

ExpressID AFIS Software

Last Updated Sunday, 18 May 2008

ExpressID AFIS is a complete fingerprint matcher software for large-scale fingerprint identification. ExpressID AFIS searches for fingerprints in the database and identifies individuals based on their fingerprints. ExpressID AFIS is used by system integrators to build fingerprint identification applications for their customers (government, enterprises, banks, hospitals, retail stores, etc.).

Compared to other AFIS systems on the market, ExpressID is:

- faster - it matches 600.000 fingerprints per second on one computer,
- more accurate - it executes an exhaustive search of the database, without using the data loss techniques of classification or indexing,
- cheaper - it runs on standard off-the-shelf PC hardware.

» Datasheet

ExpressID AFIS package contains all parts necessary for setting up complex identification applications, such as high-speed matching engine, fingerprint search-database management and client-server architecture. This allows system integrators to focus on their application's specifics such as graphical user interface, application logic or integration with customer's proprietary applications.

ExpressID AFIS has a scalable architecture, allowing the Matching Server component to be installed on several matching computers to distribute the workload and increase matching speed. Therefore, ExpressID can search large-scale databases ranging from hundreds of thousands to hundreds of millions of fingerprints.

Features and Benefits

- Exhaustive Search

Every database search is performed exhaustively comparing every record. The exhaustive search does not create data loss and ensures significantly better accuracy than standard classification and indexing algorithms.

- Innovatrics IEngine™

ExpressID AFIS contains Innovatrics IEngine™ core, high-speed fingerprint identification algorithm, reaching a

matching

speed of up to 600.000 fingerprints per second on one computer (Intel Core™; 2 Duo processor).

- Client-Server

Based on client-server architecture, ExpressID AFIS allows remote clients such as enrollment stations and identification stations to communicate with the Matching Server through SOAP protocol, over the Web or LAN. This allows rapid implementation of AFIS on a pre-existing network.

- Standard Hardware

Unlike other more costly AFIS systems, ExpressID runs on standard PC hardware and is easy to set up.

- Scalable

ExpressID Matching Server can be installed either on one computer or on several computers allowing workload distribution and increase in matching speed.

- Sensor Independent

ExpressID AFIS 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).

- Any SQL Database

ExpressID Matching Server can be connected to almost any database available on the market such as Oracle, MS SQL or MySQL.

Versions

ExpressID AFIS Enterprise ExpressID AFIS Government

Single server architecture

Up to 3 million fingerprints

Scalable cluster server architecture

Over 3 million fingerprints

How it works

From the technical standpoint, ExpressID AFIS consists of four principal parts:

- Service - is the master server of the ExpressID AFIS. It receives identification requests from client applications, manages the fingerprint database connection, executes the fingerprint search and returns result to appropriate client application.

- Dispatcher - is the module that dispatches the workload between Nodes. Dispatcher is only necessary in Distributed Server configuration.

- Nodes - are the matching computers, each can search up to 600.000 fingerprints per second stored in its memory.

- Clients - is a module installed on every client application which connects to the ExpressID AFIS for sending identification requests and receiving identification results. Client application can be developed using Innovatrics IDKit SDK products on:

- laptop or desktop PC - IDKit PC SDK

- handheld - IDKit Mobile SDK

- embedded OEM module - IDKit Embedded SDK

Technical specifications

Client

Available SDK for client programming*

IDKit PC - for PC/laptop,

IDKit Mobile - for PDA/handheld,

IDKit Embedded - for hardware terminal

Supported operating system

Windows 32bit, WinCE, Linux

* Consult corresponding datasheet for more information.

Server

Identification speed*

600.000 fingerprints per second per Node

Recommended processor

Intel Core2 Duo or superior

Operating system
Windows 32bit

Executable mode
Standalone (.exe program), Windows Service

Client-Server architecture
Based on SOAP protocol

Security
SSL

Encryption
AES with 256 bit cipher key

Communication link compression
Zip algorithm

Supported databases
Oracle, MS SQL, MySQL, SQLite

* Intel Core2 Duo 2Ghz

Prices and Ordering

Prices of development and runtime licenses are available upon request.