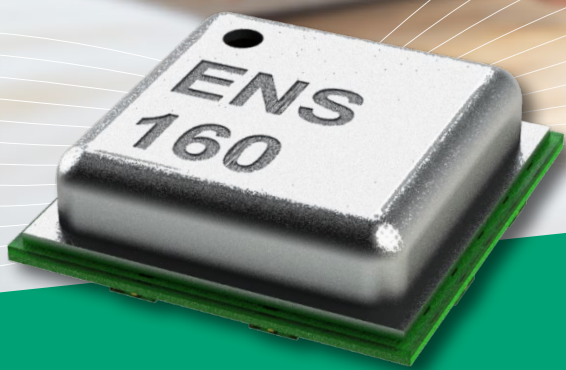


# ENS160



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

- TVOC, equivalent CO<sub>2</sub> & Air Quality Index output
- On-chip algorithm processing
- True immunity to siloxanes

# 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 gases and volatile organic compounds (VOCs), including toluene, hydrogen, ethanol, NO<sub>2</sub> and ozone.**

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 CO<sub>2</sub>-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 I<sup>2</sup>C 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.

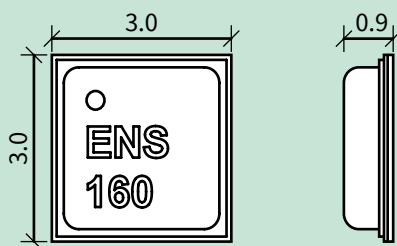
### Features

- Multiple IAQ outputs (TVOC, eCO<sub>2</sub>, AQI)
- <5 minutes warm-up
- True siloxane immunity
- 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 I<sup>2</sup>C 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



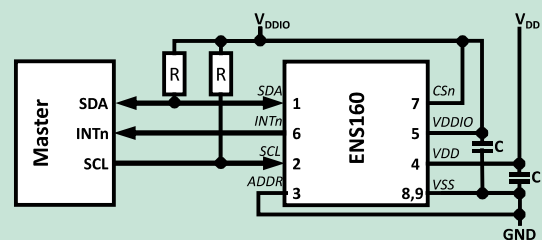
### Benefits

- 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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