



Advanced Card Systems Ltd.
Card & Reader Technologies

ACM1281U-C7

USB Contactless Reader Module with SAM Slot



Technical Specifications V1.00

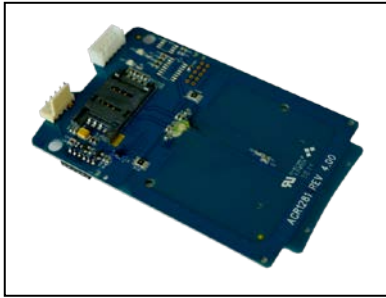


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1.0. Introduction



The ACM1281U-C7 USB Contactless Reader Module with SAM Slot, running on the 13.56 MHz frequency, was designed for fast and easy integration to embedded systems. It supports ISO 14443 Parts 1-4 Type A and B cards, and MIFARE® Classic series.

The ACM1281U-C7 has an integrated (on-board) antenna and comes with an optional USB cable and has additional features like firmware upgradability and extended APDU support. It also has an ISO 7816 Compliant built-in SAM (Secure Access Module) slot which can be used together with a SAM card for enhanced security.

With a maximum of 848 Kbps high-speed communication ability for contactless cards, making it suitable for highly demanding smart card applications like vending machine payment systems, kiosks, gaming machines and other integrated systems.



2.0. Features

- USB 2.0 Full Speed Interface
- Smart Card Reader:
 - Contactless Interface:
 - Read/Write speed of up to 848 Kbps
 - Built-in antenna for contactless tag access, with card reading distance of up to 50 mm (depending on tag type)
 - Supports ISO 14443 Part 4 Type A and B cards and MIFARE® Classic series
 - Built-in anti-collision feature (only one tag is accessed at any time)
 - Supports extended APDU (max. 64 KB)
 - SAM Interface:
 - One SAM slot
 - Supports ISO 7816 MCU Card (Class A)
- Application Programming Interface:
 - Supports PC/SC
 - Supports CT-API (through wrapper on top of PC/SC)
- Built-in Peripherals:
 - Two user-controllable LEDs
 - User-controllable buzzer
- USB Firmware Upgradability
- Supports Android™ 3.1 and above
- Compliant with the following standards:
 - ISO 14443
 - ISO 7816
 - CE
 - FCC
 - PC/SC
 - CCID
 - Microsoft® WHQL
 - RoHS 2
 - REACH

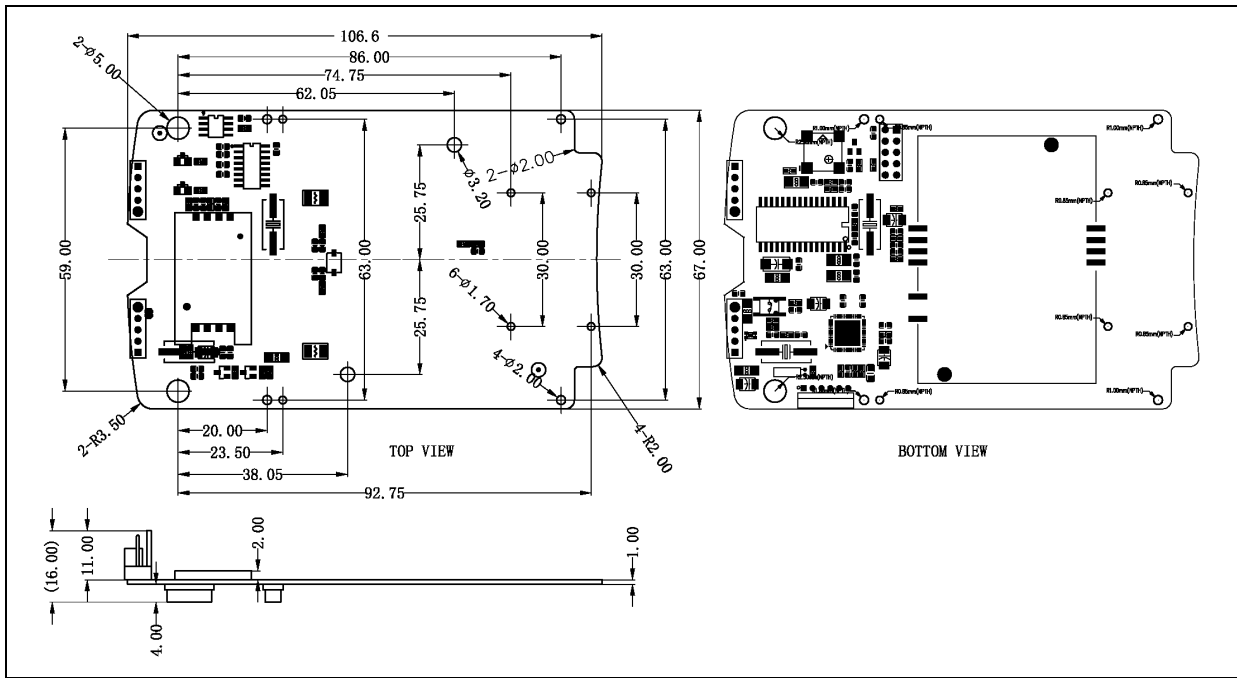


3.0. Typical Applications

- 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

Contactless Smart Card Interface

Standard ISO 14443 A and B Parts 1-4
 Protocol..... ISO 14443 T=CL for ISO 14443-4 compliant cards and T=CL Emulation for MIFARE series
 Smart Card Read/Write Speed..... 106 Kbps, 212 Kbps, 424 Kbps, 848 Kbps
 Operating Frequency 13.56 MHz
 Operating Distance Up to 50 mm (depending on card type)
 Antenna Size..... 65 mm x 60 mm

SAM Card Interface

Standard ISO 7816, Class A (5 V)
 Protocol..... T=0 and T=1 protocol

Built-in Peripherals

LEDs Red and Green
 Buzzer Monotone

Physical Specifications

Dimensions 106.6 mm (L) x 67.0 mm (W) x 16.0 mm (H)
 Weight..... 20.8 g

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

ISO 14443, ISO 7816, PC/SC, CCID, CE, FCC, RoHS 2, REACH, USB Full Speed
 Microsoft® WHQL, Windows® 2000, Windows® XP, Windows Vista®, Windows® 7, Windows® 8, Windows® Server 2012



Device Driver Operating System Support

Windows® 2000, Windows® XP, Windows Vista®, Windows® 7, Windows® 8, Windows® Server 2003, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012
Linux®, Android™ 3.1 and above



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