



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR3801

PC-linked Smart Card Reader

FIPS 201 Certified



Technical Specifications



Table of Contents

1.0.	Introduction	3
2.0.	Features	4
3.0.	Supported Card Types	5
3.1.	MCU Cards	5
3.2.	Memory-based Smart Cards (Synchronous Interface)	5
4.0.	Typical Applications.....	6
5.0.	Technical Specifications.....	7



1.0. Introduction

Designed specifically for the US market, ACR3801 is an FIPS 201 Certified Contact Smart Card Reader built on the latest technology. It is elegantly designed and is capable of high-speed transactions for smart card solutions.



ACR3801 is a high-performance, secure, and cost-effective smart card reader that complies with the industry standards for smart card readers such as ISO 7816 and PC/SC. It follows the CCID standard, which makes the installation easier and uses USB full-speed that is ideal for integration in PC applications and other systems.

The ACR3801 Smart Card Reader supports ISO 7816 Class A, B, and C smart cards (5 V, 3 V, and 1.8 V respectively) and microprocessor cards with the T=0 and T=1 protocol. Also, it supports a wide variety of memory cards in the market, including the Department of Defense Common Access Card (CAC). This makes it ideal for a broad range of solutions such as PIV Application, Physical and Logical Access Control, Digital Signature, Online Banking, and other applications.

In consideration of end-customers' varying usage patterns, ACR3801 was built using light but sturdy materials preventing it from slipping on the table top whenever a card is inserted. With its modern design, this FIPS201-certified device is the perfect smart card reader for your smart card solution.



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 (5V, 3V, 1.8 V) cards
 - Supports CAC (Common Access Card)
 - Supports 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 Cards with Secure Logic (AT88SC101/102/103)
 - Supports SLE 4404/06/18/28/32/36/42, SLE 5518/28/32/36/42, SLE 6636
 - Supports PPS (Protocol and Parameters Selection)
 - Features Short Circuit Protection
- Compliant with the following international standards:
 - FIPS 201
 - EN 60950/IEC 60950
 - TAA
 - PC/SC
 - CCID
 - RoHS
 - CE
 - FCC
 - Microsoft WHQL



3.0. Supported Card Types

3.1. MCU Cards

The ACR3801 Smart Card Reader works with ISO 7816 MCU cards following either the T=0 or T=1 protocol. It also works with CAC Cards, ideal for US PIV and PKI applications.

3.2. Memory-based Smart Cards (Synchronous Interface)

The ACR3801 Smart Card Reader 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/4C
 - Gemplus: GFM1K to 8K
- 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, AT88SC1003

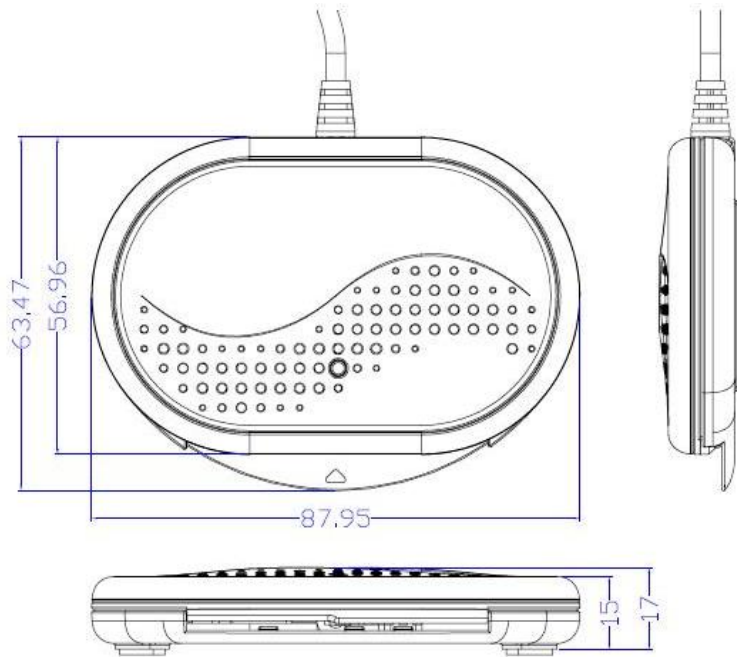


4.0. Typical Applications

- 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: +5 V, 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. 50 mA
Smart card read / write speed 1,743 – 344,086 bps
Short circuit protection +5 V / GND on all pins
The presence of the smart card power supply voltage is indicated through the LED on the reader
CLK frequency 4 MHz
Card connector Contact
Card insertion cycles min. 100,000

Physical Specifications

Dimensions 63.47 mm (L) x 87.95 mm (W) x 17 mm (H)
Color White
Weight 145 g (with heavy base)
..... 76 g (without heavy base)
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

Warranty

Duration 12 Months*

Certifications/Compliance

FIPS 201, TAA, PC/SC, CCID, CE, FCC, RoHS, EN 60950/IEC 60950, ISO 7816, USB Full-Speed
Microsoft @ WHQL 2000, XP, Vista, 7, Server 2003, Server 2008, Server 2008 R2

Device Driver Operating System Support

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



* Terms and Conditions apply