



CO₂

VOC

PM2.5

RH/T

Environmental Sensing

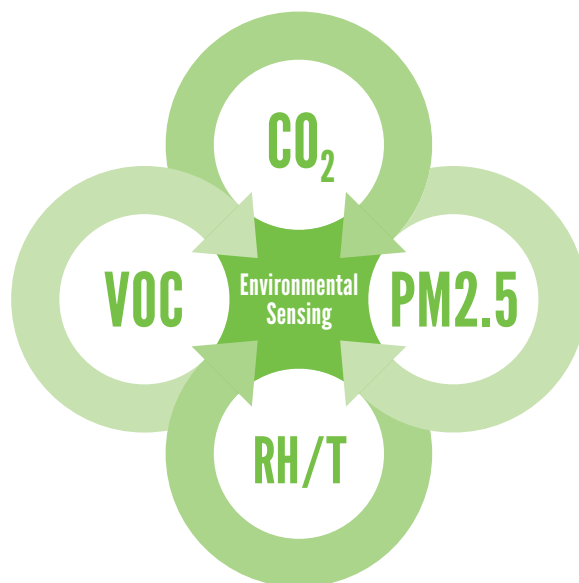
Experts for Smart Sensor Solutions

SENSIRION
THE SENSOR COMPANY

Environmental Sensing Solutions

Environmental conditions have a major impact on our well-being, comfort, and productivity. Sensirion's sensor solutions provide detailed and reliable data on key environmental parameters such as humidity, temperature, volatile organic compounds (VOCs), particulate matter (PM2.5), and CO₂. Environmental Sensing opens up new possibilities to create smarter devices that improve our comfort and well-being as well as increase energy efficiency in a wide variety of applications.

For more information, please visit www.sensirion.com/environmental-sensing

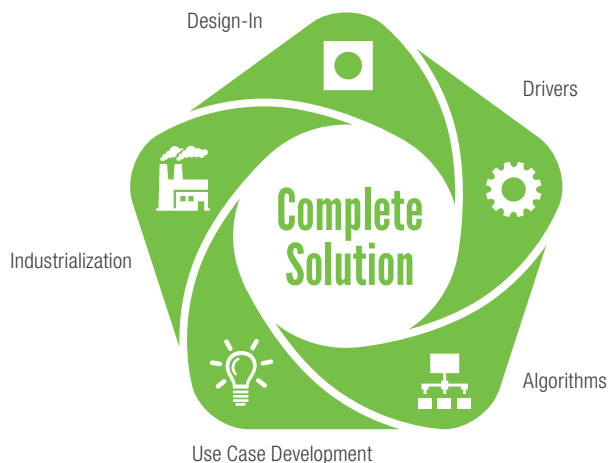


INNOVATION PIONEER

Thanks to our patented CMOSens® Technology, Sensirion was the first company to offer an automotive-grade, digital humidity sensor with a calibrated and linearized signal output. As an innovation-driven company, we did not stop with state-of-the-art humidity sensors, but have continued to develop other sensor types, such as mass flow meters and controllers for gases, differential pressure sensors and liquid flow sensors. We are always keen to find new sensor solutions for demanding applications, which is why we develop new environmental sensors, such as multi-pixel gas sensor, PM2.5 as well as CO₂ sensors to provide valuable air quality data.

COMPLETE SOLUTIONS PROVIDER

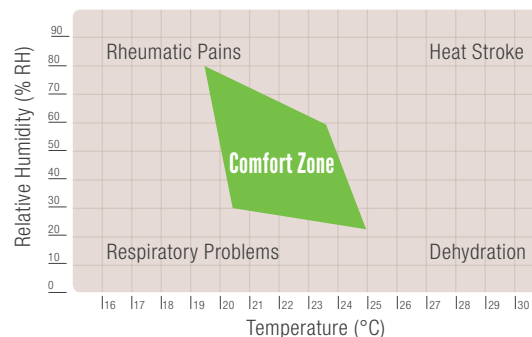
With more than 15 years' experience in the development and supply of environmental sensor solutions, we lead the field in sensor technology innovation. We provide the sensor hardware and support our customers during the design-in, the development of sophisticated algorithms and the industrialization all the way to mass production. In addition to providing unparalleled performance, we also focus on key characteristics such as size, ultra-low power consumption, fully calibrated digital output and compatible supply voltages.



Key Environmental Parameters

AMBIENT HUMIDITY AND TEMPERATURE

Thermal comfort is an important factor in climate control systems. Under which conditions does one feel comfortable, when does one feel discomfort and at what point do conditions impair human health? Relative humidity and temperature play a key role in this context, and thus personal well-being can be improved by the use of humidity and temperature sensors.

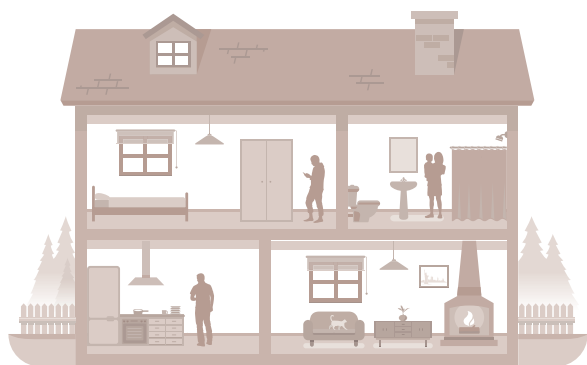


VOCs

The widespread use of new products and building materials has resulted in increased concentrations of indoor pollutants, in particular volatile organic compounds (VOCs). Many of these compounds are known to impair well-being and productivity, e.g. through headaches, eye irritation or dizziness. Sensirion gas sensor solutions monitor these indoor air pollutants and thus help manufacturers in the development of new smart home and HVAC applications.

PM2.5

PM2.5 and PM10 refer to particulate matter with particle diameter up to 2.5 microns and 10 microns, respectively, and are among the most dangerous air pollutants. Due to their small size, PM2.5 particles can travel deep into the human lung and cause a variety of health issues, for instance, by triggering asthma attacks or contributing to cardiovascular disease. Sensirion's new PM2.5 sensor solution will enable the implementation of innovative air quality monitoring devices that prevent air pollution damage.



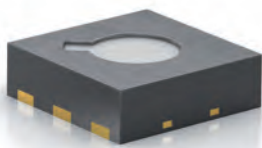
CO₂

Carbon dioxide is a key indicator for indoor air quality. Thanks to new energy standards and better insulation, houses have become increasingly energy-efficient, but the air quality can deteriorate rapidly. Active ventilation is needed to maintain a comfortable and healthy indoor environment and improve the well-being and productivity of the inhabitants. Sensirion sensor solutions offer an accurate and stable monitoring of CO₂ in the air, as well as temperature and humidity. This enables our customers to develop new solutions that increase energy efficiency and simultaneously support the well-being of everyone.

Sensirion's Environmental Sensing Solutions

HUMIDITY & TEMPERATURE SENSOR

Sensirion is the world's leading manufacturer of digital relative humidity sensors. With the introduction of our pioneering digital humidity sensors more than 15 years ago, Sensirion has defined an industry standard with the SHTxx series. Best-in-class products, unmatched technological expertise and excellent application support make Sensirion the number one partner for humidity and temperature sensors.



MULTI-PIXEL GAS SENSOR

The multi-pixel gas sensor SGP opens up new possibilities for the measurement of indoor air quality. The siloxane-resistant long-term stable metal-oxide gas sensor features multiple sensing elements on one chip providing in-depth information on air quality. The SGP gas sensor is based on Sensirion's multi-pixel platform, which integrates four gas sensing elements into a very small 2.45x2.45x0.9mm³ DFN package featuring a fully calibrated air quality output signal. The unprecedented combination of long-term stability and multi-pixel technology opens up new possibilities for environmental monitoring in smart home, appliance and Internet of Things applications.

Technology Preview

PM2.5 SENSOR

Sensirion's forthcoming PM2.5 sensor will define new market standards for accurate and reliable detection of PM2.5 and PM10. With this new particulate matter sensor, Sensirion expands its range of environmental sensing solutions and opens up a new dimension in indoor and outdoor air quality applications.



CO₂ SENSOR

CMOSens[®] Technology for IR detection enables carbon dioxide measurements of the highest accuracy at a competitive price. The sensor offers outstanding long-term stability without baseline correction algorithms due to its dual channel optical principle for compensating for environmental and sensor ageing effects. Along with the NDIR measurement technology for detecting CO₂, a best-in-class Sensirion humidity and temperature sensor is integrated on the very same sensor module. Ambient humidity and temperature can be measured through modelling and compensation of external heat sources without any additional components thanks to Sensirion's algorithm expertise. The very small module height allows for easy integration into different applications.

With Our Environmental Sensing Solutions, We Improve...



HEALTH

Your health is your greatest asset. In order to enable more people to live longer, healthier and happier lives, Sensirion has developed sensor solutions to improve medical devices and smart home applications, such as air purifiers and air cleaners.



QUALITY OF LIFE

Deep down, everyone is looking to increase their quality of life, and Sensirion's unique, intelligent sensor solutions do just that. As the leading international manufacturer of environmental sensor solutions, we offer our clients sensor solutions for increased convenience and security.



ENERGY EFFICIENCY

With efficient systems, we have the chance to significantly improve the global energy balance and make a major contribution to environmental protection. Through energy-efficient applications, we can counteract the constantly growing energy consumption around the world and at the same time reduce harmful emissions. That's why we offer our clients in a wide variety of industries sensor solutions for sustainable and efficient energy management.

Sensing. Anytime. Anywhere.

SWITZERLAND

Sensirion AG

Laubisruetistrasse 50
8712 Staefa
Switzerland
Phone +41 44 306 40 00
Fax +41 44 306 40 30
info@sensirion.com
www.sensirion.com

UNITED STATES

Sensirion Inc.

11 East Adams, Suite 220
Chicago, IL 60603
United States
Phone +1 312 690 5858
info-us@sensirion.com
www.sensirion.com

CHINA

Sensirion China Co. Ltd.

Room 1006, Tower 1
Excellence Meilin Center Plaza (Excellence City)
ZhongKang Road Shangmeilin
Futian District, Shenzhen 518049
P.R. China
Phone +86 755 8252 1501
Fax +86 755 8252 1580
info-cn@sensirion.com
www.sensirion.com/cn

JAPAN

Sensirion Japan Co. Ltd.

Takanawa Kaneo Bldg. 4F
3-25-22, Takanawa Minato-ku, Tokyo
108-0074 Japan
Phone +81 3 3444 4940
Fax +81 3 3444 4939
info-jp@sensirion.com
www.sensirion.com/jp

KOREA

Sensirion Korea Co. Ltd.

14056, #1809-#1813 Gumkang Penterium A,
282, Hagui-Ro, Dongan-Gu
Anyang-Si, Gyeonggi-Do
South Korea
Phone +82 31 337 7700~3
Fax +82 31 337 7704
info-kr@sensirion.com
www.sensirion.com/kr

TAIWAN

Sensirion Taiwan Co. Ltd.

Rm. 2, 15F, No. 223, Fuxing 2nd Rd
Zhubei City
Hsinchu County, 30271
Taiwan, R.O.C.
Phone +886 3 5506701
Fax +886 3 5506703
info@sensirion.com
www.sensirion.com



1-900050-01 / 171012-ES-EN