Advanced Card Systems Ltd.
Card & Reader Technologies

ACR122L VisualVantage
Serial NFC Reader with LCD

A Product Presentation

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Rundown

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Product Overview
ACR122L VisualVantage USB NFC Reader with LCD

The ACR122 Series is a family of Contactless Smart Card Readers sharing the same core. The readers are developed based on the 13.56 MHz RFID technology and the ISO/IEC 18092 NFC standard.

ACR122L, a serial interface NFC Contactless Reader with LCD screen, is especially designed for POS terminals employing different smart card applications.
Product Features
What are the Key Features of ACR122L?

- **Supported Card Types**
  - ISO 14443 Types A & B
  - MIFARE®
  - FeliCa
  - NFC Tags

- **RS-232 for Data Transmission**
  - 7 V DC Adaptor for Power Supply

- **Smart Card Interface**
  - PICC (Contactless)
  - SAM

- **Driverless Operation**

- **Access Speed**
  - Maximum of 424 Kbps

- **User-controllable Peripherals**
  - 2-line Graphic LCD
  - 4 LEDs
  - Buzzer
  - 3 ISO 7816 SAM Sots

- **2-line Graphic LCD Features**
  - Interactive Operability
  - Multiple Language Support

- **Operating System Support**

- **Certifications/Compliance**
  - ISO 14443
  - CE, FCC, VCCI, RoHS
NFC Technology-enabled

NFC Tag Support
- Tag 1: based on ISO 14443 A (96 bytes) e.g., Topaz
- Tag 2: based on ISO 14443 A (48 bytes) e.g., MIFARE Ultralight
- Tag 3: based on Japanese Industrial Standard e.g., FeliCa
- Tag 4: based on ISO 14443 A and B e.g., MIFARE DESFire

Source: http://www.nfc-forum.org/specs/
Recognizing the growing use of contactless smart card technology globally, ACR122L embraces different card types, common user scenarios and application environments.

- ACR122L supports a wide range of cards and phones (i.e. ISO 14443 Type A & B, MIFARE, FeliCa and NFC tags).
- ACR122L’s serial interface facilitates integration into POS terminals.
- ACR122L comes with three built-in SAM slots to secure the contactless operation.
- The ACR122L Device Peripherals include 4 LEDs, a buzzer and a 2-line graphic LCD providing rich user interaction.

- The LCD provides:
  - Interactive operability (scrolling up and down, left and right, etc.)
  - Multiple language support (Chinese, English, Japanese and some European languages)
  - Graphic display
ACR122L Architecture

Host

DLL API Layer

ACR122L

Peripherals
(LED and Buzzer)

ISO 7816 Parts 1-3 + T=0 SAM Interface

Protocol Conversion + ISO 14443, Mifare, FeliCa, and ISO 18092

SAM (Socket)

Contactless Tag/NFC Device (Built-in Antenna)

Serial RS-232 Interface

RF Interface
Product Value
What are the Key Benefits of ACR122L?

**Great Convenience to Consumers**
ACR122L supports anti-collision and direct polling for a specific card type. Users can tap their purses with several cards inside, and the device will only access the specific card involved in the transaction.

**Great Convenience to Developers**
ACR122L supports advanced settings by direct commands (i.e. reducing the strength of the antenna field to shorten the card reading distance).

**NFC-enabled**
ACR122L supports NFC Type 1 to Type 4 tags for different applications.

**Ease of Integration**
ACR122L’s serial interface and driverless operation facilitates its easy integration into different platforms.

**Multi-protocol Support**
ACR122L works with a wide range of contactless tags, cards and devices. In most cases, using ACR122L eliminates the need for merchants to use another reader for different cards and applications.

**Rich User Interaction**
ACR122L’s user-controllable device peripherals provide programmers with easy development of user-interactive applications.
Product Application
In what areas can we apply ACR122L?

- Automatic Fare Collection
- Cashless Payment
- Vending Machines
- Physical Access Control
- Network Access
Thank You!

For more information, visit: www.acr122l.com