ACR122T
USB Token
NFC Reader
Technical Specifications V2.06
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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. It 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 such as a coffee shop or use it at home to securely login 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)
    - Supports 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)
- **Built-in Peripheral:**
  - User controllable bi-color LED
- **Application Programming Interface:**
  - Supports PC/SC
  - Supports CT-API (through wrapper on top of PC/SC)
- **Supports Android™ 3.1 and later\(^1\)**
- **Compliant with the following standards:**
  - EN60950/IEC 60950
  - ISO 18092
  - ISO 14443
  - PC/SC
  - CCID
  - CE
  - FCC
  - RoHS 2
  - VCCI (Japan)
  - KC (Korea)
  - Microsoft® WHQL

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\(^1\) Uses an ACS–defined Android Library
3.0. Typical Applications

- e-Government
- e-Banking and e-Payment
- e-Healthcare
- Transportation
- Network Security
- Access Control
- Loyalty Program
4.0. Technical Specifications

**Physical Characteristics**
- **Dimensions**: 75.0 mm (L) × 30.0 mm (W) × 12.7 mm (H)
- **Weight**: 15 g
- **Color**: Pearl White
- **Material**: Polycarbonate (PC)
- **Casing**: Extractable USB plug

**USB Host Interface**
- **Protocol**: USB CCID
- **Connector Type**: Standard Type A
- **Power Source**: From USB port
- **Speed**: USB Full Speed (12 Mbps)
- **Supply Voltage**: 5 V
- **Supply Current**: Max. 200 mA, 50 mA (standby), 100 mA (normal)

**Contactless Smart Card Interface**
- **Standard**: ISO 14443 A and B Parts 1-4, ISO/IEC 18092 (NFC), MIFARE and FeliCa
- **Protocol**: T=CL
- **FeliCa 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

**Built-in Peripheral**
- **LED**: 1 bi-color, Red and Green

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

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

**Certifications/Compliance**
- EN60950/IEC 60950, ISO 14443, ISO 18092, USB Full Speed, PC/SC, CCID, CE, FCC, RoHS 2, VCCI (Japan), KC (Korea), Microsoft® WHQL
Device Driver Operating System Support
Linux®, Mac OS®, Android™ 3.1 and later

Android is a trademark of Google Inc.
FeliCa is the contactless IC card technology developed by Sony Corporation.
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