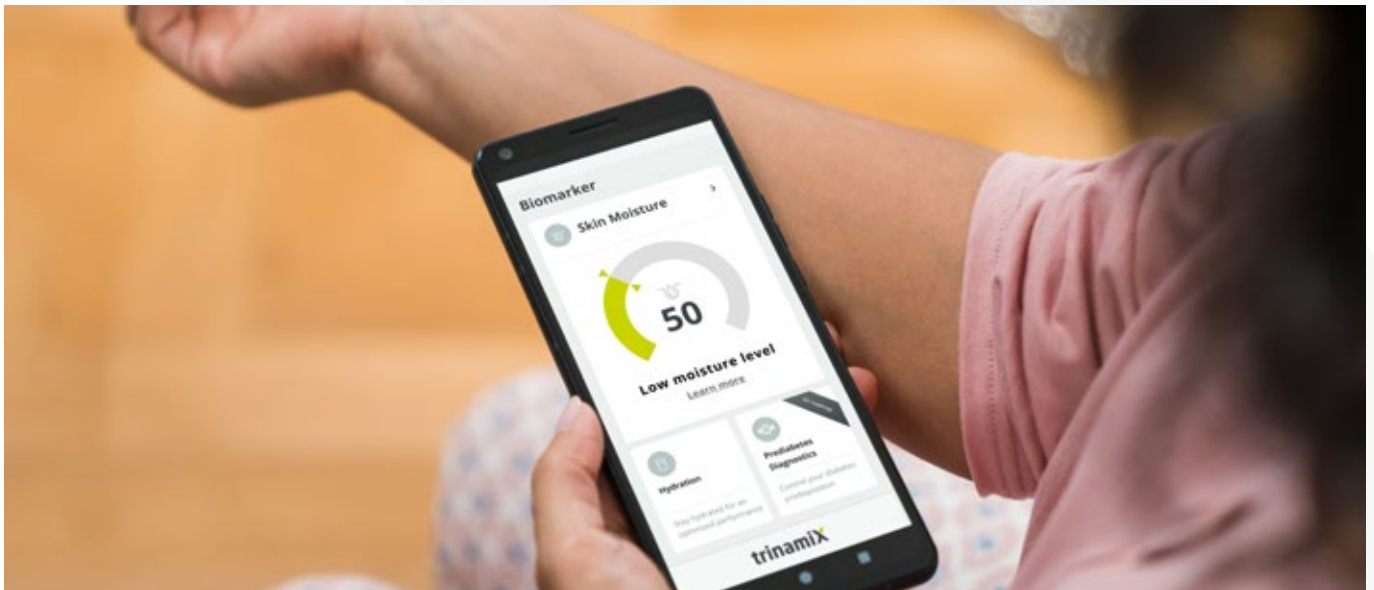


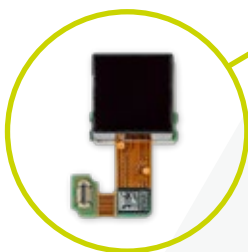
## trinamiX Consumer Spectroscopy

Turnkey self-calibrating NIR spectrometer  
for integration into mobile devices

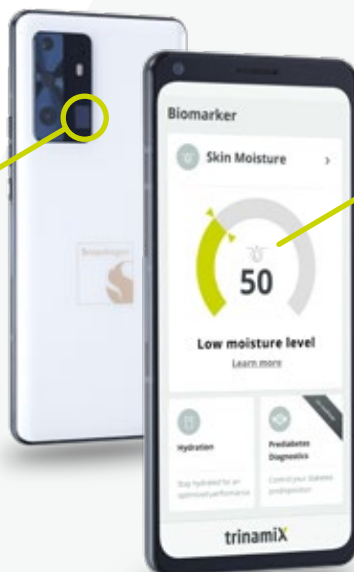


trinamiX Consumer Spectroscopy leverages the potential of  
molecular sensing for novel beauty, fitness and health applications.

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



## trinamiX Consumer Spectroscopy Reference Design (CS-RS 11)

Advanced molecular sensing in a revolutionary small form factor

### Functional overview

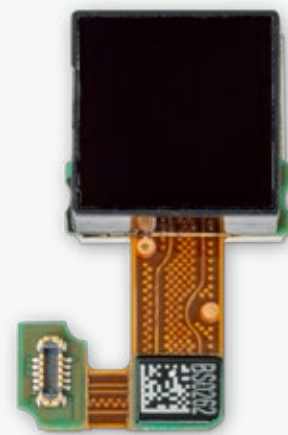
<b>Working principle</b>	Diffuse reflectance NIR spectroscopy
<b>Applications</b>	Various, e.g. non-invasive biomarker measurement
<b>Platform</b>	Designed for Snapdragon® 8 Gen 3
<b>Data access</b>	Processed data available via API

### Module specifications

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

### Interfaces

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



Turnkey spectrometer  
with trinamiX patented  
IR sensor

### Integration into multiple target devices

The trinamiX Consumer Spectroscopy 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.