

Advanced Card Systems Ltd.



## ACR38T SIMTracker II



### TECHNICAL SPECIFICATIONS

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## ACR38T SIMTracker II

### 1.0 Introduction



Due to the rising demand of e-working methods (remote office, 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.

The ACR38 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.

ACR38 is a key partner of the PC as smart card is becoming an essential component in network security and electronic payment system. Providing secured network computing environment by its data encryption function, the

SDK package allows users to easily develop their own application to best meet the specific system needs.

ACR38 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 (intranet, extranet, ...), 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.

### 2.0 Features

- **USB full speed** interface to PC with simple command structure
- Support Plug-in SIM-sized card
- Read and write all microprocessor cards with T=0 or T=1 protocols
- Supports SLE 4418/28/32/42 memory cards
- Supports most common memory-based smart cards, including **I2C bus protocol cards** (from 1k bits up to 1024k bits) and secure memory cards (**Atmel AT88SC153 and AT88SC1608**)
- Support **1.8V, 3V and 5V** MCU cards
- Supports GSM 11.11 specification
- Require no additional cable
- Short Circuit Protection
- ISO 7816-1/2/3, PC/SC, CE, FCC
- ISO7816-1/2/3 compatible smart card interface
- Support PPS (Protocol and Parameters Selection) with 1743 – 307200 bps in reading and writing smart cards
- 768 bytes RAM size and 16K bytes ROM size

### 3.0 Typical Applications

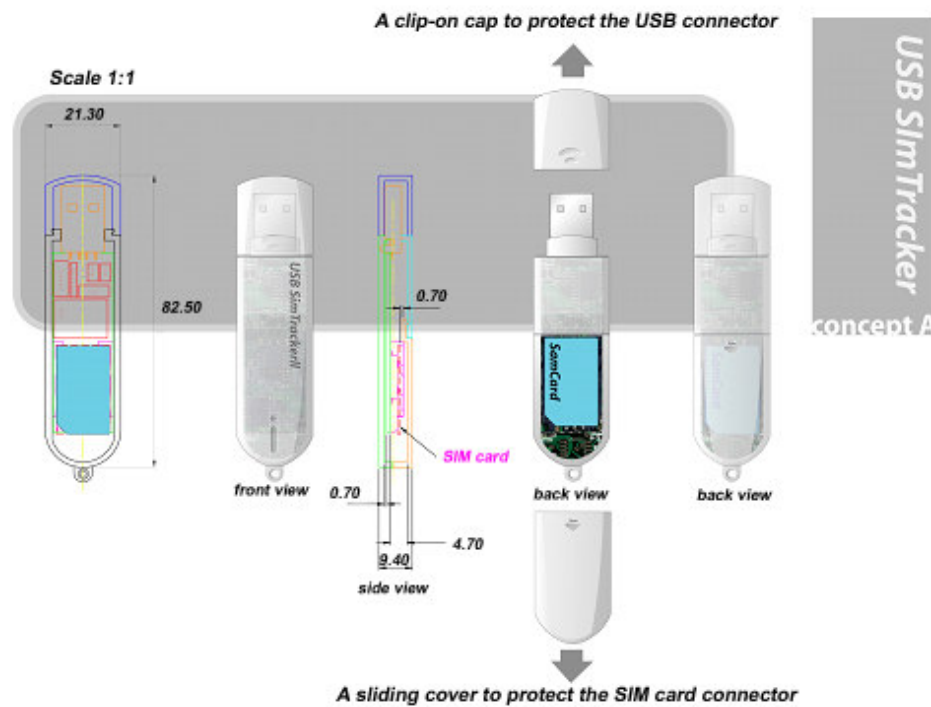
- Home Banking and Home Shopping
- Electronic Commerce
- Checking the balance of account of re-loading an electronic purses
- Network access control
- S/W locking
- Digital signature
- Loyalty and promotions
- Stored value
- Identification
- Ticketing
- Parking and toll collection
- Online gaming

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## 4.0 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 ..... 1743 – 307200 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 (8 contacts)  
 Card insertion cycles ..... min. 100,000

### Case

Dimensions ..... 84.0mm (L) x 21.5mm (B) x 10.0mm (H)  
 Color ..... Silver/golden  
 Weight ..... 0.16 kg

### Operating Conditions

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

### Standard/Certifications

EMV Level 1, ISO7816-1/2/3, PC/SC, CE, FCC

### OS

Windows 98, ME, 2K, XP

### OEM

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



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## 5.0 Software Development Kit Specifications

ACR38 SDK is a complete package containing all the vital components required for smart card application development. It provides developers with a convenient and effective way to incorporate smart cards into their solutions.

### Package Contents

- ACR38 Smart Card Reader, ACR38T SIMTracker SIM-sized plug-in Smart Card Reader, ABR08LS Balance Reader
- 5 ACOS2 8Kbyte microprocessor-based smart cards, 5 ACOS2 SIM-size plug-in 8Kbyte microprocessor-based smart cards, 5 SLE 4428 memory-based smart cards, 5 SLE 4442 memory-based smart cards
- Installation and operation CD-ROM (including drivers, source codes, utility tools and demo software)

### The SDK CD-ROM includes:

- Demo Programs – Casino Application, School Application, ACOS Screen Saver and SIMmate. These demo programs can showcase the wide range of applications ACR38 can be employed in, e.g. e-purse, SIM management, physical and logical access control, etc.
- Documentation – ACOS2 Reference Manual, ACR38 Memory Card Access, ACR38 OCF, ACR38 Reference Manual, ACR38 Technical Specifications, FAQ, PC/SC Specifications
- Sample Codes – C#, Delphi, VB.NET, Visual Basic, Visual C++
- Tools & Utilities – Card Tool, PC/SC Learning Tool, Quick View, Script Commander PC/SC
- SDK User Guide



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