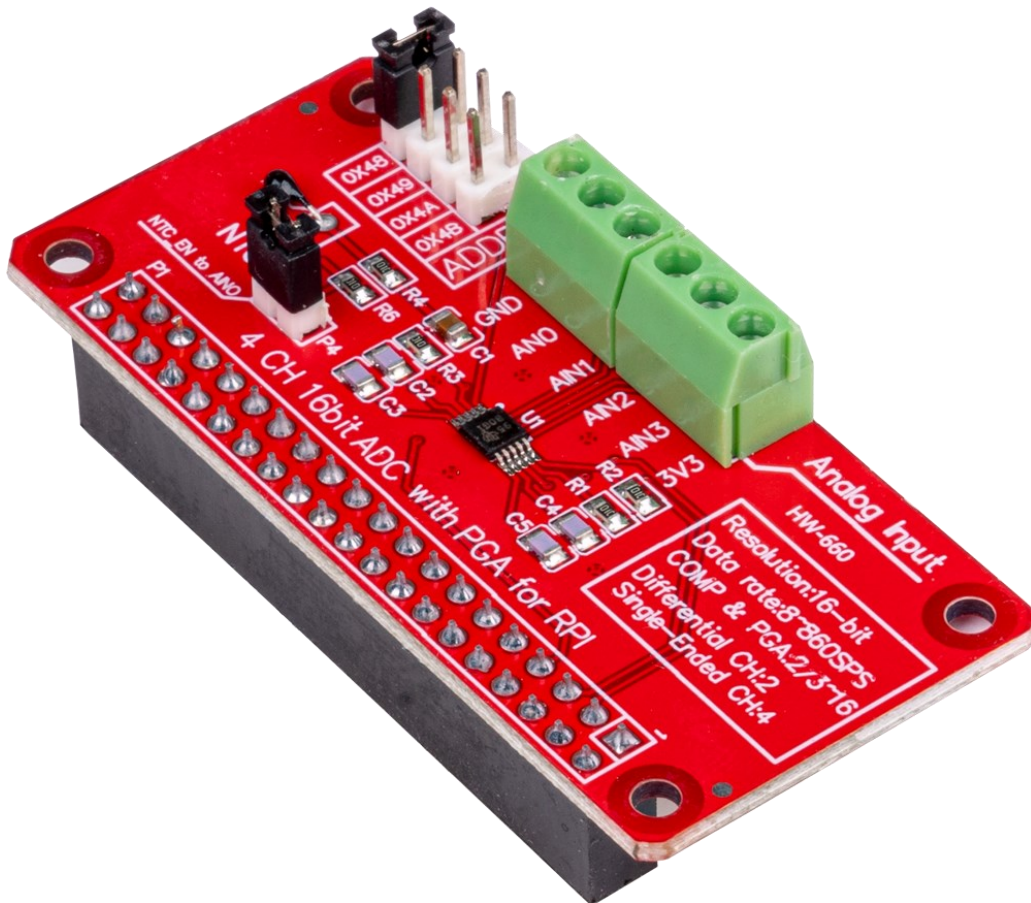


ANALOG-DIGITAL CONVERTER FOR RASPBERRY PI

RB-ADC01

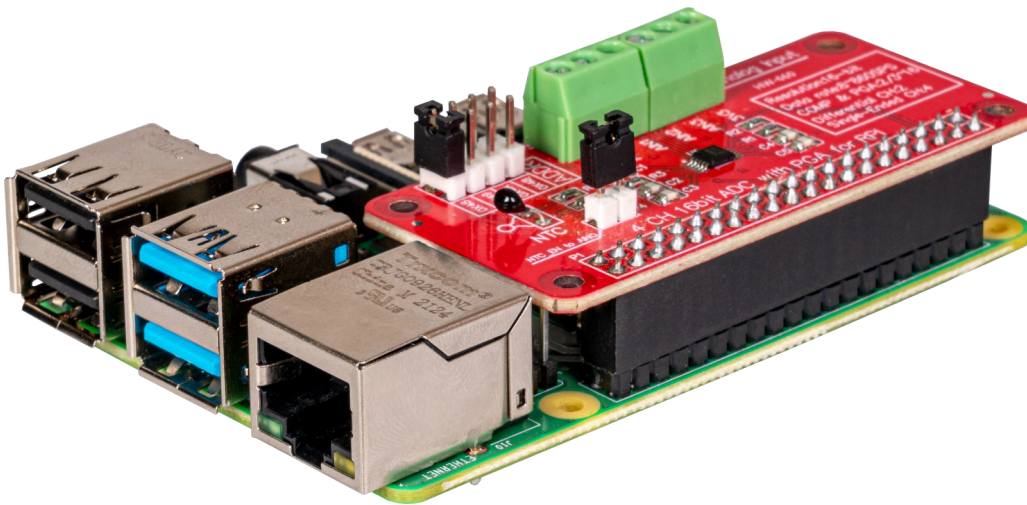


1. GENERAL INFORMATION

Dear customer,
 thank you very much for choosing our product.
 In following, we will introduce you to what to observe while starting up
 and using this product.
 Should you encounter any unexpected problems during use, please do
 not hesitate to contact us.

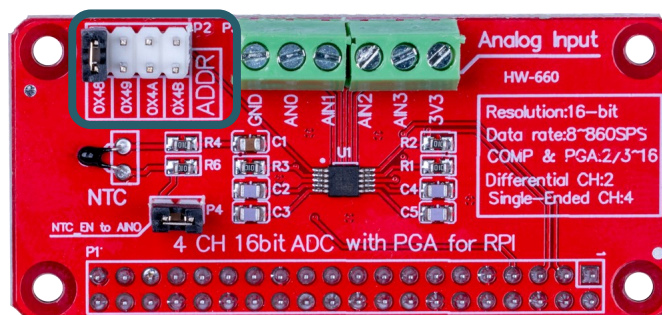
2. CONNECTION

The analog-digital converter is connected as shown in the following picture.



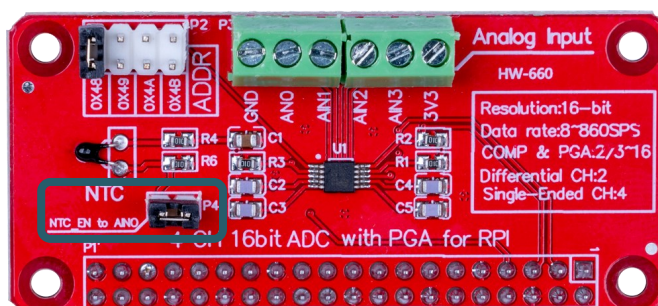
3. I2C-ADRESSE

This analog-digital converter is able to change the I2C address by means of jumpers. For this you can change the following jumper to use **0x49**, **0x4A** or **0x4B**. By default the address is set to **0x48**.



4. NTC

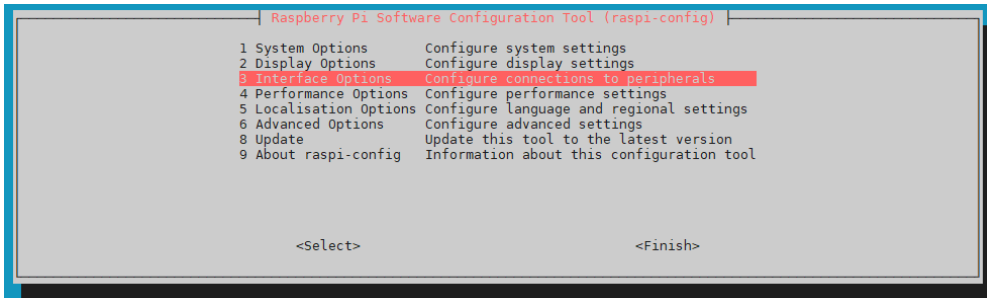
There is an NTC placed on the converter. This NTC is connected to **AN0**. In the following example, this can be used to measure the temperature. However, if you want to use **AN0**, you should remove the jumper, which is marked in the following picture.



5. CODE EXAMPLE

For the analog - digital converter you have to enable I2C on your Raspberry Pi. To do this, enter the following command into your console to access the settings of your Raspberry Pi.

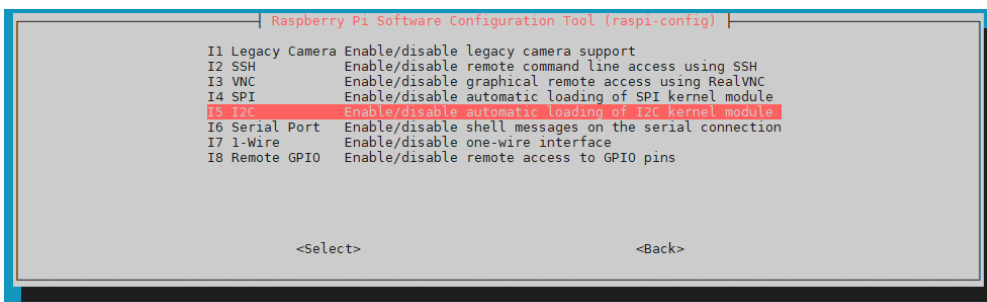
```
sudo raspi-config
```



```
Raspberry Pi Software Configuration Tool (raspi-config)
1 System Options      Configure system settings
2 Display Options     Configure display settings
3 Interface Options   Configure connections to peripherals
4 Performance Options Configure performance settings
5 Localisation Options Configure language and regional settings
6 Advanced Options   Configure advanced settings
8 Update              Update this tool to the latest version
9 About raspi-config Information about this configuration tool

<Select>                                <Finish>
```

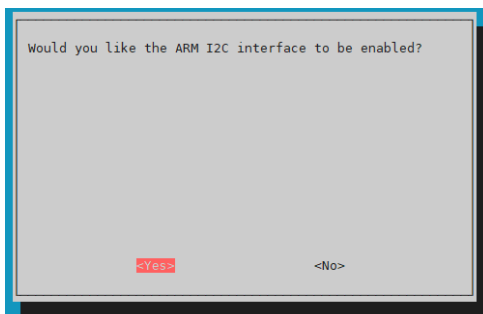
Now call **3 Interface Options** → **I5 I2C**.



```
Raspberry Pi Software Configuration Tool (raspi-config)
I1 Legacy Camera Enable/disable legacy camera support
I2 SSH           Enable/disable remote command line access using SSH
I3 VNC           Enable/disable graphical remote access using RealVNC
I4 SPI           Enable/disable automatic loading of SPI kernel module
I5 I2C           Enable/disable automatic loading of I2C kernel module
I6 Serial Port  Enable/disable shell messages on the serial connection
I7 1-Wire       Enable/disable one-wire interface
I8 Remote GPIO  Enable/disable remote access to GPIO pins

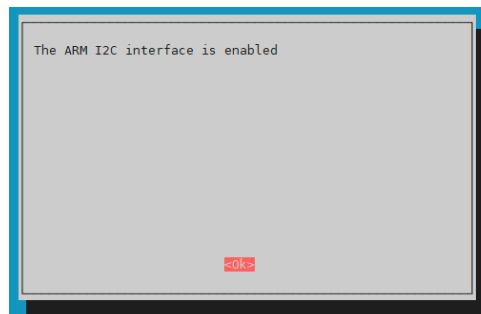
<Select>                                <Back>
```

Now activate I2C.



```
Would you like the ARM I2C interface to be enabled?

<Yes>                                <No>
```



```
The ARM I2C interface is enabled

<Ok>
```

Now, run the following commands to install all the required libraries.

```
sudo apt update
```

```
sudo apt install python3-pip
```

```
sudo apt-get install python3-smbus i2c-tools -y
```

For our code example we use [Adafruit CircuitPython ADS1x115](#) from [Adafruit](#), which is released under the [MIT license](#). You install this library with the following command.

```
sudo pip3 install adafruit-circuitpython-ads1x15
```

The code sample we provide can be downloaded [here](#) or you can run the following command in your console.

```
wget https://www.joy-it.net/files/files/Produkte/RB-ADC01/RB-ADC01_CodeExample.zip
```


Now, unpack the file with the following command:

```
unzip RB-ADC01_CodeExample.zip
```

You can now execute the script with the following command. Be aware that your file path may be differ.

```
python3 RB-ADC01_CodeExample/RB-ADC01.py
```

6. OTHER INFORMATION

Our information and take-back obligations according to the Electrical and Electronic Equipment (ElektroG)  Act

Symbol on electrical and electronic equipment:

This crossed-out dustbin means that electrical and electronic appliances do not belong in the household waste. You must return the old appliances to a collection point.

Before handing over waste batteries and accumulators that are not enclosed by waste equipment must be separated from it.

Return options:

As an end user, you can return your old device (which essentially fulfils the same function as the new device purchased from us) free of charge for disposal when you purchase a new device.

Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities independently of the purchase of a new appliance.

Possibility of return at our company location during opening hours:

SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn, Germany

Possibility of return in your area:

We will send you a parcel stamp with which you can return the device to us free of charge. Please contact us by email at Service@joy-it.net or by telephone.

Information on packaging:

If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

7. SUPPORT

If there are still any issues pending or problems arising after your purchase, we will support you by e-mail, telephone and with our ticket support system.

Email: service@joy-it.net

Ticket system: <http://support.joy-it.net>

Telephone: +49 (0)2845 9360-50 (10-17 o'clock)

For further information please visit our website:

www.joy-it.net