# Advanced Card Systems Ltd.
## Card & Reader Technologies

# ACR38U PocketMate II Smart Card Reader

Technical Specifications V1.01

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# 1.0. Introduction

ACR38U PocketMate II Smart Card Reader is the perfect tool for your mobile devices. With its MicroUSB OTG interface, the ACR38U PocketMate II is capable of supporting most of the smartphones and tablets available in the market that runs applications using full-sized contact smart cards. It provides the perfect balance between dependable functionality and design aesthetics to meet your security requirements in various fields, including m-Commerce.



## 1.1. Smart Card Reader

ACR38U PocketMate II supports ISO 7816 Class A, B, and C smart cards (5 V, 3 V, and 1.8 V), microprocessor cards with the T=0, T=1 protocol, and common memory cards in the market. It connects with computing devices through its MicroUSB full-speed interface and has a smart card read/write speed of up to 344 Kbps. This small device proves to be a powerful smart card reader as it houses the ACR38 core, which has been proven to support highly demanding smart card applications.

## 1.2. Ingenious Design

The highly compact ACR38U PocketMate II is specifically designed to be brought and used anytime, anywhere. Not larger than a standard USB token, it transforms into a smart card reader for full-sized contact smart cards with just a single swivel motion.

## 1.3. Ease of Integration

ACR38U PocketMate II can be easily integrated with any mobile device running the Android™ platform with versions 3.1 and above. Additionally, it may be used in Windows®, Linux®, or Mac operating systems with its PC/SC and CCID compliance.

Built with a modern and functional design, the ACR38U PocketMate II is a portable and lightweight smart card reader that is particularly suitable for frequent travelers who wish to securely transact while on the go.

## 2.0. Features

- USB Full-speed Interface

- Plug and Play – CCID support brings utmost mobility

- Swivel Motion Design

- Smart Card Reader:

  o Supports ISO 7816 Class A, B and C (5 V, 3 V, 1.8 V) cards

  o Supports microprocessor cards with T=0 and T=1 protocol

  o Supports memory cards

  o Supports PPS (Protocol and Parameters Selection)

  o Features Short Circuit Protection

- Application Programming Interface:

  o Supports PC/SC

  o Supports CT-API (through wrapper on top of PC/SC)

- Supports Android™ 3.1 and above

- Compliant with the following standards:

  o FIPS 201

  o TAA

  o EN60950/IEC60950

  o ISO 7816

  o CE

  o FCC

  o VCCI

  o PC/SC

  o CCID

  o EMV 2000 Level 1

  o Microsoft® WHQL

  o RoHS

  o REACH

## 3.0. Typical Applications

- Mobile Banking
- Mobile Payment
- e-Healthcare
- Loyalty Program

# 4.0. Technical Specifications
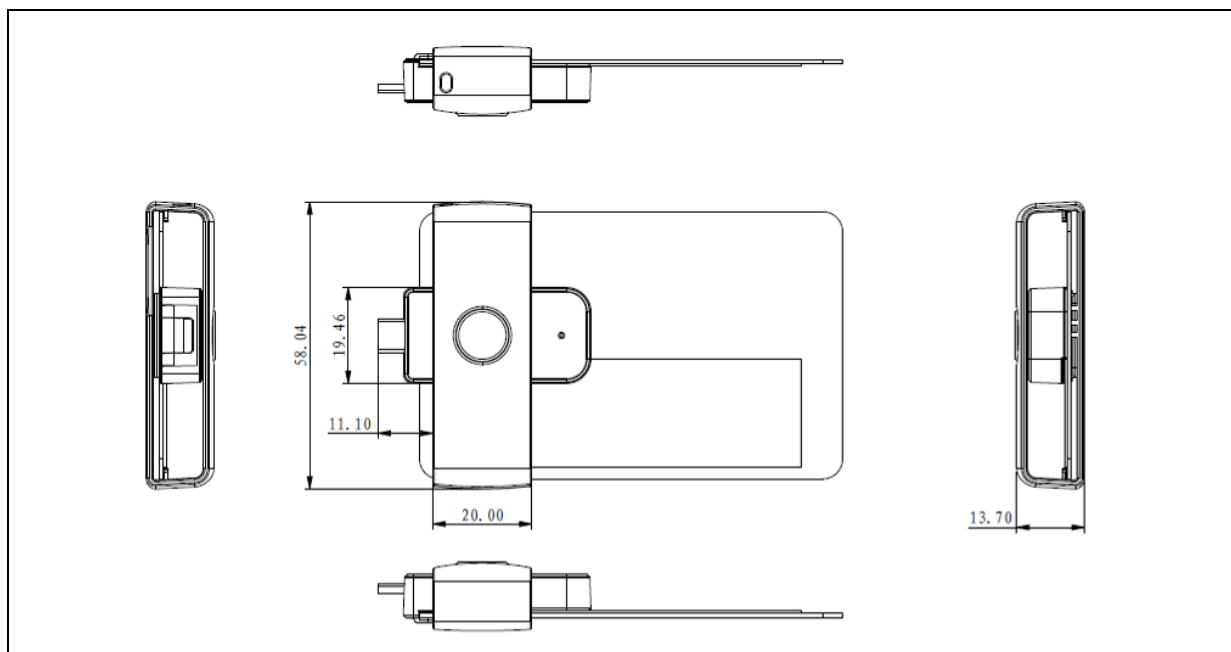


## Universal Serial Bus Interface

Type..............................................Micro USB (OTG) Full-speed, Five Lines: +5 V, GND, ID pin, D+ and D-
Power Source...............................From Micro USB
Speed ...........................................12 Mbps

## 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
CLK Frequency.............................4 MHz
Card Connector ...........................Contact
Card Insertion Cycles....................Min. 100,000

## Physical Specifications

Dimensions ..................................58.0 mm (L) x 20.0 mm (W) x 13.7 mm (H)
Color ............................................Black
Weight..........................................10 g

## Built-in Peripheral

LED...............................................1 LED, Green

## Operating Conditions

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

## Application Programming Interface

PC/SC
CT-API (through wrapper on top of PC/SC)

## Certifications/Compliance

FIPS 201, TAA, EN60950/IEC60950, ISO 7816, CE, FCC, VCCI, PC/SC, CCID, EMV 2000 Level 1, RoHS, REACH, USB Full Speed
Microsoft® WHQL for Windows® 2000, Windows® XP, Windows Vista®, Windows® 7, Windows® 8, Windows® 8.1, Windows® Server 2003, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012, Windows® Server 2012 R2

## Device Driver Operating System Support

Windows® CE, Windows® 98, Windows® ME, Windows® 2000, Windows® XP, Windows Vista®, Windows® 7, Windows® 8, Windows® Server 2003, Windows® Server 2003 R2, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012, Windows® Server 2012 R2
Linux®, Mac OS®, Android™ 3.1 and above

**ACR38U-ND – Technical Specifications**
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