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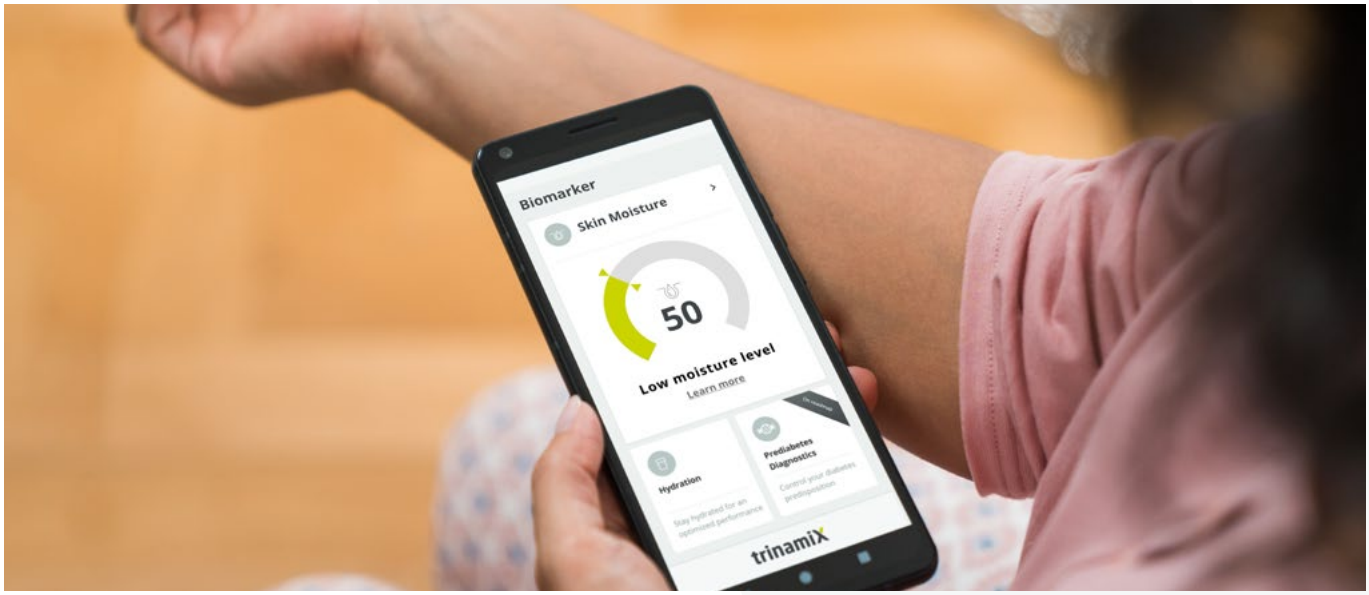
trinamiX Consumer Spectroscopy

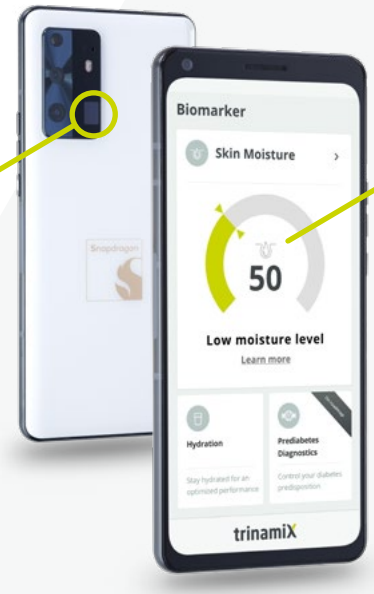
Bringing lab-proven technology into the hands of consumers



trinamiX Consumer Spectroscopy leverages the potential of molecular sensing for novel beauty, fitness and health applications.

Miniaturized spectrometer

Original size
10 x 10 x 6.5 mm



Chemometric software

Running on Snapdragon® 8 Gen 3

Find out more
about trinamiX
Consumer Spectroscopy

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trinamiX Consumer Spectroscopy Reference Design (CS-RS 11)

Advanced molecular sensing in a revolutionary small form factor

Functional overview

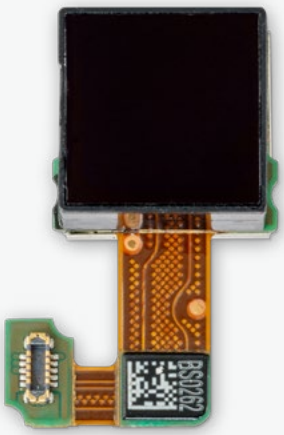
Working principle	Diffuse reflectance NIR spectroscopy
Applications	Various, e.g. non-invasive biomarker measurement
Platform	Designed for Snapdragon® 8 Gen 3
Data access	Processed data available via API

Module specifications

Dimensions	10 x 10 x 6.5 mm
Wavelength range	1,000 – 3,000 nm
Measurement time	< 1 sec
Measurement distance	Contact based
Measurement spot size	12.25 mm^2
Spectroscopy module	Turnkey spectrometer with trinamiX patented IR sensor, ASIC, integrated light filters, light source, internal power management
Calibration	Self-calibration
Operating temperature	0 – 50 °C

Interfaces

Supply voltages	VDDA (3.3 V) VDD (1.8 V) VBAT (2.7 – 5.0 V) VDDIO (1.2 – 1.8 V)
Power	300 mA @V_{BAT} 15 mA @V_{DDA}
Communication	I2C Fm+ (1 Mbit/s), IRQ pin, enable pin
Optical	Standard camera glass



Turnkey spectrometer with trinamiX patented IR sensor

Integration into multiple target devices

The trinamiX Consumer Spectrosocopy reference design is available for integration into smartphones and other consumer devices. Please reach out to us to discuss your specific application requirements in more detail.

About trinamiX

trinamiX GmbH 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.

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