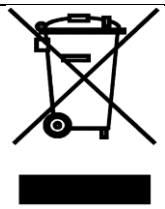
Technical Data	
Power supply	5VDC directly from the USB port
Average current consumption	80mA
Cards	EM 125 KHz (EM 4100/4102 compatible) proximity transponders
Reading distance	Up to 8 cm for ISO cards (while in an optimal relative location to the reader)
Reading time	~ 200msec
Environment	Indoor general conditions, temperature: +5°C to +40°C, relative humidity: 0 to 95% (no condensation)
Dimensions	88x30.5x14.5 mm
Weight	~ 20g

ORDERING INFORMATION

Product version	Description
RUD-2	The reader together with a USB cable

PRODUCT HISTORY

Product History			
Product version	Firmware	Date	Description
RUD-2 v1.0	v1.0	29/07/2009	First commercial product version.
RUD-2 v2.0	V2.x	01/08/2012	HID class, extended reading range

	This symbol placed on a product or packaging indicates that the product should not be disposed of with other wastes as this may have a negative impact on the environment and health. The user is obliged to deliver equipment to the designated collection points of electric and electronic waste. For detailed information on recycling, contact your local authorities, waste disposal company or point of purchase. Separate collection and recycling of this type of waste contributes to the protection of the natural resources and is safe to health and the environment. Weight of the equipment is specified in the document.

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