



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR122S

Serial NFC Reader



Technical Specifications V2.02



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1.0. Introduction



The ACR122S is the serial interface (RS-232) extension of the ACR122 Series, which is a family of NFC contactless smart card readers/writers. Developed based on the 13.56 MHz RFID technology and the ISO/IEC 18092 NFC standard, it also supports FeliCa and NFC tags, aside from Mifare and ISO 14443 Type A and B cards.

ACR122S is equipped with a buzzer and two LEDs for richer user interaction. It also supports anti-collision and selective card polling, allowing smooth operation even when multiple cards are presented. Moreover, it is equipped with a built-in SAM slot to secure the overall contactless operation.



2.0. Features

- Serial RS-232 Interface: Baud Rate = 115200 bps, 8-N-1
- USB interface for power supply
- CCID-like fram 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)
 - ISO 7816-compliant SAM slot
- Built-in Peripherals:
 - Two user-controllable LEDs
 - User-controllable buzzer
- Compliant with the following standards:
 - ISO 14443
 - CE
 - FCC
 - KC
 - VCCI
 - RoHS

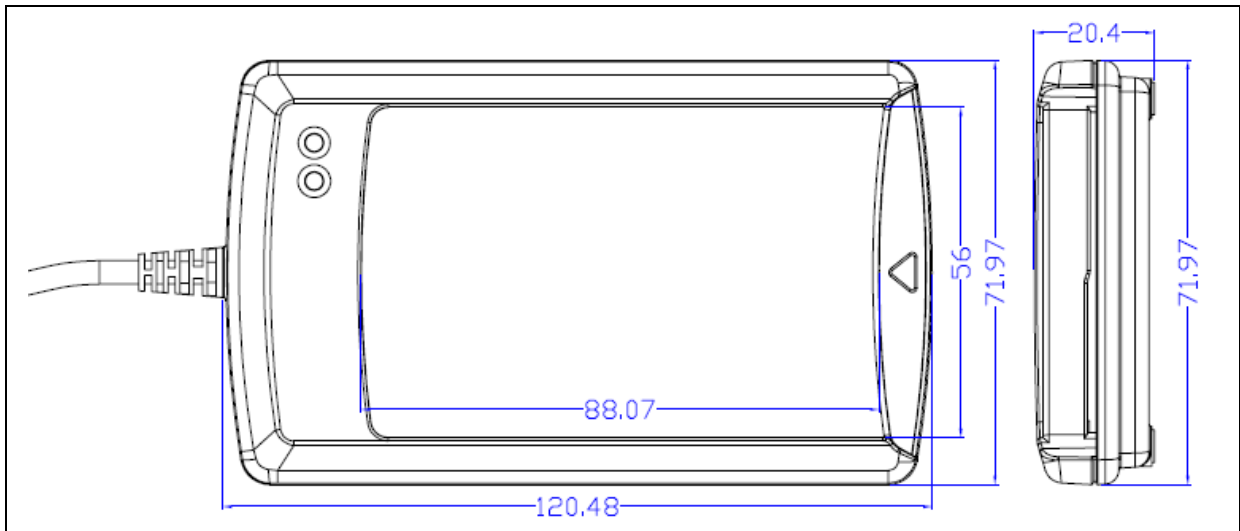


3.0. Typical Applications

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



4.0. Technical Specifications



Serial Interface

Power Source..... From USB
 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

Physical Specifications

Dimensions 120.5 mm (L) x 72.0 mm (W) x 20.4 mm (H)
 Weight..... 148 g
 Color Metallic blue
 Cable Length..... 1.5 m (DB9 + USB)

Built-In Peripherals

LEDs Red and Green
 Buzzer Monotone

Operating Conditions

Temperature 0 – 50 °C
 Humidity 10% - 90%
 MTBF 600,000 hrs.

Certifications/Compliance

ISO 14443, CE, FCC, KC, VCCI, RoHS

Device Driver Operating System Support

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

