ENS16x

Versatile Digital Air Quality Sensors for Building Automation, Appliances & Consumer Applications

- eTVOC, eCO_2 and multiple AQI (Air Quality Index) outputs
- ASIC all-on-chip data processing - no extra libraries required
- Low-power operating modes

ScioSense®

ENS16x

Versatile Digital Multi-Gas Air Quality Sensors with Low Power Modes

ENS16x is a range of digital multi-gas metal oxide (MOX) sensors, specifically designed for indoor air quality monitoring, offering an unrivaled wealth of fully-processed outputs including low-power operating modes.

With its innovative TrueVOC® technology the ENS16x combines detection of a wide range of gases including volatile organic compounds (VOCs) and oxidizing gases with intelligent on-chip algorithms. It calculates a series of fully processed outputs such as CO_2-equivalents, TVOC-equivalents, a 5-step Air Quality Index (AQI) according to the UBA (German Environmental Agency) and a 500-step relative AQI according to ScioSense. Moreover, the ENS16x offers full humidity compensation plus low power operating modes for power-constrained designs.

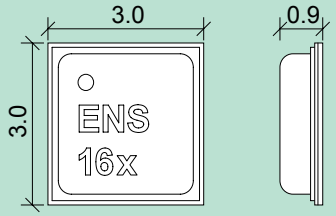
Features

- Multiple, fully processed air quality outputs (eCO_2, eTVOC, various AQIs)
- Current consumption down to 150µA (low power modes)
- Hassle-free on-chip data processing

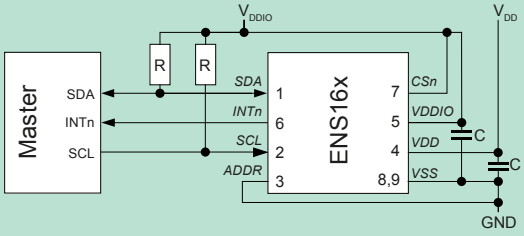
Benefits

- Freedom of air quality signal choice
- Meeting power-constrained applications
- No libraries needed – no impact on host CPU

Dimensions



Application circuit



Application reference table

	Outputs				Low Power Modes	Applications				General properties
	eCO_2	eTVOC	AQI-U	AQI-S		Building Automation (HVAC / DCV)	Home Appliances (air purifiers, cooker hoods)	Smarthome IoT devices	Wearables & battery-powered devices	
ENS161	✓	✓	✓	✓	✓	✓	✓	✓	✓	• 3.0 x 3.0 x 0.9mm LGA package • I²C & SPI interface • Operating voltage: 1.71 – 1.98V • V_{DDIO} up to 3.6V
ENS160	✓	✓	✓			✓	✓	✓		

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