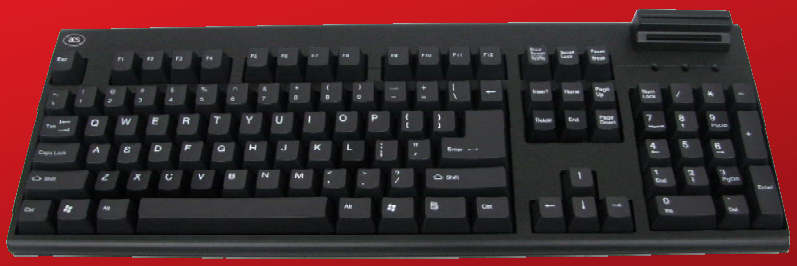
Advanced Card Systems Ltd.
Card & Reader Technologies

ACR38K



Technical Specifications

info@acs.com.hk
www.acs.com.hk

Table of Contents

1.0. Introduction

The ACR38K combines the functionalities of a smart card reader and PC keyboard into one, enabling easy implementation of smart card-based solutions in a PC environment. The ACS smart card readers utilize the latest microchip technology bringing you high security for your confidential files in a convenient and easy way.

The ordinary PC keyboard combined with ACS's versatile smart card reader/writer – the ACR38 module, is transformed into the ACR38K Smart Keyboard. The ACR38K is a powerful component for security, e-commerce, and other applications. Furthermore, you can select another version of ACR38K which comes with multimedia keys and it lets you access to different applications and programs.

2.0. Features

2.1. Keyboard Features

- USB interface with 104 keys
- ACPI power management key support: power, sleep and wake up

2.2. Smart Card Reader Features

- PC/SC Compliant
- Microsoft WHQL Certified Drivers
- CE and FCC Certified
- EMV 2000 Level 1 Certified
- Conforms to EN 60950/IEC 60950
- Supports ISO-7816 Class A, B and C (5V, 3V, 1.8V) cards
- Read and write support to all microprocessor cards with T=0 or T=1 protocol
- Supports a wide range of memory-based smart cards
- USB full speed interface to PC
- Short Circuit Protection
- RoHS Compliant
- 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 ACR38K operates with an MCU card following either the T=0 or T=1 protocol.

3.2. Memory-Based Smart Cards (Synchronous Interface)

The ACR38K supports the following memory cards:

- 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
- SLE4432/4442/5542 intelligent 256 bytes EEPROM with write protect function:

  SLE4432, SLE4442, SLE5542
- SLE4418/4428/5528 intelligent 1K bytes EEPROM with write-protect function:

  SLE4418, SLE 4428, SLE5528
- Secure memory cards such as:

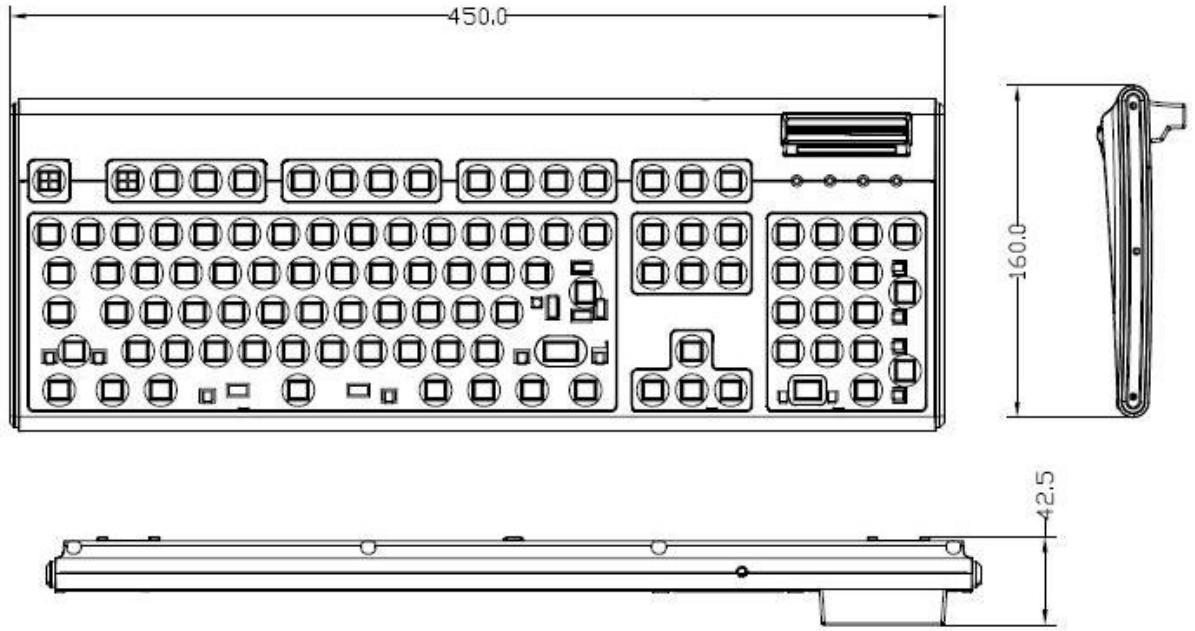
  AT88SC153, AT88SC1608
- SLE4406/4436/5536 ‘104’ type EEPROM non-reloadable token counter cards

  SLE4406, SLE4436, SLE5536

4.0. Typical Applications

- Home Banking and Home Shopping
- Electronic Commerce
- Network access control
- S/W locking
- Digital signature
- Loyalty and promotions
- Stored value
- Identification
- Online gaming

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 (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

Number of Keys 104
Keyboard Dimensions ..... 445 mm (L) x160 mm (W) x 40 mm (H)
Color ..... Black
Weight 650g

Operating Conditions

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

Certifications/Compliance

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

Device Driver Operating System Support

Windows ® NT, 98, ME, Server 2000, 2003, XP, Vista, Server 2008, Server 2008 R2, 7
Linux, MAC