



CONTACTLESS READERS

# ACR1252U

USB NFC Contactless Reader III  
(NFC Forum Certified)

The ACR1252U USB NFC Reader III is an NFC Forum-certified PC-linked reader, developed based on 13.56MHz contactless technology. It has a SAM (Secure Access Module) slot which can be used together with a SAM card for key diversification and mutual authentication, providing high-level security in contactless transactions. Post-deployment firmware upgrade is also supported, eliminating the need for additional hardware modification.

ACR1252U is capable of the three modes of NFC, namely: card reader/writer, card emulation and peer-to-peer communication.

Compliant with both CCID and PC/SC, this plug-and-play USB NFC device allows interoperability with different devices and applications.

The ACR1252U comes with an optional stand to hold the smart card reader at an optimal angle, so that users can tap contactless cards or NFC-enabled devices onto the ACR1252U with ease.

## KEY FEATURES

- ✓ **Support various type of card type**
  - ISO/IEC 18092 NFC
  - ISO 14443 Type A & B (T=CL)
  - MIFARE®
  - FeliCa
- ✓ **Security**
  - 1 x ISO 7816 Standard SAM slot for improved security
- ✓ **Flexible**
  - Read/write speed, LED & Buzzer can be programmable
- ✓ **Support USB Firmware Upgrade**
- ✓ **Reliable**
  - Certified for international regulations
  - Mean time between failures (MTBF) up to 500k Hours
- ✓ **Compatibility**
  - Support for all major operating systems



## Common Applications

e-Government  
e-Banking and e-Payment  
e-Healthcare  
Transportation  
Network Security  
Access Control  
Loyalty Program  
Smart Poster/URL Marketing  
P2P Communication

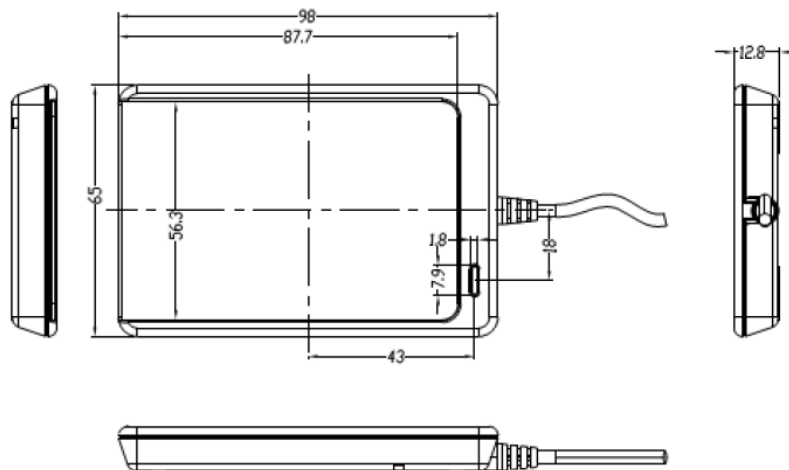




## TECHNICAL SPECIFICATION

| Contactless Smart Card Interface |                                                          | Peripherals                  |                                                                                                                            |
|----------------------------------|----------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Supported Card Types             | ISO/IEC 18092 NFC, ISO 14443 Type A & B, MIFARE®, FeliCa | Buzzer                       | 1 x Programmable Buzzer (Mono-tone)                                                                                        |
| Operating Frequency              | 13.56 MHz                                                | LED                          | 1 x Programmable LED (Red & Green)                                                                                         |
| Reading Distance                 | Up to 50 mm (Depending on tag type)                      | Operating Condition          |                                                                                                                            |
| Read/Write Speed                 | 106/212/424 kbps (Programmable)                          | Temperature                  | 0 - 60°C                                                                                                                   |
| Anti-Collision                   | Yes                                                      | Humidity                     | 90% (Non-condensing)                                                                                                       |
| Supported NFC Mode               | NFC Reader/Writer, Peer-to-Peer, Card Emulation          | MTBF                         | 500,000 Hours                                                                                                              |
| SAM Card Interface               |                                                          | Certifications & Compliances |                                                                                                                            |
| Standard                         | 1 x ISO 7816 Class A (5V) Standard SIM size slot         | Certifications               | NFC Forum Certification Mark, IEC/EN 62368, CE, UKCA, FCC, J-LIS, VCCI, TELEC, KC, BIS, RoHS, REACH, WEEE, Microsoft® WHQL |
| Protocol                         | T=0, T=1                                                 | Compliances                  | USB CCID, PC/SC                                                                                                            |
| Read/Write Speed                 | 9.6 – 215 kbps                                           | Libraries & Tools            |                                                                                                                            |
| Host Interface                   |                                                          | Libraries                    | CT-API                                                                                                                     |
| Protocol                         | USB CCID                                                 | Tools                        | Android Evaluation Kit, Software Development Kit (USD 149)                                                                 |
| Connector Type                   | USB Type-A, USB Type-C                                   | Drivers & Support            |                                                                                                                            |
| Speed                            | USB 2.0 Full Speed (12Mbps)                              | Driver Supported OS          | Windows, Linux, Mac OS, Android                                                                                            |
| Supply Voltage                   | 5VDC                                                     | Warranty                     | 1 Year                                                                                                                     |
| Current Consumption              | Max. 200mA                                               | Model/Part Number            |                                                                                                                            |
| USB Firmware Upgrade             | Supported                                                | USB Type-A                   | ACR1252U-M1                                                                                                                |
| Physical Characteristics         |                                                          | USB Type-C                   | ACR1252U-MF                                                                                                                |
| Dimension (L x W x H)            | Main Body: 98 x 65 x 12.8 mm<br>Antenna size: 50 x 40 mm |                              |                                                                                                                            |
| Weight                           | 81 g                                                     |                              |                                                                                                                            |
| Available Colour                 | Matte Black                                              |                              |                                                                                                                            |
| USB Cable Length                 | 1 m (Non-detachable)                                     |                              |                                                                                                                            |

## MECHANICAL SPECIFICATION



### About ACS

Advanced Card Systems Ltd. (ACS), founded in 1995, is Asia Pacific's top supplier and one of the world's top 3 suppliers of PC-linked smart card readers. ACS is the winner of the Product Quality Leadership Award for Smart Card Readers from Frost & Sullivan. In 2010, 2014 and 2015, ACS was listed in Forbes Asia's "Best Under a Billion" list, an inter-industry list comprised of 200 top-performing publicly listed companies in the Asia-Pacific, with sales between US\$5 million and US\$1 billion. ACS develops a wide range of high-quality smart card reading/writing devices, smart cards and related products and distributes them to over 100 countries worldwide.

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