



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR1281U-C2 Card UID Reader



Technical Specifications V1.03



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1.0. Introduction

ACR1281U-C2 is a contactless card UID (Unique Identification Number) reader especially designed to get the UID of any ISO 14443 Parts 1-4 Type A and B-compliant contactless card in an efficient way. Its sole focus is to retrieve the card's UID and display it directly in any text editor such as Notepad, Microsoft® Excel and Microsoft® Word.

When a contactless card (e.g., MIFARE® DESFire® card) is tapped onto the ACR1281U-C2, the reader retrieves the UID and automatically returns the UID to the computer. Since it is HID (Human Interface Device)-compliant, this device does not require any additional driver to be installed in the computer. The ACR1281U-C2 also has an anti-collision feature that ensures only one card is accessed when multiple cards are presented at the same time.

ACR1281U-C2 Card UID Reader can support Windows®, Linux®, Mac OS®, and other embedded systems.



Figure 1: ACR1281U-C2 Sample Application



2.0. Features

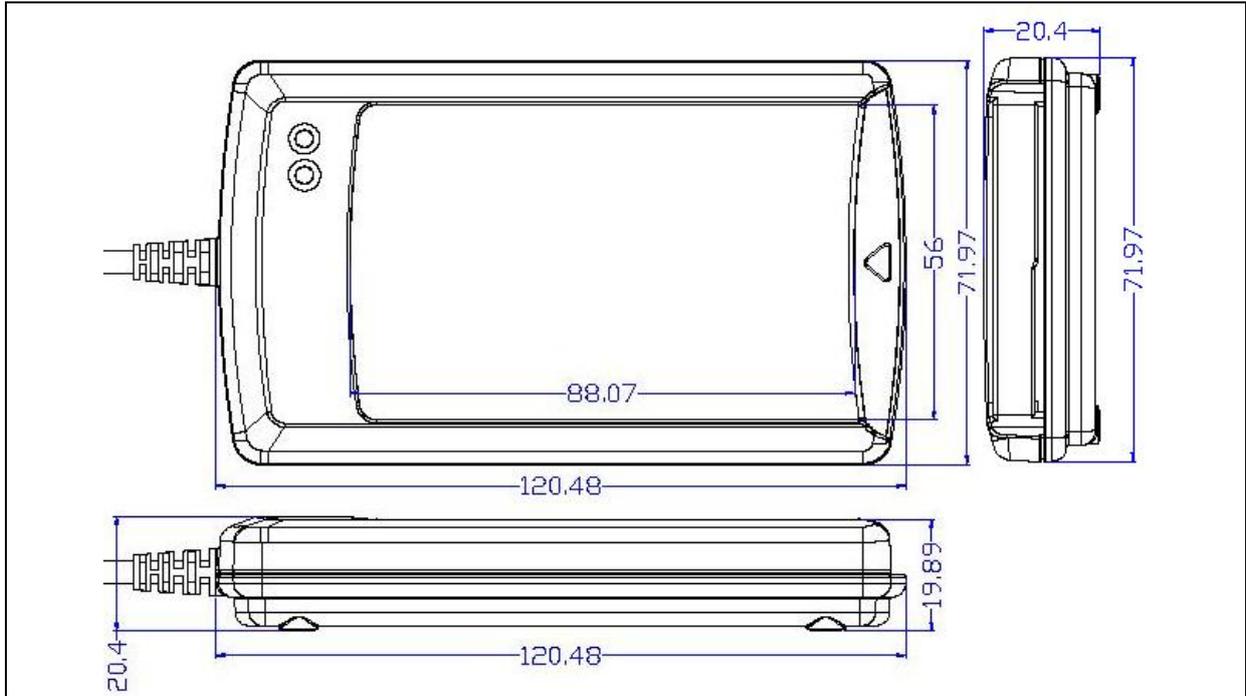
- USB 2.0 Full Speed Interface
- USB HID Keyboard Class Emulation
- Smart Card Reader:
 - Contactless Interface:
 - Read/Write speed of up to 848 Kbps
 - Built-in antenna for contactless tag access, with card reading distance of up to 50 mm (depending on tag type)
 - Supports ISO 14443 Part 4 Type A and B cards, and MIFARE® cards
 - Built-in anti-collision feature (only one tag is accessed at any time)
- USB Firmware Upgradability
- Compliant with the following standards:
 - ISO 14443
 - USB HID
 - CE
 - FCC
 - RoHS 2



3.0. Typical Applications

- e-Government
- e-Banking and e-Payment
- e-Healthcare
- Transportation
- Network Security
- Access Control
- Loyalty Program

4.0. Technical Specifications



Physical Characteristics

Dimensions	120.5 mm (L) × 72.0 mm (W) × 20.4 mm (H)
Weight	140 g
Color	Black

USB Host Interface

Protocol	USB HID Keyboard Class
Connector Type	Standard Type A
Power Source	From USB port
Speed	USB Full Speed (12 Mbps)
Supply Voltage	5 V
Supply Current	Max. 200 mA
Cable Length	2.0 m, Fixed

Contactless Smart Card Interface

Standard	ISO 14443 A and B Parts 1-4
Protocol	ISO 14443 T=CL for ISO 14443-4-compliant cards
.....	T=CL Emulation for MIFARE Classic
Operating Frequency	13.56 MHz
Operating Distance	Up to 50 mm (depending on card type)
Smart Card Read/Write Speed	106 Kbps, 212 Kbps, 424 Kbps, 848 Kbps
Antenna Size	65 mm × 60 mm

Built-in Peripherals

LED	2 single-color: Red and Green
Buzzer	Monotone

Other Feature

Firmware Upgrade	Supported
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Operating Conditions

Temperature	0 °C – 60 °C
Humidity	Max. 90% (non-condensing)
MTBF	500,000 hrs

Certifications/Compliance

ISO 14443, USB Full Speed, USB HID, CE, FCC, RoHS 2



Operating System Support

Windows®, Linux®, Mac OS®



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