



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR38DT DualKey Smart Card Reader



Technical Specifications



Table of Contents

1.0.	Introduction	3
1.1.	Plug-in (SIM-sized) card reader.....	3
1.2.	Contactless Features.....	3
2.0.	Features	4
3.0.	Supported Card Types	5
3.1.	MCU Cards	5
3.2.	Memory-Based Smart Cards	5
4.0.	Typical Applications.....	6
5.0.	Technical Specifications.....	7



1.0. Introduction

Due to the rising demand of e-working methods such as remote office and home banking, and the increasing risk of unauthorized access to private network, it is time to properly secure access to PCs, desktops, and Intranet and Extranet networks. The ACR38DT DualKey offers both solutions based on a SIM-sized combi smart card (contactless and contact card) for logical and physical access control.

ACR38DT DualKey is an extension of the ACR38T SIMTracker II. It has full ACR38T functionalities with value-added contactless features.



1.1. Plug-in (SIM-sized) card reader

Compliant with the GSM 11.11 specification, the ACR38DT DualKey is an extremely compact USB Full Speed device compatible with the ACR38 smart card reader, and is designed to access SIM-sized smart cards (Plug-in cards). With a size of only 78.73 mm x 21.50 mm x 11.00 mm, it is highly suitable for portable applications. It is plugged into the PC's USB port and requires no additional cable or wiring, making it perfectly suitable for smart card-based applications in the PC environment.

1.2. Contactless Feature

While the ACR38DT DualKey serves as a contactless card, the embedded antenna coil enables the contactless part of the SIM-sized combi card to work as a contactless card to communicate with contactless readers.

The ACR38DT DualKey is a reliable and effective high quality reader, designed for convenient use and harmony with other PC peripherals. It is ideal for electronic commerce, physical access control, home banking or e-purse facilities, secured computer access, transportation and GSM applications.



2.0. Features

- USB 2.0 Full Speed Interface
- Plug and Play – CCID support brings utmost mobility
- Smart card reader:
 - Support ISO 7816 Class A, B, and C (5 V, 3 V, 1.8 V) cards
 - Read and write support to all 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 Card with Secure Logic (AT88SC101/102/1003)
 - Supports SLE 4404/06/18/28/32/36/42, SLE 5518/28/32/36/42, SLE 6636
 - Supports PPS (Protocol and Parameters Selection)
 - Short Circuit Protection
- Contactless Feature
 - Supports Combi Cards
- Compliant with the following standards:
 - EN60950/IEC60950
 - PC/SC
 - CCID
 - RoHS
 - CE
 - FCC
 - Microsoft WHQL



3.0. Supported Card Types

3.1. MCU Cards

The ACR38DT DualKey operates with any MCU card following either the T=0 or T=1 protocol.

3.2. Memory-Based Smart Cards

The ACR38DT DualKey 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, ST14C04C
 - Gemplus: GFM1K, GFM2K, GFM4K, GFM8K
- 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 and AT88SC1003

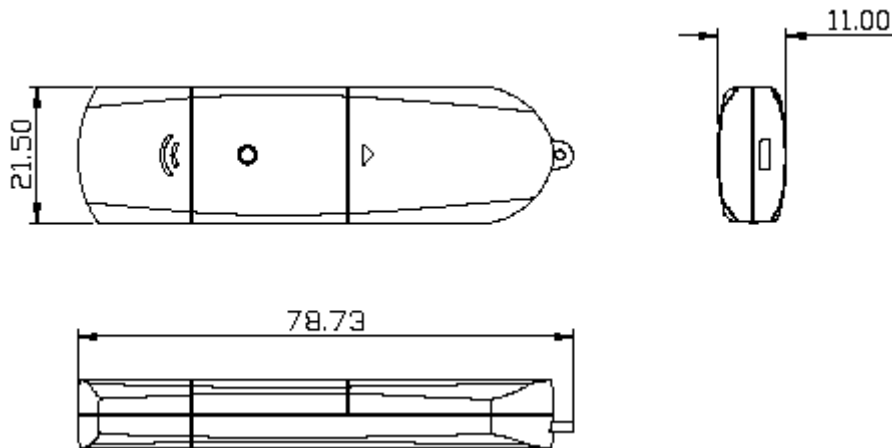


4.0. Typical Applications

- 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

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 max. 344,086 bps
Short circuit protection +5 V / 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
Card insertion cycles min. 10,000

Physical Specifications

Dimensions 78.73 mm (L) x 21.50 mm (W) x 11.00 mm (H)
Standard color Silver
Weight 16 g

Operating Conditions

Temperature 0 – 50 °C
Humidity 10% - 90%
MTBF 500,000 hrs

Certifications/Compliance

EN 60950/IEC 60950, PC/SC, CE, FCC, CCID, RoHS, USB Full Speed
Microsoft © WHQL 2000, Server 2003, XP, Vista, Server 2008, Server 2008 R2, 7

Device Driver Operating System Support

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

