


AET60 BioCARDKey

The background of the page features a collage of images related to smart card technology. It includes a close-up of hands inserting a smart card into a reader, a person's hand holding a smart card, and a computer keyboard. A semi-transparent box containing the title "TECHNICAL SPECIFICATIONS" is overlaid on the central part of the background.

TECHNICAL SPECIFICATIONS

Version 1.3 09-2004

1.0 Introduction



Using the same Active Capacitive Sensing technology as BioSIMKey and combining fingerprint sensor and smart card reader, the BioCARDKey ensures the full size smart cards to deliver the highest quality images. It improves security and efficiency of network access, e-commerce, home banking and point-of-sales transactions.

Since fingerprints cannot be lost, duplicated, stolen or forgotten, the fingerprint product series are widely accepted as a more reliable and convenient solutions than password-based authentication. With the BioSIMKey, security is further enhanced by storing user's fingerprint onto a template inside a plug-in card instead of the PC. This not only provides a more secure environment but also enhances portability and eliminates privacy concerns. In addition, the user can be assured that he is the only one authorized to use his smart card, should it become lost or stolen.

As a proven solution for biometrics, the BioCARDKey is an ideal solution for a broad range of applications including e-business, network access, home banking, secure e-mail, file encryption, and government security.

Using a simple Application Programming Interface, it is extremely easy for designers to integrate the fingerprint authentication features into their applications. The developer can develop the interface very quickly without an in-depth knowledge of biometrics.

2.0 Features

- High-speed USB interface
- Requiring no additional power supply
- High-resolution 508 DPI imaging
- Utilizes ST's patented TouchChip technology, resulting in high quality fingerprint images in any environment
- ISO 7816-3 and PC/SC compliant
- Supports all micro-controller cards, with T=0 or T=1 protocols
- Encrypted finger print template stored inside smart card
- Session key generation among smart card, BioCARDKey Processor and host computer
- Unique bonding between the smart card and BioCARDkey

3.0 Typical Applications

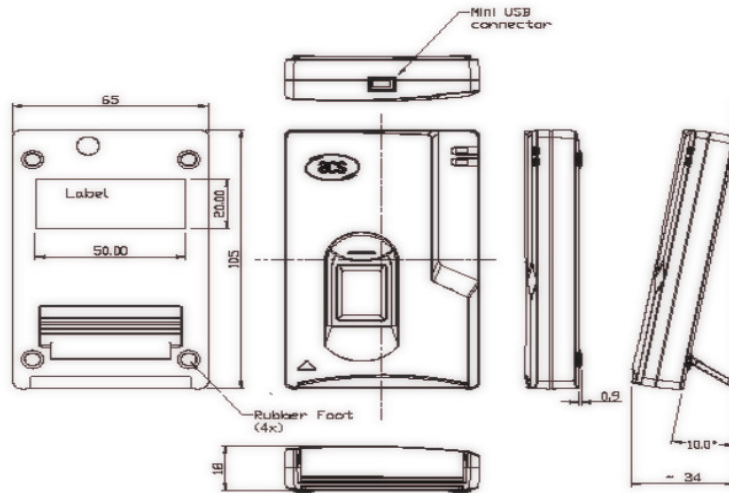
- Remote Electronic Voting
- Secured E-commerce
- Secure Home-banking
- Computer System Logon

4.0 Supported Card Types

MCU Cards

The AET60 can operate MCU card with T=0 and T=1 protocol.

5.0 Technical Specification



Power supply

Power supply USB Bus powered

Universal Serial Bus Interface

Type USB v1.1 Full-Speed

Speed 12 Mbps

Smart Card Interface

Standard ISO 7816 1/2/3, T=0 and T=1

Supply current max. 50mA

Smart card read / write speed 9600 – 115200 bps

Short circuit protection +5V / GND on all pins

The presence of the smart card power supply voltage is indicated through a green LED on the reader

CLK frequency 4 MHz

Card connector Landing contacts (8 contacts)

Card insertion cycles min. 200,000

Fingerprint Scanner Interface

Active sensor size 12.8 x 18 mm

Array size 256 x 360 pixels

Array pitch 50 microns

Image resolution 508 DPI

Case

Color Silver

Operating Conditions

Temperature 0 - 40° C

Standard/Certifications

ISO 7816-1/2/3, PS/SC, Microsoft WHQL 98, 2K XP

OS

Windows 98 SE, ME, 2K, and XP

OEM

OEM-Logo possible, customer-specific colors



6.0 Software Development Kit Specifications

AET60 SDK is a complete package containing all the vital components required for smart card/finger print application development. It provides developers with a convenient and effective way to incorporate fingerprint and smart card authentication as part of their solutions.

Using the simple Application Programming Interface, designers can easily integrate fingerprint authentication features into their applications. The interface can be developed quickly without any in-depth knowledge of biometrics.

Package Contents

- AET60 BioCARDKey - A smart card reader integrated with fingerprint sensor
- 10 ACOS1 8Kbyte Microprocessor-based Card
- Installation and operation CD-ROM (including drivers, source codes, and demo software)

The SDK CD-ROM includes:

- Demo – Arcade Demo: Demonstrates the capability of BioCARDKey as an access control device.
Simple AET60 Demo: With the Security Level control and Data Template display, shows the potential of AET60 as a device applicable to a multitude of usages.
- Manuals
- Samples – Sample codes are given Delphi, Visual Basic 6 and Visual C
- Utility Tools – PCSC CardTool, PCSC Learning Tool & Perfect Print Testing Tool, to help the user better understand the protocols sent and received by the reader.

