

Gateway

Transmitter to receive, record, calculate and send vital data parameters of cosinuss[°] sensors to cosinuss[°] Health



Features

- Periodic and triggered measurements for remote patient monitoring
- Data from cosinuss[°] sensors are stored and sent to the cosinuss[°] Health
- Calculation of the breathing rate from the raw data of the cosinuss[°] Two sensor
- Internet connection possible via wireless LAN, LAN cable or an optional LTE stick
- Powered by corded power supply
- Operating temperature range: 0 °C – 50 °C

General

Product specification

Type number	LG01
Generation	1
Device type	Receiver and transmitter for vital sign parameters
Usage	The Gateway is placed in the Bluetooth range of a person who is to be monitored and records vital data of cosinuss° sensors via Bluetooth Low Energy (BLE). The data is then sent to cosinuss° Health.
Calculated values	Respiratory rate
Certification	CE, FCC, Bluetooth
Status indicators	RGB-LED
Size, H x W x D	46 mm x 221 mm x 75 mm
Weight	115 g
Material	ABS plastic
Color	Black
Environmental temperature for usage	0 °C – 50 °C
Appliance class	III
Service life	2 years
Storage	32 GB Flash Memory
Scope of delivery	Gateway, power supply, manual; Optional: LTE SurfStick, SIM card

Radio transmission

Wireless data acquisition

Type	Bluetooth Low Energy (BLE)
Version	4.2

Frequency	ISM band 2.4 – 2.48 GHz
Transmitting power	Max. 11,6 dBm

Wireless network connectivity

Type	IEEE 802.11.b/g/n/ac wireless LAN
Frequency	2.4GHz and 5GHz

Ethernet connectivity

Type	Gigabit Ethernet over USB 2.0 (maximum throughput 300 Mbps)
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Recorded and calculated values**Recorded values from cosinuss° sensors**

Values	Details
Photoplethysmography (PPG)	Red, green and infrared light
Core body temperature	In °C
Heart rate	In bpm
Heart rate quality	Custom indicator to judge the heart rate measurement
RR-intervals	In ms
Perfusion index	In %
Oxygen saturation (SpO2)	In %
Sensor battery level	In %

Calculated values: respiratory rate

Type	Calculated from raw PPG signal
Measuring range	tbd
Resolution	tbd

Accuracy	tbd
Interval	tbd

Accessories

Power supply

Model	DSA-13PFC-05 FEU 051250
Input	100 – 240 V ~ 50/60 Hz, 0.5 A Max.
Output	5.1 V, 2500 mA
Plug	Europlug CEE 7/16 to Micro-USB B
Cable length	1.5 m

Optional - cellular network connectivity stick

Type	HUAWEI E3372h-320 LTE 4G Surfstick with up to 150 Mbps
Data services	GSM (2G), UMTS (3G), LTE (4G)
Frequency	LTE: 2600 / 2100 / 1800 / 900 / 800 MHz UMTS: 2100 / 900 MHz GSM: 1900 / 1800 / 900 / 850 MHz

Optional - SIM card

Model	Operable in over 120 countries
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Compatibility

cosinuss° components	cosinuss° Two, c-med° alpha
cosinuss° Health	Yes
Third party components	Polar H7, Polar H10

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Glossary

Symbol	Quantity
bpm	Beats per minute
°C	Degree Celsius
m, cm, mm	Meter, centimeter, millimeter
dBm	Decibel milliwatt
g	Grams
H x W x D	Height x width x depth
hPa, Pa	Hectopascal, Pascal
Hz, kHz, MHz, GHz	Hertz, Kilohertz, Megahertz Gigahertz
mbar	Millibar
mAh	Milliampere hour
s, h	Second, hour
m/s ²	Acceleration in meter per second squared
Mbit	Megabit
Mbps	Megabit per second

Abbreviations

approx.	Approximately
BLE	Bluetooth Low Energy
PPG	Photoplethysmography
tbd	To be determined