



Advanced Card Systems Limited

Card and Reader Technologies

A background image showing a person's hands using a card reader. The person is holding a card and inserting it into a device. The image is slightly blurred and has a semi-transparent white box overlaid on it.

Technical Specifications

ACR122 NFC Contactless Smart Card Reader





Advanced Card Systems Limited

ACR122 NFC Contactless Smart Card Reader

1.0 Introduction



The ACR122 is a PC-linked Contactless Smart Card Reader/Writer developed on the 13.56MHz Contactless Technology. It is the world's first CCID Compliant Contactless Card Reader/Writer that follows both ISO14443 and ISO18092. This device is designed to support not only MiFare and ISO14443 Type A and B Cards but also FeliCa and NFC tags.

By making use high-speed card access and full USB speed of 12 Mbps, read and write operations are faster and more efficient. Furthermore, this reader acts as a Plug and Play (PnP) device so there is no need to provide drivers to users. With its compact size and

trendy design and with the various features the ACR122 offers, you can experience the convenience in using ACR122 for applications of payment, mass transit, physical access control, time attendance, etc.

1.1 About RoHS Compliance

The RoHS (**R**estriction **o**f **H**azardous **S**ubstance) Directive restricts the use of six hazardous materials in the manufacturing of various types of EEE (Electrical and Electronic Equipment), including:

- Lead,
- Mercury,
- Cadmium,
- Hexavalent chromium,
- Polybrominated biphenyl (PBB) and
- Polybrominated diphenyl ether (PBDE).

**RoHS
Compliant**

RoHS compliance means the protection to the environment and your future generations from these restricted irritants, carcinogens and toxins.

2.0 Features

- CCID Standard
- Read / Write Speed up to 424kbps
- ISO/IEC18092 (NFC) compliant
- ISO14443 Type A and B card support
- USB PnP
- Compact and Slim design
- Bi-Color LED
- RoHS Compliant
- User Controllable Buzzer (optional)
- SAM Socket (optional)

3.0 Typical Applications

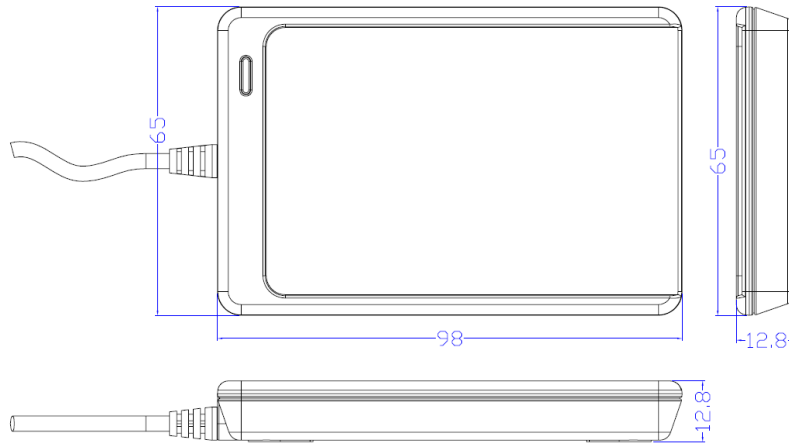
- Network access control
- Micro-payment
- NFC mobile tag
- Public Transportation Terminals
- Automatic Fare Collection
- Physical access control
- Customer Loyalty
- Time attendance
- Contactless public phones
- Vending machines



Advanced Card Systems Limited

ACR122 NFC Contactless Smart Card Reader

4.0 Technical Specification



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
 Protocol FeliCa protocol, T=CL protocol
 Operating Frequency 13.56 MHz
 Smart card read / write speed 212 kbps, 424 Kbps

SAM Card Interface (Optional)

Standard ISO 7816
 Protocol T=0 protocol
 Operating Frequency 4 MHz
 Smart card read / write speed 9600 - 115200 bps

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 50mm x 40mm
 Operating distance up to 50 mm

Built-in Peripherals

Bi-Color LED Bi-Color LED, Red and Green
 Buzzer Monotone (optional)

Cable Connector

Length 1.0 M (USB)

Standard/Certifications

CE, FCC and ROHS Compliant



OS Support

Windows 2K, 2K3, XP32, XP64, VISTA32, VISTA64 and Linux

OEM

OEM-Logo possible, customer-specific colors, casing, and card connector