



ONYX Suitability for Financial Transactions

Apple® Inc.'s release of Touch ID™ proves consumers are willing to adopt biometrics, particularly fingerprint biometrics, for everyday tasks that require security such as mobile banking access and approving mobile transactions.

Touch ID reveals that while convenience is a driver in the consumer space, security remains of paramount importance in the financial industry. Touch ID was quickly spoofed, and subsequent public use revealed high False Acceptance Rates (FAR). With one finger enrolled (more fingers enrolled lowers security) on Touch ID, the sensor actually achieves (at best) five times more security than a PIN. ONYX™ security offers ten to fifteen times more security than a PIN.

Studies by the U.S. Dept. of Commerce, National Institute for Standards and Technology (NIST), reveal that high FAR/FRR rates experienced on the iPhone® 5S and the swipe sensor on the Samsung Galaxy S® 5 are a result of the small amount of finger area those sensors collect. The study has lead NIST to conclude the area of fingerprint collected is directly proportional to the effectiveness and accuracy of the biometric system, and that "Small-Platen Capture Devices" such as the one used by Touch ID are not suitable for large database matching, such as government systems, or systems requiring strong security. In other words: more fingerprint equals more security.

Like Touch ID, ONYX is meant for mobile use; all matching and biometric information is stored securely on the device. It's also very convenient to use. Additionally, ONYX is a software-only solution making it easy to implement, easy to deploy on more devices, and because it takes advantage of the existing integrated camera, ONYX acquires the entire fingerprint. It is far more accurate and far more secure, than Touch ID or the swipe sensor in the Samsung GS5.

ONYX allows banking and financial transaction apps to deliver biometric security to virtually any Android or iOS device. Solutions for Blackberry® and Windows® Phone are in active development. Because ONYX uses the camera and is separate from the home button, the user must deliberately authenticate, leaving no possibility of accidental activity.

Onyx provides convenience to users, and there is no PIN or password to remember. More importantly, ONYX provides real security and the broadest deployability of any fingerprint biometric solution.



Diamond Fortress Technologies

1500 1st. Ave. N.

Birmingham, AL 35203

855-785-8646

www.diamondfortress.com

team@diamondfortress.com



DIAMOND FORTRESS
TECHNOLOGIES

WWW.DIAMONDFORTRESS.COM

¹ Apple. *iPhone 5S: About TouchID security*. March 2014. Web. <<http://support.apple.com/kb/ht5949>>.

² United States of America. National Institute of Standards and Technology. Orandi, Shahram et. al. *NISTIR 7950 - Examination of the Impact of Fingerprint Spatial Area Loss on Matcher Performance in Various Mobile Identification Scenarios* (page 30). March 2014.

Apple, Touch ID, and iPhone are trademarks or registered trademarks of Apple, Inc., registered in the U. S. and other countries. Samsung and Galaxy S are both registered trademarks of Samsung Electronics Co., Ltd. The Trademark Blackberry is owned by Research In Motion Limited and is registered in the United States and may be pending or registered in other countries. Neither Diamond Fortress Technologies, Inc.; Check2Protect Pty Ltd; nor ONYX are endorsed, sponsored, affiliated with or otherwise authorized by Research In Motion Limited. Windows is a registered trademark of Microsoft Corporation.