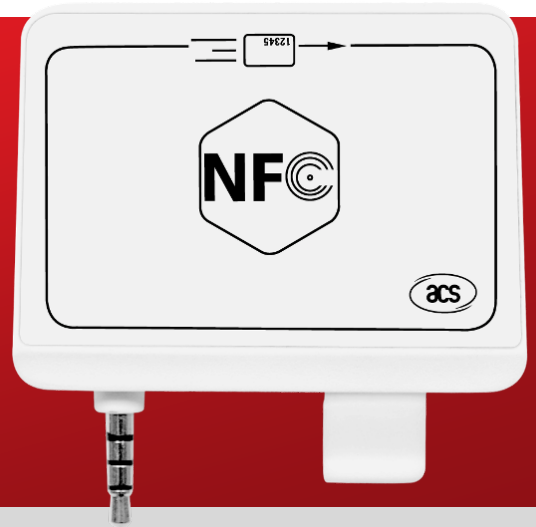




**Advanced Card Systems Ltd.**  
Card & Reader Technologies

# ACR35 NFC MobileMate



Technical Specifications V1.00



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## 1.0. Introduction

ACR35 NFC MobileMate Card Reader is the perfect tool that you can use with your mobile device. With the combination of two card technologies into one, it provides its user flexibility to use magnetic stripe cards and smart cards without the additional cost. ACR35 NFC MobileMate seamlessly unites card reader functionality with mobility which allows you to access secure applications anytime, anywhere.

### 1.1. Secure Card Reader

ACR35 NFC MobileMate is a reliable card reader that uses AES-128 encryption algorithm and DUKPT Key Management System for a secure transaction. It is capable of reading both high-coercivity and low-coercivity magnetic cards that conform to ISO 7810 and ISO 7811 standards. Also, it supports ISO 14443 Type A and B cards, MIFARE®, FeliCa, and most NFC tags and devices compliant to ISO 18092 standard, which makes it an ideal device for a broad range of solutions, such as e-Banking and e-Payment.



### 1.2. Ingenious Design

ACR35 NFC MobileMate is specifically designed to be brought anytime, anywhere. With its rechargeable Lithium-ion battery as its power supply and standard 3.5 mm audio jack interface, it allows ACR35 NFC MobileMate to be integrated impeccably into any smartphone or tablet available in the market.

### 1.3. Ease of Integration

ACR35 NFC MobileMate can be easily integrated with any mobile device running the Android™ platform with versions 2.0 and above, and iOS platform with versions 5.0 and above.



## 2.0. Features

- 3.5 mm Audio Jack Interface
- Powered by a Lithium-ion battery (rechargeable through USB cable)
- Smart Card Reader:
  - Built-in antenna for contactless tag access, with reading distance of up to 50 mm (depending on tag type)
  - Supports ISO 14443 Part 4 Type A and B cards
  - Supports MIFARE®
  - Supports FeliCa
  - Supports ISO 18092 Tags (NFC Tags)\*
  - Built-in anti-collision feature (only one tag is accessed at any time)
  - NFC Support:
    - Card reader/writer mode
- Magnetic Stripe Card Reader:
  - Reads up to two tracks of card data
  - Capable of bi-directional reading
  - Supports AES-128 encryption algorithm
  - Supports DUKPT Key Management System
  - Supports ISO 7810/7811 magnetic cards
  - Supports Hi-coercivity and Low-coercivity magnetic cards
  - Supports JIS1 and JIS2
- Supports Android™ 2.0 and above\*\*
- Supports iOS 5.0 and above\*\*
- Compliant with the following standards:
  - ISO 18092
  - ISO 14443
  - CE
  - FCC
  - VCCI
  - RoHS 2
  - REACH

*\*Topaz type is excluded. Please contact ACS for more details.*

*\*\* Visit [www.acs.com.hk](http://www.acs.com.hk) for the list of supported devices.*

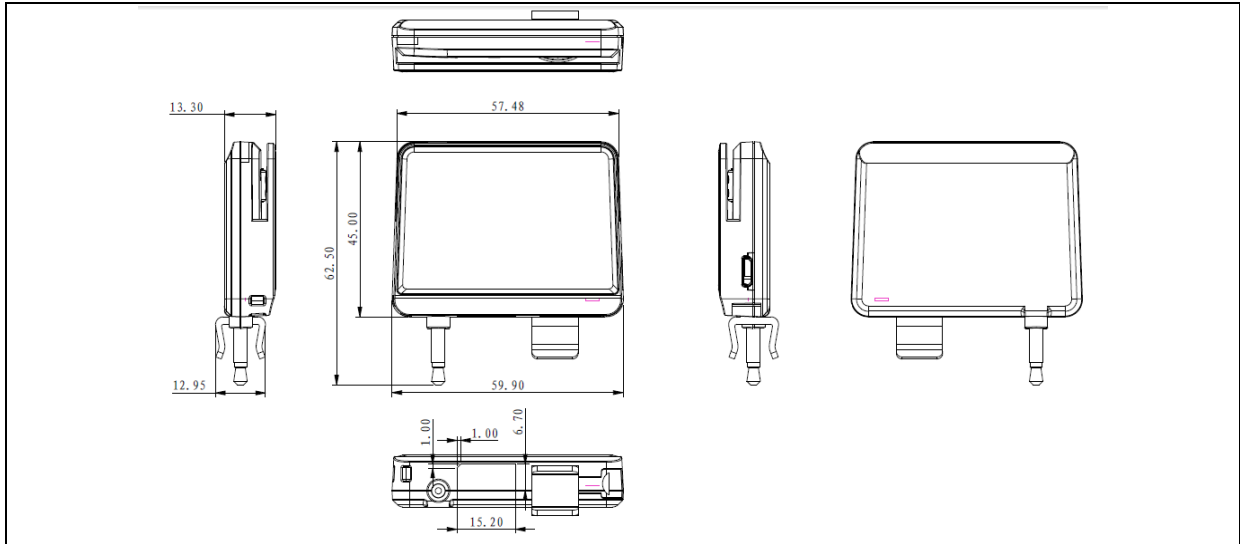


### **3.0. Typical Applications**

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



## 4.0. Technical Specifications



### Power Supply

Battery Powered..... 3.2 V to 3.7 V DC Lithium-ion Battery (rechargeable through USB)  
Operation Time ..... Approx. 2 hrs (continuous operation)

### Communication Interface

Type..... Bi-directional Audio Jack Interface  
Connector..... 3.5 mm 4-pole Audio Jack  
Speed..... Max. 2.6 Kbps

### Magnetic Card Interface

Standard ..... ISO 7810/7811 Hi-Co and Low-Co Magnetic Cards  
..... JIS 1 and JIS 2  
Card Swipe Speed ..... Max. 10 in/s  
Card Swipe Cycles..... Min. 500,000

### Contactless Smart Card Interface

Standard ..... ISO/IEC 18092 NFC, ISO 14443 Type A & B, MIFARE, FeliCa  
Protocol..... ISO 14443 T=CL for ISO14443-4 compliant cards and T=CL Emulation for MIFARE Classic 1K/4K, ISO 18092, FeliCa and NFC tags  
Operating Frequency ..... 13.56 MHz  
Operating Distance ..... Up to 50 mm (depending on tag type)  
Smart Card Read/Write Speed..... 106 Kbps, 212 Kbps, 424 Kbps

### Physical Specifications

Dimensions ..... 60.0 mm (L) x 45.0 mm (W) x 13.3 mm (H)  
Color ..... White  
Weight ..... 29 g (with battery)  
Cable length, cord, connector ..... 1 m, Fixed (detachable), USB A

### Operating Conditions

Temperature ..... 0 °C – 50 °C  
Humidity ..... Max. 90% (non-condensing)  
Mean Time Between Failure ..... 300,000 hrs

### Certifications/Compliance

ISO14443, ISO/IEC 18092, CE, FCC, VCCI, RoHS 2, REACH

### Device Driver Operating System Support

Android™ 2.0 and above, iOS 5.0 and above



Android is a trademark of Google Inc.  
MIFARE and MIFARE Classic are trademarks of NXP B.V.