



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

# **ACR1011**

# **SIMicro (CCID)**

## **Smart Card and Micro SD Reader**



Technical Specifications V1.09



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## 1.0. Introduction

The ACR101I SIMicro (CCID) is more than just your ordinary SIM-sized smart card reader. With the combination of a smart card reader and a Micro SD card slot in a compact USB token, the ACR101I SIMicro (CCID) provides you with complete support for highly secured mobile applications. The ACR101I SIMicro (CCID) is also available in HID, bringing you the same plug-and-play convenience, which does not require any special driver installation.



### 1.1. SIM-sized Smart Card Reader

The ACR101I SIMicro (CCID) is a compact and powerful reader with its reliable support for ISO 7816 microprocessor smart cards. It works with most memory cards and microprocessor cards with the T=0 and T=1 protocol.

With security as its top priority, the ACR101I SIMicro (CCID) gives you the option to integrate highly secured technologies, such as Public Key Infrastructure (PKI), into your applications for maximum protection of sensitive data.

### 1.2. Memory Storage Device

Aside from being a SIM-sized smart card reader, the ACR101I SIMicro (CCID) is also a storage device. With a dimension of 72.0 mm × 26.0 mm × 11.7 mm, this USB-powered device can be brought anywhere and be used without any cable. The ACR101I SIMicro (CCID) is also capable of supporting expandable Micro SD memory.

### 1.3. Ease of Integration

With the ACR101I SIMicro (CCID) being compliant with the Chip/Smart Card Interface Devices (CCID) and Personal Computer/Smart Card (PC/SC) standards, it is easier to integrate in a computer-based environment by eliminating driver installation prior to use. In addition, the ACR101I SIMicro (CCID) may now be used on mobile devices running the Android™ platform with versions 3.1 and later.

With its wide array of features, the ACR101I SIMicro (CCID) can be used in various application areas, such as Public Key Infrastructure, network security and GSM management.



## 2.0. Features

- USB Combo Device - Works as a smart card reader and mass storage
- USB Full Speed Interface
- Plug and Play - CCID support brings utmost mobility
- Extractable USB Connector
- Smart Card Reader:
  - Contact Interface:
    - Supports ISO 7816 Class A, B and C (5 V, 3 V, 1.8 V) SIM-sized cards
    - Supports microprocessor cards with T=0 or T=1 protocol
    - Supports memory cards
    - Supports PPS (Protocol and Parameters Selection)
    - Features Short Circuit Protection
- Built-in Peripherals:
  - Bi-color LED
- Application Programming Interface:
  - Supports PC/SC
  - Supports CT-API (through wrapper on top of PC/SC)
- Flash Drive:
  - Supports the latest Micro SD Card Formats, including SDXS and SDHC
- Supports Android™ 3.1 and later<sup>1</sup>
- Compliant with the following standards:
  - EN 60950/IEC 60950
  - ISO 7816
  - PC/SC
  - CCID
  - CE
  - FCC
  - RoHS 2
  - REACH
  - VCCI (Japan)
  - Microsoft® WHQL

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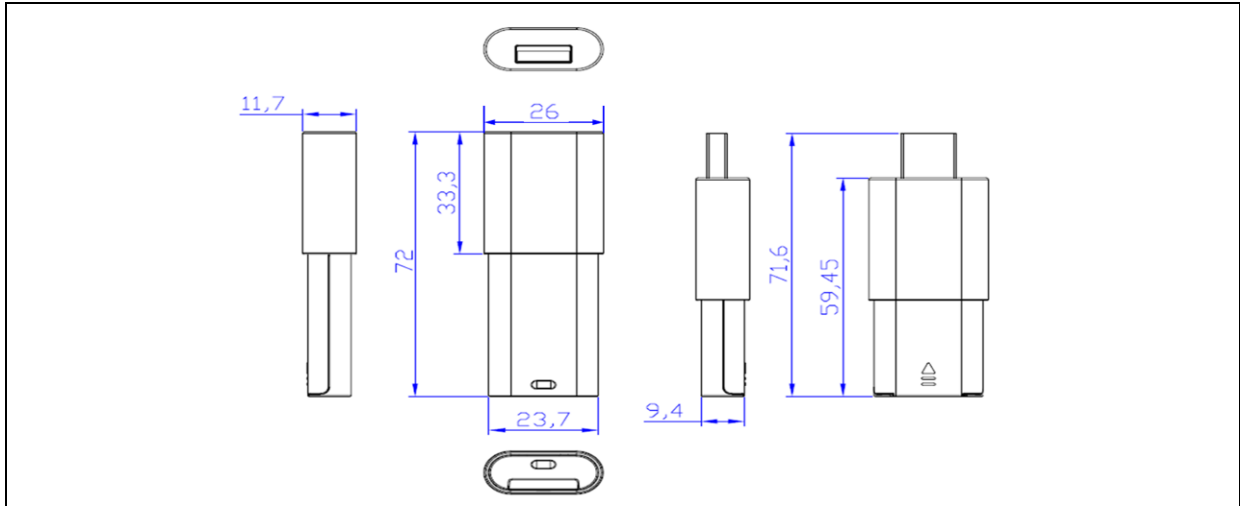
<sup>1</sup> Uses an ACS Defined Android Library



### 3.0. Typical Applications

- e-Government
- Banking and Payment
- Network Security
- Public Key Infrastructure
- Telecommunications
- VoIP (Voice over IP)
- Data Storage

## 4.0. Technical Specifications



### Physical Characteristics

Dimensions ..... 72.0 mm (L) x 26.0 mm (W) x 11.7 mm (H)  
 Weight ..... 15 g  
 Color ..... Green and White

### USB Host Interface

Protocol ..... USB CCID  
 Connector Type ..... Standard Type A  
 Power Source ..... From USB port  
 Speed ..... USB Full Speed (12 Mbps)  
 Supply Voltage ..... 2.7 V - 3.6 V

### Contact Smart Card Interface

Number of Slots ..... 1 SIM-Sized Card Slot  
 Standard ..... ISO 7816 Class A, B and C (5 V, 3 V, 1.8 V)  
 Protocol ..... T=0 and T=1; Memory Card Support  
 Supply Current ..... Max. 50 mA  
 Smart Card Read/Write Speed ..... 9.6 Kbps - 344 Kbps  
 Short Circuit Protection ..... (+5) V/GND on all pins  
 Clock Frequency ..... 4 MHz  
 Card Connector Type ..... Contact  
 Card Insertion Cycles ..... Min. 2,000

### Memory Expansion

Micro-SD Card Slot ..... Supports the latest memory card formats, including SDXC and SDHC

### Built-in Peripheral

LED ..... 1 bi-color: Green and Red

### Application Programming Interface

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

### Operating Conditions

Temperature ..... 0 °C - 50 °C  
 Humidity ..... Max. 90% (non-condensing)  
 MTBF ..... 500,000 hrs

### Certifications/Compliance

EN 60950/IEC 60950, ISO 7816, USB Full Speed, PC/SC, CCID, CE, FCC, RoHS 2, REACH, VCCI (Japan), Microsoft® WHQL



**Device Driver Operating System Support**

Windows® XP, Windows® Vista™, Windows® 7, Windows® 8, Windows® 8.1, Windows® 10,  
Windows® Server 2003, Windows® Server 2008, Windows® Server 2008 R2, Windows® Server 2012,  
Windows® Server 2012 R2, Windows® Server 2016  
Linux®, macOS, Android™ 3.1 and later



## 5.0. Opening the Card Cover

1. Before opening the cover of the SIM-sized smart card and Micro SD slot, make sure that the USB connector cover is closed.



2. To close the cover of the USB connector, pull up the green cap.



3. Place your thumb on the cover of the SIM-sized smart card slot and push up.







4. Slightly pull up the bottom end of the cover to open the smart card slot.



5. Remove the cover to reveal the SIM-sized card slot and Micro SD slot.



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