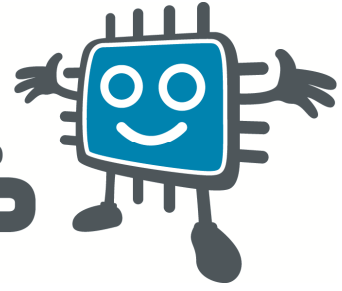


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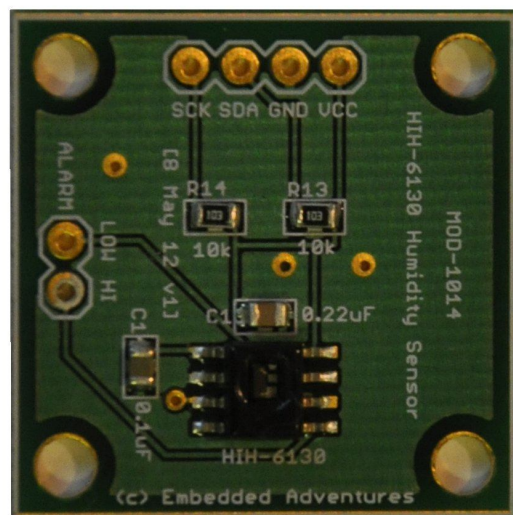
Device: MOD-1014

This document Version: 1.0

Matches module version: v1

Date: 6 June 2012

Description: Temperature and Humidity Sensor



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Introduction

The MOD-1014 is an HIH-6130 based temperature and humidity sensor.

Features

The MOD-1014 features the HIH-6130 from Honeywell. It features an I2C interface, can operate down to 2.3V and up to 5.5V, and provides 14 bit temperature and 14 bit humidity. Humidity is accurate to +/- 4% and temperature +/- 1 degree C.

Hackability

The MOD-1014 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-1014 we provide a datasheet, and complete schematic. 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

Construction

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

Connections

The MOD-1014 has two connection ports.

VCC	Positive supply. 2.3V – 5.5V.
GND	Ground (Vss) connection.
SDA	I2C serial data
SCLK	I2C serial clock

The second connection port allows access to the Alarm outputs:

Hi	Hi alarm output
Low	Low alarm output

Power

The MOD-1014 can be powered from 2.3V – 5.5V. It uses 1uA while asleep and 0.65mA when measuring humidity and temperature.

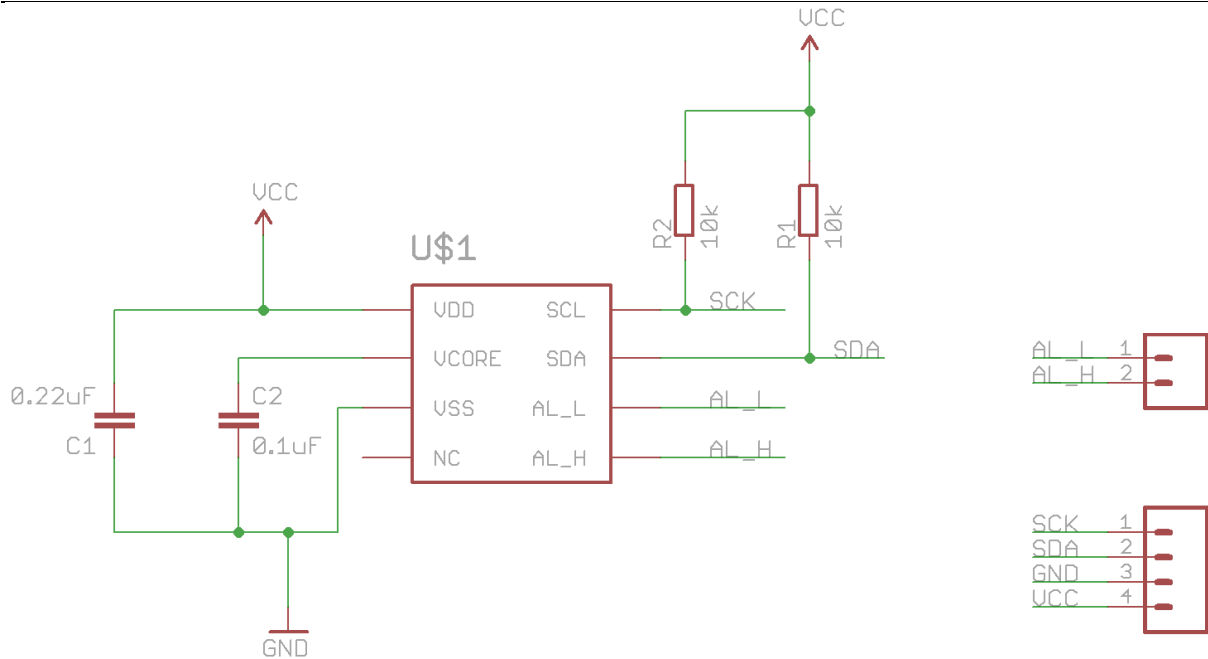
Pull up resistors

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 unsoldering the resistors.

Tips and tricks

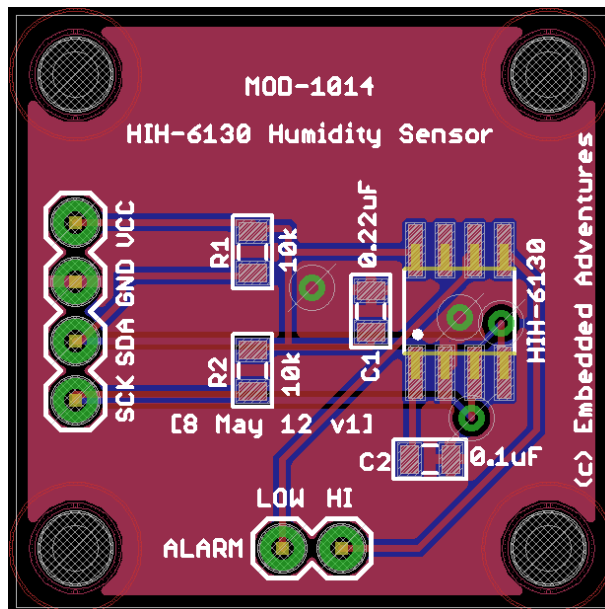
The HIH-6130 comes with a sticker over the sensor region for soldering and shipping. Removing the sticker before you use it will give much better results.

Schematic



The MOD-1014 schematic is pretty straightforward. Don't forget to have a look at the HIH-6130 datasheet and interface document (available on the Embedded Adventures web site) so you know how to get the most out of the humidity sensor.

PCB



Versions

Version	Date	Comments
Version 1.0	6 July 2012	Initial Version for board v1