

trinamiX

A brand of
BASF – We create chemistry

Fueling the next generation of automotive applications

trinamiX Face Authentication for enhanced driver-vehicle interaction



trinamiX Face Authentication contributes to a new driving experience by protecting the car against theft and unlocking innovative applications like touchless in-car payment.



Secure

Highest biometric security requirements to protect against fraud and theft.



Visually appealing

Freedom in system design thanks to concealing the sensors.



Convenient

Keyless authentication for comfortable car entry, ignition access and in-car payment.



Easy to integrate

Leveraging mandatory driver monitoring systems by augmenting built-in hardware.

About liveness detection

trinamiX Face Authentication is based on our unique method to make biometric authentication even more secure: The detection of human skin. It adds a reliable, passive liveness detection to regular face recognition. Our solution can benefit a broad variety of particularly sensitive use cases across markets.

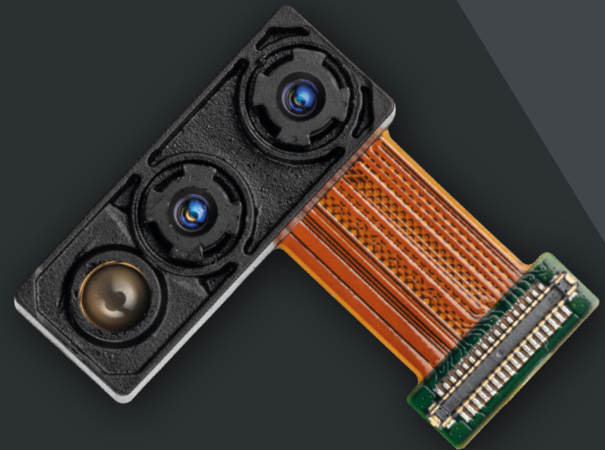


Find out more

about trinamiX Face Authentication for automotive applications

We combine 2D image with unique skin detection

trinamiX Face Authentication Reference Design RS 11



Software

Operating system	Linux
Platform	NXP i.MX 8M nano
Applications	In-cabin sensing, vehicle access
FAR @ FRR	1 : 1,000,000 @ 1 %
Spoof Acceptance Rate (SAR)	0 %; fulfills requirements for Android Biometric „Class 3“ and mobile payment ¹

Hardware

Camera module	1.5 MP NIR camera
Dot projector and flood	940 nm VCSEL (Laser Class 1)
Dimensions (W x H x D)	20.7 x 8.7 x 4.8 mm
Interface	MIPI + GPIO

Key Operating Figures

Working range	0.2 m – 0.7 m
Outdoor performance	Up to 100 k LUX
Field of view	65 x 55 (H x V)
Operating temperature	From 0 °C to 60 °C
Baseline	6 mm
Certification	FIDO, Android Biometric Security and IIFAA
Behind OLED operation	Optional ²

Technology

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

- Flood-illuminated 2D IR image
- Skin detection
- Meets highest biometric security standards

About trinamiX GmbH

trinamiX develops cutting-edge biometric and mobile NIR spectroscopy solutions, 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.

¹ Certification provided by biometrics test institutes. Must be re-certified in customer product.

² System setup and projector depend on display transparency as well as geometry