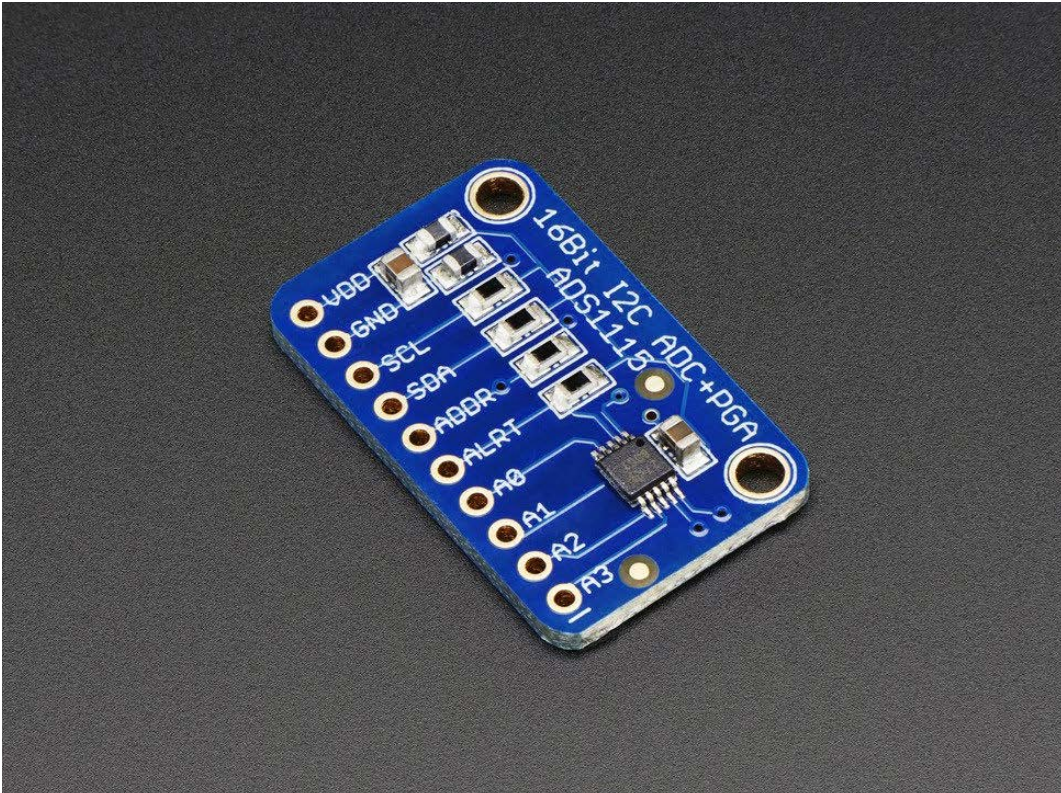


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([images/1200x900/1085-02.jpg](#))



([images/1200x02.jpg](#))



([images/1200x03.jpg](#))



([images/1200x04.jpg](#))

ADS1115 16-Bit ADC - 4 Channel with Programmable Gain Amplifier

PRODUCT ID: 1085

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DESCRIPTION

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TECHNICAL DETAILS

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DESCRIPTION

For microcontrollers without an analog-to-digital converter or when you want a higher-precision ADC, the ADS1115 provides 16-bit precision at 860 samples/second over I2C. The chip can be configured as 4 single-ended input channels, or two differential channels. As a nice bonus, it even includes a programmable gain amplifier, up to x16, to help boost up smaller single/differential signals to the full range. We like this ADC because it can run from 2V to 5V power/logic, can measure a large range of signals and its super easy to use. It is a great general purpose 16 bit converter.

The chip's fairly small so it comes on a breakout board with ferrites to keep the AVDD and AGND quiet. Interfacing is done via I2C. The address can be changed to one of four options (see the datasheet table 5) so you can have up to 4 ADS1115's connected on a single 2-wire I2C bus for 16 single ended inputs.

To get you started, we have example code for both the Raspberry Pi ([in our Adafruit Pi Python library \(https://github.com/adafruit/Adafruit-Raspberry-Pi-Python-Code\)](#)) and Arduino ([in our ADS1X15 Arduino library repository \(https://github.com/adafruit/Adafruit_ADS1X15\)](#)) Simply connect GND to ground, VDD to your logic power supply, and SCL/SDA to your microcontroller's I2C port and run the example code to start reading data.

TECHNICAL DETAILS



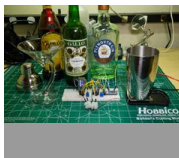
- WIDE SUPPLY RANGE: 2.0V to 5.5V
- LOW CURRENT CONSUMPTION: Continuous Mode: Only 150µA Single-Shot Mode: Auto Shut-Down
- PROGRAMMABLE DATA RATE: 8SPS to 860SPS
- INTERNAL LOW-DRIFT VOLTAGE REFERENCE
- INTERNAL OSCILLATOR
- INTERNAL PGA
- I2C INTERFACE: Pin-Selectable Addresses
- FOUR SINGLE-ENDED OR TWO DIFFERENTIAL INPUTS
- PROGRAMMABLE COMPARATOR
- This board/chip uses I2C 7-bit addresses between 0x48-0x4B, selectable with jumpers.

Lots more information in the [datasheet \(http://adafruit.com/datasheets/ads1115.pdf\)](http://adafruit.com/datasheets/ads1115.pdf)

LEARN

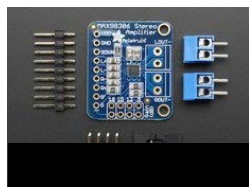


Adafruit 4-Channel ADC Breakouts
<https://learn.adafruit.com/adafruit-4-channel-adc-breakouts>
 A guide to the ADS1115 and ADS1015 analog converters

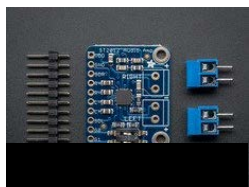


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