



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

# ACR122U NFC READER

Technical Specifications





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## 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 read and write faster and more efficiently. Furthermore, ACR122U 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

- CCID-compliant
- PC/SC-compliant
- Read/write speed 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 Type A and B, Mifare®, FeliCa, and all 4 types of NFC (ISO/IEC 18092) tags
- Supports all 3 modes of NFC: reader mode, card emulation and peer-to-peer mode
- Built-in anti-collision feature (at least 1 card is detected when multiple cards are presented)
- USB PnP
- Bi-color LED
- Compact size: 98mm (L) x 65mm (W) x 12.8mm (H)
- Light Weight: 70g
- Compliance with CE, FCC, VCCI and RoHS
- User-controllable buzzer (optional)

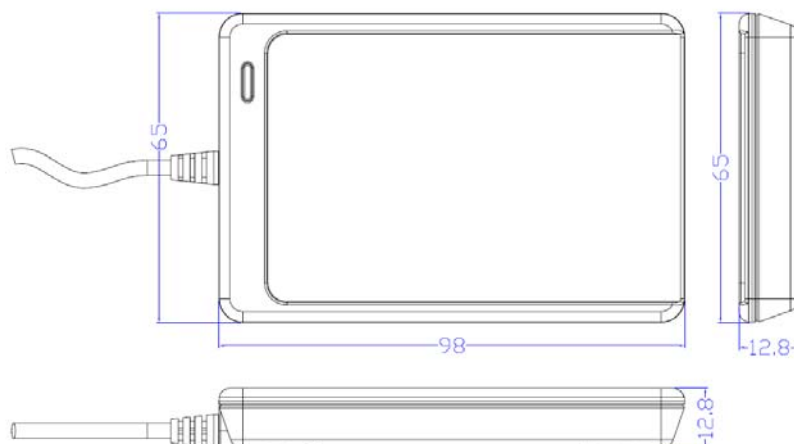


### 3.0. Typical Applications

- Network access control
- Micro-payment
- NFC mobile tag
- Public transportation terminals
- Automatic fare collection
- Physical access control
- Customer loyalty
- Time and attendance
- Contactless public phones
- Vending machines



## 4.0. Technical Specifications



### Universal Serial Bus Interface

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

### Contactless Smart Card Interface

Standard ..... ISO/IEC 18092 ; ISO14443 A and B, FeliCa, MiFare Classics  
Protocol..... FeliCa protocol, T=CL protocol  
Operating Frequency ..... 13.56 MHz  
Smart card read / write speed ..... 106 kbps, 212 kbps, 424 kbps

### Casing

Dimensions ..... 98 mm (L) x 65 mm (W) x 12.8 mm (H)  
Weight ..... 70 grams  
Material ..... Polycarbonate (PC)  
Color ..... Pearl White  
Antenna Size..... 50 mm x 40 mm  
Operating distance ..... up to 50 mm

### Built-In Peripherals

Bi-Color LED ..... Bi-color LED, red and green  
Buzzer ..... Monotone (optional)

### Operating Conditions

Temperature ..... 0 - 50° C  
Humidity ..... 10% - 80%

### Cable Connector

Length..... 1.0 M (USB)

### Certifications/Compliance

PC/SC, CCID, CE, FCC, VCCI, RoHS Compliant  
Microsoft WHQL 2000, XP, Vista, 7

### Device Driver Operating System Support

Windows ® 2000, Server 2003, XP, Vista, Server 2008, 7  
Windows ® CE 5.0  
Linux, Mac OS X

