



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR38U-JKC

Smart Card Reader



Technical Specifications



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1.0. Introduction

In our ever-changing world, while the advancement of technology seems unstoppable, so is the need to protect ourselves from intruders, phishers and others who want to steal valuable information. ACR38U-JKC combines efficiency, cost-effectiveness, and reliability of a smart card reader. It is designed to communicate with the PC environment with a USB full speed interface and CCID compliance making it compatible with different operating systems.



1.1. Smart Card Reader

ACR38U-JKC supports ISO 7816 Classes A, B, and C smart cards and works with memory cards and microprocessor cards with the T=0 and T=1 protocol. It also features a USB Full Speed interface and a smart card R/W speed of 344 Kbps. Highly durable, ACR38U-JKC can last for at least 100,000 card insertion cycles.

1.2. Trendy Design

ACR38U-JKC sports fresh and trendy design that makes it stand out from ordinary smart card readers. This modern device houses the powerful

ACR38 core, which has been proven to support highly demanding smart card applications, such as e-Banking and e-Payment, e-Government, Loyalty, and Access Control, Network Security, e-Healthcare.

1.3. Ease of Integration

Because of ACR38U-JKC's PC/SC and CCID compliance, it can be easily installed, used, and integrated in a PC environment. Its drivers are also compatible with Windows, Linux and MAC operating systems.



2.0. Features

- USB 2.0 Full Speed Interface
- Plug and Play – CCID support brings utmost mobility
- Smart card reader:
 - Supports ISO 7816 Class A, B, and C (5 V, 3 V, 1.8 V) cards
 - Has read and write support to all microprocessor cards with T=0 or T=1 protocols
 - Supports memory cards:
 - I2C bus Protocol Cards (1K bits to 1024K bits)
 - Secure Memory cards (Atmel AT88SC153 and AT88SC1608)
 - Memory Card with Secure Logic (AT88SC101/102/1003)
 - Supports SLE 4404/06/18/28/32/36/42, SLE 5518/28/32/36/42, SLE 6636
 - Supports PPS (Protocol and Parameters Selection)
 - Has Short Circuit Protection
- Compliant with the following standards:
 - EN60950/IEC60950
 - PC/SC
 - CCID
 - RoHS
 - CE
 - FCC
 - Microsoft WHQL
 - VCCI



3.0. Supported Card Types

3.1. MCU Cards

ACR38U-JKC operates with any MCU card following either the T=0 or T=1 protocol.

3.2. Memory-Based Smart Cards

ACR38U-JKC works with several memory-based smart cards such as:

- Cards following the I2Cbus protocol (free memory cards) with maximum 128 bytes page with capability, including:
 - Atmel: AT24C01/02/04/08/16/32/64/128/256/512/1024
 - SGS-Thomson: ST14C02C, ST14C04C
 - Gemplus: GFM1K, GFM2K, GFM4K, GFM8K
- Cards with secure memory IC with password and authentication, including:
 - Atmel: AT88SC153 and AT88SC1608
- Cards with intelligent 1k bytes EEPROM with write-protect function, including:
 - Infineon: SLE4418, SLE4428, SLE5518 and SLE5528
- Cards with intelligent 256 bytes EEPROM with write-protect function, including:
 - Infineon: SLE4432, SLE4442, SLE5532 and SLE5542
- Cards with '104' type EEPROM non-reloadable token counter cards, including:
 - Infineon: SLE4406, SLE4436, SLE5536 and SLE6636
- Cards with Intelligent 416-Bit EEPROM with internal PIN check, including:
 - Infineon: SLE4404
- Cards with Security Logic with Application Zone(s), including:
 - Atmel: AT88SC101, AT88SC102 and AT88SC1003

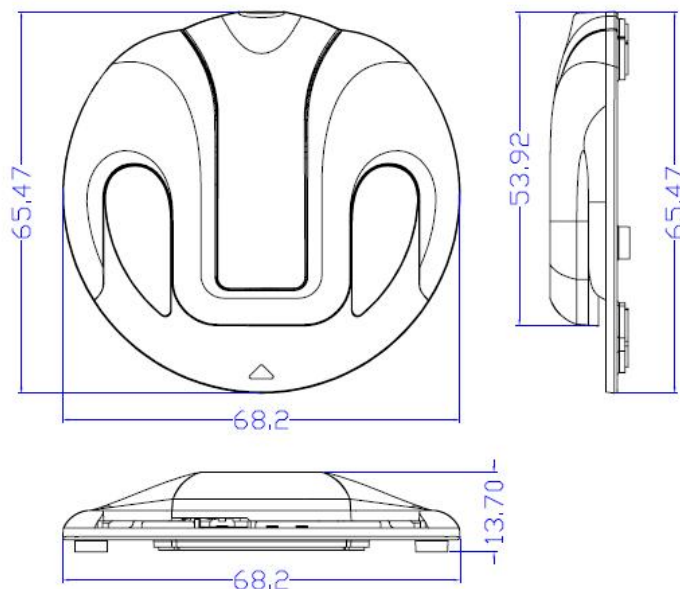


4.0. Typical Applications

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



5.0. Technical Specifications



Universal Serial Bus Interface

Type USB full speed, four lines: +5V, GND, D+ and D-
Power source From USB
Speed 12 Mbps

Smart Card Interface

Standard ISO-7816 Class A, B and C (5 V, 3 V, 1.8 V), T=0 and T=1
Supply current max. 50mA
Smart card read / write speed max. 344,086 bps
Short circuit protection +5V / GND on all pins
The presence of the smart card power supply voltage is indicated through a green LED on the reader
CLK frequency 4 MHz
Card connector Contact
Card insertion cycles min. 100,000

Physical Specifications

Dimensions 65.5mm (L) x 68.2mm (W) x 13.7mm (H)
Color Green (Default) *Also available in other colors
Weight 65 g (± 5g allowance for cable)
Cable length, cord, connector 1.5 meters, Fixed (non-detachable), USB A

Operating Conditions

Temperature 0 - 50°C
Humidity 10% - 90%
MTBF 500,000 hrs

Certifications/Compliance

EN 60950/IEC 60950, EMV 2000 Level 1, PC/SC, CE, FCC, VCCI, CCID, RoHS, USB Full Speed
Microsoft © WHQL 2000, Server 2003, XP, Vista, Server 2008, Server 2008 R2, 7

Device Driver Operating System Support

Windows © 98, ME, 2000, Server 2003, XP, Vista, Server 2008, Server 2008 R2, 7
Linux, Mac

