

IDKit SDK

IDKit SDK is a fingerprint SDK designed for developers who need to integrate fast fingerprint search into their applications on:

- laptop or desktop PC – **IDKit PC SDK**
- handheld – **IDKit Mobile SDK**
- embedded OEM module – **IDKit Embedded SDK**



Unlike other fingerprint SDK, IDKit contains everything needed for rapid development of 1:N applications, such as:

- **integrated database** for data storage,
- **enrollee management** enabling developers to register multiple fingerprints per enrollee to improve accuracy,
- **data compression** for faster data exchanges,
- **advanced database encryption** for protecting privacy.

Features - Benefits

- **Exhaustive Search – Accuracy**

Every database search is performed exhaustively by comparing every record with the probe template. The exhaustive search does not introduce data loss and ensures significantly better accuracy than standard classification and indexing algorithms.

- **Innovatrics IEngine™ – Speed**

IDKit contains Innovatrics IEngine™ core, high-speed fingerprint identification algorithm, reaching the matching speed of up to:

- **600.000** fingerprints per second on a computer (Intel Core2 Duo processor).
- **40.000** fingerprints per second on a handheld (Intel PXA270 processor)
- **20.000** fingerprints per second on an OEM module (ARM9 processor)

- **Local fingerprint database – Ease of use**

Local database (SQLite3) is included to store and manage user records with fingerprints. The user record contains multiple fingerprint templates from the user and, if required, contains the corresponding fingerprint images and custom user attributes such as username, address, e-mail, etc. The local database is provided for convenience and simplifies programming as the IDKit seamlessly loads the database for matching and automatically handles fingerprint storage and retrieval.

- **Automatic Score Combination – Accuracy**

Several fingers can be registered per user. After matching, the similarity score of two users is calculated automatically without the need to manually match finger by finger.

- **Data encryption – Security**

For enhanced security, the database can be encrypted. In this case, all fingerprint templates, images and custom data are automatically encrypted by AES (Advanced Encryption Standard) cipher when they are stored in the database. When the data is loaded back from the database, it is automatically decrypted. The 256bit cipher keys can be set by the developer.

- **Sensor independence – Compatibility**

IDKit is sensor independent, which allows the end-user or system integrator to choose the suitable fingerprint scanner for their application based on image size, cost or technology (optical, capacitive, thermal).

Versions

IDKit PC SDK

IDKit SDK is the fastest fingerprint identification SDK on a standard laptop or desktop PC. Main functions are:

- search and identify a person from the database,
- eliminate duplicates from the fingerprint database.



Specifications

Identification speed*	600.000 fingerprint matches per second
Verification speed*	300 fingerprint matches per second
Extraction speed*	150 milliseconds
Recommended processor	Intel Core2 Duo
Operating system**	Windows 32bit
Available API	Windows dll, .NET connector
Supported languages	C, C++, VB, C#
Encryption	AES with 256 bit cipher key
Image input	BMP, JPEG, GIF, PNG
Image compression	WSQ
Directly supported sensors	DigitalPersona U.are.U 4000B, Futronic FS80 and FS82, CrossMatch Verifier300LC, SecuGen HamsterIII, UPEK TCRU1C and TCRU2C
Sensor compatibility	Any sensor (if image input is used)

* Intel Core2 Duo 2GHz, ** Other supported OS: Linux

IDKit Mobile SDK

IDKit Mobile SDK is a fingerprint SDK for mobile devices running on WinCE. IDKit Mobile SDK can:

- identify a person locally on the device,
- connect to ExpressID AFIS Matching Server for wireless client-server identification.



Specifications

Identification speed*	40.000 fingerprint matches per second
Verification speed*	40 fingerprint matches per second
Extraction speed*	400 milliseconds
Recommended processor	Intel PXA 270, 255 Samsung S3C2440.
Operating system	WinCE (Windows Mobile 2003, 5.0)
Available API	Windows dll
Supported languages	C, C++
Encryption	AES with 256 bit cipher key
Template size	Approximately 1kB
Image input	BMP
Directly supported sensors	-
Sensor compatibility	Any sensor (must use image input)
Mobile device support	HP iPAQ hx2750, HP iPAQ hx2790, DAP CE3240, DAP CE3240B, Intermec 751G, ASUS A696, ACERn321

* Intel XScale PXA 270, 624MHz

IDKit Embedded SDK

IDKit Embedded SDK is designed to provide rapid identification embedded in **physical access control terminals**. IDKit Embedded SDK runs on Innometriks OEM modules based on ARM9 processors.



Specifications

Identification speed*	20.000 fingerprint matches per second
Verification speed*	10 fingerprint matches per second
Extraction speed*	1 second
Processor	ARM9, 240MHz
Operating system	Linux
Supported languages	C, C++
Encryption	AES with 256 bit cipher key
Directly supported sensors	Futronic FS80, UPEK T1/T2, Atmel Fingerprint

* ARM9, 240MHz