



Advanced Card Systems Ltd.
Card & Reader Technologies

ACM1281S-C7

Serial Contactless Reader Module with SAM Slot



Technical Specifications V1.03

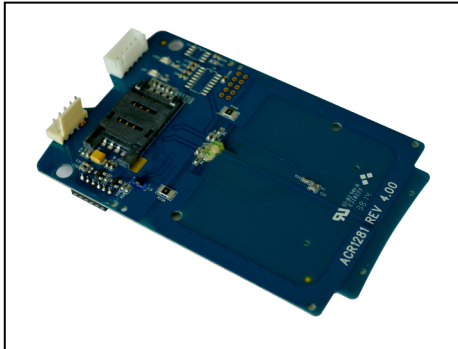


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1.0. Introduction



The ACM1281S-C7 Serial Contactless Reader Module with SAM Slot is designed based on the 13.56 MHz technology. It supports ISO 14443 Parts 1-4 Type A and B cards, and MIFARE Classic® series with a card reading distance of up to 50 mm (depending on tag type).

The ACM1281S-C7 is a Plug and Play device that does not require any driver installation and is specifically designed for fast and easy integration to embedded systems. It also has an ISO 7816-compliant built-in SAM (Secure Access Module) slot which can be used together with a SAM card for high-level security in contactless transactions.

The ACM1281S-C7 has an integrated (on-board) antenna, comes with an optional serial cable, and has additional features like USB firmware upgradability and extended APDU support. Lastly, the ACM1281S-C7 makes use of high-speed communication for contactless cards at a maximum of 848 Kbps, which makes it suitable for highly demanding applications such as vending machine payment systems, kiosks, gaming machines, and other integrated systems which have different serial ports.



2.0. Features

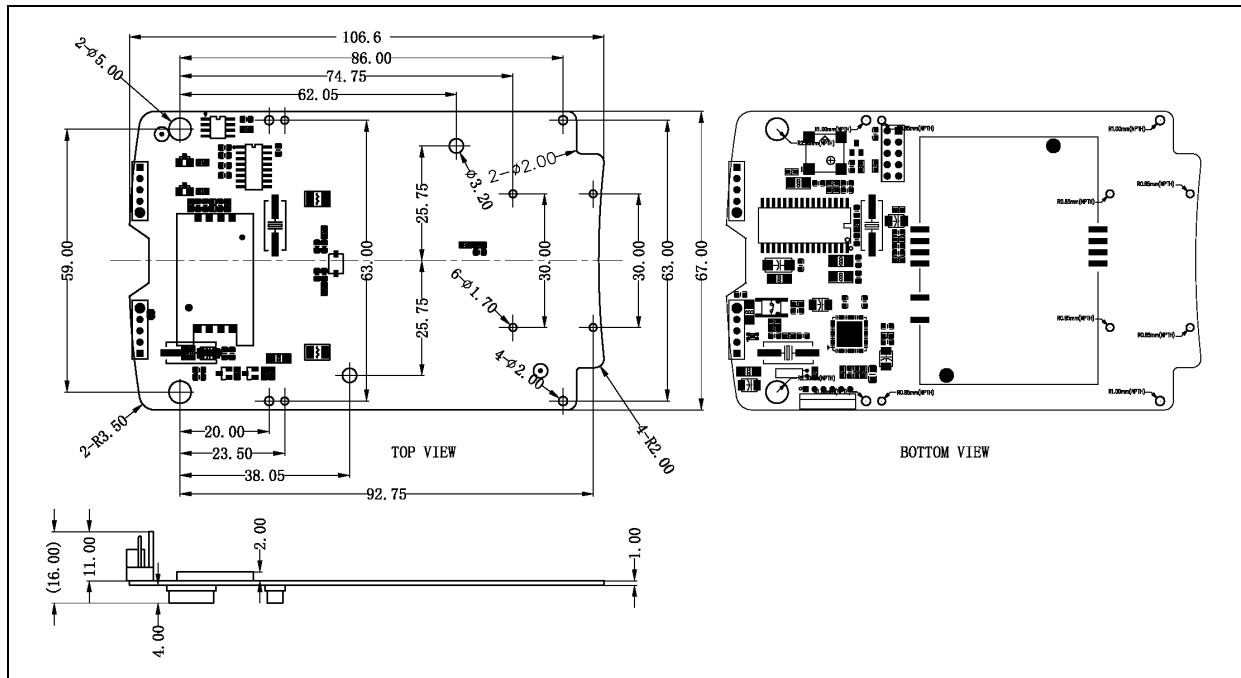
- Serial RS-232 Interface: Baud Rate = 9.6 Kbps (default), 19.2 Kbps, 38.4 Kbps, 57.6 Kbps, 115.2 Kbps, 230.4 Kbps
- USB interface for power supply
- CCID-like frame format
- Smart Card Reader:
 - Contactless Interface:
 - Read/Write speed of up to 848 Kbps
 - Built-in antenna for contactless tag access, 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-compliant Class A SAM cards
- Built-in Peripherals:
 - Two user-controllable LEDs
 - User-controllable buzzer
- USB Firmware Upgradeability
- Compliant with the following standards:
 - ISO 14443
 - ISO 7816
 - PC/SC
 - CE
 - FCC
 - 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



Physical Characteristics

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

Serial Host Interface

Protocol RS-232
Connector Type DB-9 connector
Power Source From USB port
Speed 9.6 Kbps (default), 19.2 Kbps, 38.4 Kbps, 57.6 Kbps, 115.2 Kbps, 230.4 Kbps
Supply Voltage 5 V
Supply Current Max. 200 mA
Cable Length 1.5 m, Detachable (optional)

Contactless Smart Card Interface

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

SAM Card Interface

Number of Slots 1 Standard SIM-sized Card Slot
Standard ISO 7816, Class A (5 V)
Protocol T=0; T=1
Smart Card Read/Write Speed 9.6 Kbps – 344 Kbps
Card Connector Type SAM Slot 0: Contact

Built-in Peripherals

LED 2 single-color: Red and Green
Buzzer Monotone

Other Feature

Firmware Upgrade Supported

Operating Conditions

Temperature 0 °C – 60 °C
Humidity Max. 90% (non-condensing)
MTBF 500,000 hrs

Certifications/Compliance

EN 60950/EIC 60950, ISO 14443, ISO 7816 (SAM Slot), CE, FCC, RoHS 2, REACH



Device Driver Operating System Support

Windows® XP, Windows Vista®, Windows® 7, Windows® 8, Windows® 8.1, Windows® 10,
Windows® Server 2003, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012,
Windows® Server 2012 R2, Windows® Server 2016
Linux®



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