



Advanced Card Systems Limited

Card and Reader Technologies

A background image showing a person's hands interacting with a card reader device. The person is holding a card and appears to be inserting it into the device. The image is slightly blurred and has a warm, golden-yellow tint.

TECHNICAL SPECIFICATIONS

ACR38U-CCID USB Smart Card Reader / Writer





ACR38U-CCID USB Smart Card Reader/Writer

1.0 Introduction



Due to the rising demand of e-working methods (remote office, intranet, extranet and home office) and the increasing risk of unauthorized access to private network, it is time to properly secure access to PCs, desktops, and the Intranet and Extranet networks. ACR38 offers solutions based on smart card readers (connected to PCs) for access control.

Now, reinforced with **CCID** compliance, the ACR38U-CCID makes use of Microsoft CCID class driver that is compatible with the Device Class Specification for USB chip/Smart Card Interface Devices.

This CCID compliant smart card reader/writer is a **USB full speed** device which is the interface for the communication between a computer and a smart card. It is designed for the PC

environment, and is the ultimate smart card peripheral for a PC.

ACR38U-CCID is a key partner of the PC as smart card is becoming an essential component in network security and electronic payment system. It is a low cost, yet reliable and effective smart card-to-PC interface with design focusing on convenient use and harmony with other PC peripherals in shape and color. It also provides the solution where the security of a smart card is required. It can be used as access control to a computer or network, authentication for e-commerce (B to B, B to C). It is also very simple to use and install. It is ideal for electronic commerce, home banking or e-purse facilities, secure computer access or any of a multitude of other applications.

1.1 About RoHS Compliance

The RoHS (**R**estriction **o**f **H**azardous **S**ubstance) Directive restricts the use of six hazardous materials in the manufacturing of various types of EEE (Electrical and Electronic Equipment), including:

- Lead,
- Mercury,
- Cadmium,
- Hexavalent chromium,
- Polybrominated biphenyl (PBB) and
- Polybrominated diphenyl ether (PBDE).



So RoHS compliance means the protection to the environment and your future generations from these restricted irritants, carcinogens and toxins.

2.0 Features

- **USB full speed** interface to PC with simple command structure
- Read and write all microprocessor cards with T=0 or T=1 protocols
- Short Circuit Protection
- Conform with: EN 60950/IEC 60950, ISO-7816, PC/SC, CE, FCC, USB Full Speed, Microsoft WHQL, EMV 2000 Level 1
- Support ISO-7816 Class A, B and C (**5V, 3V, 1.8V**) cards
- Support PPS (Protocol and Parameters Selection) with 1,743 – 250,000 bps in reading and writing smart cards



3.0 Supported Card Types

3.1 MCU Cards

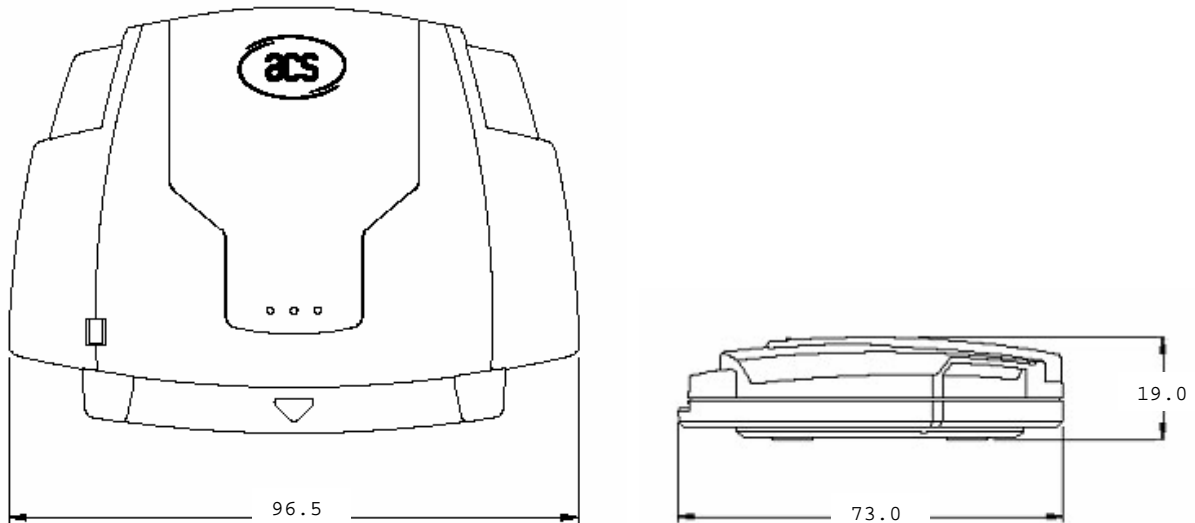
The ACR38U-CCID can operate MCU cards with T=0 and T=1 protocol.

4.0 Typical Applications

- Home Banking and Home Shopping
- Electronic Commerce
- Checking the balance of account of re-loading an electronic purses
- Network access control
- S/W locking
- Digital signature
- Loyalty and promotions
- Stored value
- Identification
- Ticketing
- Parking and toll collection
- Online gaming



5.0 Technical Specification



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 (5V, 3V, 1.8V), T=0 and T=1
 Supply current max. 50mA
 Smart card read / write speed 1,743 – 250,000 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..... 73.0mm (L) x 96.5mm (W) x 19.0mm (H)
 Color..... Silver
 Weight 95g (± 5g allowance for cable) - Spaceship casing
 Cable length, cord, connector 1.5 meters, Fixed (non-detachable), USB A

Operating Conditions

Temperature..... 0 - 50° C
 Humidity..... 40% - 80%

Standard/Certifications

EN 60950/IEC 60950, RoHS Compliant, CCID, EMV 2000 Level 1, ISO-7816, PC/SC, CE, FCC, USB Full Speed
 Microsoft WHQL 2K, XP, Vista

OS

Windows 2K, XP, Vista (Can be used on Windows 98, ME, coupled with the drivers downloadable from our website)

OEM

OEM-Logo possible, customer-specific colors, casing and card connector

