trinamiX

From Face Authentication to remote Vital Signs Analysis

Capture multiple Vital Signs with a single camera module

Authenticator ›

ACCESS GRANTED

Heart Rate ›

80
BPM

Expandable
Face Authentication is our core – software updates will enable the analysis of vital signs and skin texture.

Convenient
Seamless integration behind OLED thanks to a compact design optimized for state-of-the-art display requirements

Secure
Meets highest security standards to protect sensitive applications

Privacy
The protection of sensitive data is our top priority: All user data collected during face authentication is encrypted and protected by Qualcomm® Trusted Execution Environment. It is only stored locally on the device without any cloud computing involved.

Find out more
about trinamiX
Face Authentication

trinamiX

A brand of
BASF – We create chemistry

One hardware – multiple applications

trinamiX Face Authentication Reference Design RS 13

Software

Operating system	Android
Secure Environment (TrustZone)	Qualcomm's QTEE with Trusted App (TA) and Secure Processing Unit (SPU)
FAR @ FRR [1]	1 : 1,000,000 @ 1 %
Spoof Acceptance Rate (SAR) [2]	0 %; fulfills requirements for Android Biometric „class 3", and mobile payment
Applications	Software updates will gradually enable the analysis of skin health and vital signs.

Hardware

Camera module	1.5 MP Global Shutter CMOS Camera
Integrated dot & flood projector	2 x 940 nm VCSEL incl. metaoptics
Dimensions	14 x 8 x 4.7 mm (X x Y x Z)
Interface	MIPI + GPIO

Key Operating Figures

Working range	0.2 m – 0.6 m
Outdoor performance	Up to 100 k LUX
Field of view	65 x 55 (H x V)
Unlock duration	< 250 ms
Unlock power consumption	< 1.4 W
Operating temperature	From 0 °C to 60 °C
Baseline	≥ 6.5 mm
Certification ready	FIDO, Google Android Biometrics and IIFAA
Behind LTPO/HOP operation	Yes [3]

1 Face recognition performance according to NIST test scenarios.
2 Certification provided by biometrics test institutes for previous generation.
  Must be re-certified in customer product.
3 System geometry and projector power will to be adapted to match the display of choice.

Technology

The system enhances a regular 2D IR image by laser dot projection and analyzing it through our proprietary algorithms.

- Flood-illuminated IR 2D image
- Skin detection
- Meets **FIDO BioLevel 2+** standard

About trinamiX GmbH

trinamiX develops cutting-edge solutions in the field 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.