ACR1311U-N2

Secure Bluetooth®

NFC Reader

Technical Specifications V1.0

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1.0. Introduction

ACR1311U-N2 Bluetooth® NFC Reader combines the latest 13.56 MHz contactless technology with Bluetooth® Smart connectivity for on-the-go smart card and NFC applications.

1.1. Smart Card Reader

ACR1311U-N2 supports ISO 14443 Part 4 Type A cards, MIFARE®, and MIFARE® DESFire®. This makes it the ideal device for a broad range of solutions, such as hands-free verification for physical and logical access control, and inventory tracking. ACR1311U-N2 has both Bluetooth 4.0 interface for pairing with mobile devices and USB Full Speed for PC-linked operation. Additionally, it can read/write at the speed of up to 424 Kbps for contactless smart card and NFC device access.

1.2. Compact Design

With a compact design, ACR1311U-N2 is extremely portable and convenient for use anytime, anywhere with most Bluetooth-enabled smartphones and tablets in the market.

1.3. Firmware Upgradeable Feature

To save valuable cost and time, the firmware of ACR1311U-N2 could conveniently be upgraded in-field to let users cope with the fast-changing technology for their applications to suit different scenarios.

1.4. Secure Bluetooth Connectivity

With Bluetooth 4.0 Smart technology, ACR1311U-N2 can connect securely and wirelessly with ease to any device running on Android™ version 4.3 and later, and iOS 5.0 and later

1.5. Ease of Integration

ACR1311U-N2 can easily be installed for use with any personal computer running on Windows® operating system because it is PC/SC and CCID-compliant. Its drivers are also compatible with Linux® and Mac OS®. With its numerous features, the ACR1311U-N2 is the perfect reader for your smart card solutions.

2.0. Features

- USB 2.0 full speed interface

- Bluetooth 4.0 smart interface

- Plug and Play – CCID support brings utmost mobility

- USB Firmware Upgradeability[1]

- Smart Card Reader:

  o Built-in antenna for contactless tag access, with reading distance of up to 25 mm (depending on tag type)
  o Supports ISO 14443 Part 4 Type A cards
  o Supports MIFARE® and MIFARE® DESFire®
  o Built-in anti-collision feature (only one tag is accessed at any time)
  o NFC Support:

    ▪ Card reader/writer mode

- Application Programming Interface:

  o Supports PC/SC
  o Supports CT-API (through wrapper on top of PC/SC)

- Supports Android™ 4.3 and above[2]

- Supports iOS 5.0 and later[2]

- Built-in Peripherals:

  o Two user-controllable bi-color LEDs

- Compliant with the following standards:

  o EN60950/IEC 60950
  o ISO 14443
  o Bluetooth® Smart
  o PC/SC
  o CCID
  o RoHS 2
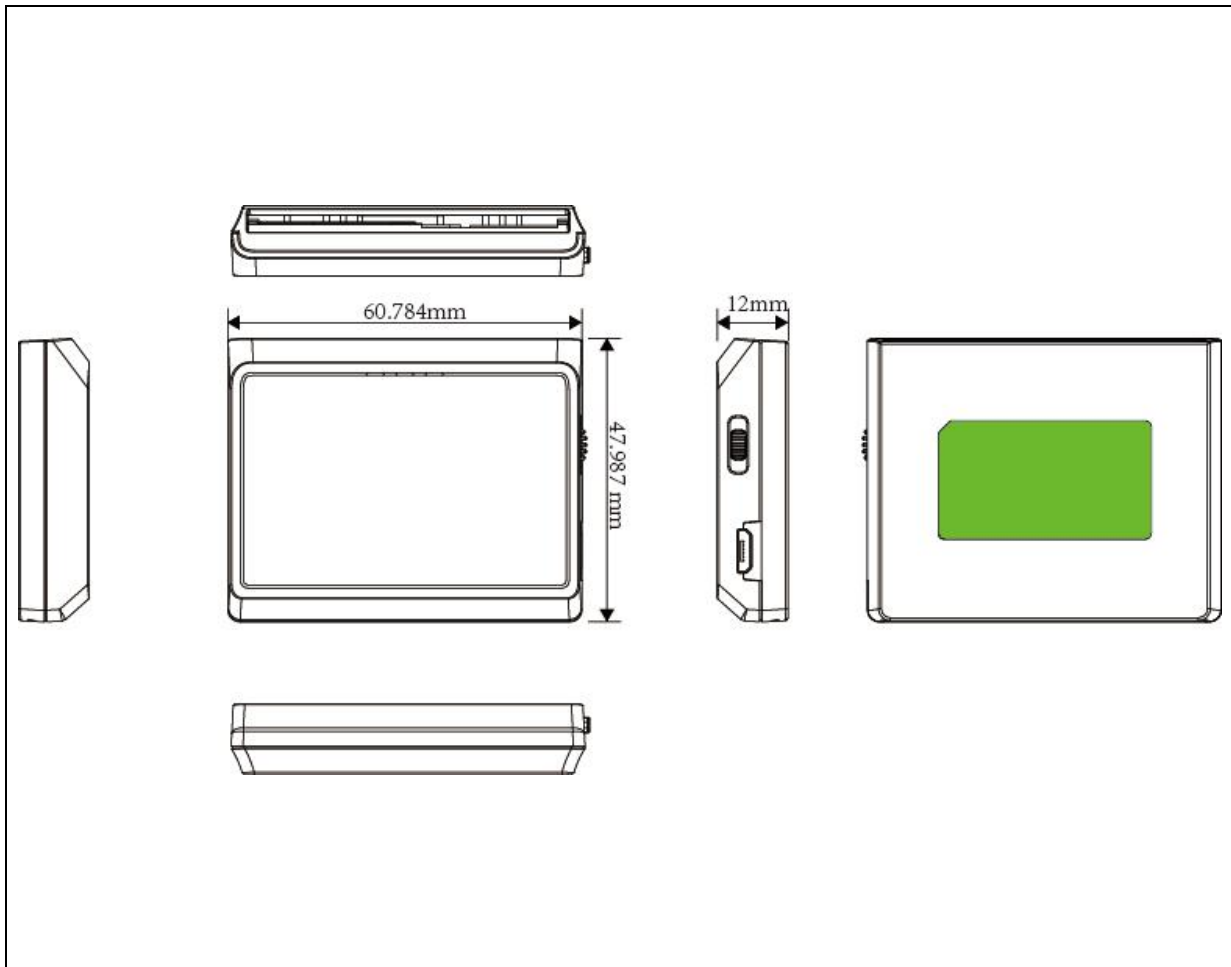 o REACH
  o Microsoft® WHQL

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[1] Applicable under PC-linked mode

[2] Use an ACS-defined library

3.0. Typical Applications

- Mobile Banking & Payment
- e-Government
- e-Healthcare
- Network Security
- Access Control
- e-Purse & Loyalty
- Public Key Infrastructure

4.0. Technical specification

Physical Characteristics	
Dimensions	60mm (L) × 47.98 mm (W) × 12 mm (H)
Weight	30g
Color	White

Lithium-ion Battery	
Battery Capacity	300mAh
Working Voltage	3.7 V DC
Working Hours	About 10 hours (full of electricity)

Bluetooth Interface	
Protocol	Bluetooth Smart (Bluetooth Low Energy/Bluetooth 4.0)
Power Source	300mAh Rechargeable Lithium-ion Battery (Charging through USB)
Speed	1 Mbps

USB Host Interface	
Protocol	USB Full Speed
Type	Four Line: +5 V, GND, D+ and D-
Connector Type	USB Micro
Power Source	From USB Port
Speed	USB Full Speed (12 Mbps)
Cable Length	1 m (Detachable)
Firmware	Upgradeable through USB Interface

Contactless Smart Card Interface	
Standard	ISO 14443 Type A & B, MIFARE, DESFire
Protocol	ISO 14443 T=CL for ISO14443-4 compliant cards, and T=CL Emulation for MIFARE Classic 1K/4K and NFC tags
Operating Frequency	13.56 MHz

Operating Distance............................ Up to 25 mm (depending on tag type)
Smart Card Read/Write Speed........ 106 Kbps, 212 Kbps, 424 Kbps
Antenna Size.......................................28.00 mm × 32.00 mm

Built-in Peripherals

LED...2 bi-color: Red and Blue, Red and Green
Buzzer..Monotone

Operating Conditions

Temperature.......................................0 °C - 50 °C
Humidity...Max. 90% (non-condensing)
MTBF..500,000 hrs

Application Programming Interface

PC-linked Mode.................................PC/SC
....CT-API (through wrapper on top of PC/SC)

Certifications/Compliance

EN60950/IEC 60950, ISO 14443, USB Full Speed, Bluetooth Smart, PC/SC, CCID, RoHS 2, REACH, Microsoft® WHQL

Device Driver Operating System Support

Windows® ME, Windows® 98, Windows® 2000, Windows® XP, Windows Vista®, Windows® 7, Windows® 8, Windows® 8.1, Windows® 10, Windows® Server 2003, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012, Windows® Server 2012 R2

Linux®, Mac OS®, Android™[1], iOS[2]

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[1] *4.3 or later Android version is required for Bluetooth 4.0*

[2] *5.0 and later iOS version is required*