

**PRESS RELEASE:**

**For Immediate Release:**

**Media Contacts:**

Michael A. Farino

New Era Communications Services

sensory@newerapr.com

(949) 346-1984

**Sensory Releases TrulySecure Face Authentication with 3D Camera Support, GPU Processing and Optional Cloud Capabilities**

*TrulySecure, Sensory’s class-leading face and voice ID solution found in top-selling smartphones and banking apps can now harness the benefits of 3D camera technology to authenticate users in all lighting conditions, even complete darkness*

**SANTA CLARA, Calif., – October 24, 2018** – [Sensory](http://www.sensory.com/), a leader in speech and vision technologies that enhance the user experience and security of consumer electronics, today announced the release of its fourth generation of TrulySecure™ FIDO Certified™ multimodal biometric authentication technology. Now smarter, faster and more secure than ever before, the TrulySecure 4.0 SDK boasts a variety of new AI features that cater to today’s smartphones, mobile apps, and IoT devices, including support for 3D cameras, GPU utilization for authentication processing, new liveness challenges and options for integrating components of TrulySecure into cloud-based authentication systems.

**TrulySecure’s AI Gets Smarter**

With each subsequent revision, Sensory continues to significantly enhance the performance, security and features offered by TrulySecure. Version 4.0 continues the trend by expanding on Sensory’s market-proven face authentication AI performance and accuracy. With version 4.0, TrulySecure’s deep learning AI has been trained on a data set that is an order of magnitude larger than the previous generation, which has improved 2D facial recognition accuracy more than 50-percent.

**TrulySecure Now Supports 3D and IR Cameras**

A common problem with traditional 2D facial recognition solutions is the inability to authenticate users in challenging lighting or no-light scenarios. The use of an IR illuminator completely eliminates this problem, essentially allowing TrulySecure to see clearly and authenticate users in all lighting conditions, including complete darkness.

3D camera support also increases the robustness of TrulySecure to varying pose angles, making the system more accurate during casual use across a broader range of conditions, and more resistant to spoof attacks.

TrulySecure's support of 3D camera data has been developed in collaboration with [pmd Technologies](https://pmdtec.com/) from Germany, the worldwide leading 3D Time-of-Flight CMOS-based digital imaging technology supplier. 3D cameras from pmd are already integrated into smartphones, robots, cars and AR headsets.

[**Click here for a short video that outlines the benefits of 3D/IR cameras.**](https://youtu.be/z9538oFEhOw)

**GPU Utilization for Faster Authentication**

Another major update in TrulySecure is the ability to split the biometric authentication data processing load between a device’s GPU and applications processor. To accomplish this, key processor-heavy components of the core TrulySecure algorithm were isolated, streamlined and specially ported to run on a GPU. In testing, it was found that those isolated components of TrulySecure run as fast or even faster on the GPU than on the AP. Moving heavy processing components of TrulySecure from the AP to the GPU allows the applications processor to either prioritize other tasks, or work in parallel with the GPU to cut the amount of processing time required for the TrulySecure algorithm in half.

As an added bonus, isolating and streamlining processor-heavy components of the TrulySecure algorithm has opened up a whole new realm of possibilities for porting to other embedded environments in the future.

**Unrivaled Anti-Spoofing and Liveness Detection**

An area of concern for all authentication modalities is spoofing. While previous generations of TrulySecure face and voice recognition featured industry-leading anti-spoofing and liveness detection capabilities, TrulySecure 4.0 makes spoofing a concern of the past. The first major leap forward from the previous version of TrulySecure is the use of 3D image data for authentication. This allows TrulySecure to not only recognize the user’s face, but the shape and contour of it too – and immediately reject 2D images and videos of the user’s face. Requiring 3D facial imagery serves as an excellent anti-spoofing measure, but not all devices have 3D cameras. For traditional 2D RGB camera applications, Sensory’s TrulySecure now features a face liveness challenge that makes it virtually impossible for anybody but the enrolled user to get in. TrulySecure’s face liveness challenge requires the enrolled user to follow prompts telling them what kind of movement to make in order to be authenticated. Additionally, TrulySecure now features an ‘eyes open’ challenge, that requires the user’s eyes to be open during authentication.

**TrulySecure Adds Greater Support for Cloud-Based Authentication**

Sensory’s technologies have long been the go-to for those looking to integrate powerful AI at the edge, but now TrulySecure can make cloud-based authentication technologies faster, more convenient and more secure.

One way that TrulySecure can do this is via its incredibly quick on-device enrollment component for federated authentication. With federated authentication, once a user completes the TrulySecure enrollment process on their device, TrulySecure creates a user enrollment template that can be handed off to the authentication server. Once the template is received by the server, it can be sent to other devices as needed, allowing the enrolled user to authenticate by face on any permitted device or app.

TrulySecure can also be used to reduce authentication data loads sent to cloud-based authentication systems by moving pre-authentication steps like liveness detection and feature extraction to the edge. TrulySecure’s on-device liveness detection can be used to immediately verify user authentication samples for liveness before sending captured authentication images to the server for processing. Taking it another step further, by enabling TrulySecure’s on-device feature extraction, once the AI detects liveness, it can then immediately convert the user’s facial features into templates (irreversible mathematical data) that can be sent to the authentication server instead of sending multiple images. This mitigates security risks associated with sending photos of a user’s face used for authentication over the internet, and significantly reduces the amount of data sent to the cloud for authentication.

Ideal for a wide range of applications, including smartphones, tablets, PCs, personal assistant technologies and robots, Sensory’s SDK for TrulySecure 4.0 face authentication is now available and currently supports ToF 3D cameras from pmd Technologies.

For more information about this announcement, Sensory or its technologies, please contact sales@sensory.com ; Press inquiries: press@sensory.com.

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**About Sensory Inc.**

Sensory Inc. creates a safer and superior UX through vision and voice technologies. Sensory's technologies are widely deployed in consumer electronics applications including mobile phones, automotive, wearables, toys, IoT and various home electronics. With its TrulyHandsfree™ voice control, Sensory has set the standard for mobile handset platforms' ultra-low power "always listening" touchless control. To date, Sensory’s technologies have shipped in over a billion units of leading consumer products.