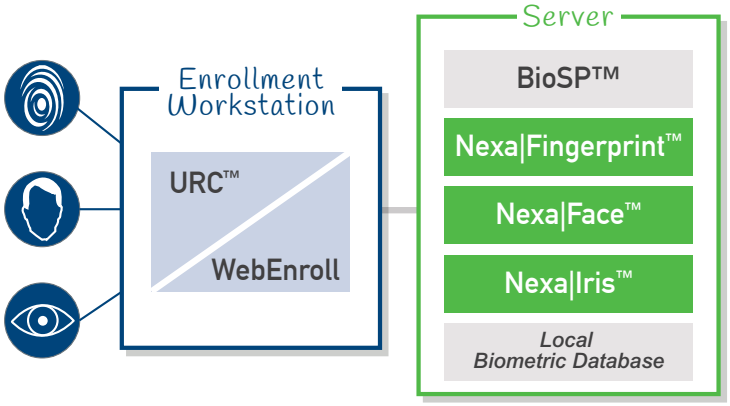
Nexa™ | Biometric Search and Match SDKs for Fingerprint, Face, and Iris

Aware's **Nexa|Fingerprint™**, **Nexa|Face™**, and **Nexa|Iris™** biometric search and match algorithms deliver high accuracy and fast search speeds in SDK packages that are reliable, configurable, and easy to use. They are complemented by a level of technical support that has helped make Aware a trusted provider of high-quality biometric enrollment and workflow software for over twenty years.

Nexa SDKs are designed to be easily configured towards optimization of a system for a given application, database, computing platform, and operational environment. They include configuration tools that help quantify system performance, identify opportunities for improvement, and continuously optimize the system.

Each Nexa SDK can be deployed on a workstation or server, either as a standalone biometric search/match API, or in combination with Aware's other modular, COTS SDKs and platforms. For very large-scale biometric searching and matching, Nexa SDKs can be deployed on the Astra™ Automated Biometric Identification System (ABIS) that uses a cluster computing platform optimized for rapid biometric search of extremely large databases, high-volume biometric authentication, as well as identity resolution.

Aware's SequenceCheck, PreFace, and IrisCheck SDKs can be used in concert with Nexa libraries to perform optional quality assurance and preprocessing for enhanced fingerprint, face, and iris search functionality and performance.



FEATURES

- Fast, accurate search and match algorithms
- Well-designed, easy-to-use APIs
- Fully scalable and extensible
- Highly configurable and tunable for performance optimization
- Fully leverages multicore processor power
- Human-interpretable match scores that estimate false match likelihood
- Portable between client and server hardware and OS, and database platforms
- Support for all major image formats
- Enhanced functionality with optional Aware image preprocessing and QA SDKs
- C, .NET, JNI, and Web Service interfaces
- Support for 32-bit and 64-bit Windows and Linux

API FUNCTIONALITY

Biometric enrollment

- Subject add, update, and delete
- Automatic unique subject ID generation
- Accept preprocessed image/metadata objects from other Aware SDKs

Biometric search and match

- Match score from 1:1 comparison between two subjects or probe and selected subject
- Match score(s) from 1:many comparison between probe and full gallery

Search and match configuration

- Tools for performance optimization based on:
  - database size/quality
  - RAM/CPU
  - target speed/accuracy

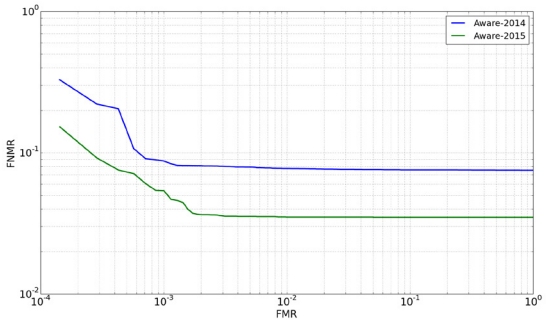
Nexa|Fingerprint™

The Nexa|Fingerprint SDK provides high-performance algorithms for multistage fingerprint search or rapid, high-volume authentications. With recently optimized algorithms, the performance is comparable to other leading fingerprint search software products.

- Multi-stage fingerprint matching algorithms
- Flats, rolls, and multi-finger images
- One through ten fingerprints and 14-image sets
- 1:1 match, 1:many search, deduplication
- Human-interpretable match and confidence scores

Enhanced features with LiveScan API and SequenceCheck SDKs

- Sequence checking
- High-performance segmentation
- ANSI/NIST ITL-1 2011 transaction parsing
- Quality scoring
- Live scan support



Intel i7-3770 CPU @ 3.40GHz
16 GB Windows 7

100K identities
Ten-finger rolls
Very low quality images
65K matches/sec
(accuracy maximized)

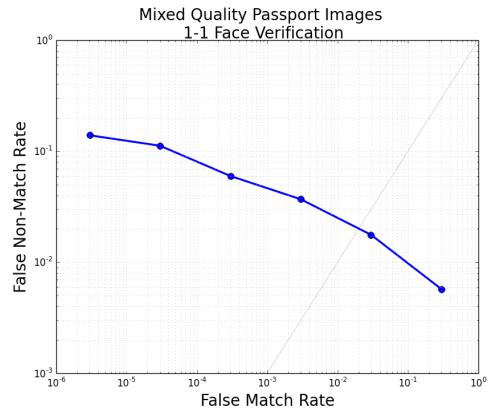
Nexa|Face™

Nexa|Face is a high-performance facial matching and searching algorithm that can be trained on any database to optimize its matching performance.

- 1:1 match, 1:many search, deduplication
- Human-interpretable match and confidence scores
- Custom-trainable algorithms

Enhanced features with PreFace™ SDK

- Portrait normalization (tilt, scale, crop, brightness, contrast)
- Quality and compliance assurance
- Age, sex, and race estimation
- Facial features and attributes
- Configurable face finding
- Video input support
- Camera support



i7-3770 CPU @ 3.40GHz
16 GB, Windows 7

Most accurate:
Template size: 5400 bytes
Template creation time: 0.13 s

Match Speed: 100,000/s

Fastest:
Template size: 1800 bytes
Template creation time: 0.09s

Match Speed (fastest):
220,000/s

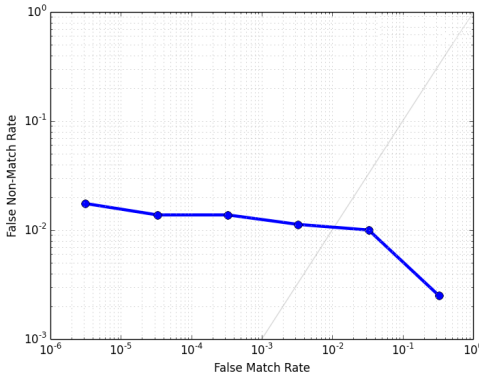
Nexa|Iris™

Nexa|Iris is a high-performance iris matching and searching algorithm that performs:

- Search and match using one or two irises
- 1:1 match, 1:many search, deduplication

Enhanced features with IrisCheck™ SDK

- Segmentation configuration
- ISO/IEC 29794-6 quality scoring
- Support for all NIST KIND formats



Intel i7-3635QM. 2.4 GHz,
6 GB RAM, 4 core

33K comparisons/sec/
core

AWARE

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Aware is a leading global supplier of biometrics software products and solutions since 1993. We provide biometric enrolment SDKs, controls and applications, text and biometric search and match algorithms, and a biometric server platform. Our products are used to build biometric solutions for a variety of applications including law enforcement, border control, access control, credentialing, defense, and intelligence.