Advanced Card Systems Ltd.
Card & Reader Technologies

ACR1281-C8 Contactless Reader/Writer

Technical Specifications V1.00

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1.0. Introduction

The ACR1281-C8 is the new version of ACS's ACR120 Contactless Smart Card Reader. It is a compact and cost-effective device developed based on the 13.56 MHz contactless smart card (RFID) technology, with proximity operating distance up to 5 cm, depending on the type of contactless tag in use (supports Mifare and ISO 14443 Type A and Type B cards).

The versatile reader is available in both USB and Serial interface version, which can easily be integrated into a PC environment as well as other systems. It is ideal for a broad range of applications, including public transport terminals, physical and logical access controls, and even vending machines.

2.0. Features

- USB PnP or Serial RS232 interface (also available in RS485 *upon request*)
- Read and write functionality
- Smart Card Reader:
  - Built-in antenna for contactless tag access, with card reading distance of up to 50 mm
  - Supports for ISO 14443 Type A and B cards, Mifare
  - Built-in anti-collision feature (only one tag is accessed at any time)
  - Selective card polling capability (especially useful when multiple cards are presented)
- Built-in Peripherals:
  - LED
  - Buzzer
- OEM PCBA module version (*upon request*)
- Firmware Upgradability
- Compliant with the following standards:
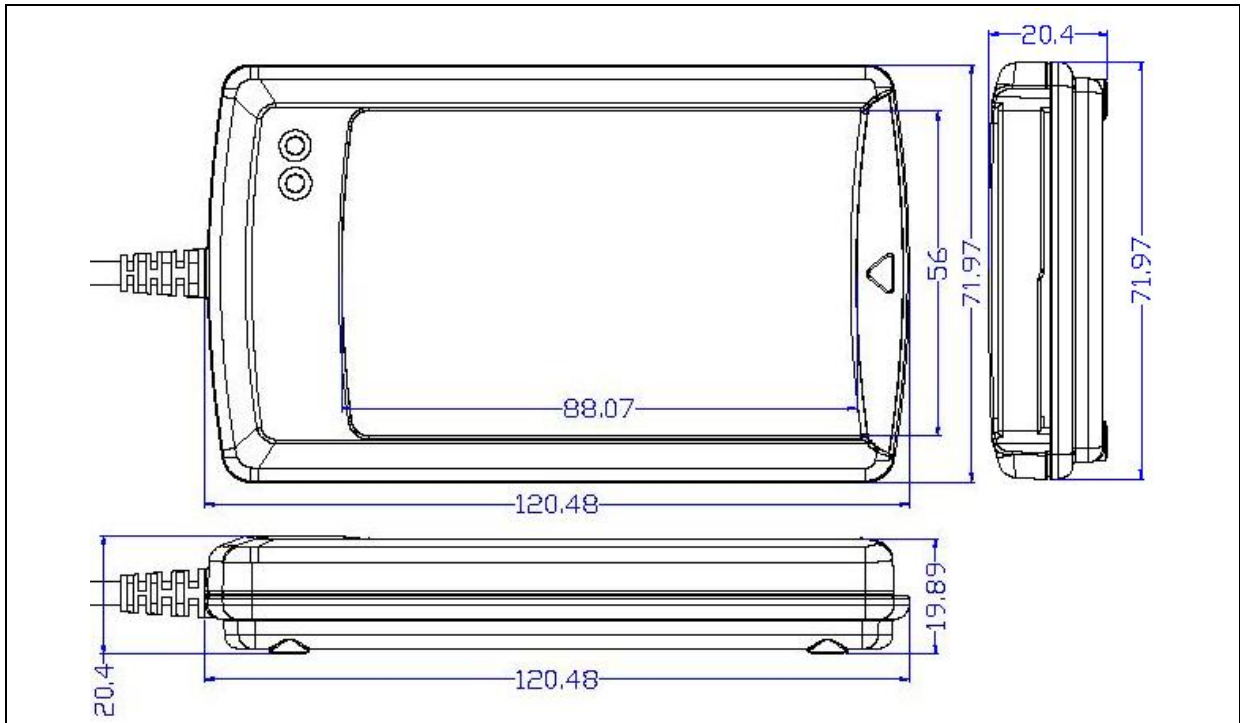 - CE
  - FCC
  - RoHS

3.0. Typical Applications

- e-Government
- e-Banking and e-Payment
- e-Healthcare
- Public Key Infrastructure
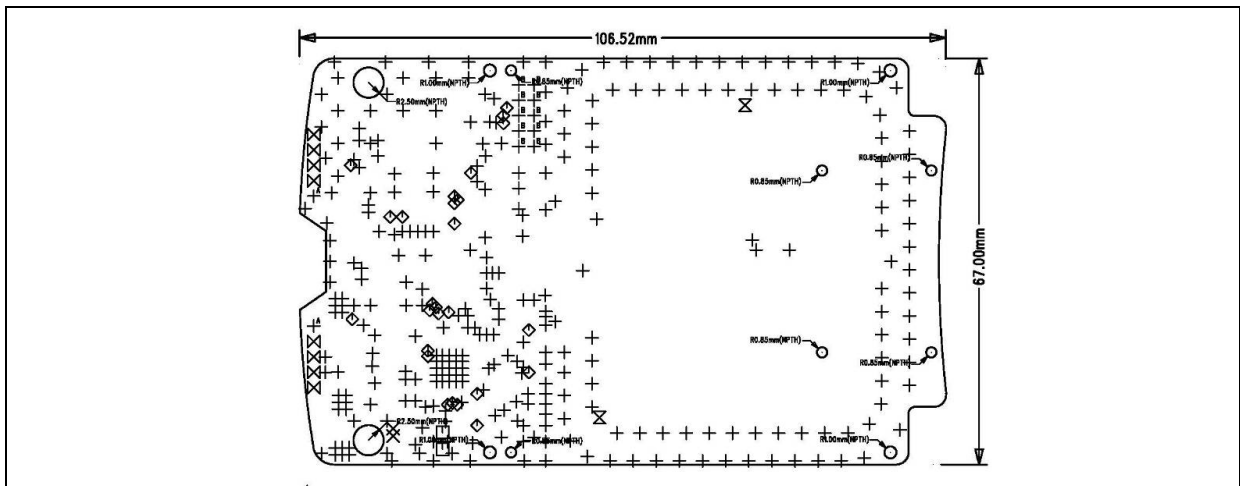- Network Security
- Access Control
- Loyalty Program

4.0. Technical Specifications

4.1. ACR1281-C8 Reader

4.2. ACR1281-C8 Reader Module

Serial Interface

Type .... RS232 (Standard)
Operation Baud Rate .... 9,600 – 115,200 bps
Power Source .... From USB
Supply Voltage .... Regulated 5 V DC
Supply Current .... 200 mA

Universal Serial Bus Interface

Power Source .... From USB
Speed .... 12 Mbps (High Speed)
Supply Voltage .... Regulated 5 V DC
Supply Current .... 200 mA

Contactless Smart Card Interface

Standard .... ISO 14443 A and B
Protocol .... Mifare® Classic protocols, Mifare® DESFire protocols, Mifare Mini protocols
Smart Card Read/Write Speed .... 106 kbps

Physical Specifications

Dimensions .... 120.5 mm (L) x 72.0 mm (W) x 20.4 mm (H)
Color .... Black
Weight .... 150 g

Operating Conditions

Temperature .... 0 – 50 °C
Humidity .... 10% - 90%

Certification/Compliance

CE, FCC, RoHS

Device Driver Operating System Support

Windows® 98, ME, NT (Serial), 2000, XP, Vista, 7, Server 2003, Server 2003 R2, Server 2008, Server 2008 R2
Linux