Multi-Modal Authentication

Voice and Vision, Quick and Easy, Highly-Secure and Easy-to-Use Authentication

TrulySecure is a highly flexible face and voice authentication solution, offering higher security and greater ease-of-use than traditional authentication methods like **user names**, passwords and **PIN's**.

By combining both face and voice into one SDK, developers can leverage both biometrics to address real-world challenges such as face masks, **recordings of a voice password, very dark environments or noisy environments**. When faces are partially obstructed, the voice biometric provides the extra confidence needed to enable secure access. Alternatively, when used in a noisy environment, such as a restaurant or sporting event, the voice biometric is enhanced with a facial recognition score. Developers can leverage both face and voice biometrics in real-time to provide a seamless, contact free experience to the end-user.

The proprietary speaker verification, face recognition, and biometric fusion algorithms leverage Sensory's deep strength in speech processing, computer vision, and machine learning. TrulySecure offers ease-of-mind specifications: no special hardware is required - the solution uses a standard mic and camera on phones, tablets and PCs. Additionally, all processing can be done on-device so personal data remains secure.

Maximum Security

Face and voice authentication combined creates a synergistic effect on security. **Face liveness detection** protects against spoof attacks using an image or video.

Private/Secure

Embedded execution negates the transfer of private information to the cloud.

Fast Enrollment

Embedded, therefore zero cloud communication delay. The solution features quick and easy enrollment - capturing voice and face simultaneously in only a few seconds.

Configurable Security Levels

Developers are provided 5 sensitivity levels to fit application security needs.

Hardware Agnostic

No special hardware is required - the solution uses a standard mic and camera on phones, tablets and PCs.

Proven Demand

With millions of installs, face and/or voice authentications, **AppLock** proves that users want the convenience and security that TrulySecure provides.

Environmental Adaptation

Adaptive enrollment dynamically updates enrollment templates in new environments.

3D Camera Support

Sensory has developed a face recognition engine to take advantage of the depth field generated by 3D cameras, working closely with PMD technologies.

FIDO Certified

FIDO UAF certified for Android

Compatible Platforms

Android, iOS, Windows, OSX, Linux and Tizen. (Many OS options contact Sales)

Mobile | Automotive | IoT | Medical Equipment | Biometric Security

Accuracy & Performance

A key measure of any biometric system is the inherent accuracy of the matching algorithm. The chart to the right details the accuracy of the TrulySecure solution as it relates to both False Acceptance Rates (FAR) and False Rejection Rates (FRR). This is done for face and voice individually, as well as both biometrics in combination. We present the TrulySecure accuracy results in the form of Detection Error Tradeoff (DET) plots, which explicitly show the tradeoff between security (FAR) and ease of use (FRR). Plots are included for face, voice and the combination (convenience mode) of the two.
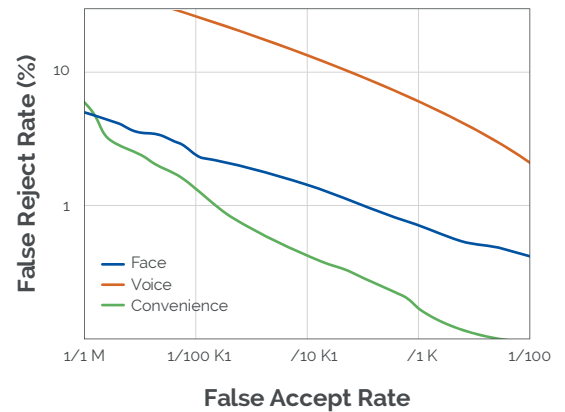
AppLock™

Perhaps the most important confirmation of the accuracy (and hence viability) of TrulySecure is its real-world performance in millions of mobile phones and by millions of mobile banking customers as well in Sensory's AppLock which is Sensory's example app on the Google Play Store. AppLock can be used to lock other apps on a mobile device - when that app is opened, AppLock opens up first, requiring a face or voice authentication before then allowing the other app to fully open.

• Applock is being used in virtually every country in the world, on virtually every Android device available.

• Applock users receive no special training or guidance - they simply find the app on the Play Store and start using it.

• Applock is used in an extremely wide range of environmental conditions. Moreover, we have analyzed the authentication results for AppLock users and have confirmed greater than 95% Detection Rates, matching closely with the test results presented in this document.

TrulySecure (TS) SDK specifications:

Languages	Language-independent
Authentication Types	Fixed-phrase, User-Defined Passphrase
OS Platforms	Windows (64-bit), Linux (x86_64, 32 & 64-bit ARM), MacOS, Android, iOS
API Languages	SMMA-C++, Java, Python, Objective-C, Swift, C#, VVUtils -Java API for Android, Android demo app, Objective-C/Swift as iOS framework, iOS demo
Processing Location	On-device
Video Requirements	128 pixels across width of face, Smartphone, 480X720 resolution or higher.
Audio Formats	16 kHz, 16-bit, mono

sensory™