



Gradient Signature

Handwritten signature recognition technology

Gradient Signature integrates latest Gradient's dynamic handwritten signature recognition technology.

Gradient Signature comprises a set of libraries ready for integration in touchscreen mobile devices, enabling signature verification in smartphones and tablets.

- ✓ **Award-winning dynamic signature recognition technology:** outstanding verification rates
- ✓ **Configurable enrolment and security levels**
- ✓ **Detection of easy-to-forge signatures and template coherence**
- ✓ **Ideal for documental security and transactions,** including financial services, insurance or healthcare

Functionalities

Acquisition modules

Acquisition and control modules for mobile devices allowing fast integration and development of handwritten signature authentication enabled applications.

Signature security analysis module

- ✓ Analysis of single signature complexity to avoid easy-to-forge signatures.
- ✓ Analysis of template's coherence (multiple signatures).

Signature template acquisition module

Handwritten signature template generation from one or several signatures.

Signature verification module

Signature template matching, allowing an easy development of verification applications.

Requirements

iOS

- ✓ Minimum OS: iOS device (iPhone, iPad) with iOS 8 or above.
- ✓ Minimum hardware requirements: Apple A7 processor or higher (iPhone 5s or above).
- ✓ Programming language: ObjectiveC API.

Android

- ✓ Minimum OS: Smartphone or tablet with Android 5.0 OS or

above (API 21).

- ✓ Minimum hardware requirements:
 - Multi-core processor.
 - Reference device: Samsung Galaxy Note 5 or higher.
- ✓ Programming language: Java API.

Performance

Recognition rates:

- ✓ Gradient Signature v1.0:
 - Samsung Note8 DB (private DB*): EER=5.37% (10.43% with skilled forgeries).
 - Mobile processing allowed.
 - General purpose DSV (Dynamic Signature Verification).
- ✓ GradientSignature v2.0 (using additional pressure and angle information by taking advantage of pen devices):
 - Samsung Note8 DB (private DB*): EER=2.16% (4.71% with skilled forgeries).
 - Mobile processing allowed.
 - DSV optimised for Note8 devices: 57% of performance boost over v1.0 and 22.5x faster than v1.0.

International competitions evaluation:

ESRA 2011 DB:

- ✓ EER<3% (x,y,time info)
- ✓ EER<2% (x,y,time,pressure&angle info).

✓ Ranked 1st in the contest.

Package

Developer SDK for integration and deployment.

* Private DB details under request

