Advanced Card Systems Ltd.
Card & Reader Technologies

ACR1281U-C2 Card UID Reader

Technical Specifications V1.04

Table of Contents

List of Figure

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
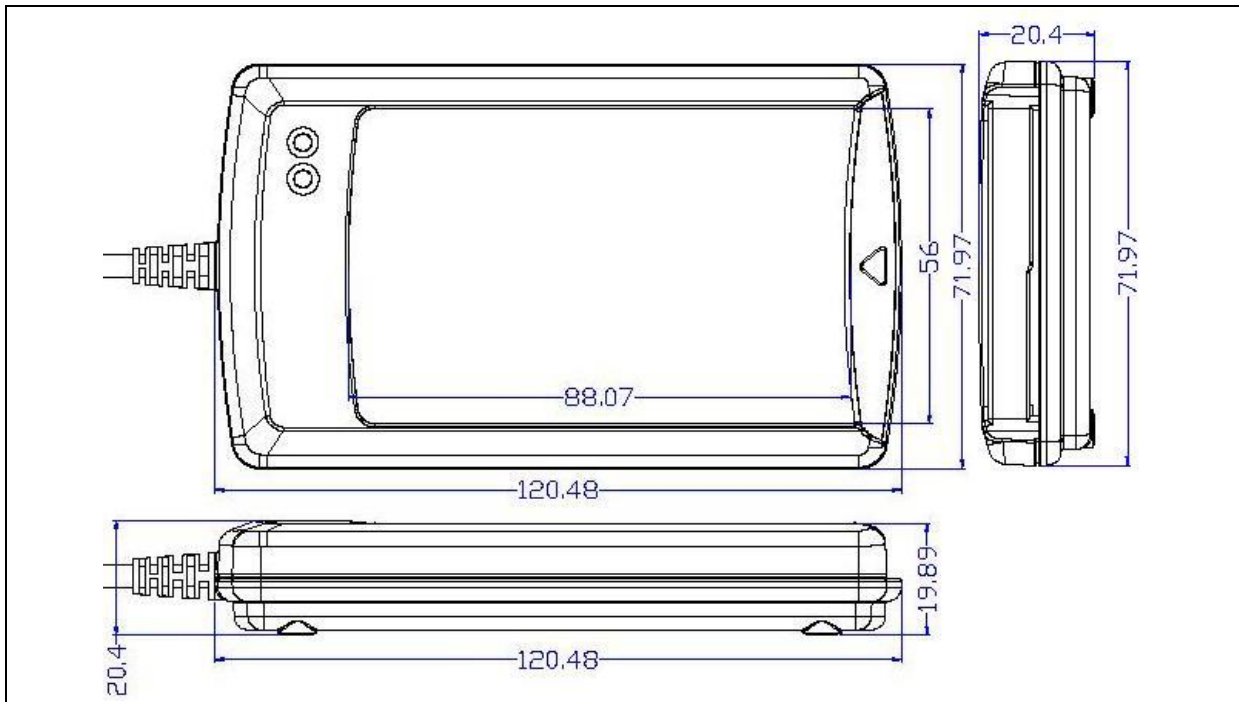
2.0. Features

- 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

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

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

Operating System Support

Windows®, Linux®, Mac OS®

ACR1281U-C2 – Technical Specifications

info@acs.com.hk

Version 1.04

www.acs.com.hk