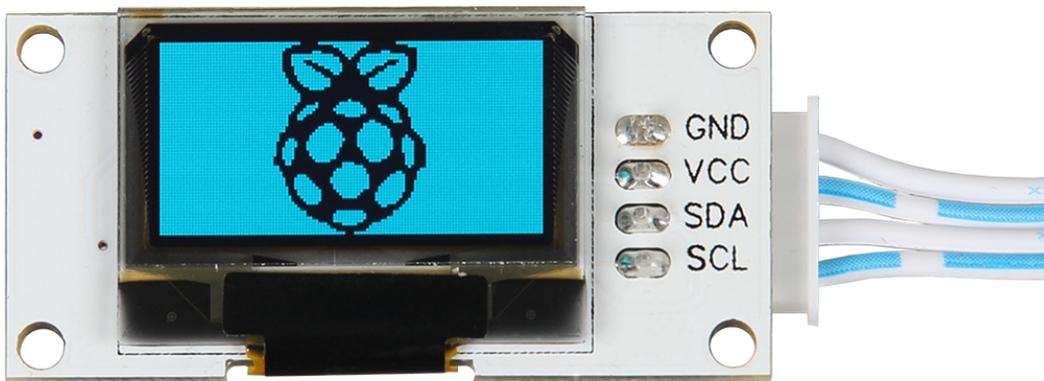


# LINKERKIT OLED

for Raspberry Pi and Arduino



## 1. GENERAL INFORMATION

Dear customer,

thank you for choosing our product. In the following, we will show you how to use your product.

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

## 2. CONNECTION TO RASPBERRY PI

### 1. connect the display

Use our LinkerKit sytem so that you can plug in the LinkerKit cable into the I2C port like in the following picture.



If you want to connect the display directly with your device, the table shows you the pin assignment.

<u>pin name display</u>	<u>pin name Raspberry Pi</u>	<u>pin number Raspberry Pi</u>
GND	GND	06
VCC	3V3	01
SDA	GPIO 02 / SDA1	03
SCL	GPIO 03 / SCL1	05

### 2. Activation of the I2C interface

To follow the following installation instructions without any deviations, we recommend the operating system Raspbian (Buster) to use as an image.

First you have to edit the data file “config.txt“. The following line must be added at the end of the file.

```
dtoverlay=i2c_arm=on
```

configuration of the hardware initialization in the config.txt

You can edit the file directly on the Raspberry with the following command:

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

config.txt can be edited directly on the Raspberry

With the key combination „Strg“ + „X“ and a following „Y“ and „Enter“ as a confirmation, changes will be saved.

### **3.Installation of the Adafruit SSD1306 library**

The developers of adafruit offer a library to control OLED displays with a SSD1306 chipset. To use this library you must give the following commands to install further but necessary modules:

(every command must be confirmed with “Enter“):

```
sudo apt-get update  
  
sudo apt-get install build essential python-dev python-pip-y  
  
sudo pip install RPi.GPIO  
  
sudo apt-get install python-imaging python-smbus-y
```

If all modules are installed, the “Adafruit\_Python\_SSD1306“ library can be installed with the following commands:

```
sudo apt-get install git  
  
git clone https://github.com/adafruit/Adafruit_Python_SSD1306.git  
  
cd Adafruit_Python_SSD1306  
  
sudo python setup.py install
```

## 4. Application of code examples

In the adafruit library are some code examples. To invoke them, you first must switch to the example file with the following command.

```
cd examples
```

From there you can invoke the following commands:

show ticker

```
sudo python animate.py
```

show a little picture

```
sudo python image.py happycat_oled_64.ppm
```

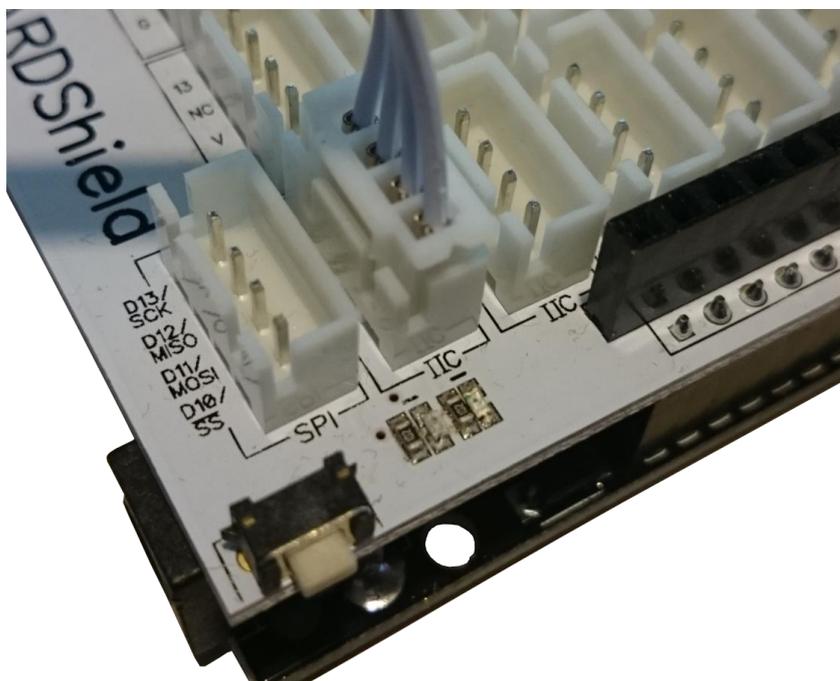
show different shapes

```
sudo python shapes.py
```

## 3. CONNECTION TO ARDUINO

### 1. Connect the display

Use our LinkerKit system so that you can plug in the LinkerKit cable into the I2C port like in the following picture.



If you want to connect the display directly with your device, the table shows you the pin assignment.

<u>pin name display</u>	<u>pin name Arduino</u>
GND	GND
VCC	5V
SDA	SDA
SCL	SCL

## **2.Installation of adafruit libraries**

The developers of adafruit offer a library to control OLED displays with a SSD1306 chipset.

Both libraries “Adafruit\_SSD1306“ and “Adafruit-GFX-Library“ must be downloaded, installed and edited.

### Download:

Download the libraries with the following link as a Zip file:

Adafruit\_SSD1306

[https://github.com/adafruit/Adafruit\\_SSD1306](https://github.com/adafruit/Adafruit_SSD1306)

Adafruit-GFX-Library

<https://github.com/adafruit/Adafruit-GFX-Library>

### Unzip:

The libraries must be unzipped in the Arduino library folder after the download. This folder can be usually found here:

C:\Benutzer\<<BENUTZERNAME>\Dokumente\Arduino\libraries\

The path can change depending on the used Arduino installation.

### Adjust:

Two files must be edited that the library can be used with the LinkerKit OLED display. In...

...\libraries\Adafruit\_SSD1306-master\Adafruit\_SSD1306.h

must be the following lines:

```
61 -----
62 // #define SSD1306_128_64
63 #define SSD1306_128_32
64 // #define SSD1306_128_16
65 /* =====
```

These must be changed like that:

```
61 -----
62     #define SSD1306_128_64
63     // #define SSD1306_128_32
64     // #define SSD1306_128_16
65     /* =====
```

In

...\libraries\Adafruit\_SSD1306-master\examples\ssd1306\_128x64\_i2c.ino

must be the following lines:

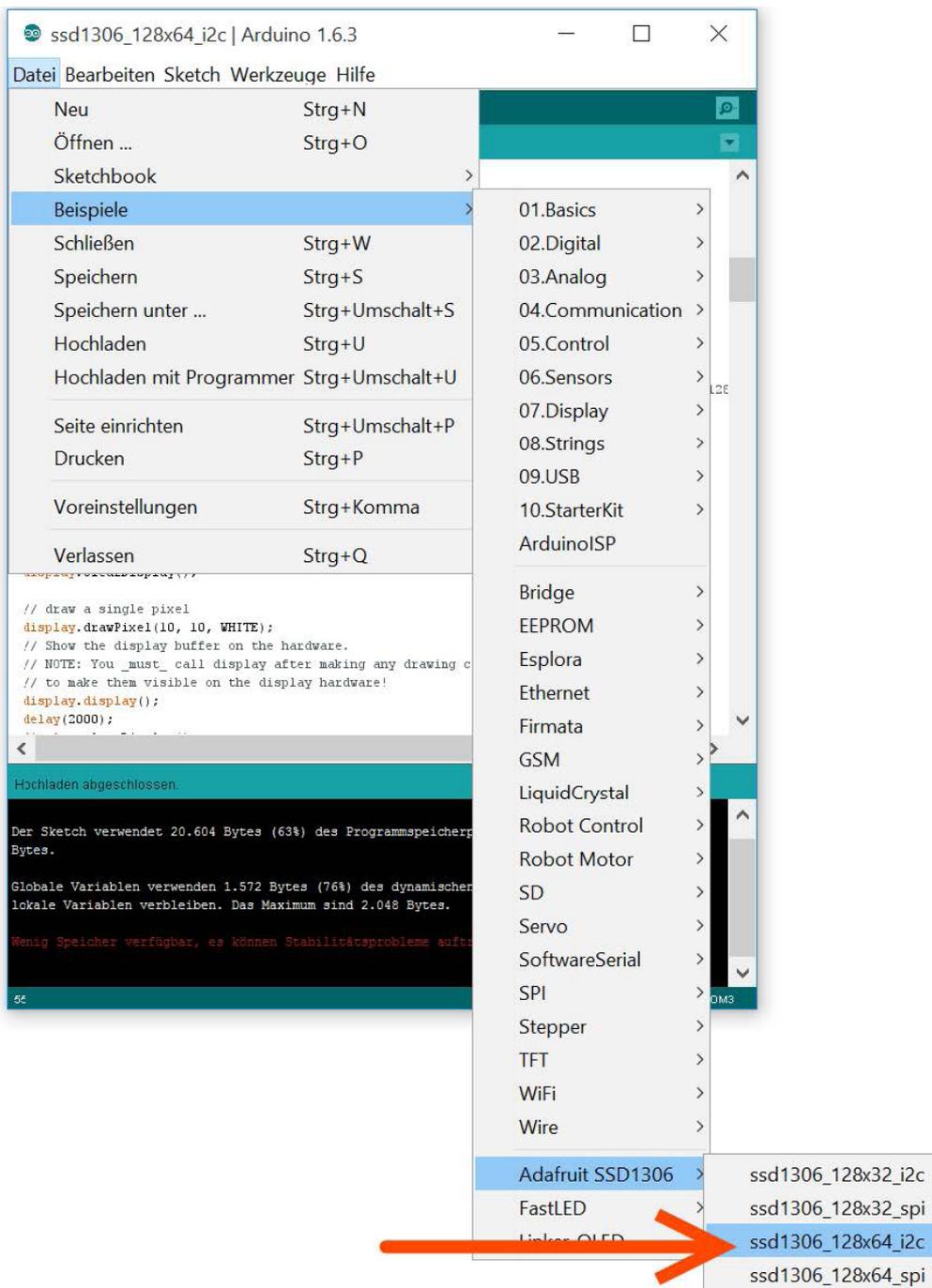
```
60 //by default, we'll generate the high voltage from the 3.3v line
    internally! (neat!)
61     display.begin(SSD1306_SWITCHCAPVCC, 0x3D;
        // initialize with the I2C addr 0x3D (for the 128x64)
62 //     init done
```

These must be changed like that:

```
60 //by default, we'll generate the high voltage from the 3.3v line
    internally! (neat!)
61     display.begin(SSD1306_SWITCHCAPVCC, 0x3C;
        // initialize with the I2C addr 0x3D (for the 128x64)
62 //     init done
```

### **3. Application of code examples**

Now in the library contained code examples can be used . For that the example program can be chosen directly in the Arduino program...



... and can be directly compiled and loaded on the Arduino.



## 4. FURTHER INFORMATION

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



### Symbol on electrical and electronic products :

This crossed-out bin means that electrical and electronic products do not belong into the household waste. You must hand over your old appliance to a registration office. Before you can hand over the old appliance, you must remove used batteries and accumulators which are not enclosed by the device.

### Return options :

As the end user, you can hand over with the purchase of a new device your old appliance (which has essentially the same functions as the new one) free of charge for disposal. Small devices which do not have outer dimensions greater than 25 cm can be submitted independently of the purchase of a new product in normal household quantities.

### Possibility of restitution at our company location during our opening hours:

Simac GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

### Possibility of restitution nearby :

We send you a parcel stamp with which you can send us your old appliance free of charge. For this possibility, you must contact us via e-mail at [service@joy-it.net](mailto:service@joy-it.net) or via telephone.

### Information about packaging:

Please package your old appliance safe during transport. Should you not have a suitable packaging material or you do not want to use your own material, you can contact us and we will send you an appropriate package.



## 5. SUPPORT

If any questions remain open or problems arise after your purchase, we are available by email, telephone and ticket support system to answer these.

E-Mail: [service@joy-it.net](mailto:service@joy-it.net)

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

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

For more information visit our website:

[www.joy-it.net](http://www.joy-it.net)