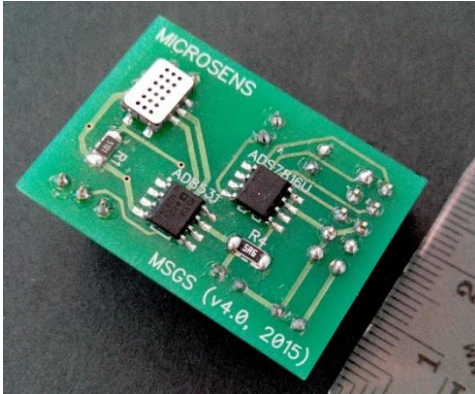


MGSM 5000

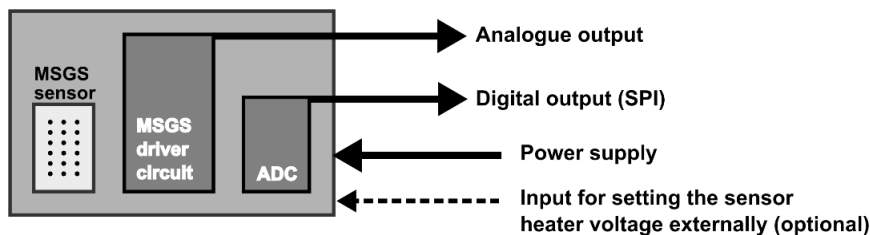
MICROSENS Miniature Gas Sensing Module

Module Description



- The MSGS Gas Sensing Module provides the necessary circuitry to drive the MSGS5000i gas sensor, integrated in the module.
- The sensor output is available in analogue format as well as digital format (SPI).
- The sensor temperature can be set to a default value or via an external voltage input.
- The MSGS sensor module can be powered by a 9V battery for short term use or any power supply delivering between 8V and 16V.

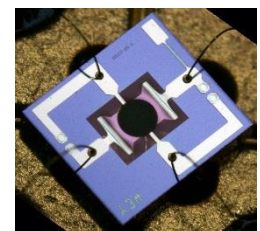
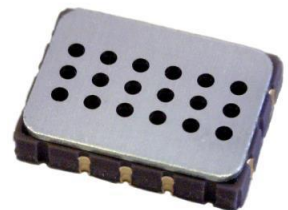
Module Schematics and Principle



The digital output of the MSGS Gas Sensing Module can be connected to the SPI port of a microcontroller or to a PC via a suitable transceiver module (e.g. SPI-to-USB).

MGSM 5000i (integrated into module)

- A miniature semiconductor gas sensor manufactured using standard microelectronic technology and silicon micromachining techniques.
- The sensitive element consists of a semiconducting metal oxide layer. The measurement of specific oxidizing or reducing gases is based on a reversible conductivity change of the sensing element at an appropriate working temperature.
- The thin semiconducting metal oxide is deposited on an integrated heater. The sensitive area is thermally insulated from the silicon substrate to minimize electrical power consumption.



SMD packaging (top) and microphotograph (bottom) of the MSGS5000i gas sensor