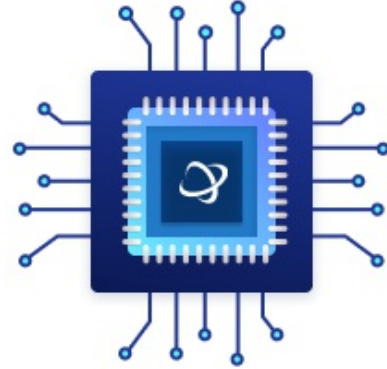


Outdoor Air Quality Sensor Platform

Manufacturers	Renesas Technology Corp
Package/Case	
Product Type	
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ZMOD4510AI1V or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

General Description

The ZMOD4510 Gas Sensor Module is designed for monitoring outdoor air quality (OAQ) and the measurement of outdoor relevant gases ozone and nitrogen oxide. It is a 12-pin LGA assembly (3.0 x 3.0 x 0.7 mm) that consists of a gas sense element and a CMOS signal conditioning IC. The module's sense element consists of a heater element on a Si-based MEMS structure and a metal oxide (MOx) chemiresistor. The signal conditioner controls the sensor temperature and measures the MOx conductivity, which is a function of the outdoor air concentration.

The measurement results can be read via an I2C interface with the user's microprocessor, which processes the data to determine an Outdoor Air Quality Rating defined by the US Environmental Protection Agency. Software upgradability makes the sensors in the ZMOD4510 platform capable of providing a variety of measurement options by varying the method of operation or changing the firmware used to interpret the measurements for gas selectivity. Downloadable firmware libraries and source code provided by IDT enables detection of OAQ Rating and supports smart devices implementation. The ZMOD4510 is ideal for outdoor air quality applications such as smart home building controls and other smart personal devices.

Features

Sensor output based on operation method:

Non-selective measurement of nitrogen dioxide (NO₂) and ozone (O₃)

Selective ozone (O₃) measurement using ultra-low power

Supports international standards for air quality, such as the US Environmental Protection Agency (EPA)

Ultra-low average power consumption down to 0.2mW

External reset pin (active-LOW)

Siloxane resistant

RoHS compliant

Target operation temperature: -40 °C to +65 °C

Supply voltage: 1.7V to 3.6V

Water and dustproof version available (IP67 certified)

Available assembly sizes:

3.0mm x 3.0mm x 0.7mm (standard version)

3.0mm x 3.0mm x 0.9mm (IP67 version)

Related Products



[X9313ZMZT1](#)

Renesas Technology Corp
8-MSOP



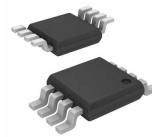
[X9313ZMZ](#)

Renesas Technology Corp
8-TSSOP, 8-MSOP (0.118, 3.00mm Width)



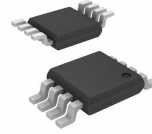
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Renesas Technology Corp
MSOP-8



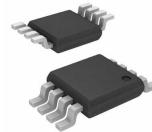
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Renesas Technology Corp
MSOP-8



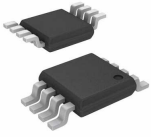
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Renesas Technology Corp
8-MSOP



[X9313ZMIZ-3](#)

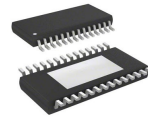
Renesas Technology Corp
MSOP8



[X9313ZMIZ](#)

Renesas Technology Corp

MSOP-8



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Renesas Technology Corp

TSSOP