The MS5611-01BA is a new generation of high resolution altimeter sensors with SPI and I2C bus interface.

Overpressure: 6 bar
Sensor Type: Digital Pressure and Altimeter Sensor Modules
Type: Absolute
Output/Span: 24 bit ADC
Accuracy: ±1.5 mbar

This barometric pressure sensor is optimized for altimeters and variometers with an altitude resolution of 10 cm.

The sensor module includes a high linearity pressure sensor and an ultra-low power 24 bit ΔΣ ADC with internal factory calibrated coefficients. It provides a precise digital 24 Bit pressure and temperature value and different operation modes that allow the user to optimize for conversion speed and current consumption. A high resolution temperature output allows the implementation of an altimeter/thermometer function without any additional sensor. The MS5611-01BA can be interfaced to virtually any microcontroller. The communication protocol is simple, without the need of programming internal registers in the device. Small dimensions of only 5.0 mm x 3.0 mm and a height of only 1.0 mm allow for integration in mobile devices. This new sensor module generation is based on leading MEMS technology and latest benefits from MEAS Switzerland proven experience and know-how in high volume manufacturing of altimeter modules, which have been widely used for over a decade. The sensing principle employed leads to very low hysteresis and high stability of both pressure and temperature signal.

**BENEFITS**

- High resolution module, 10 cm
- Fast conversion down to 1 ms
- Low power, 1 µA (standby < 0.15 µA)
- QFN package 5.0 x 3.0 x 1.0 mm
- Supply voltage 1.8 to 3.6 V
- Integrated digital pressure sensor (24 bit ΔΣ ADC)
- Operating range: 10 to 1200 mbar, -40 to +85 °C
- I²C and SPI interface up to 20 MHz
- No external components (Internal oscillator)
- Excellent long term stability

**APPLICATIONS**

Mobile altimeter / barometer systems
• Bike computers
• Variometers
• Height sensing for medical alarms
• Indoor navigation

Features

**Product Type Features**

<table>
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<th>Sensor Type</th>
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**Electrical Characteristics**

| Supply Voltage (V)  | 1.8 - 3.6                                   |

**Dimensions**

| Dimensions (mm)     | 5 x 3 x 1                                   |
| Dimensions (in)     | .19 x .11 x .04                             |

**Usage Conditions**

| Operating Temperature Range (°C) | -40 - 85, -40 - 85                       |
| Operating Temperature Range (°F) | -40 - 185, -40 - 185                     |

**Operation/Application**

| Resolution                  | .012                                        |
| Output Interface            | I²C and SPI (Mode 0, 3)                    |
| Overpressure                | 6 bar                                       |
| Output/Span                 | 24 bit ADC                                  |
| Accuracy                    | ±1.5mbar                                    |

**Packaging Features**

| Package                  | Surface Mountable                          |

**Related Materials**

**Data Sheet**

Data sheet
English

**Customer View Model**

Customer View Model
3D

Customer View Model
Customer View Model
SS CAP ALTIMETER PRESSURE SENSOR

TE Model #: MS5611-01BA03
TE Internal #: CAT-BLPS0036

English

Customer View Model
Customer View Model
English

Customer View Model
Customer View Model
English

Also in the Series | MEAS MS5611

Board Level Pressure Sensors(2)