Data you can trust.

Integrate quality rated vital signs streamed from one single in-ear device.
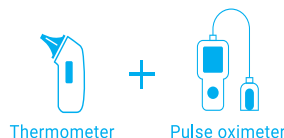
- Quality rated vital signs
- Continuous data stream
- Ease of integration
- Update possibility
- Small & lightweight
- CE class IIa*

Temperature
36,5 °C

Heart Rate
120 bpm
Quality: 80

SpO2 ?
98%
Perfusion: 0.0

SpO2
98%
Perfusion: 1.6
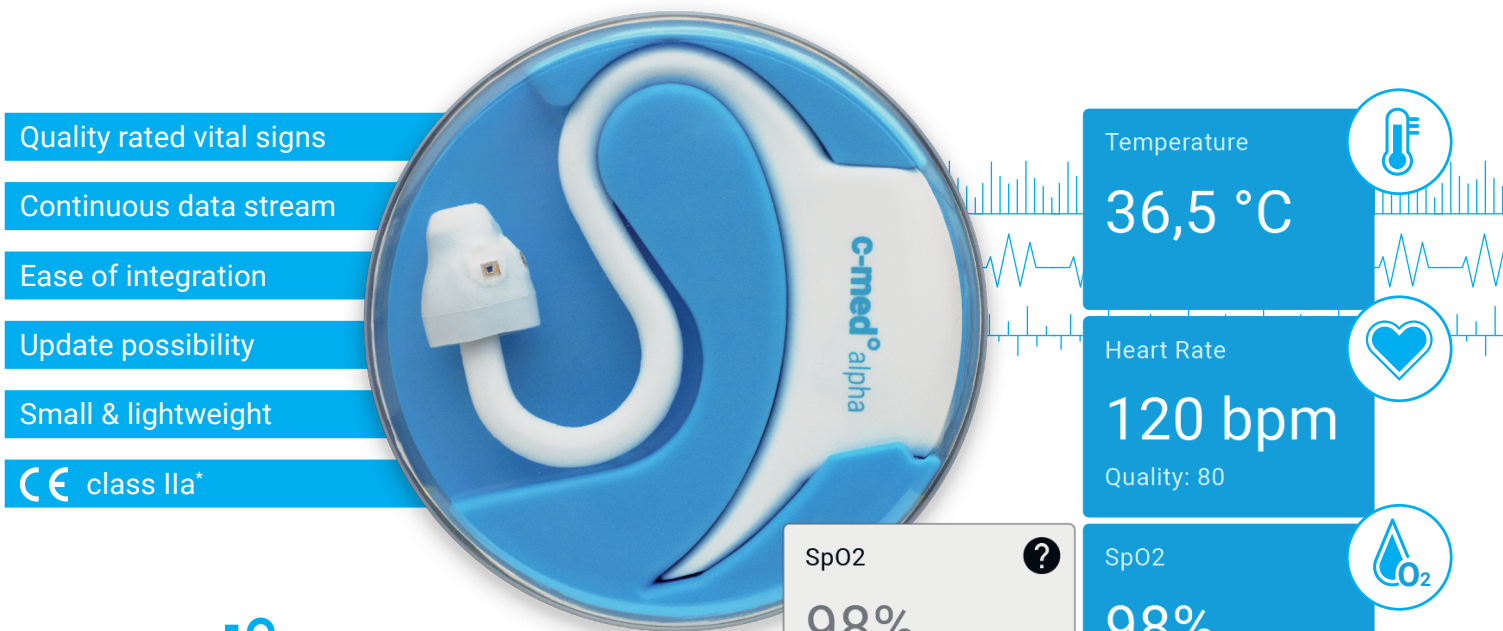
c-med°alpha

The c-med° alpha is a class IIa* medical measuring device that generates continuous data streams of three important vital signs:

- **Core Body Temperature**
- **Heart Rate**
- **Blood Oxygen Saturation (SpO2)**

Raw data is acquired in the outer ear canal and is then processed on the device itself. The calculated vital signs data is transmitted via Bluetooth 5.0 . The c-med° alpha is a wearable sensor fusion of two frequently used medical measuring devices.

Thermometer + Pulse oximeter

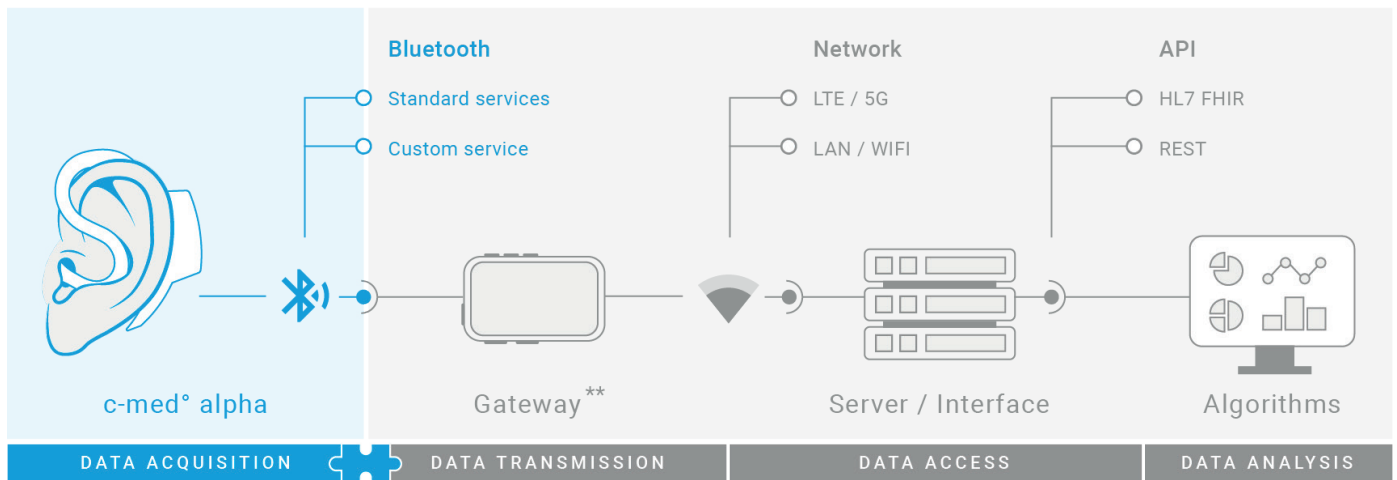? *Unreliable signal*   ✓ *Reliable signal*

QUALITY RATED

Focusing on the generation of reliable data streams, unique algorithms detect and flag invalid sequences in vital signs data. Thus you can see at any time whether a measurement is to be trusted or not.

Heart rate and SpO2 are accompanied by their own quality ratings, the Quality and Perfusion, turning mobile vital signs into data for decision making.

cosinuss°

Example IT-infrastructure*

Bluetooth
- Standard services
- Custom service

Network
- LTE / 5G
- LAN / WIFI

API
- HL7 FHIR
- REST

c-med° alpha

Gateway**

Server / Interface

Algorithms

DATA ACQUISITION	DATA TRANSMISSION	DATA ACCESS	DATA ANALYSIS

* Complete RPM-ecosystem can be provided by cosinuss°
** Gateways can be smartphone apps, smartwatches or client computers

INTEGRATION
Connecting to the Internet of medical things (IoMT).

Wherever and whenever – the vital signs data acquired can be seamlessly integrated into any IT-ecosystem with full transparency allowing you to access, further process and act in real-time.

The Bluetooth standard services offer an easy and safe integration for the data stream including three calculated vital signs and device information needed. With that, the c-med° alpha offers a wireless data transmission of vital signs data in compliance with medical standards.

An additional custom Bluetooth service enables advanced characteristics such as high-resolution data streaming and individual device configuration on the fly.

INFRASTRUCTURE
cosinuss° IoMT

A full IoMT infrastructure or parts of it can be provided by cosinuss° as well: The cosinuss° LabSystem consists of a gateway solution, a server with a web based and other standardized interfaces as well as additional analytics.

SUPPORT
Learn, share and build.

cosinuss° offers technical documentation and in-person support for a successful integration and user training.

CONTACT
Talk to our team today.

You are a Healthcare provider looking for real-time insights? You are a Research organization designing remote studies? Or are you a digital health company developing mobile applications for medical technologies?

GET IN TOUCH

SELECTED REFERENCES

- **Transform medical care with connectivity** – *COVID-19 | University Hospital in Munich / 2020 - 2021*
- **Full recovery from intensive station to home** – *COVID-19 | University Hospital LMU in Munich / 2021*
- **Telemedicine with objective data** – *RPM | University Hospital in Denmark / 2021*
- **Individualized patient care** – *EPILEPSY | University of Bonn / 2016 - 2022*
- **360° data integration** – *EMERGENCY CARE | University in Sweden / 2021*

SPECIFICATIONS

Bluetooth 5.0 standard services

Standard Services	16-bit UUID
Device Information	180A
Generic Access	1800
Generic Attribute	1801
Battery Service	180F
Secure DFU Service	FE59
Health Thermometer	1809
Heart Rate	180D
Pulse Oximeter	1822

Additional custom service

Additional to the standard services a custom service is used to achieve high-resolution data streaming and individual device configuration on the fly.

Data transmission

Type	Bluetooth 5.0
Frequency	ISM band
	2.4 – 2.485 GHz
Transmitting range	Approx. 10 m
Transmitting interval	Configurable,
	Standard 1 Hz
	(every second)

General

Size, H x W x D	5.5 x 5.8 x 1.0 cm
Weight	7 g
Material	Silicone rubber, medical grade
Protection type	IP 47
Disinfection	Temporary alcohol immersion
Medical classification	IIa, *certification expected in Q1 2022*
Certificates	Medical CE, FCC, Bluetooth^R

CE 0123   FC   Bluetooth

Battery

Type	Lithium, rechargeable
Run time	24 hours
	(measuring every 5 minutes)
Charging time	1 hour

Vital Signs accuracy

Body Temperature	± 0.3 °C
Heart Rate	± 2 bpm
SpO2	± 4 %

COMPANY PROFILE

Cosinuss GmbH is a certified medical devices manufacturer based in Munich specializing in mobile & continuous monitoring of several vital parameters. With more than 15 years of research and development, numerous patents and medically certified products, cosinuss° is a pioneer in the field of mobile & continuous monitoring. Following the vision to contribute to the change of health care into a flexible and extended organization by improving the diagnosis, treatment and rehabilitation of patients.

TÜV SÜD
EN ISO 13485