



**Advanced Card Systems Ltd.**  
Card & Reader Technologies

# ACR122U USB NFC Reader



Technical Specifications V3.06



## 2.0. Features

- USB Full Speed Interface
- CCID-compliant
- 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)
  - Supports ISO 14443 Part 4 Type A and B cards, MIFARE Classic®, FeliCa, and all four types of NFC (ISO/IEC 18092 tags)
  - Built-in anti-collision feature (only one tag is accessed at any time)
- Built-in Peripherals:
  - User-controllable bi-color LED
  - User-controllable buzzer
- Application Programming Interface:
  - Supports PC/SC
  - Supports CT-API (through wrapper on top of PC/SC)
- Supports Android™ 3.1 and later<sup>1</sup>
- Compliant with the following standards:
  - EN 60950/IEC 60950
  - ISO 14443
  - ISO 18092
  - PC/SC
  - CCID
  - CE
  - FCC
  - RoHS 2
  - REACH
  - VCCI (Japan)
  - KC (Korea)
  - Microsoft® WHQL

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<sup>1</sup> Uses an ACS-defined Android Library



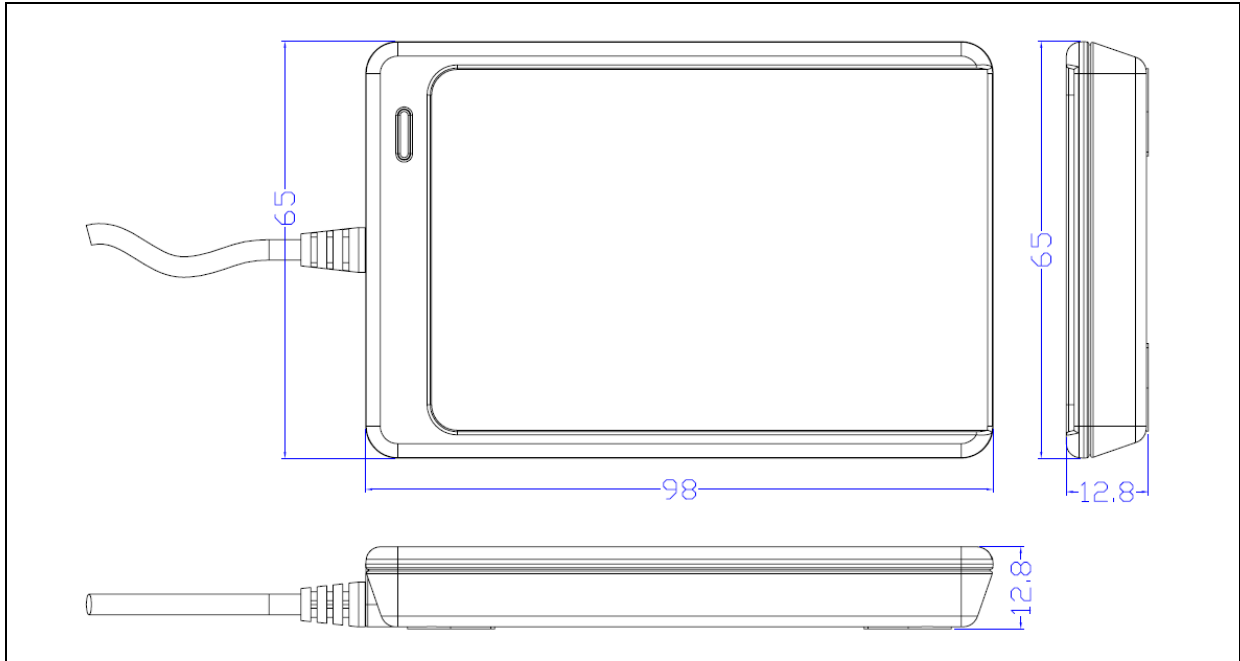
### 3.0. Typical Applications

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





## 4.0. Technical Specifications



### Physical Characteristics

Dimensions ..... 98.0 mm (L) × 65.0 mm (W) × 12.8 mm (H)  
Weight ..... 70 g  
Color ..... Pearl White

### USB Host Interface

Protocol ..... USB CCID  
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 ..... 1.0 m, Fixed

### Contactless Smart Card Interface

Standard ..... ISO/IEC 18092 NFC, ISO 14443 Type A & B, MIFARE, FeliCa  
Protocol ..... ISO 14443 T=CL for ISO 14443-4 compliant cards  
..... T=CL Emulation for MIFARE Classic, ISO 18092, FeliCa and NFC Tags  
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  
Antenna Size ..... 50 mm × 40 mm

### Built-in Peripherals

LED ..... 1 bi-color: Red and Green  
Buzzer ..... Monotone

### Application Programming Interface

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

### Operating Conditions

Temperature ..... 0 °C – 60 °C  
Humidity ..... Max. 90% (non-condensing)  
MTBF ..... 408,500 hrs

### Certifications/Compliance

EN 60950/IEC 60950, ISO 14443, ISO 18092, USB Full Speed, PC/SC, CCID, CE, FCC, RoHS 2, REACH VCCI (Japan), KC (Korea), Microsoft® WHQL



**Device Driver Operating System Support**

Windows® CE 5.0, Windows® 6.0, Windows® Embedded Compact 7, Windows® XP, Windows Vista®, Windows® 7, Windows® 8, Windows® 8.1, Windows® 10  
Windows® Server 2003, Windows® Server 2003 R2, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012, Windows® Server 2012 R2, Windows® Server 2016  
Linux®, Mac OS®, Solaris, Android™ 3.1 and later



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