



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR122U USB NFC Reader



Technical Specifications V3.04



Table of Contents

1.0.	Introduction	3
2.0.	Features	4
3.0.	Typical Applications.....	5
4.0.	Technical Specifications.....	6



1.0. Introduction



The ACR122U is a PC-linked contactless smart card reader/writer developed on the 13.56 MHz contactless technology. It is the world's first CCID-compliant contactless card reader/writer that follows both ISO 14443 and ISO 18092. This device is designed to support not only MIFARE® and ISO 14443 Type A and B cards, but also FeliCa and NFC tags.

By making use of up to 424 Kbps for NFC tag access and full USB speed of up to 12 Mbps, ACR122U can efficiently read from and write to various contactless cards/tags. It is also PC/SC-compliant which allows interoperability across different applications and platforms.

You can experience the convenience in using ACR122U, with its compact size and the various features it offers, for applications such as payment, access control, time and attendance, and mass transit.



2.0. Features

- USB 2.0 Full Speed Interface
- CCID Compliance
- Smart Card Reader:
 - Read/Write speed of up to 424 Kbps
 - Built-in antenna for contactless tag access, with card reading distance of up to 50 mm (depending on tag type)
 - Support for ISO 14443 Part 4 Type A and B cards, MIFARE, FeliCa, and all four types of NFC (ISO/IEC 18092 tags)
 - Built-in anti-collision feature (only one tag is accessed at any time)
- Application Programming Interface:
 - Supports PC/SC
 - Supports CT-API (through wrapper on top of PC/SC)
- Built-in Peripherals:
 - User-controllable bi-color LED
 - User-controllable buzzer
- Supports Android™ 3.1 and above
- Compliant with the following standards:
 - ISO 18092
 - ISO 14443
 - CE
 - FCC
 - KC
 - VCCI
 - PC/SC
 - CCID
 - Microsoft® WHQL
 - RoHS 2
 - IEC/EN 60950



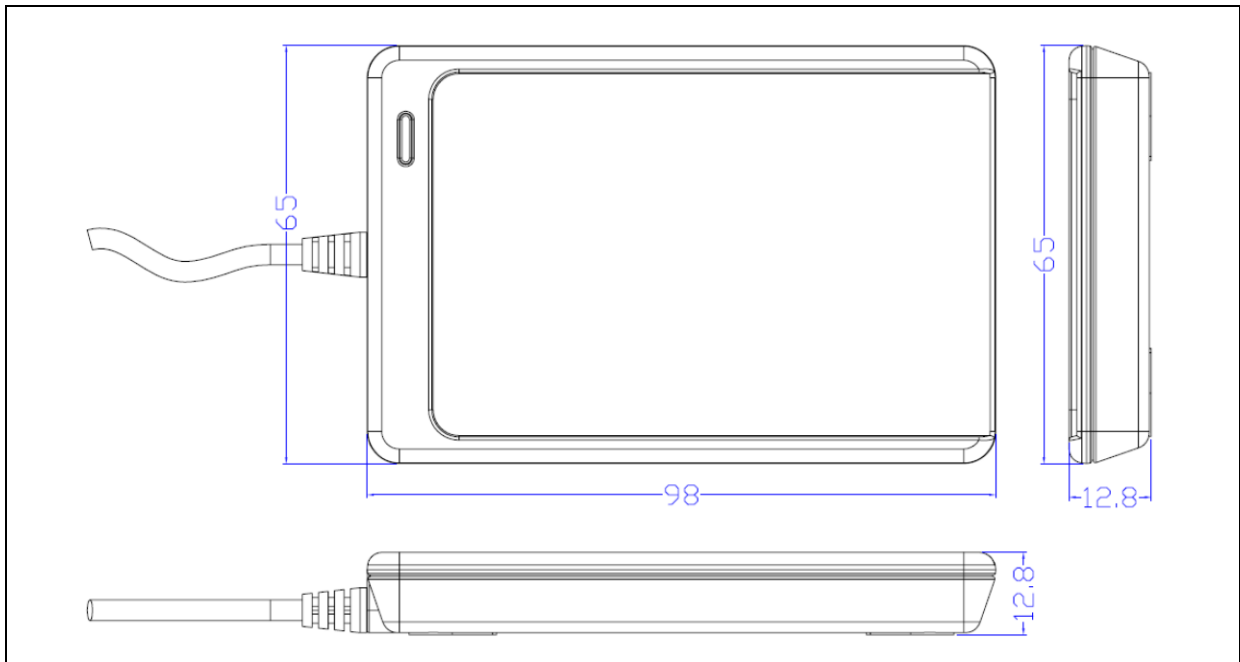
3.0. Typical Applications

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





4.0. Technical Specifications



Universal Serial Bus Interface

Power Source..... From USB
 Speed..... 12 Mbps (Full Speed)
 Supply Voltage..... Regulated 5 V DC
 Supply Current 200 mA (maximum); 50 mA (standby); 100 mA (normal)

Contactless Smart Card Interface

Standard ISO/IEC 18092 NFC, ISO 14443 Type A & B, MIFARE, FeliCa
 Protocol..... FeliCa protocol, T=CL protocol
 Operating Frequency 13.56 MHz
 Operating Distance Up to 50 mm (depending on tag type)
 Smart Card Read/Write Speed..... 106 Kbps, 212 Kbps, 424 Kbps

Physical Specifications

Dimensions 98.0 mm (L) x 65.0 mm (W) x 12.8 mm (H)
 Weight..... 70.0 g
 Material Polycarbonate (PC)
 Color Pearl White
 Antenna Size..... 50.0 mm x 40.0 mm
 Cable Length..... 1.0 m (USB)

Built-in Peripherals

LED Bi-color (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/SC
 CT-API (through wrapper on top of PC/SC)

Certifications/Compliance

ISO 18092, ISO 14443, CE, FCC, KC, VCCI, PC/SC, CCID, RoHS 2, IEC/EN 60950, USB Full Speed
 Microsoft® WHQL for Windows® 2000, Windows® XP, Windows Vista®, Windows® 7, Windows® 8,
 Windows® Server 2003, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012



Device Driver Operating System Support

Windows® 2000, Windows® XP, Windows Vista®, Windows® 7, Windows® 8, Windows® 8.1,
Windows® Server 2003, Windows® Server 2003 R2, Windows® Server 2008, Windows® Server 2008 R2,
Windows® Server 2012, Windows® Server 2012 R2
Linux®, Mac OS®, Android™ 3.1 and above



Android is a trademark of Google Inc.
Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.
Mac OS is a trademark of Apple Inc.
Microsoft, Windows and Windows Vista are either registered trademarks or trademarks of the Microsoft group of companies.
MIFARE is a registered trademark of NXP B.V. and is used under license.