VERIDIUM

# vFace

Veridium creates trusted digital identities by binding a user's biometrics – unique traits or behavioral characteristics – with the user's smartphone for a convenient yet secure passwordless multi factor authentication experience.

Organizations trust Veridium to eliminate the risks associated with passwords and comply with GDPR, PSD2 and other government regulations. Veridium allows enterprises to replace passwords with biometrics as the fundamental element of identity. Veridium is deployed within highly regulated industries, including financial services, healthcare and government services. Implement a Zero Trust identity strategy that meets multi factor authentication requirements and regulations with Veridium.

## Biometrics
## make the world safer

Every day biometrics are creating a safer world. Biometric authentication can be the use of any physical characteristic or personal trait – including fingerprints, faces, voice or movement. A single heartbeat can be used to identify an individual according to innovators in the auto industry that are testing steering wheel sensors. While iris scans are currently the most accurate, the most commonly used biometric tools are Apple's Touch ID and Face ID and Microsoft's Windows Hello. Biometrics are becoming ever present across airports, stadiums and modern devices. Consider that a step tracker is a behavioral biometric tool that tracks body movement and motivates you to be healthier. Biometrics will play a significant role in creating a healthier and safer world in several arenas including health, finance and transportation.

## Friendly
## vFace

Since not everyone can afford the latest mobile devices, Veridium innovated to deliver an affordable facial biometric app that is readily available for use on a variety of devices. Now, nearly all mobile phone users can have access to the benefits of facial recognition to improve access security for their data, their apps and into their work environments from their phones. Enterprises can eliminate annoying passwords and improve security for consumers, employees and transactions with Veridium vFace technology.

# Veridium
## vFace

Veridium's vFace utilizes the mobile device's front facing camera (when available) to provide software authentication for users into a variety of mobile applications and environments. Veridium vFace is available for Android and iOS in the respective app stores and is supported on the VeridiumID platform. VeridiumID is an open authentication platform providing users the flexibility to choose their preferred biometric method. VeridiumID supports native biometrics like Touch ID or Face ID, or proprietary Veridium biometrics including vFace and 4 Fingers TouchlessID, or integration with third-party biometrics. This flexible mobile centric platform reduces the total cost of ownership for strong multi factor authentication.

## Biometric Facial Templates

Veridium vFace allows users to enroll templates easily and securely and offers organizations options for storing face templates on the client device, VeridiumID server or in a distributed template model. With the distributed template model, a complete facial template is never stored in a single location, making it the most secure method. Typically one portion is on the server and another on the mobile device. Matching is performed server side or client side only at the moment the user needs to authenticate. The vFace template is created after analyzing specific facial features and once the user is enrolled, any original images of the user's face are immediately discarded. Veridium never stores the complete face images used to create the user's enrollment template.

## Architecture

Veridium vFace leverages MobileNet architecture, which covers both the latest mobile hardware and legacy low-powered mobile devices.

## Liveness

Veridium vFace ships with an "active liveness" capability, which can be disabled. Active liveness requires users to move their head during enrollment to ensure that a static spoof image is not being used. The Veridium algorithms use the head movements to create a depth map of a user's face to mitigate the risk from presentation attacks using digital or print images.

## Performance

The minimal vFace template size, less than 3 kilobytes, provides an exceptional sub 3ms matching time even on legacy mobile devices like the iPhone6 and Galaxy S6. For additional performance, Veridium vFace creates multiple templates to provide exceptional levels of performance for matching.

## SDK

Veridium's vFace has been seamlessly integrated into the Veridium Mobile SDK, offering users the option of using either Veridium 4 Fingers TouchlessID or vFace for authentication.

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