Advanced Card Systems Ltd.
Card & Reader Technologies

ACR122T
USB Token
NFC Reader

Technical Specifications V2.05

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ACR122T – Technical Specifications
Version 2.05

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1.0. Introduction

The ACR122T is the token version of the ACR122U, the world's first NFC card reader compliant with the CCID standard, is developed based on the 13.56 MHz RFID technology and the ISO/IEC 18092 NFC standard. It supports not only MIFARE® and ISO 14443 Type A and B cards but also FeliCa and NFC tags.

Because of its compact size and great portability, you can bring the ACR122T and conveniently use it in public areas – a coffee shop, for example – or use it at home to securely log on to your notebook, load your e-Purse, check your balance, and pay for a product or service you ordered.

2.0. Features

- USB 2.0 Full Speed Interface

- Smart Card Reader:
  - Contactless Interface
    - Read/Write speed of up to 424 Kbps
    - Built-in antenna for contactless tag access, with card reading distance of up to 30 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)

- Application Programming Interface:
  - Supports PC/SC
  - Supports CT-API (through wrapper on top of PC/SC)

- Built-in Peripheral:
  - User controllable bi-color LED

- Supports Android™ 3.1 and above

- Compliant with the following standards:
  - EN60950/IEC 60950
  - ISO 18092
  - ISO 14443
  - CE
  - FCC
  - VCCI
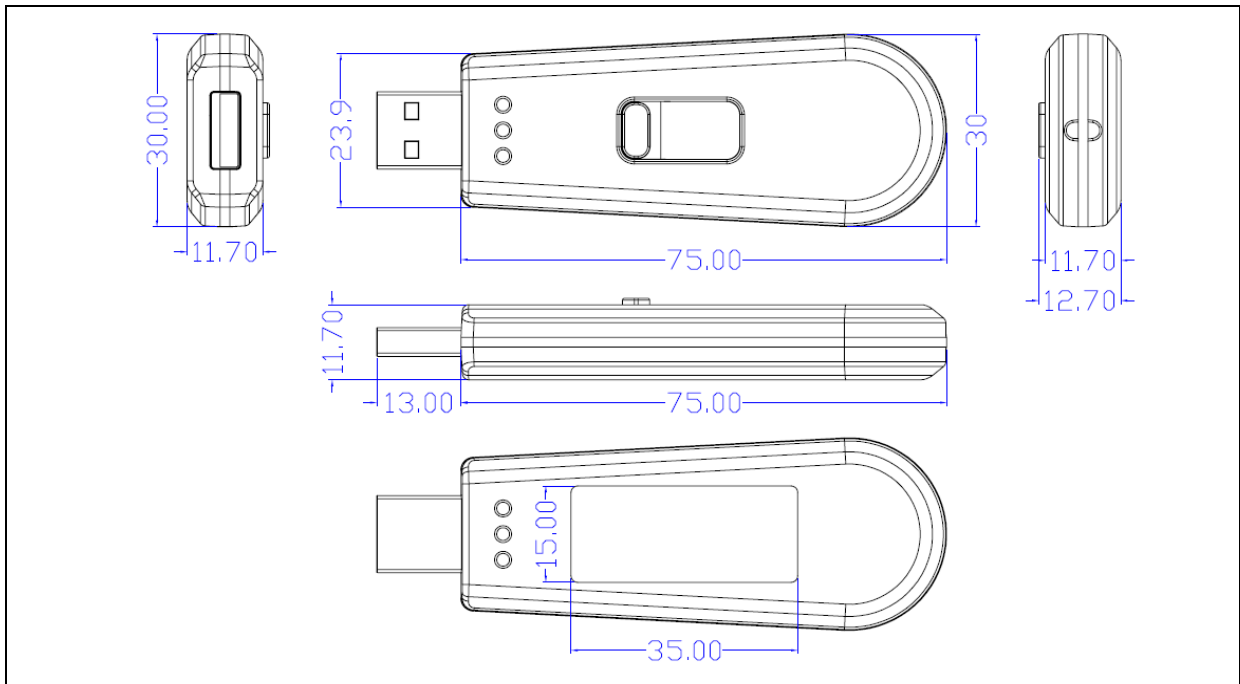 - KC
  - PC/SC
  - CCID
  - Microsoft® WHQL
  - RoHS 2

3.0. Typical Applications

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

4.0. Technical Specifications

| **Universal Serial Bus Interface** |
| Power Source................................. From USB |
| Speed... 12 Mbps (Full Speed) |
| Supply Voltage.............................. Regulated 5 V DC |
| Supply Current .... 200 mA (maximum); 50 mA (standby); 100 mA (normal) |

Universal Serial Bus Interface
Power Source................................. From USB
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Contactless Smart Card Interface
Standard .... ISO/IEC 18092 NFC, ISO 14443 Part 1-4 Type A and B, FeliCa, MIFARE
Protocol.. FeliCa protocol, T=CL protocol
Operating Frequency .... 13.56 MHz
Operating Distance .... Up to 30 mm (depending on tag type)
Smart Card Read/Write Speed....... 106 Kbps, 212 Kbps, 424 Kbps

Physical Specifications
Dimensions .... 75.0 mm (L) x 30.0 mm (W) 12.7 mm (H)
Weight... 15.0 g
Material .... Polycarbonate (PC)
Color .... Pearl White
Casing... Extractable USB plug

Built-in Peripheral
Bi-color LED................................. Red and Green

Operating Conditions
Temperature.................................. 0 °C – 50 °C
Humidity .... Max 90% (non-condensing)
MTBF .... 500,000 hrs

Application Programming Interface
PC/SC
CT-API (through wrapper on top of PC/SC)

Certifications/Compliance
EN60950/IEC 60950, ISO 18092, ISO 14443, CE, FCC, KC, VCCI, PC/SC, CCID, RoHS 2, USB Full Speed
Microsoft® WHQL for Windows® 2000, Windows® XP, Window Vista®, Windows® 7, Windows® 8,
Windows® 8.1, Windows® Server 2003, Windows® Server 2008, Windows® Server 2008 R2,
Windows® Server 2012

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Device Driver Operating System Support

Windows® 2000, Windows® XP, Window Vista®, Windows® 7, Windows® 8, Windows® 8.1,
Windows® Server 2003, Windows® Server 2003 R2, Windows® Server 2008, Windows® Server 2008 R2,
Windows® Server 2012, Windows® Server 2012 R2, Windows® CE 5.0 and 6.0,
Linux®, Mac OS®, Android™ 3.1 and above

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