

News release

trinamiX Face Authentication is the first to be certified as highly secure behind OLED

- The first face authentication to pass Android Biometric Security Test and FIDO Biometric Component Certification, while the hardware is mounted behind an OLED display
- Solution officially approved for integration into Android phones as well as for use in particularly sensitive applications

February 3, 2022 (Ludwigshafen, Germany) – **trinamiX Face Authentication is the world's first to fulfill highest biometric security demands while the hardware is invisibly mounted behind an OLED display. The solution was lately put to the thorough test of accredited assessment institutes. It was certified to be spoof-proof behind OLED according to the top standards defined by Android™ and FIDO® Alliance. trinamiX GmbH, a German subsidiary of BASF SE, is thus taking a further step towards creating the next generation of biometric authentication for smartphones.**

Thanks to biometrics, user authentication today is as easy as looking at your smartphone's screen to unlock it. The unmatched convenience of biometric solutions, especially compared to passwords or PINs, has made them increasingly popular. Still, these systems can be fooled by simply using a three-dimensional replica of someone's face or finger. Biometric authentication is often not yet sufficient to meet the industry's high security demands. trinamiX has launched a unique face authentication solution that is now certified to meet them – and to even go beyond.

A unique liveness check based on skin detection

trinamiX adds a unique dimension to face authentication: skin detection. Their technology reliably detects skin versus other materials while verifying a user's identity in order to tell whether the object in front of the camera is an actual human-being. In that regard, it functions as a new way to check for liveness without any active user contribution. Acknowledging the value of their breakthrough, trinamiX has already patented the underlying technology *Beam Profile Analysis*. "We aim to create a future, in which sensitive user information is protected by reliable and convenient authentication steps," says Stefan Metz, Director 3D Imaging Business at trinamiX. "This is where we see huge potential in facial biometrics – if smartphone manufacturers are able to close the security gaps that common technologies still have. At trinamiX we have found a way to provide that next-generation technology."

To give proof of its higher security, trinamiX has put their technology to the test of accredited assessment institutes. Over a period of several months, it has undergone thousands of spoof attempts including the use of silicone masks with accurate three-dimensional shape. As a result, their face authentication solution has successfully been certified as spoof-proof (Spoof Acceptance Rate = 0 %) according to Android Biometric Class 3 (strong). It furthermore showed to fulfill the high requirements of FIDO Level C – the alliance's soon-to-be top standard. Based on these assessments, trinamiX Face Authentication is officially approved for integration into Android phones as well as for use in sensitive applications like mobile payment. As the world's first face authentication solution, it passed all biometric security tests while the hardware was mounted behind an OLED display.

Combining both worlds: security and user experience

By integrating their solution behind OLED, trinamiX has unlocked a new freedom of design. It enables smartphone companies to create products with best user experience – while reliably protecting their

users' personal data. "Our goal is to give smartphone brands a greater freedom of design and to allow for sleek, maximum display designs," says Metz. "We made our authentication solution work behind OLED and thereby finally erase the need for a notch." While full-screen displays are smartphone industry's ongoing trend, they typically impair the functionality of common face authentication. trinamiX found a way to solve these challenges: With their latest certifications, they prove to combine best user experience with highest security.

For more information visit <https://trinamixsensing.com/3d-imaging/smartphone>

Futher details on mentioned certifications

trinamiX Face Authentication was tested according to the FIDO Alliance Biometric Component Certification Program and the Android Biometric Security Test. It passed each of them with the highest possible rating, while the hardware (camera, dot projector, flood illuminator) was integrated behind OLED.

To be considered compatible with Android, device implementations must meet their specific security requirements. The **Android Biometric Security** defines three classes of biometric strength: Class 3 (Strong), Class 2 (Weak), and Class 1 (Convenience). trinamiX Face Authentication was rated Class 3 based on, besides other criteria, the Spoof Acceptance Rate of 0 %.

Source: <https://source.android.com/security/biometric/measure>

The FIDO Alliance **Biometric Component Certification** was established globally to set a standard for biometric authentication methods. Their standard provides the means to make biometric security measurable and comparable – especially in accordance with the payment requirements of international financial ecosystem standards. trinamiX Face Authentication was tested in accordance with the requirements of soon-to-be top standard FIDO Level C.

Source: <https://fidoalliance.org/certification/biometric-component-certification/>

Android is a trademark of Google LLC. | FIDO® is a trademark (registered in numerous countries) of FIDO Alliance, Inc.

About trinamiX GmbH

trinamiX GmbH develops cutting-edge solutions in the fields of biometrics and mobile NIR spectroscopy, which are used in both consumer electronics and industrial designs. The company's products enable humans and machines to better capture data with the goal of understanding the world around us. This results in improved decision making as well as stronger biometric security. trinamiX, based in Ludwigshafen (Germany), was founded in 2015 as a wholly owned subsidiary of BASF SE. The company employs over 180 people worldwide and holds more than 300 patents and patent applications. For further information visit www.trinamiXsensing.com.

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