



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR122L Serial NFC Reader with LCD

Technical Specifications V1.03





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1.0. Introduction



The ACR122L is a serial NFC contactless reader with LCD screen. Developed based on the 13.56 MHz RFID technology and the ISO/IEC 18092 NFC standard, it supports ISO 14443 Type A and B cards, Mifare, FeliCa and NFC technologies, including all four types of NFC tags.

ACR122L has a built-in anti-collision feature and direct card type polling commands that enable smooth operation in cases where multiple cards are present. ACR122L comes with four LEDs, a buzzer and an LCD, providing users with a clear indication of the reader's status. The two-line graphic LCD has multiple language support, including language support for Chinese, English, Japanese and several European languages. It allows interactive operation, such as scrolling up and down, left and right, etc. Finally, ACR122L is equipped with three built-in SAM slots that provide enhanced security in contactless operations.



2.0. Features

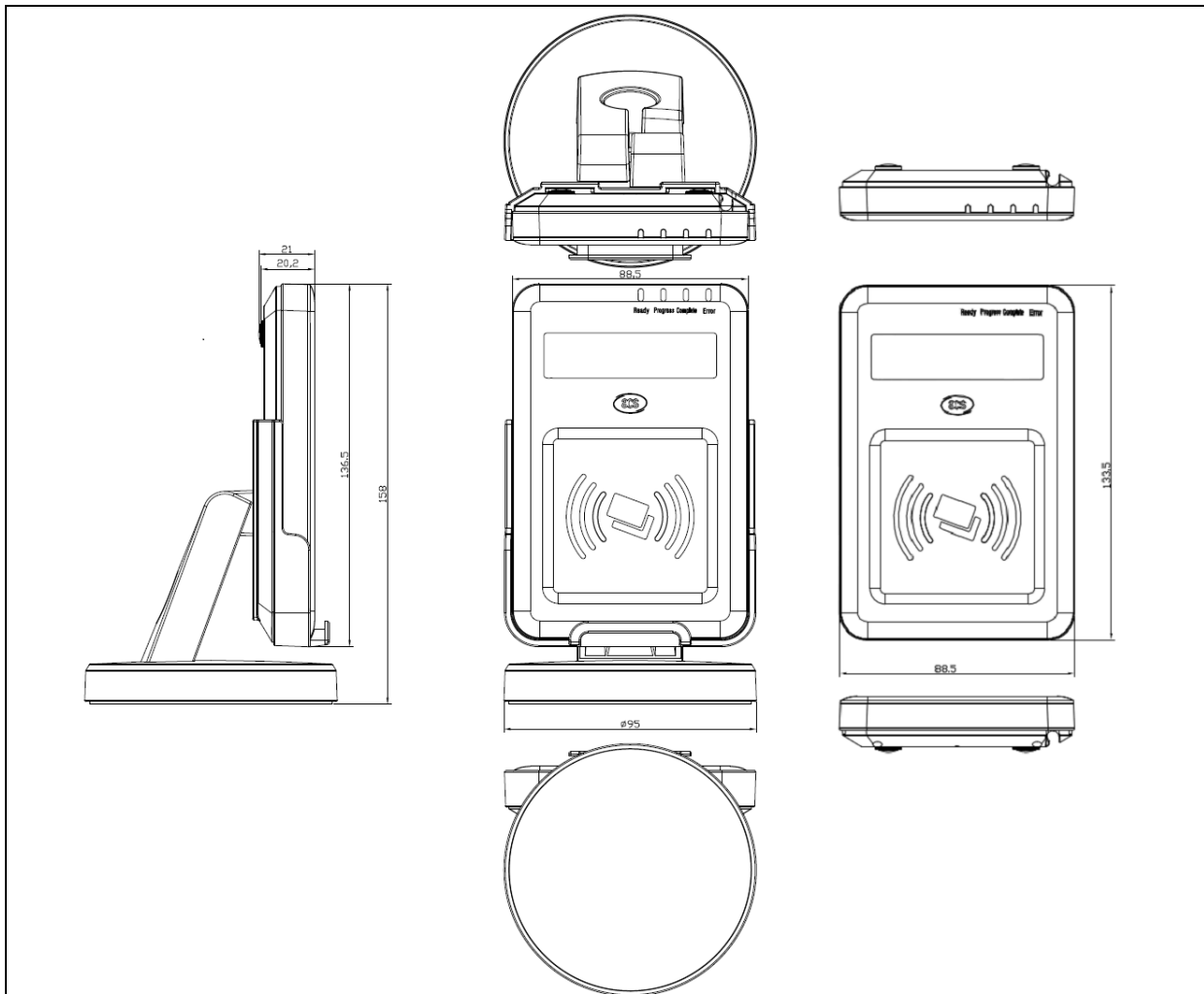
- Serial RS232 Interface: Baud Rate = 115200 bps, 8-N-1
- 7 V DC adaptor for power supply
- CCID-like frame format (Binary format)
- Smart Card Reader:
 - Read/Write speed of up to 424 kbps
 - Built-in antenna for contactless tag access, with card reading distance of up to 50 mm (depending on tag type)
 - 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)
 - Three ISO 7816 compliant SAM slots
- Built-in Peripherals:
 - Two-line graphic LCD with interactive operability (i.e. scroll up and down, left and right, etc.) and multi-language support (i.e. Chinese, English, Japanese and several European languages)
 - Four user-controllable LEDs
 - User-controllable buzzer
- Compliant with the following standards:
 - ISO 14443
 - CE
 - FCC
 - VCCI
 - 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



Serial Interface

Power Source 7 V DC power adaptor
 Speed 9.6 kbps, 115.2 kbps
 Supply Voltage Regulated 5 V DC
 Supply Current 200 mA (max.); 50 mA (standby); 100 mA (normal)

Contactless Smart Card Interface

Standard Mifare, ISO 14443-4 Type A & B, FeliCa, ISO/IEC 18092 NFC
 Operating Frequency 13.56 MHz
 Operating Distance Up to 50 mm (depending on tag type)
 Smart Card Read/Write Speed 106, 212, 424 kbps

SAM Card Interface

Standard ISO 7816
 Protocol T=0 protocol
 Operating Frequency 4 MHz
 Smart Card Read/Write Speed 9.6 – 115.2 kbps

Built-in Peripherals

LCD Display 128 x 32 pixel graphic LCD with yellow-green backlight
 Number of characters: 2 line x 16 characters
 LED Status Indicators 4 LEDs: Green, Blue, Orange and Red
 Buzzer Monotone

Physical Specifications

Dimensions Main Body: 133.5 mm (L) x 88.5 mm (W) x 21.0 mm (H);
 With Stand: 158.0 mm (L) x 95.0 mm (W) x 95.0 mm (H)
 Weight Main Body: 202 g
 With Stand and Adaptor: 645 g
 Color Black
 Cable Length 1.5 m



Operating Conditions

Temperature 0 - 50° C
Humidity 10% - 90%

Certifications/Compliance

ISO 14443, CE, FCC, VCCI, RoHS

Device Driver Operating System Support

Windows® 98, ME, 2000, XP, Vista, 7, Server 2003, Server 2008, Server 2008 R2
Linux

