

## Adafruit HDC1008 Temperature & Humidity Sensor Breakout Board

PRODUCT ID: 2635

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## DESCRIPTION

It's summer and you're sweating and your hair's all frizzy and all you really want to know is why the weatherman said this morning that today's relative humidity would max out at a perfectly reasonable 52% when it feels more like 77%. Enter the **HDC1008 Temperature + Humidity Sensor** - the best way to prove the weatherman wrong!

This I2C digital humidity sensor is a fairly accurate and intelligent alternative to the much simpler [Humidity and Temperature Sensor - SHT15 Breakout](#) It has a typical accuracy of  $\pm 4\%$  with an operating range that's optimized from 10% to 80% RH. Operation outside this range is still possible - just the accuracy might drop a bit. The temperature output has a typical accuracy of  $\pm 0.2^\circ\text{C}$  from  $-20^\circ$  to  $85^\circ\text{C}$ .

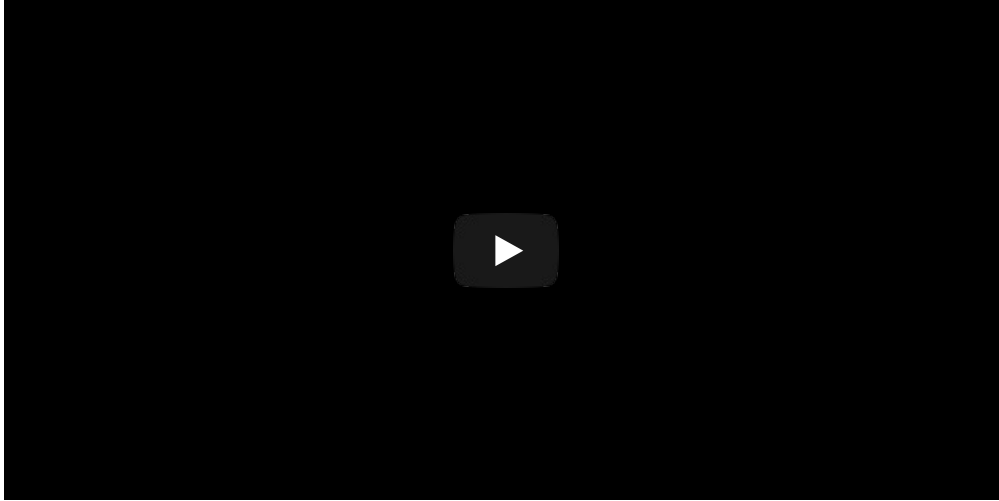
The HDC1008 sensor chip has 2 address-select pins, so you can have up to 4 shared on a single I2C bus. It's also 3-5V power and logic safe so you don't need any level shifters or

regulators to use with a 5V or 3V microcontroller.

Such a lovely chip, but only available in a tiny BGA package. So we spun up a breakout board with the chip and some extra passive components to make it easy to use. Each order comes with one fully assembled and tested PCB breakout and a small piece of header. You'll need to solder the header onto the PCB but it's fairly easy and takes only a few minutes even for a beginner.

**Please note:** TI has indicated that there's a 'settling' effect for the humidity and that you will need to re-hydrate the sensor once you receive it. To rehydrate it, place it in a location with 85% humidity for 24 hours or 60% humidity for 10 days.

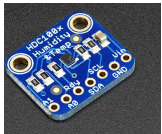
We would never leave you with a datasheet & a "good luck!" Check out the tutorial for pinouts, assembly, Arduino library, and more!



## TECHNICAL DETAILS

- Dimensions: 18mm x 15mm x 2mm / 0.7" x 0.6" x 0.1"
- Weight: 1.0g
- Power: 3-5VDC
- Logic: 3-5VDC
- Uses I2C address 0x40, 0x41, 0x42 or 0x43
- [Datasheets](#), [PCB files](#), [Fritzing object](#) and more available in the product tutorial

## LEARN



[Adafruit HDC1008 Temperature and Humidity Sensor Breakout](#)

A tiny temperature and humidity sensor

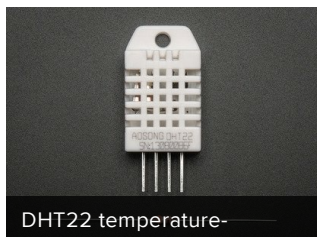


[I2C addresses!](#)  
I2C addresses from 0x00 to 0x7F (inclusive)

## MAY WE ALSO SUGGEST...



Adafruit HTU21D-F



DHT22 temperature-



AM2302 (wired DHT22)



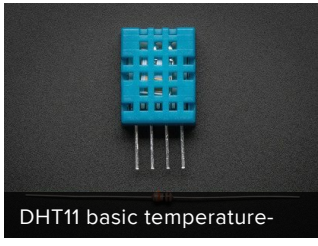
MCP9808 High Accuracy



AM2315 - Encased I2C



Mesh-protected Weather-



DHT11 basic temperature-



Adafruit BME280 I2C or SPI



Adafruit CCS811 Air Quality



Huzzah! Adafruit.io Internet



Adafruit SGP30 Air Quality



Adafruit Sensiron SHT31-D

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*"Calculation and reasoning, like weaving and ploughing, are work, not for human souls, but for clever combinations of iron and wood" - Mary Boole*



4.9 ★★★★★  
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Customer Reviews