

# IdentityTOOLS® SDK

Multi-biometric recognition SDK for single servers and workstations



## What is IdentityTOOLS SDK?

IdentityTOOLS is a Software Developer's Kit (SDK) for single servers and workstations that is designed to enable developers to build fingerprint and face recognition biometric identification applications. Using IdentityTOOLS, developers have the ability to create virtually any fingerprint and/or face recognition application that requires image acquisition, template generation, verification or identification. IdentityTOOLS is based on Viisage's Flexible Template Matching technology and a unique combination of multiple biometric algorithms.

## The Multi-biometric Advantage

Viisage's new combination of both fingerprint and face recognition results leads to a new dimension of biometric accuracy and the intuitive use of multiple biometrics. Viisage is unique in its ability to provide all three, Fingerprint, Face recognition and ISO Image components, including quality checks for all in one easy-to-use SDK. IdentityTOOLS SDK saves time by reducing the number of biometric SDKs that an application developer needs to learn and reduces the cost of development by reducing the number of biometric SDKs that are needed.

## Identity Management

The IdentityTOOLS software architecture is designed to support rapid integration of additional algorithms. The software ensures backward compatibility with biometric templates built on FaceTOOLS 3.0 and later versions. and includes an ID Management Structure for administrating multi-biometric data.

## Face Recognition Capabilities

- Supports Viisage's enhanced Flexible Template matching
- Incorporates 3D pose generation technology
- Incorporates both Independent component Analysis (ICA), and Hierarchical Graph matching (HGM) face recognition algorithms
- Provides ISO/IEC-19794-5 and ANSI INCITS 385-2004 compliance image generation
- Face recognition 1:1 and 1:n
- Image Quality Checks

## Fingerprint Capabilities

- ISO image generation for fingerprints (ISO/IEC-19794-4 and ANSI/NCITS381-2004)
- 1: 1 fingerprint matching
- 1: n fingerprint matching
- Fingerprint Quality Checks

## Interoperability

- Complies with BioAPI version 1.1
- Provides a C++-API
  - Most functions offered by Viisage's IdentityTOOLS SDK API, are also compatible with the IdentityEXPLORER SDK API
  - Supports a full range of image devices
- Applications providing image quality checking, ISO image generation, template generation and template matching—for both face and fingerprint recognition.

## Tools

- Registration Tool for license files management

## Sample Applications

- Written in C++
- All sample source code included

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## FEATURES AND FUNCTIONS

### Sample Applications Included

- **ID Matcher** template generation and matching for face and fingerprint. (figure 1)
- **ID Recorder/Viewer**—Records and presents biometric information. (figure 2)
- **Image Device**—Live video capture
- **ID Record Viewer**—Presenting the persons' data
- **Acquisition quality**—Image quality analysis
- **Face Pose Transformer**—Face pose transformation
- **ISO Face Image**—ISO image generation
- **ISO Fingerprint Image**—ISO image generation



Figure 1.

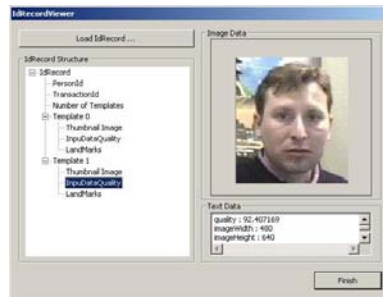


Figure 2.

IdentityTOOLS SDK	Standard Face	Standard Finger	Professional	Enterprise
ISO Face Image Generation	X		X	X
ISO Fingerprint Image Generation		X	X	X
Image Quality Check Face	X		X	X
Image Quality Check Fingerprint		X	X	X
3D Pose Estimator	X		X	X
Face Template Generator	X		X	X
Fingerprint Template Generator		X	X	X
Fingerprint Matcher 1:1		X	X	X
Face Matcher 1:1			X	X
Face/Fingerprint—Fusion			X	X
Face Matcher 1:n				X
Fingerprint Matcher 1:n				X
Fingerprint Device Support		X	X	X

### Licensing Components

- IdentityTOOLS SDK developer's license
- Runtime license (for each client)
- Template enrollment license
- Training and professional services are also available

### Hardware System Requirements

- Intel Pentium III or higher
- 256 MB or RAM, 512 MB preferred
- 300 MB of disk space + 200 MB for Matrox MIL Lite SDK

### Software System Requirements

- Software operating systems
- Microsoft Windows 2000 (Professional or Server\*) SP3 or later
- Microsoft Windows XP SP1
- Microsoft Windows Server 2003\*

### Supported Video Capture Devices

- USB, IEEE 1394 (Direct X)
- Matrox CronosPlus
- Matrox Meteor II
- Matrix Vision Delta/Sigma
- IDS Falcon/Falcon Plus
- Canon USB Device

### Supported Fingerprint Capture Devices

- Cross Match, Smith-Heimann, Identix

### Supported development environments

- C/C++
- .NET environments using managed C++-Code

\*Note: Matrox MIL Lite SDK does not officially support Microsoft Windows Server 2000 and 2003

Please contact our Professional Services Team at [sales@viisage.com](mailto:sales@viisage.com) if you have any requirements beyond those specified.



Massachusetts 978.932.2200 Washington D.C. 703.414.5800 EMEA 49 234.9787.0 [www.viisage.com](http://www.viisage.com) [sales@viisage.com](mailto:sales@viisage.com)

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