ACR100H SIMFlash (HID)

Technical Specifications V4.02

Table of Contents

1.0. Introduction

The ACR100H 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 ACR100H is ideal for GSM solutions such as GSM management software and VoIP applications. In addition to this, the ACR100H 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

The ACR100H SIMFlash is a reliable and cost-effective smart card reader for security-related applications. It is a USB high-speed plug-in card reader that is paired with a mass storage feature which enables you to do more than simply back up and manage your SIM card information in the PC. It supports MCU cards with T=0 and T=1 protocols and GSM cards conforming to Specification 11.11.

1.2. Mass Storage Device

The ACR100H SIMFlash is also a mass storage device. Its relatively small dimension that measures 77 mm x 23 mm x 10 mm makes it highly portable and 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 ACR100H SIMFlash being compliant with the Human Interface Devices (HID) standard, it reduces driver installation issues when being integrated into PC environments.

With its wide array of features, ACR100H 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 – HID 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)
- Compliant with the following standards:
  - ISO 7816
  - CE
  - FCC
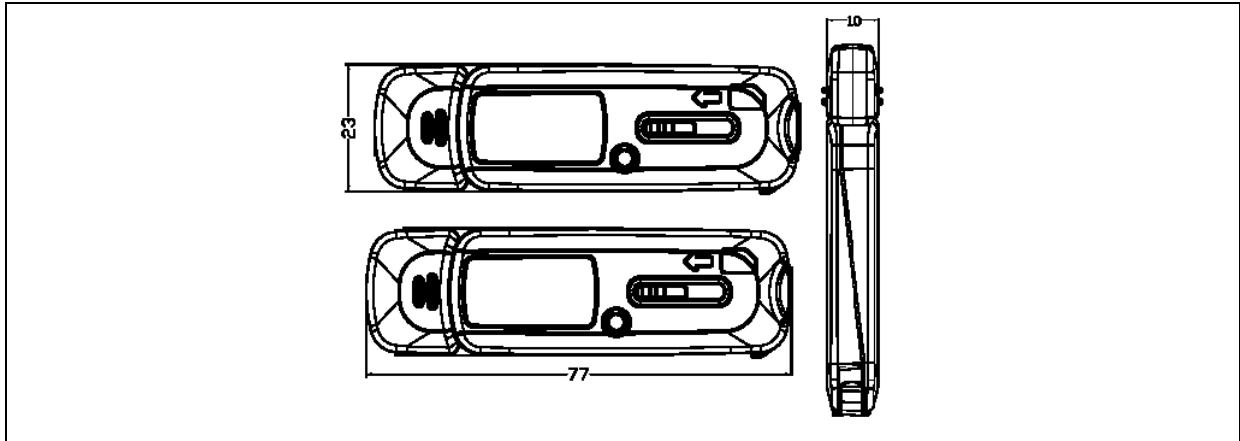 - PC/SC
  - HID
  - RoHS

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 Writing Speed........................ Up to 3 Mbps (Faster speed available upon request)
Data Reading 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, CE, FCC, PC/SC, HID, RoHS

Device 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®