RPI-ADS1115-ADC-Module SKU:EP-0076

Description

The ADS1115 are precision analog-to-digital converters (ADCs) with 16 bits of resolution offered in an ultra-small, an MSOP-10 package.
Data are transferred via an I2C-compatible serial interface, four I2C slave addresses can be selected, it operate from a single power supply at 3.3V.
It can be used to detect analog signal and convert it to digital signal.
You can attach a joy stick or other analog sensor such as NTC,temperature, dust sensor and so on.

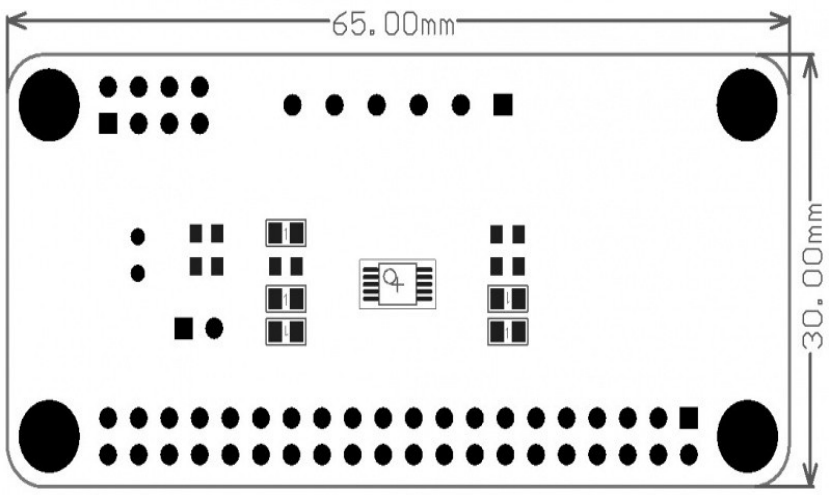
Compatibility List

Platform	ADS1115-ADC Module	Notes
Raspberry Pi 3 Model B Plus	√	
Raspberry Pi zero	√	
Raspberry Pi zero W	√	
Raspberry Pi 3 Model B	√	
Raspberry Pi 2 Model B	√	
Raspberry Pi Model B+	×	

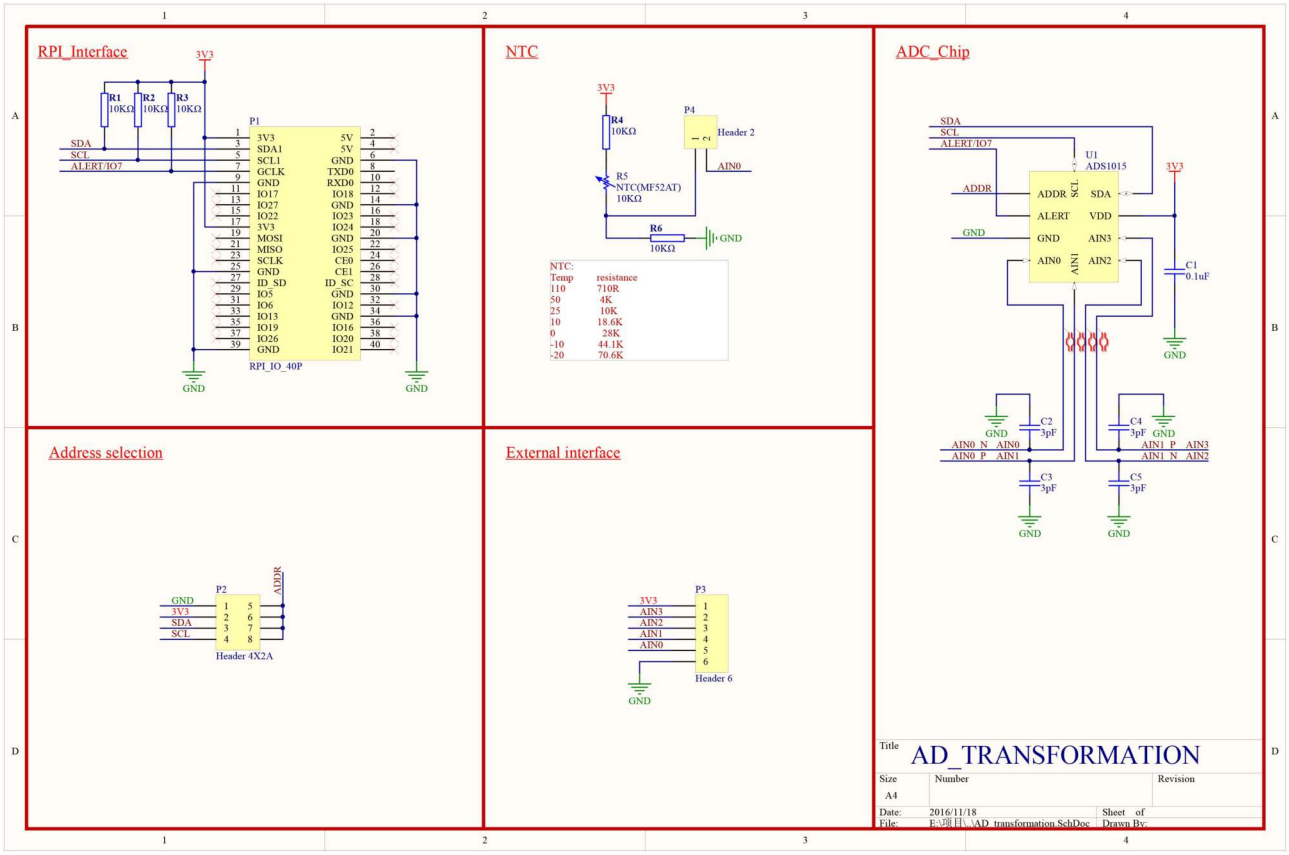
Features

Parameters	Values
Size:	65.0mm x 30.0mm x 18.0mm
Power Supply	3.3v
Analog Input Voltage	GND to VDD
PROGRAMMABLE DATA RATE:	8SPS to 860SPS
INTERNAL LOW-DRIFT:	VOLTAGE REFERENCE
INTERNAL PGA	Available
Resolution	16-bit
I2C™ INTERFACE:	Pin-Selectable Addresses
Channels Number	4 SINGLE-ENDED OR 2 DIFFERENTIAL INPUTS
PROGRAMMABLE COMPARATOR	2/3 ~ 16
INTERNAL NTC Support	Available

Mechanical Drawing



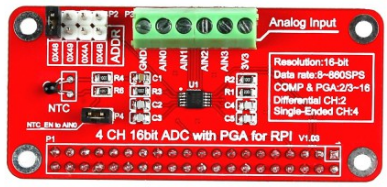
Schematic Diagram

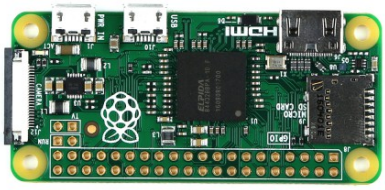


How to wire up

Just Plug into GPIO with this module.

NOTE: Please be ware of the No.1 Pin is fit for your GPIO No.1 Pin.





How to get analog data

• All steps are available that we've consumed that you have already flashed the newest image file into your TF card, and your RaspberryPi is powered on.
• Modify /boot/config.txt file and add those parameters to enable ADC module's driver:

```
sudo vim.tiny /boot/config.txt
```

```
   dtparam=i2c_arm=on
```

Save it and reboot your raspberry Pi.

• Python code to use the ADS1015 and ADS1115 analog to digital converters with a Raspberry Pi or BeagleBone black.
• To install the library from source (recommended) run the following commands on a Raspberry Pi or other Debian-based OS system:

```
sudo apt-get install git build-essential python-dev
cd ~
git clone https://github.com/adafruit/Adafruit_Python_ADS1x15.git
cd Adafruit_Python_ADS1x15
sudo python setup.py install
```

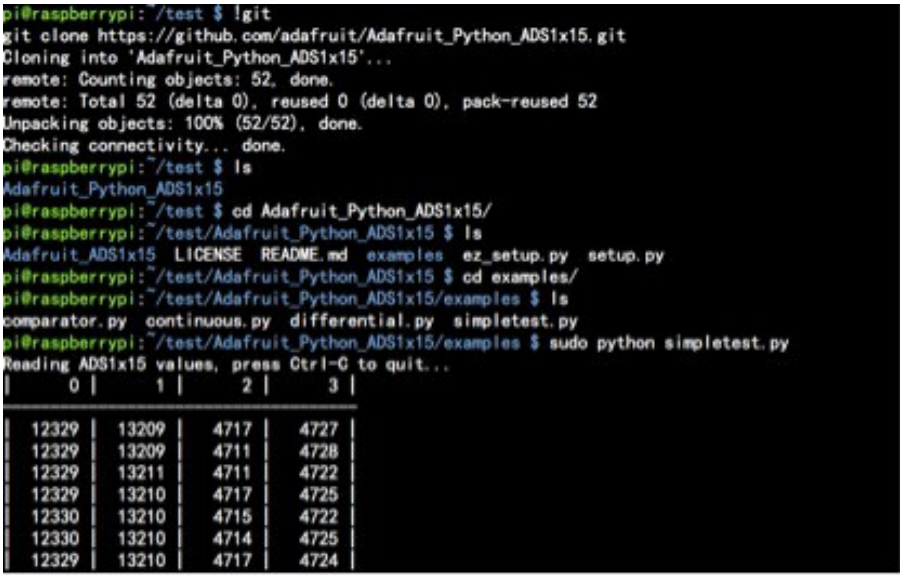
• Alternatively you can install from pip with:

```
sudo pip install adafruit-ads1x15
```

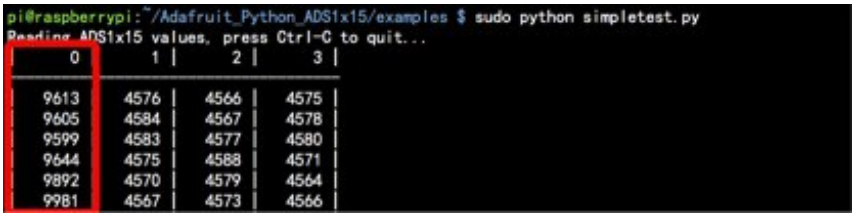
• Change your work directory to Adafruit_Python_ADS1x15/example as following command:

```
cd ~/Adafruit_Python_ADS1x15/examples
sudo python simpletest.py
```

• You will see a chart like following picture:



• Do not panic when you see this picture:



• Remove the jumper from NTC_EN to AIN0, it will be back to normal.

4588	4578	4585	4579
4570	4570	4576	4573
4572	4570	4577	4570
4571	4571	4577	4569
4571	4571	4577	4570
4570	4574	4573	4570
4570	4573	4576	4572
4575	4575	4576	4575
4600	4578	4582	4576

Have fun!