



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR38-BMC



Technical Specifications



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1.0. Introduction

The ACR38U-BMC is a USB interface smart card reader/writer. Belonging to the ACR38 family of high speed smart card readers/writers, it is built with a unique “Bridge Desktop” casing that allows for an upright insertion of smart cards. The convenience of using the ACR38 for applications like network security and electronic payment system makes it the ultimate smart card peripheral for the PC environment. Its stylish yet durable design also blends well with the look of other PC peripherals.

Low cost but high quality, the ACR38U-BMC creates lasting customer value and offers viable and user-friendly solutions for various smart card applications such as electronic commerce, home banking or e-purse applications and secure computer access.





2.0. Smart Card Reader Features

The table below summarizes the features of the ACR38-BMC:

Features	Firmware 1.10	Firmware 1.12c
1. PS/SC	✓	✓
2. CCID	✗	✓
3. WHQL Certified Drivers	✓	✓
4. CE and FCC	✓	✓
5. RoHS	✓	✓
6. EMV Level 1	✓	✓
7. ISO 7816 (Class A, B, C)	✓	✓
8. MCU Card Support (T=0, T=1)	✓	✓
9. Memory Card Support	✓	✓
10. USB Full Speed	✓	✓
11. Short Circuit Protection	✓	✓



3.0. Supported Card Types

3.1. MCU Cards

The ACR38-BMC is PC/SC compliant and supports ISO 7816 5V, 3V and 1.8 (Class A, B, and C) smart cards and MCU cards following either the T=0 and T=1 protocol.

3.2. Memory-based Smart Cards

The ACR38-BMC supports the following memory cards:

Types of Memory Cards	Firmware 1.10	Firmware 1.12c
1. 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	✓	✓
2. Cards with secure memory IC with password and authentication, including: Atmel: AT88SC153 and AT88SC1608	✓	✓
3. Cards with intelligent 1k bytes EEPROM with write-protect function, including: Infineon: SLE4418, SLE4428, SLE5518 and SLE5528	✓	✓
4. Cards with intelligent 256 bytes EEPROM with write-protect function, including: Infineon: SLE4432, SLE4442, SLE5532 and SLE5542	✓	✓
5. Cards with '104' type EEPROM non-reloadable token counter cards, including: Infineon: SLE4406, SLE4436, SLE5536 and SLE6636	✓	✓
6. Cards with Intelligent 416-Bit EEPROM with internal PIN check, including: Infineon: SLE4404	x	✓
7. Cards with Security Logic with Application Zone(s), including: Atmel: AT88SC101, AT88SC102 and AT88SC1003	x	✓

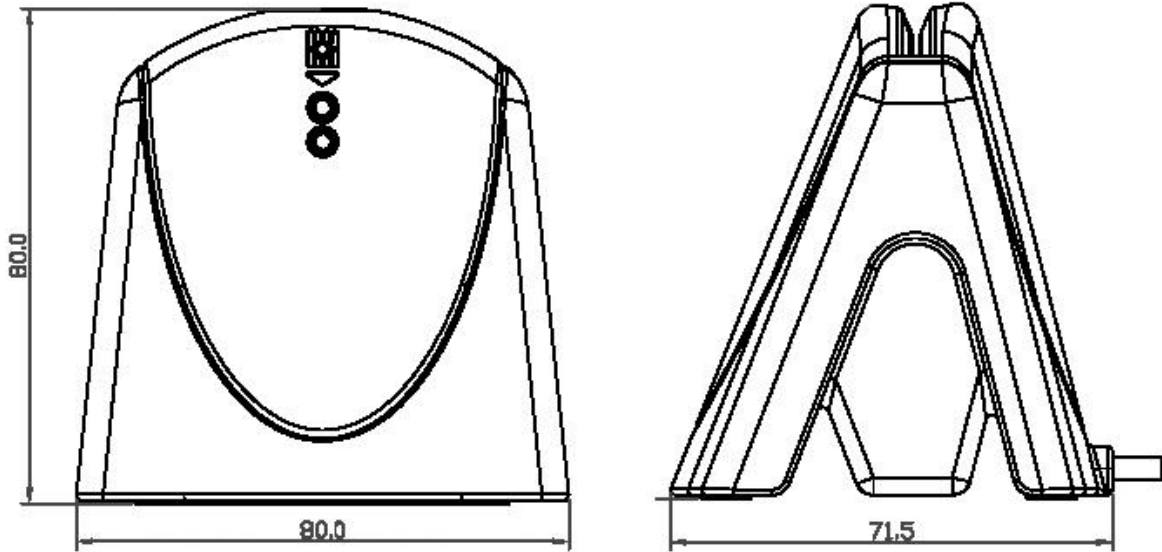


4.0. Typical Applications

- Home Banking and Home Shopping
- Electronic Commerce
- Checking the balance of account of re-loading 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 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 max. 250,000 bps (FW 1.10)
..... max. 344,086 bps (FW 1.12c)
Short circuit protection +5V / GND on all pins
The presence of the smart card power supply voltage is indicated through a red LED (top LED) on the reader. The insertion of the smart card is indicated through a green LED (bottom LED) on the reader.
CLK frequency 4 MHz
Card connector Contact
Card insertion cycles min. 100,000

Physical Specifications

Dimensions 71.5 mm (L) x 80mm (W) x 80mm (H)
Color Black
Weight 174g (± 5g allowance for cable) – Bridge Desktop casing
Cable length, cord, connector 1.5 meters, Fixed (non-detachable), USB A

Operating Conditions

Temperature 0 - 50° C
Humidity 40% - 80%
MTBF 500,000 hrs

Certifications/Compliance

EN 60950/IEC 60950, EMV 2000 Level 1, PC/SC, CE, FCC, CCID¹, RoHS Compliant, 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



¹Supported by FW1.12c

