



Advanced Card Systems Ltd.
Card & Reader Technologies

ACR100F SIMFlash (CCID)



Technical Specifications V4.02



Table of Contents

1.0.	Introduction	3
1.1.	Plug-in (SIM-sized) Card Reader	3
1.2.	Mass Storage Device.....	3
1.3.	Plug and Play Feature	3
2.0.	Features	4
3.0.	Typical Applications	5
4.0.	Technical Specifications	6



1.0. Introduction

The ACR100F SIMFlash, being more than just a smart card reader, has a maximum of built-in 8 GB flash memory. Designed both to access plug-in (SIM-sized) smart cards and data or application storage, the ACR100F is ideal for GSM solutions such as GSM management software and VoIP applications. In addition to this, the ACR100F can also be used in different applications, such as electronic payment systems, e-Commerce, home banking, transportation, and computer and network access.

1.1. Plug-in (SIM-sized) Card Reader

ACR100F SIMFlash is a reliable and cost-effective smart card reader for security-related applications. It is a USB high-speed plug-in SIM-sized smart card reader which also works as a mass storage. This feature enables the users to back up their files and manage their SIM card information in the PC. It supports most memory cards, MCU cards with T=0 and T=1 protocols, and GSM cards conforming to Specification 11.11.



1.2. Mass Storage Device

ACR100F SIMFlash is also a mass storage device. With its dimension of 77 mm x 23 mm x 10 mm, it is the perfect companion wherever you go. Various options for partitioning the flash drive are also available – CD-ROM, boot disk and public, and lock and hidden areas are all accessible in the same device.

1.3. Plug and Play Feature

With ACR100F SIMFlash being compliant with the Chip/Smart Card Interface Devices (CCID) and PC/SC standards, it is easier to integrate into a PC environment by eliminating driver installation prior to use. In addition, ACR100F SIMFlash can now be used on mobile devices running the Android™ platform with versions 3.1 and above.

With its wide array of features, ACR100F SIMFlash can be used in various application areas, such as Public Key Infrastructure (PKI), network security and GSM management.



2.0. Features

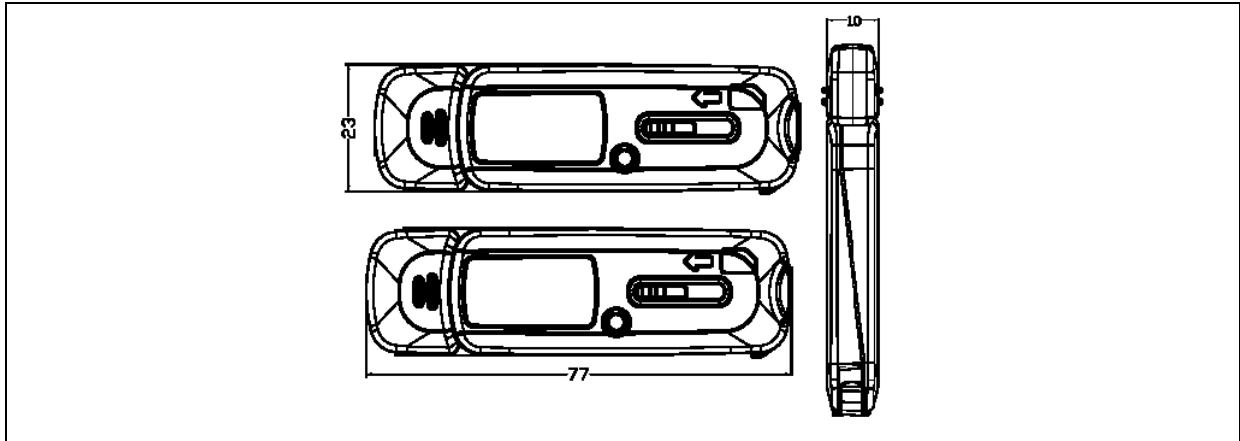
- USB Combo Device – Works as a smart card reader and mass storage
- USB 2.0 High-speed Interface
- Bus-powered – No need for separate power supply or battery
- Plug and Play – CCID support brings utmost mobility
- With protective USB cap and keychain loop
- Smart Card Reader:
 - Supports ISO 7816 Class 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 using Synchronous Card APDU
 - Supports Specification 11.11-compliant GSM cards
 - Supports PPS (Protocol and Parameters Selection)
 - Features Short Circuit Protection
- Application Programming Interface:
 - Supports PC/SC
 - Supports CT-API (through wrapper on top of PC/SC)
- Flash Drive:
 - Maximum of 8 GB memory
 - Division of up to three partitions (Private/Security, Public and CD-ROM/Autorun, and Hidden)
- Supports Android™ 3.1 and above
- Compliant with the following standards:
 - ISO 7816
 - CE
 - FCC
 - PC/SC
 - CCID
 - Microsoft® WHQL
 - RoHS



3.0. Typical Applications

- e-Government
- e-Banking and e-Payment
- Public Key Infrastructure
- Network Security
- GSM Management
- VoIP
- Data Storage

4.0. Technical Specifications



Universal Serial Bus Interface

Type USB High-speed, Four Line: +5 V, GND, D+ and D-
Power Source..... From USB
Speed Max. 480 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. 10,000

Flash Memory Interface

Memory Size Max. 8 GB
Voltage Supply 2.7 V ~ 3.6 V
Supply Current Max. 70 mA
Endurance..... 10K program/erase cycles
Data Retention 10 years
Data Write Speed..... Up to 3 Mbps (Faster speed available upon request)
Data Read Speed..... Up to 9 Mbps (Faster speed available upon request)
Disk Partitioning Options..... Up to 3 partitions (Private, Public and CD-ROM/Autorun, Hidden)

Physical Specifications

Dimensions 77 mm (L) x 23 mm (W) x 10 mm (H)
Color Black
Weight..... 20 g

Built-in Peripheral

LED Bi-color LED, Red and 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

ISO 7816, PC/SC, CCID, CE, FCC, RoHS
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® 8.1, 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

