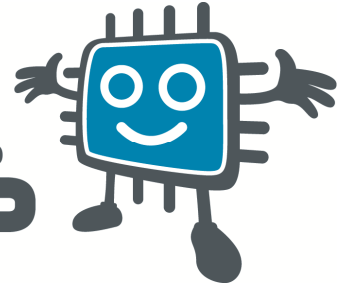


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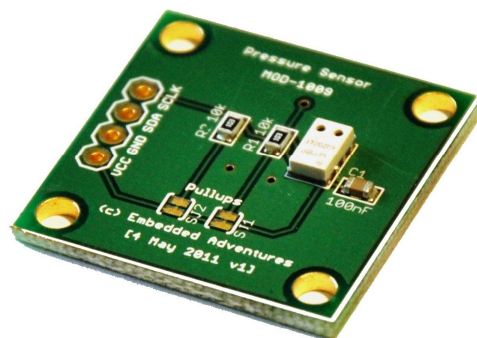
Device: MOD-1009

This document Version: 1.0

Matches module version: v1

Date: 7 June 2011

Description: Pressure Sensor (barometer)



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## Introduction

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The MOD-1009 is an MS5611 based absolute air pressure sensor module (barometer).

## Features

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The MOD-1009 features the MS5611 from Measurement Specialities. Due to its 24 bit ADC, it is capable of discerning the altitude within 10cm, an astonishingly accurate result. Of course, this sensor is great for weather measurements as well, and includes a temperature sensor to allow for temperature-compensated pressure readings.

The module itself has been arranged so the output from the MS5611 is available as I2C.

## Hackability

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The MOD-1009 is 100% hackable.

At Embedded Adventures, we believe you have the most fun when you have the most control over your hardware. For the MOD-1009 we provide a datasheet, complete schematic and complete source code. After that, it's all up to you. We'd love to hear about the projects you're using it for – send us information and photos to [myproject@embeddedadventures.com](mailto:myproject@embeddedadventures.com)

## Construction

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It's all pre-built! Just add female or male header pins, or solder directly to the board, and away you go.

## Connections

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The MOD-1005 has one connection port.

VCC	Positive supply. 1.8V – 4V.
GND	Ground (Vss) connection.

# MOD-1009 v1 datasheet – Page 4

SDA	I2C serial data
SCLK	I2C serial clock

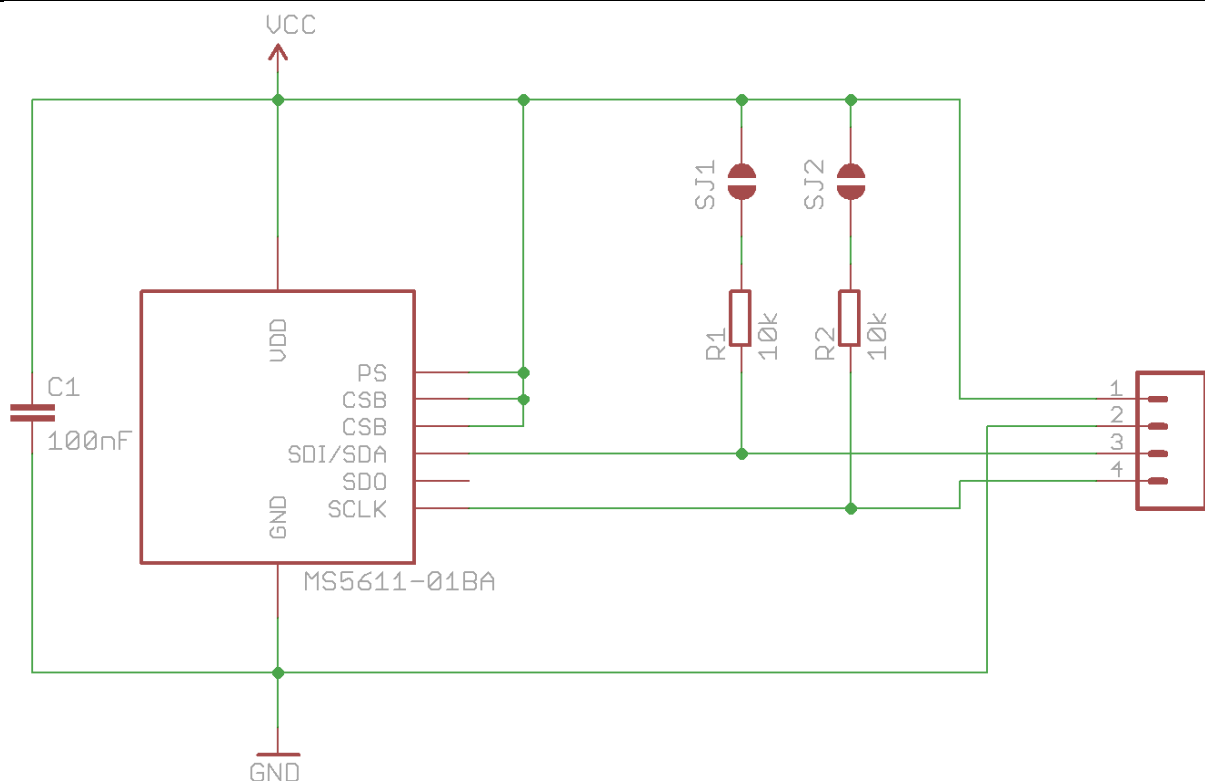
## Power

The MOD-1005 can be powered from 1.8V – 4V. If your microcontroller is using 5V, consider using a bidirectional level converter such as the MOD-1003 from Embedded Adventures (that’s us!).

## Pull up resistors

I2C requires the use of pull-up resistors. The board comes with the pull-up resistors enabled. If you are connecting to an existing I2C buss that already has pull-up resistors, or you are using internal pull-ups in your microcontroller, you can disable the pull-up resistors by cutting the PCB jumpers on the MOD-1009 board.

## Schematic



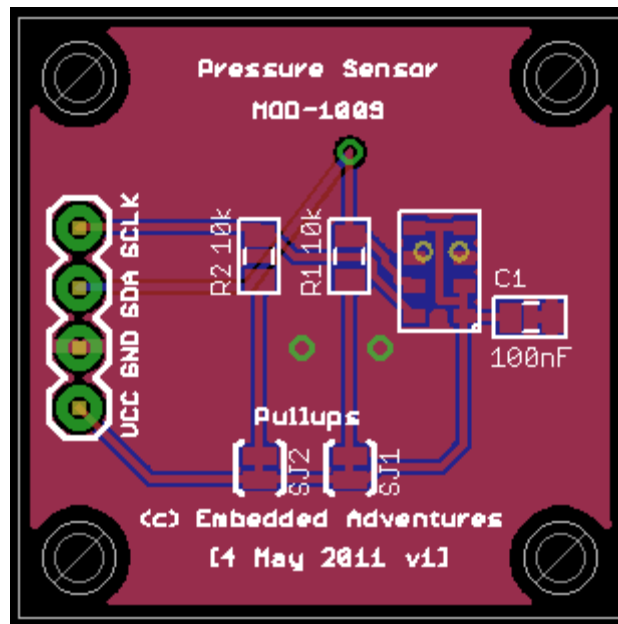
The MOD-1009 schematic is pretty straightforward. Don’t forget to have a look at the MS5611 datasheet so you know how to get the most out of the pressure sensor.

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## Programming

See ms5611.c and ms5611.h available in the PicPack library. These rely on the i2c.c and i2c.h software i2c libraries. The PicPack library can be downloaded from the Tutorials | Downloads section of [www.embeddedadventures.com](http://www.embeddedadventures.com)

## PCB



## Versions

Version	Date	Comments
Version 1.0	12 June 2011	Initial Version for board v1