

Advanced Card Systems Ltd.



## **ACR38T-IBS Plug-in Card Reader**



### **TECHNICAL SPECIFICATIONS**

**Version 1.4 11-2005**



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## ACR38T-IBS Plug-in Card Reader

### 1.0 Introduction



The ACR38T is a stylish plug-in (SIM-sized) smart card reader/writer. It has the full functionalities of ACR38 and supports smart cards that conform to GSM 11.11 specification.

It is an extremely light and compact USB full speed device, with a weight of only 10 grams and has a release button for plug-in smart cards. The ACR38T is a highly portable smart card PC peripheral, as it plugs into the USB port and requires no additional cable or wiring. It is ideal for Internet Banking, Payment Systems and Network Security.

### 2.0 Features

- **USB full speed** interface to PC with simple command structure
- Support Plug-in SIM-sized card
- Read and write all microprocessor SIM-sized cards with T=0 or T=1 protocols
- Read and write popular memory card types
- Support **1.8V, 3V** and **5V** MCU cards
- Support GSM 11.11 specification
- Require no additional cable
- Short Circuit Protection
- Conform with: ISO 7816-1/2/3, PC/SC, Microsoft WHQL, EMV Level 1, USB Full Speed
- ISO7816-1/2/3 compatible smart card interface
- 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 ACR38T can operate MCU card with T=0 and T=1 protocol. The table presented in Appendix A (Reference Manual) explains which card type selection value must be specified for the various card types supported by the reader.

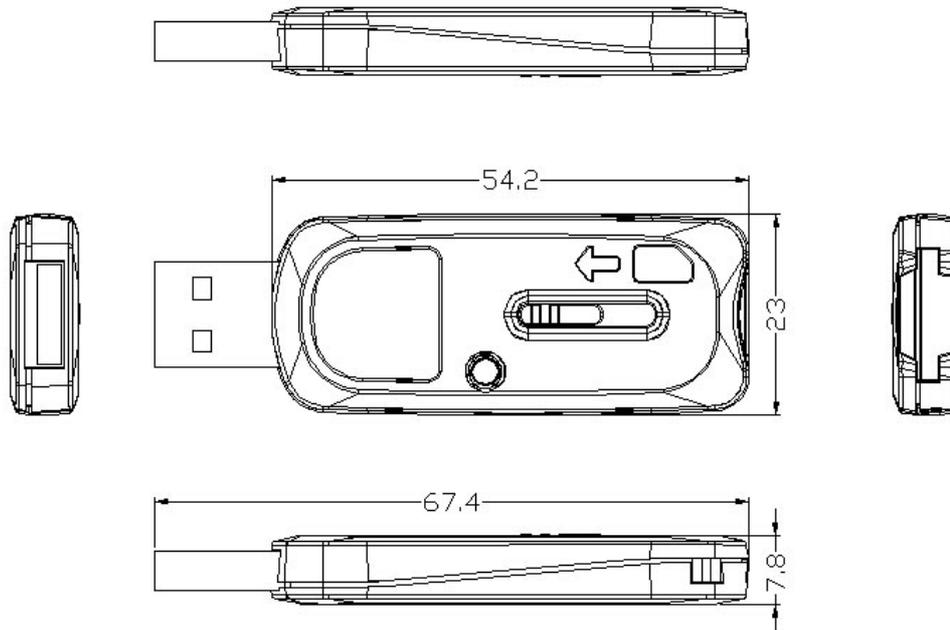
#### 3.2 Memory-based smart cards (synchronous interface)

- Cards following the I2C bus protocol (free memory cards) such as:  
*Atmel:* AT24C01 / 02 / 04 / 08 / 16 / 32 / 64 / 128 / 256 / 512 / 1024  
*SGS-Thomson:* ST14C02C, ST14C04C  
*Gemplus:* GFM1K, GFM2K, GFM4K, GFM8K
- SLE4432/4442 intelligent 256 bytes EEPROM with write protect function:  
 SLE4432, SLE4442
- SLE4418/4428 intelligent 1K bytes EEPROM with write-protect function:  
 SLE4418, SLE4428
- Secure memory cards such as:  
 AT88SC153, AT88SC1608
- SLE4406/4436/5536 '104' type EEPROM non-reloadable token counter cards (for firmware version 1.10 onwards):  
 SLE4406, SLE4436, SLE5536

## 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 (Full Speed)

### Smart Card Interface

Standard..... ISO 7816 1/2/3, 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..... sliding contacts (6 contacts)  
 Card insertion cycles..... min. 100,000

### Case

Dimensions..... 67.4mm (L) x 23.0mm (W) x 7.8mm (H)  
 Color..... Red  
 Weight..... 10 g

### Operating Conditions

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

### Standard/Certifications

EMV Level 1, USB Full Speed, ISO7816-1/2/3, PC/SC, CE, FCC, Microsoft WHQL 2000, XP

### OS

Windows 98, ME, NT, 2K, XP, 2K3 Server, Linux, Mac OS X 10.1, 10.2, 10.3

### OEM

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



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