

## Biometric Identification for Everybody

- PC USB based platform solution
- Easy use high-level software development library interface
- Self contained biometric software modules
- Memory smart card support

[www.infineon.com/fingertip](http://www.infineon.com/fingertip)

### Key data for the biometric system FingerTIP

■ Data Transfer Time	< 100 ms
■ Sensor Array	224 × 288 Pixel
■ Resolution	513 dpi
■ Data format	8 bit/Pixel
■ Size Sensor area:	11,1 mm × 14,3 mm
Module:	18 mm × 21 mm × 1,5 mm
■ Interfaces	Parallel and serial on-chip, selectable
■ VCC operating range	3,3 – 5 V
■ ESD protection	<b>15 kV</b>
■ Power consumption	< 50 mW
■ Operational temperature	–40°C... +85°C

### Benefits of FingerTIP

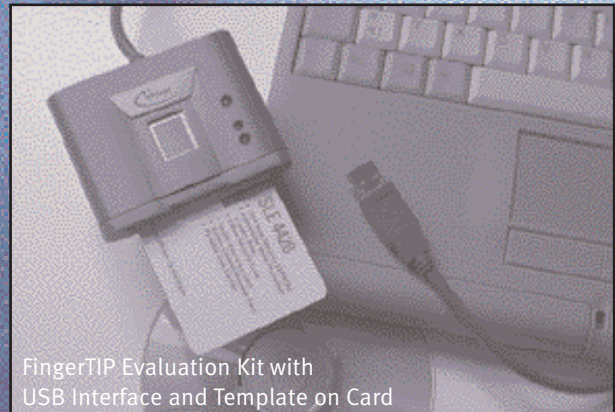
- Single-chip solution based on CMOS technology
- Small size
- Different packages (flex, SMD)
- Fast scanning and identification
- Low power consumption
- Robustness/15 kV ESD
- Complete hardware solution with optional software for individual applications
- User friendliness



The purpose of the FingerTIP Evaluation Kit 2 is to demonstrate a biometric system using Infineon's FingerTIP Sensor and FingerTIP Software Development Kit (SDK) connected via USB interface to the PC. The FingerTIP Evaluation Kit 2 consists of a FingerTIP sensor mounted in a small format PC-SC compliant smartcard reader unit plus extensive development and demonstration software.

## The evaluation kit 2 contains:

- Sensor – mounted for direct PC USB connection
- CD ROMs with
  - Demonstration software
  - Third Party Software Development Kit
  - FingerTIP SDK
- Complete documentation
- Infineon SLE 4428 memory chip mounted in an ISO compliant card



FingerTIP Evaluation Kit with USB Interface and Template on Card

[www.infineon.com/fingertip/evaluation\\_tools](http://www.infineon.com/fingertip/evaluation_tools)

## Functional Overview

Familiarity with programming in a Windows environment is assumed, whereas no special knowledge on biometric algorithms is required. A comprehensive overview is given on the Infineon biometric algorithms within the documentation. The developer is able to use the FingerTIP sensor alone, or in conjunction with the FingerTIP SDK's sensor management functions, or alternatively, to exploit the entire FingerTIP SDK functionality including the biometric algorithms. In the FingerTIP recognition demonstrator, a high resolution digital fingerprint image is delivered by the sensor to the host system through the USB interface. The Infineon biometric algorithm then extracts the fingerprint features (minutia) and compares the fingerprint template to reference data that has previously been stored for that individual. The entire fingerprint itself is not stored. The minutia data extracted is sufficient to perform the matching functions and the original fingerprint cannot be recreated from the stored fingerprint template. User fingerprint minutia templates can be stored on the computer hard drive or a smartcard. While the compressed and encrypted hard drive storage security is sufficient for most situations, storing the fingerprint template on a smartcard offers extra security and personal integrity since the user can maintain possession of his personal biometric data.

The **hardware platform** allows for storage of the biometric fingerprint template

- on a secure smartcard (included)
- on the PC hard drive or
- even in a client server environment.

The FingerTIP Evaluation Kit 2 can be connected directly to the USB port of a PC.

**Software libraries** included with the FingerTIP Evaluation Kit 2 are

- the Infineon Software Developer's Kit (SDK) which performs all biometric functions
- 3<sup>rd</sup> party SDK for USB and smartcard communication allowing the integration of the Infineon's biometric fingerprint recognition engine into PC based USB and smartcard applications.
- Demonstration programs
- Example code

**Comprehensive documentation includes:**

- data sheets
- user guide
- programmers guide
- design guidelines

## System Requirements

- Microsoft Windows 98SE, 2000
- USB 1.1 compatible PC port
- Minimum 32 MB memory
- Microsoft Visual C++6.0 as a development environment
- Intel Pentium processor PC with minimum 133 MHz
- Minimum monitor resolution of 800\*\*600