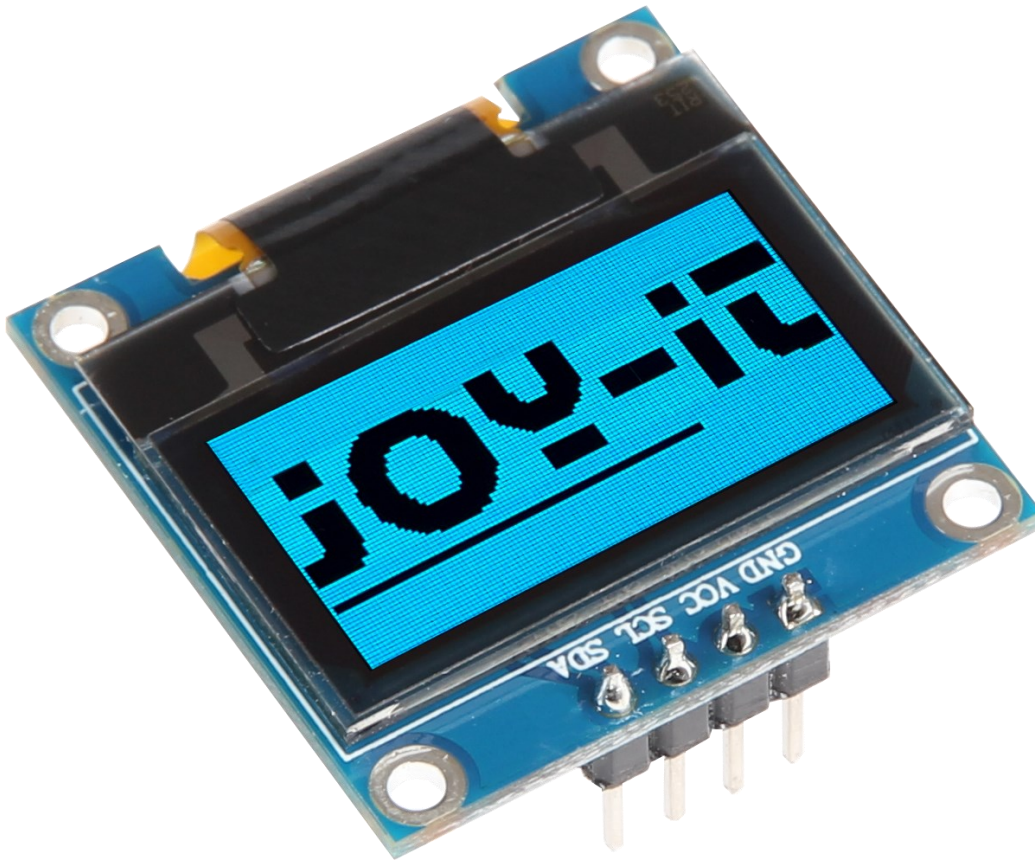


OLED DISPLAY 128X64

SBC-OLED01



1. GENERAL INFORMATION

Dear customer,

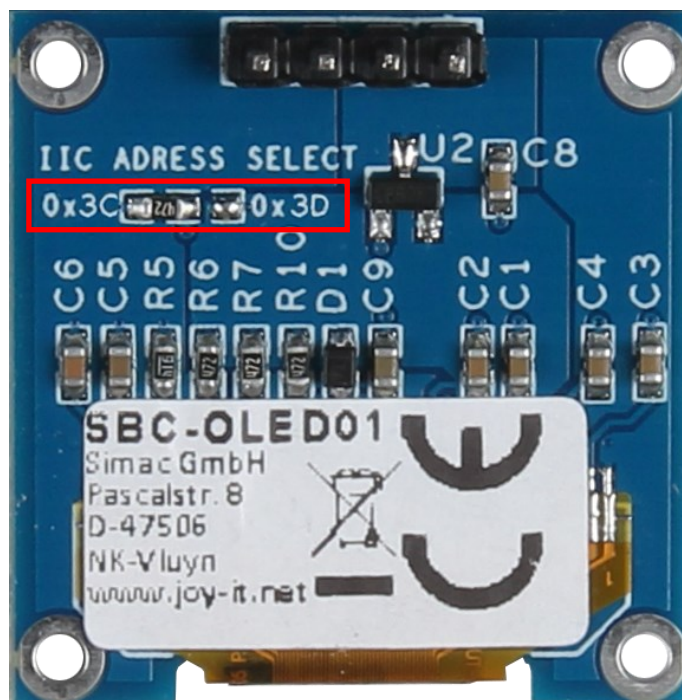
Thank you for purchasing our product. In the following, we will show you which things should be noted during the use.

Should you encounter any unexpected problems, do not hesitate to contact us.

2. I2C ADRESSE

On the backside of the OLED display is a resistor, with which you can set the I2C address of the display to 0x3D. In the delivery state, the display is accessible via the I2C address 0x3C.

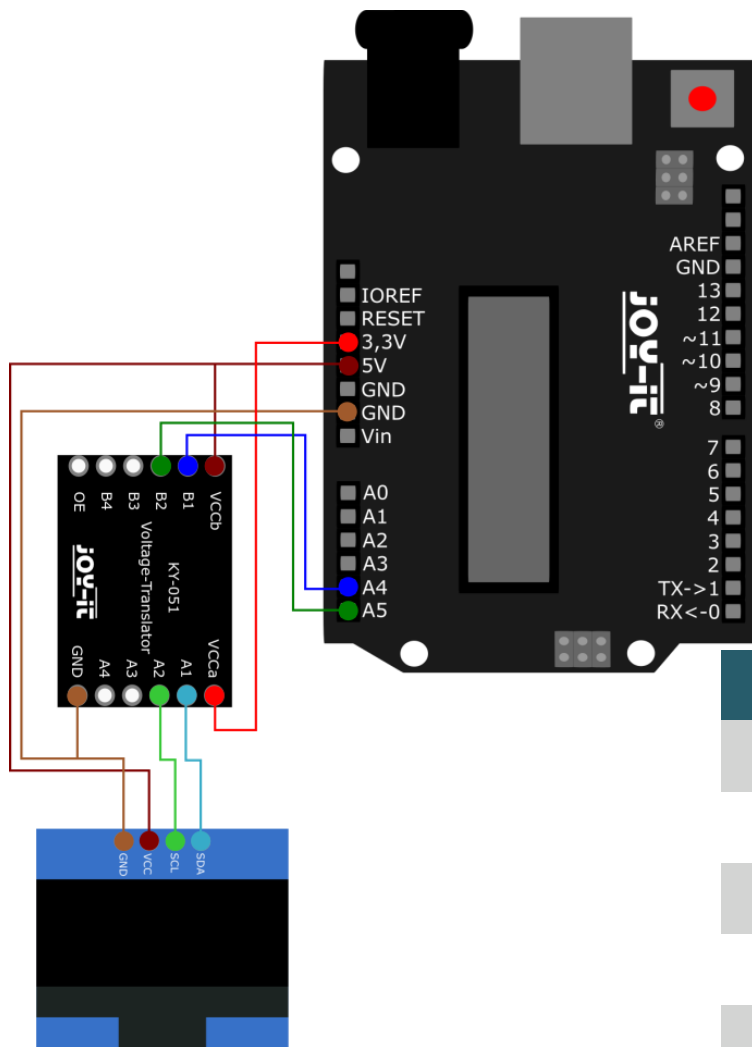
To do change the address, re-solder the resistor marked in the figure.



3. USAGE WITH ARDUINO

3.1 Connection

The SBC-OLED01 has a logic level of 3.3V. Therefore, when using an Arduino Uno, a voltage translator must be used, otherwise it may cause damage to the display. In our example, we use the [COM-KY051VT](#).



OLED	Arduino	Voltage translator
GND	GND	GND
VCC	5V	VCCb
-	3,3 V	VCCa
-	A5	B2
SCL	-	A2
-	A4	B1
SDA	-	A1

3.2 Code example

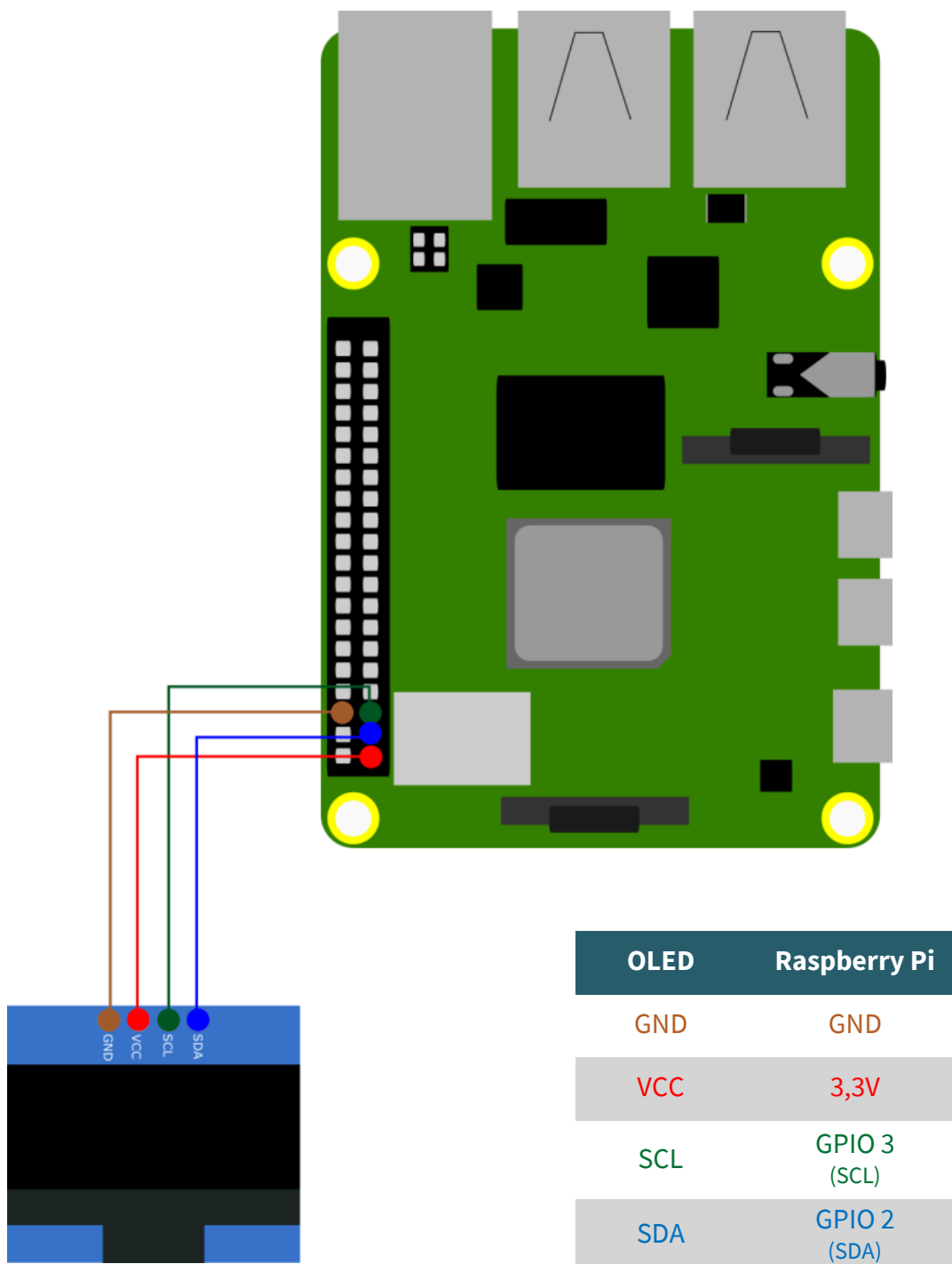
Before you can transfer the code example to your Arduino using your Arduino IDE, you must first install the additional libraries [Adafruit GFX Library](#) (released under the [BSD License](#)) and [Adafruit SSD1306](#) (released under the [BSD License](#)) from [Adafruit](#).

These libraries allow you to use the display as easily and quickly as possible. You can search for and install them under **Sketch** → **Include Library** → **Manage Libraries...**

You can download our code examples [here](#). You can upload the code to your Arduino using the **Upload** button. Make sure that you have selected **Port** and **Board** correctly under **Tools**.

4. USAGE WITH RASPBERRY PI

4.1 Connection



4.2 Installation

First, enable I2C on your Raspberry Pi. To do this, enter the following command into your console.

```
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 activate I2C under **3 Interface Options** → **P5 I2C**.

```
Raspberry Pi Software Configuration Tool (raspi-config)

P1 Camera      Enable/disable connection to the Raspberry Pi Camera
P2 SSH         Enable/disable remote command line access using SSH
P3 VNC         Enable/disable graphical remote access using RealVNC
P4 SPI         Enable/disable automatic loading of SPI kernel module
P5 I2C         Enable/disable automatic loading of I2C kernel module
P6 Serial Port Enable/disable shell messages on the serial connection
P7 1-Wire      Enable/disable one-wire interface
P8 Remote GPIO Enable/disable remote access to GPIO pins

<Select>                                <Back>
```

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

<Yes>                                <No>
```

```
The ARM I2C interface is enabled

<Ok>
```

Now, enter the following commands to install the necessary libraries.

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

```
sudo apt-get install python3-pil
```

Now, open the config.txt to increase the baud rate for the display. To do this, execute the following command.

```
sudo nano /boot/config.txt
```

Add the following line at the end of the file.

```
[all]
dtparam=i2c_baudrate=1000000
```

Save the file with **CTRL + O** and close it with **CTRL + X**.
Now restart the Raspberry Pi with the following command.

```
sudo reboot
```

For the display, we use the [Adafruit CircuitPython SSD1306 library](#) from [Adafruit](#), which is released under the [MIT-License](#). You can download it with the following command.

```
sudo pip3 install adafruit-circuitpython-ssd1306
```

4.2 Code example

You can download our sample code with the following command.

```
wget https://www.joy-it.net/files/files/Produkte/SBC-OLED01/SBC-OLED01_Codeexample_RaspberryPi.zip
```

Unzip the file with the following command.


```
unzip SBC-OLED01_Codeexample_RaspberryPi
```

You can now execute the code with the following command. Please note that the directory may differ.

```
cd SBC-OLED01_Codeexample_RaspberryPi
```

```
python3 SBC-OLED01.py
```

5. 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.

6. SUPPORT

If any questions remained open or problems may arise after your purchase, we are available by e-mail, telephone and ticket support system to answer these.

E-Mail: service@joy-it.net

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

Telephone: +49 (0)2845 98469 – 66 (10 - 17 o'clock)

For further information visit our website:

www.joy-it.net