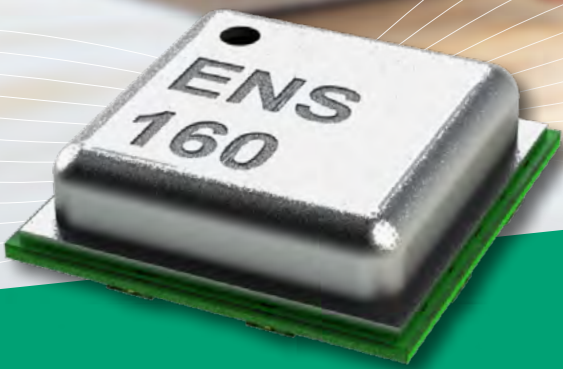


ENS160



Air Quality Sensor for Home and Building Automation, Consumer, Appliances & Air Purification

- TVOC, equivalent CO₂ & Air Quality Index output
- On-chip algorithm processing
- Superior immunity to humidity and ozone

ENS160

Digital Air Quality Multi-Gas Sensor

ENS160 is a digital multi-gas sensor specifically designed for indoor air quality monitoring, offering optimum detection of a wide range of volatile organic compounds (VOCs) and oxidizing gases.

Our innovative TrueVOC® technology combines the flexibility of four independently controlled sensor elements, based on metal oxide (MOX) technology, with intelligent on-chip algorithms to calculate CO₂-equivalents, TVOC and various air quality indices (AQI's).

This results in superior selectivity, accuracy and fast

response, with no extra processing load imposed to the host system. Digital raw sensor outputs are available for algorithm customization. The LGA packaged device offers an SPI or I²C slave interface with separate supply for host communication.

The ENS160 is a proven, maintenance-free solution, designed for high volume production and reliability from one of the pioneers of MEMS gas sensing, looking back to two decades of gas sensor design with more than 50 million units shipped to date.

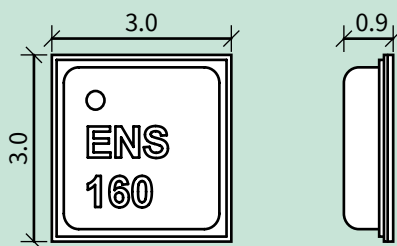
Features

- Multiple IAQ outputs (TVOC, eCO₂, AQI)
- <3 minutes warm-up
- Superior immunity to humidity and ozone
- Hassle-free all-on-chip data processing
- Wide operating range & separate VDDIO

Properties

- Small 3.0 x 3.0 x 0.9mm LGA package
- High-speed I²C and SPI
- Low peripheral BOM required
- Tape & reel, reflow solderable
- Environment: -40 to +85°C / 5 to 95% rH
- VDDIO: up to 3.6V

Dimensions



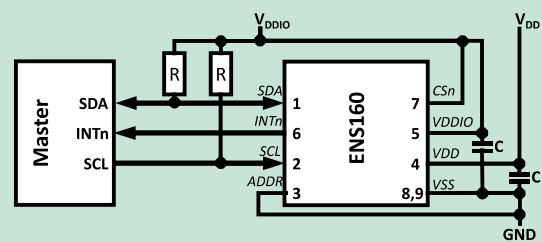
Benefits

- Freedom of air quality signal choice
- Crucial for quick system start-ups
- Safe use with everyday products
- No libraries needed – no host CPU impacts
- Allowing for flexible & rugged designs

Applications

- Air purification / home automation
- HVAC / ventilation systems
- Building automation / smart thermostats
- Appliances / cooker hoods
- Mobiles / wearables
- Smart things & IoT devices

Application circuit



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