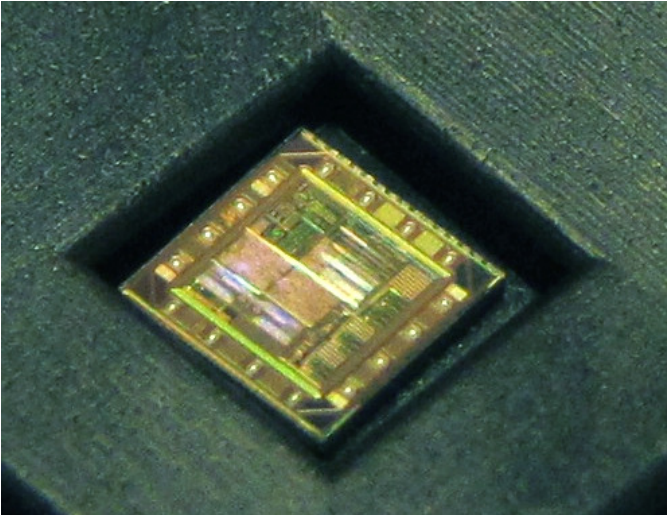


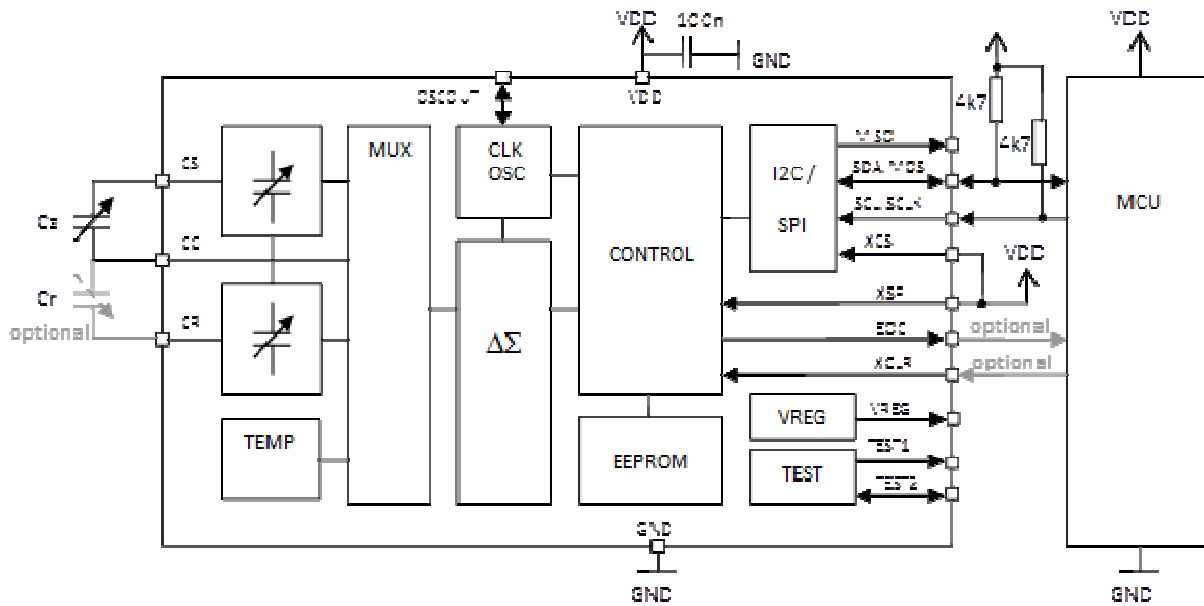
MAS6512 – Capacitive Sensor Signal Interface IC

Category: Front Page News

23.08.2012 Micro Analog Systems Oy introduces [MAS6512](#), a 16 Bit Capacitive Sensor Signal Interface IC primarily intended for MEMS based pressure sensor modules.



The device uses a ratiometric AD-converter principle employing a delta-sigma conversion technique, giving very good noise performance. Its current consumption is extremely low (1.9 μA) and it can operate at low supply voltage from 1.8 V to 3.6 V which makes it an ideal solution for interfacing a capacitive sensor in power consumption critical portable applications. The resolution of the ADC is 14-bits. The over sampling ratio (OSR) of the Delta-Sigma converter has five values to choose from for further optimization between conversion accuracy, speed and current consumption. MAS6512 capacitive sensor interface IC can interface both single and dual capacitance sensors. It has internal temperature sensor for temperature measurement and temperature compensation purposes. The MAS6512 communicates via a standard 2-wire I²C and 4-wire SPI bus interface.



FEATURES

- Single and Differential Capacitive Sensors
- Sensor Offset and Gain Adjustment
 - Changing Capacitance Range 2pF...30pF
 - Internal Offset Capacitance Matrix 0pF...22pF
 - External Capacitance up to 40pF (or higher using external clock)
- Resolution 14 bit (OSR=4096, $\Delta C=20\text{pF}$)
- Internal Clock Oscillator
- On Chip Temperature Sensor $-40^{\circ}\text{C}...+85^{\circ}\text{C}$
- Low Voltage Operation 1.8 V...3.6 V
- Low Supply Current: 1.9 $\mu\text{A}...28 \mu\text{A}$
- Conversion Time 5.8ms...82.6ms (12Hz...173Hz)
- 16-bit Ratiometric $\Delta\Sigma$ CDC
- Internal 256-bit EEPROM Calibration Memory

MAS6512 is available in a QFN-16 4x4x0.75 package as well as tested wafers or dies in waffle pack. For further information and samples please contact Micro Analog Systems Oy.

Download <[press release](#)>.

[Print](#)