

Futronic SDK

Linux & Android Fingerprint SDK



Description

The Futronic Linux Fingerprint Recognition Software Development Kit (SDK) is an excellent tool for users to develop Linux based fingerprint recognition application software. It works seamlessly with the Futronic FS80, FS82, FS88 and FS26 fingerprint scanners. With the SDK, you can make use of the Futronic proprietary fingerprint recognition algorithm without knowing the details of a purely mathematical process. So fingerprint recognition can be integrated into any application program, for instance to REPLACE the users' Logon password by a touch of finger to make your system more secure and user administration easier.

Application software developers who want to add secure but convenient fingerprint authentication into any Linux or Android application software for easy user management and more secure logon control. The SDK can be used to make stand alone application programs for mobile phone, tablet, standalone PC as well as many devices connected in any networking environment.

The Linux SDK doesn't use a kernel mode driver, but works with a well-known multi-platform library libusb.so. "libusb" is a library to allow userspace application access to USB devices.

There are two libraries, libScanAPI.so and ftapi.so.

1. libScanAPI.so is responsible for the fingerprint image capturing, it works with the libusb.so.
2. ftapi.so is responsible for the fingerprint processing and recognition.



Basics about fingerprint recognition

- A fingerprint must be registered in a system before it can be used for authentication.
- During registration, the fingerprint image is captured by using a fingerprint scanner. Then the system will extract the fingerprint's characteristics (minutiae) from the captured image and create a fingerprint registration template which is stored in any non-volatile memory space.
- To do user authentication, fingerprint is captured again and the system will create an accessing fingerprint template using the same method as creating a registration template. Then it will compare the accessing template with the registration template to determine if there is a "match" or "no match".
- If a user ID is provided, the system will compare the accessing template to the registration template of this particular user ID. This is called verification (1-to-1 matching).
- If a user ID is not provided, the system will compare the accessing template to all the registration templates stored in the system. This is called identification (1-to-many matching).

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Technical Specifications

SDK Features	Capture fingerprint image from Futronic FS80, FS82, FS88, FS26 or FS10 scanner Extracting fingerprint characteristics(minutiae) from image captured in real time and create a minutiae template which can be used: <ul style="list-style-type: none">> For registration, the template will be stored in the database> For authentication, the template will be matched to pre-registered template Matching fingerprint templates(one of the matching templates must be generated from an image captured in real time) can be done in 1-to-1 or 1-to-many mode Recognition accuracy, FAR & FRR, can be adjusted to suit security requirements Support for Live Finger Detection(LFD) when using the FS80, FS82, FS88 or FS26 scanner Support WinCE 5.0 and 6.0 for both ARM9 and x86 hardware platforms Support Futronic FS50 and FS64 for multi-finger template extraction and matching
Supported Operating Systems	Windows XP/2003/Vista/2008/7/2012/8/10/2016 32 or 64 bit environments
Development platform samples	<ul style="list-style-type: none">• VC6 and VC2012• VB.Net and C#, including VS2003/2005/2010/2012/2013• JAVA• VB6• Borland Delphi
Complementary Products	Futronic FS80, FS88, FS10, FS26, FS50 and FS64

Also Available

SDK for MacOSX

Futronic MacOS(version 10.5, 10.6 and 10.7, Intel CPU) Fingerprint Recognition Software Development Kit (SDK) is an excellent tool for users to develop MacOS based fingerprint recognition application software.

The MacOS SDK has exactly the same function as the Futronic Windows SDK. It includes header file that define API, libraries, and sample code for XCode application.

The SDK is implemented as Mach-O dynamic-link library (dylib)

Standard MacOS SDK package includes sample program with source code to illustrate how to use the SDK.

Sample program has been compiled and tested under XCode 3.1.2 for MacOS version 10.5, 10.6 and 10.7, Intel CPU.



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