

EnviCam-30

MULTI-GAS MICROSENSOR

by General description

EnviCam-30 is a multi-gas microsensor supplying actionable data for IoT & Industry 4.0 solutions. The sensor microchip is based on our patented CMOSEnvi[™] technology, integrating several nanotech-based sensing materials within a CMOS-compatible process.

We tackle the sensor chain as a whole, from the sensing element to the data processing, creating a new generation of smart gas sensor, featuring:

- high selectivity with respect to the chemical compounds of interest
- ultra-low-power with self-calibration, allowing applications up to 10 years
- and ease of integration.



A Multi-pixel, multi-gas measurement on a single chip

Ammonia	NH3	0.2 – 200 ppm
Carbon monoxide	со	1 – 2.000 ppm
Nitrogen dioxide	NO ₂	0.025 – 200 ppm
Formaldehyde	НСНО	0.1 – 20 ppm
Acetaldehyde	CH ₃ CHO	0.1 – 20 ppm
Methane	CH4	Available in Q4 2022
Carbon dioxide	CO2	Available in Q4 2022
Hydrogen sulfide	H ₂ S	Available in Q1 2023

Extended measurement range is available upon request.

Under development: BTEX, ethylene oxide (EtO), ethylene, hydrogen sulfide (SO₂), hydrogen (H₂) and acetone.



(Petro)chemical Recycling Agri-Food C Applications Smart city Smart building Healthcare Pharmaceutical

Security



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System view

VOCSens provides the necessary system support for integrating the EnviCam-30 device within your hardware module and application:

- Firmware libraries to control the multi-gas microsensor and to integrate in your embedded software application
- Container-based application with AI algorithms that are used to self-calibrate the gas measurements against the drifts caused by temperature, humidity, gas cross-sensitivitits and aging

Depending the processing capabilities, the container can either be installed locally on a server or directly embedded on your MCU, with recurrent updates. Finally, the system will need a temperature and humidity sensor to provide the necessary data for compensations by the self-calibration algorithms.



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Power consumption	< 50 μW @ 1 Hz	Current ON	< 1 mA	
Power supply	VDD: 1.8 V VDDIO: 1.8-3.3 V	Current OFF	< 10 µA	
Output	0.1 - 100 kHz	Package	LGA 10 x 5 x 0.9 mm³	
Input	GPIO	Firmware	C library	





Package content

Customer sensor module

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Embedded application

Data

Hub

Server

application

Connectivity

(内)

Containe

based software

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EnviCam-30

Third-party senso

Temperature

and humidity

The product is delivered in a LGA package $(10 \times 5 \times 0.9 \text{ mm}^3)$.





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