

ENVIRONMENT AND SLEEP QUALITY MONITOR



QoR-Quality of Rest

ENVIRONMENT AND SLEEP QUALITY MONITOR

Monitor the air quality and sleep quality. The IDT-QR-IO1 is an environmental monitor that allows for the simultaneous measurement of up to 5 types of gases and particles, providing real-time data on air quality.

Data visualization

All collected data can be visualized and analyzed anytime and anywhere through the corresponding web platform, allowing continuous and detailed monitoring. This monitor stands out for its ability to provide relevant information on air quality and sleep, complying with the relevant regulations to ensure data quality.



Measures temperature, humidity, CO₂, formaldehyde (CH₂O), TVOC, PM_{2.5}, and PM₁₀, ensuring a comprehensive analysis of your space.



Access measurement information provided by the sensor, enabling you to make informed decisions about the air quality and sleep quality of the guest.



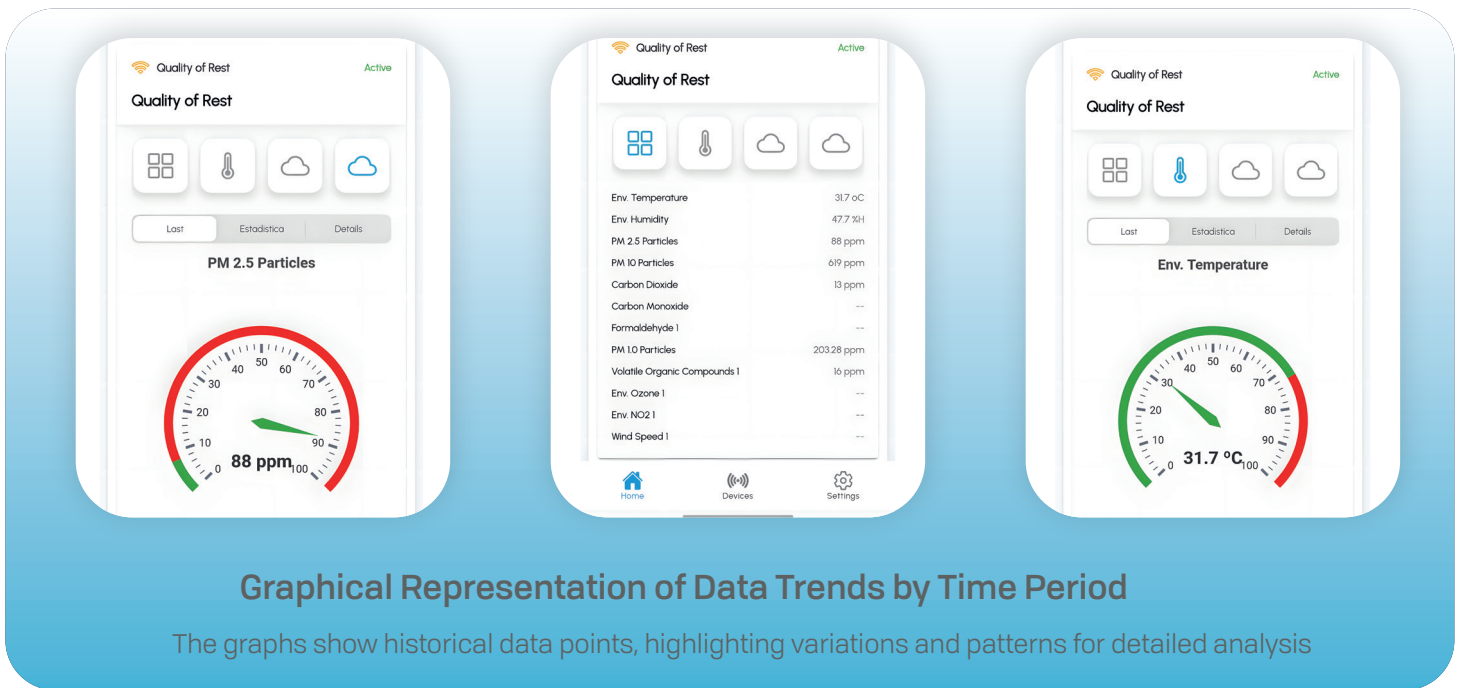
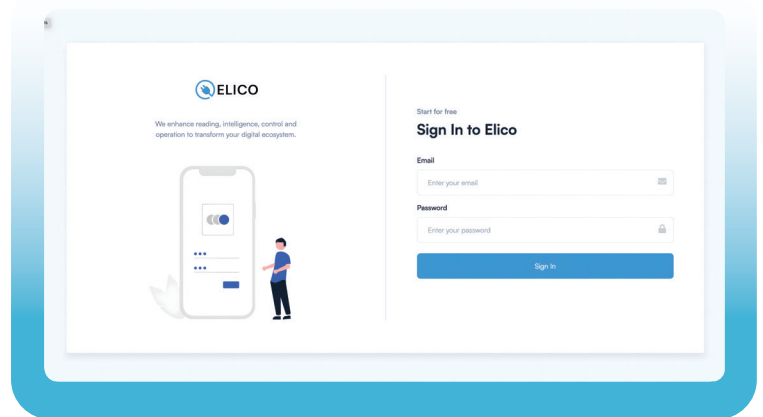
Compatible with LoRaWAN and Wi-Fi, enabling seamless data transmission.



Features a 60 GHz millimeter-wave radar to detect breathing and heart rate, providing an accurate assessment of sleep quality.

Sensor data access and monitoring

ELICO, our proprietary digital platform, delivers real-time, customizable access to data collected from sensors. It enables seamless monitoring across multiple devices and locations while providing in-depth analytics. The platform also enhances decision-making by identifying historical trends and patterns for better insights. Additionally, ELICO simplifies device integration with a QR-based onboarding system, allowing users to quickly add new sensors and expand their monitoring network effortlessly.



Graphical Representation of Data Trends by Time Period

The graphs show historical data points, highlighting variations and patterns for detailed analysis



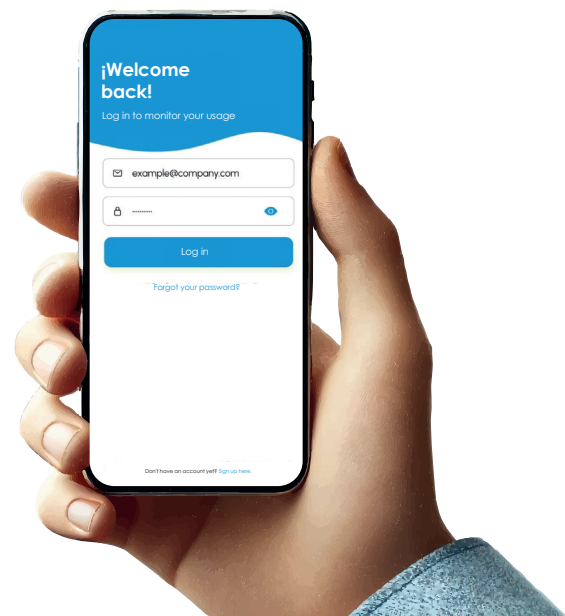
Device Management

View and manage all connected devices from ELICO interface

ELICO APP

Stay Connected Anytime,
Anywhere

Access ELICO seamlessly from your mobile device, ensuring real-time visibility into sensor data no matter where you are. Monitor key parameters, receive instant updates, and manage devices effortlessly from your smartphone, keeping your operations running smoothly at all times.





Total time sleep



Percentage of waking time



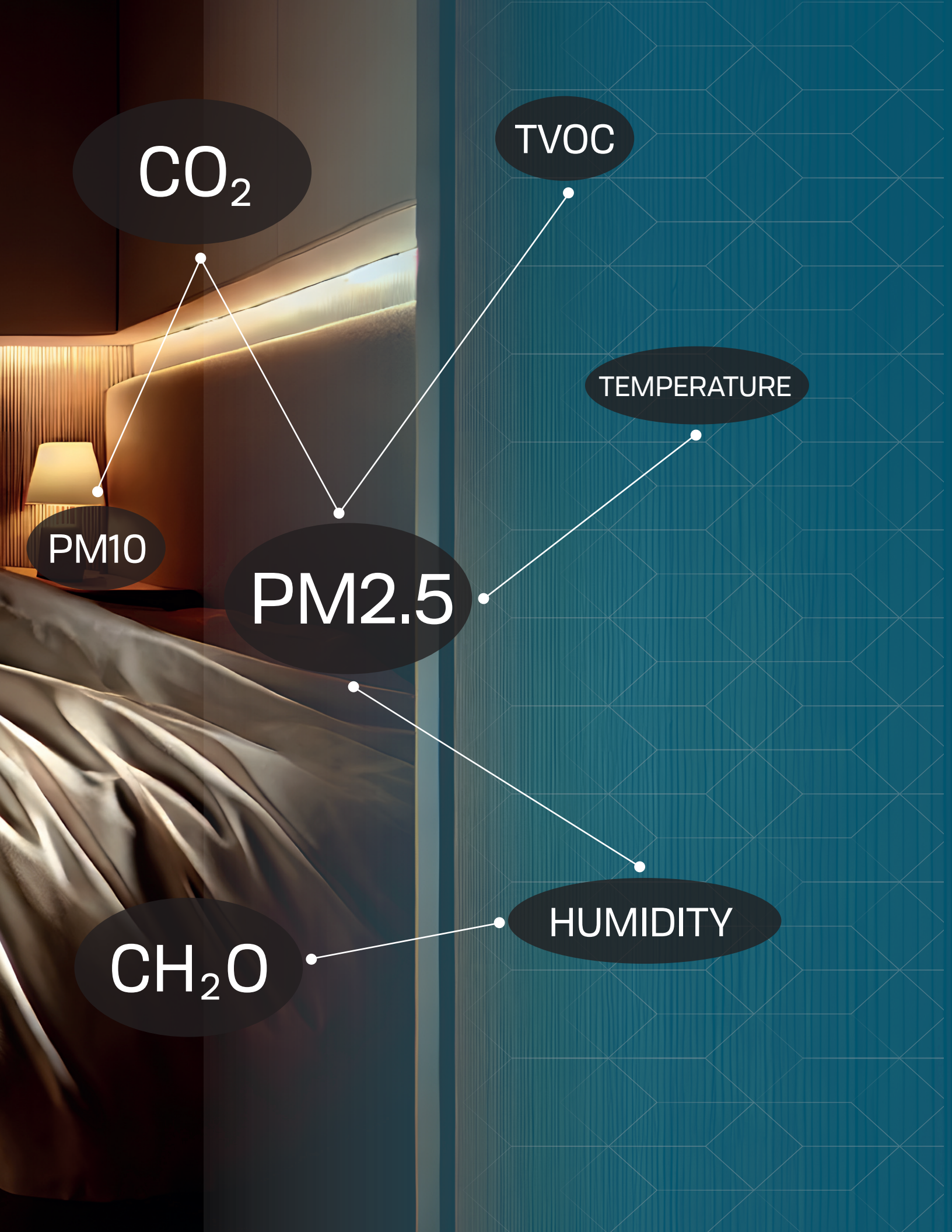
Number of apnea



- Rem (Deep Sleep)
- No rem (Light Sleep)



- Heartbeat rate
- Breathing rate



CO_2

TVOC

TEMPERATURE

PM10

PM2.5




CH_2O

HUMIDITY

Breathing clean is living healthy



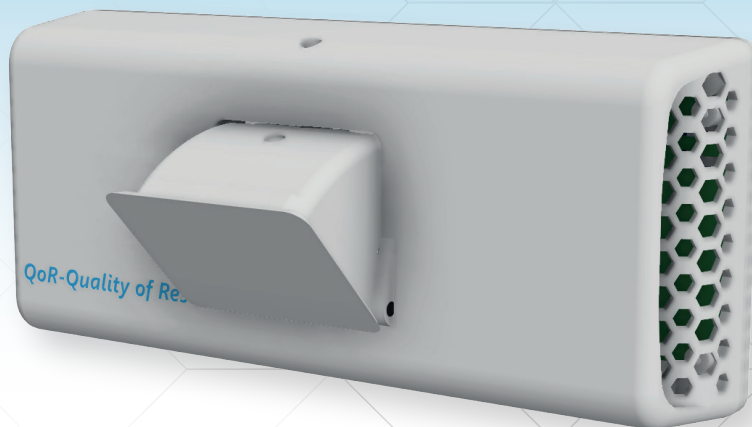
Air Quality Ranges for Common Pollutants

Pollutant Gas	 Normal Range	 Medium Range	 Danger Range	Effects of Prolonged Exposure
CO2	350-1,000 ppm (ideal)	1,000-2,000 ppm (acceptable)	>1,000 ppm (poor quality)	Headache, fatigue, breathing difficulties
Formaldehyde (CH2O)	<0.08 ppm	0.08-0.1 ppm	>0.1 ppm (harmful)	Eye, nose, throat irritation; carcinogenic effects
TVOC	<0.3 mg/m ³	0.3-0.6 mg/m ³	>0.6 mg/m ³ (risk)	Respiratory irritation, nausea
PM2.5	0-12 µg/m ³	12-35 µg/m ³	>35 µg/m ³ (harmful)	Damage to respiratory airways
PM10	0-50 µg/m ³	50-100 µg/m ³	>100 µg/m ³ (harmful)	Chronic respiratory problems

IDT-QR-I01

Environmental and sleep quality monitor

IDTOLU
CONNECT & TRANSFORM



Especifications

Parameters

Temperature measurement

Range	40° C ~ 80° C
Accuracy	± 0.5 °C
Resolution	0.1 °C

Humidity measurement

Range	0 ~ 100% RH
Accuracy	± 2% RH
Resolution	0.1% RH

CO₂ measurement

Range	400 ppm ~ 5000 ppm
Accuracy	± 3% + 50 ppm or ± 10%
Resolution	0.1% RH

Measurement of CH₂O (Formaldehyde)

Range	0 µg/m ³ ~ 2000 µg/m ³
Accuracy	± 10%
Resolution	0.1% RH

Measurement TVOC

Range	0 µg/m ³ ~ 5000 µg/m ³
Accuracy	± 25%
Resolution	1 µg/m ³

Measurement PM2.5

Range	0 µg/m ³ ~ 999 µg/m ³
Accuracy	± 10% or ± 10
Resolution	1 µg/m ³

Measurement PM10

Range	0 µg/m ³ ~ 1000 µg/m ³
Accuracy	± 10% or ± 10
Resolution	1 µg/m ³

General parameters

Connectivity	LoraWAN
Supported protocol	Class C
Transmission power	MAX 19dBm
Sensibility	-116 dBm
Communication distance	2 to 5 Km (depending on the gateway antenna and gateway and environment)
Data upload interval	Configurable
Power supply	9v ~ 24v, 500 1A

Sleep Quality Parameters

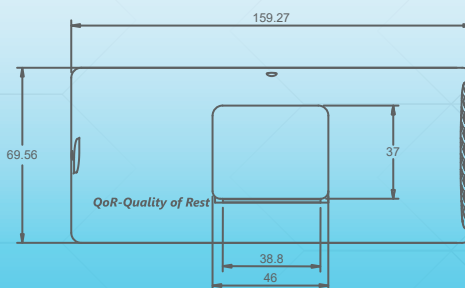
Technology and Functionality

Description

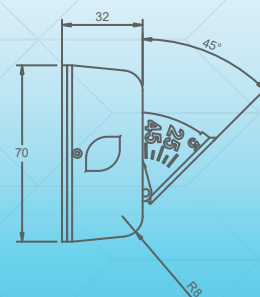
Radar frequency	Based on 60 GHz millimeter-wave radar
Main detection	Designed to detect respiration and heartbeat, as well as to assess sleep quality and sleep status
Motion detection	Human presence

Dimensions

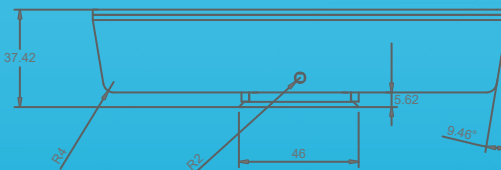
Front view



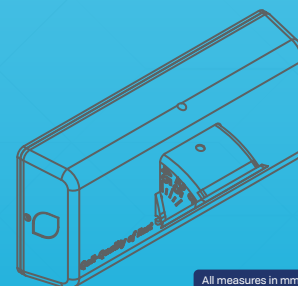
Side view



Top view



Isometric view



All measures in mm

Enhances
comfort and
well-being in
homes and
hotels

Creates
healthier
recovery
spaces

Fosters a
comfortable
working
environments

Breathe better

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