Hardware Manual

NFC/MIFARE Desktop Reader/Writer ADRB V2

Document history

Revision	Date	Author	Description
1.0	06 / 2013	T. Baur	Initial release
1.1	06 / 2013	T. Baur	Added FCC & Industry Canada Compliance note
1.2	08 / 2013	T. Baur	Changed housing labels

FCC NOTICE

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, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

WARNING: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

INDUSTRY CANADA COMPLIANCE

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

"Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

Table of contents

1. Description

This document provides information about the hardware specifications of the NFC/MIFARE desktop reader/writer model ADRB V2.

Note: LED brightness on image enhanced to highlight their position.

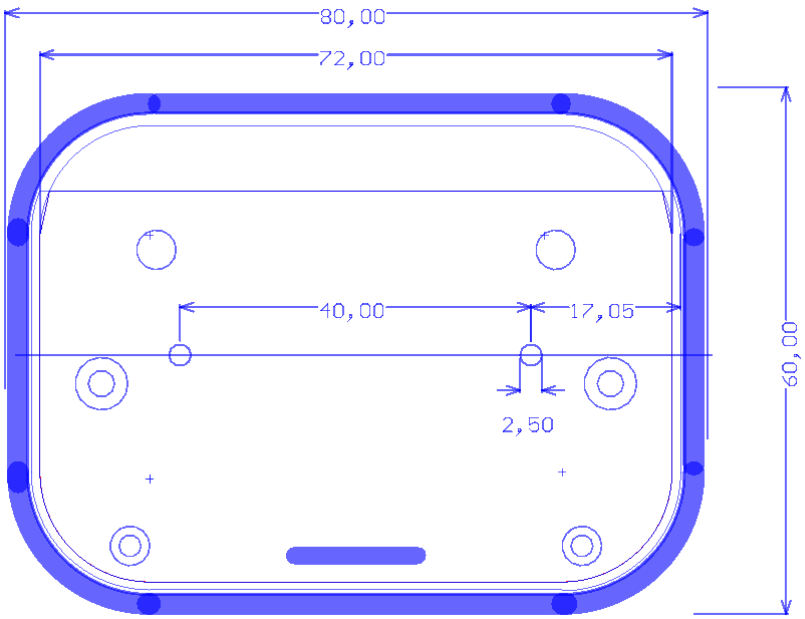
2. Available models

The “ADRB V2” desktop reader/writer series are available in the following two versions:

Part Number	Description
ADRB-USB-V2	NFC/MIFARE desktop reader/writer ADRB V2 with USB
ADRB-232-V2	NFC/MIFARE desktop reader/writer ADRB V2 with RS232

Housing Label ADRB-USB-V2	Housing Label ADRB-232-V2
IDENTIVE NFC Desktop Reader ADRB FCC ID: XLWADRBV2 IC: 7485A-ADRBV2 ⎓ +5V 250mA RoHS COMPLIANT 2002/95/EC M/N: ADRB-USB-V2	IDENTIVE NFC Desktop Reader ADRB FCC ID: XLWADRBV2 IC: 7485A-ADRBV2 ⎓ +5V 250mA RoHS COMPLIANT 2002/95/EC M/N: ADRB-232-V2

3. Mechanical drawing



4. Connectivity & power supply

	ADRB-USB-V2	ADRB-232-V2
Host interface	USB 2.0	RS232
Connection to host	USB type A	Sub-D9 (data) + USB Type A (power only)
Cable length	1.5 m	1.8 m (data) / 0.35 m (power)
Cable colour	grey	black
Power supply	$5V_{DC}$	$5V_{DC}$
Power consumption	up to 120mA, sleep ~2mA	up to 120mA, sleep ~2mA
Driver	Virtual COM Port (VCP)	none
Operating System	Windows 2000/Server 2003/XP/ Vista/7/8, Linux, Mac OS X (32 & 64-bit)	any OS with serial host interface

5. USB driver

Latest version can be downloaded in the “Downloads Driver” section from support.identive-group.com or “CP210x USB to UART Bridge VCP Drivers” from www.silabs.com

6. Device boot-up sequence

Each time the device is connected to an USB or RS232 port and powered, the bootloader forces the LEDs to blink and the buzzer to beep in the way and sequence as described below:

#	LED		Buzzer	Description
1.	Red	4x	none	Bootloader active, waiting to jump to functional firmware
2.	Red + Green	3x	2x	Confirmation that functional firmware was successfully loaded

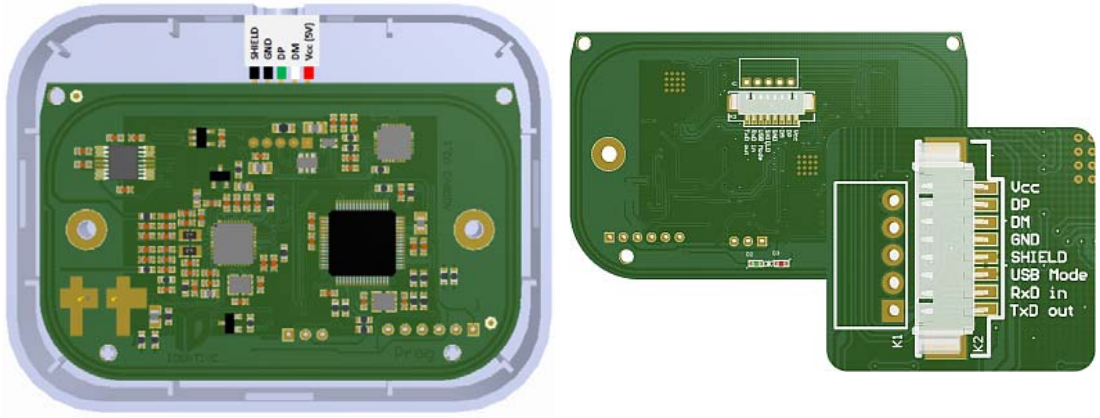
Failure scenarios:

- Bootloader malfunction or device/cable defective: LEDs do not blink & buzzer does not beep
- Bootloader active but functional firmware is malfunctioning: #1 is completed; #2 is not performed

Note: Functional firmware may be recovered using the "Identive NFC Reader Firmware Updater" by using the "Recovery Option" (see application manual for details)

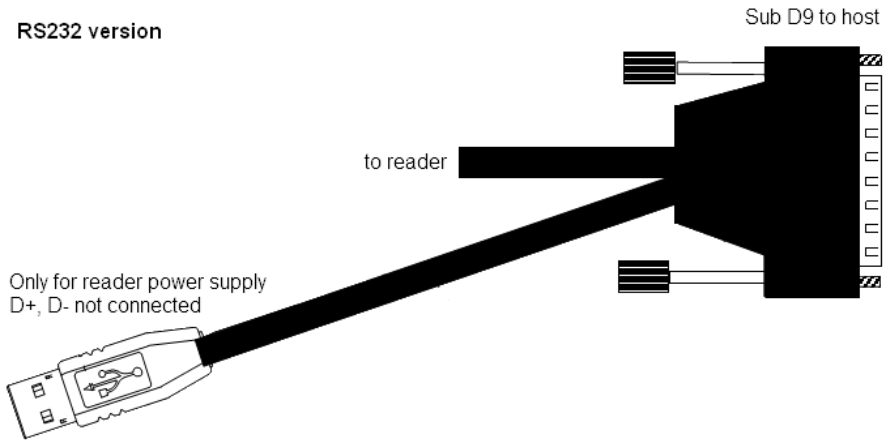
7. Cable connection

a) USB



In case the ADRB is taken apart make sure the cable is connected according to the drawing above before powering the device.

b) RS232



The Molex PicoBlade connector of the serial cable is reverse-polarity protected to avoid wrong connection of the cable on the reader board.

8. Human interfaces

The NFC/MIFARE desktop reader/writer ADRB V2 comes with two LED (green, red) and a piezoelectric buzzer with a frequency of 4kHz. Both LED and buzzer can be controlled with dedicated easyCommunication protocol commands in terms of count, delay and frequency (buzzer only). Please read “Application Note Software (ANSW)” for command descriptions.

Note: After boot-up sequence (see chapter 6) is completed, both LED are turned off by default.