

## RB-RS232

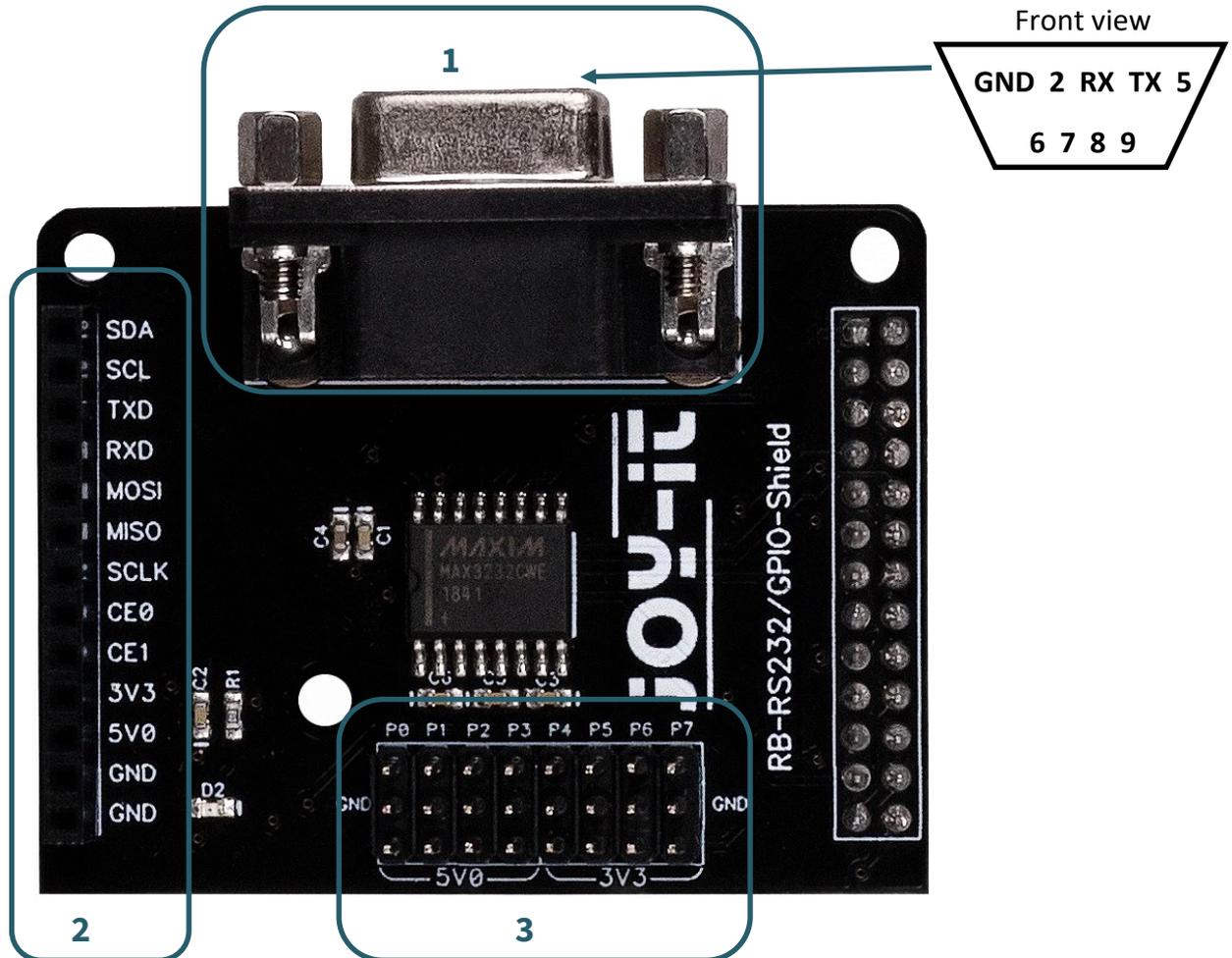
RS232 breakout kit for Raspberry Pi

## 1. GENERAL INFORMATION

Dear customer,  
thank you very much for choosing our product.  
In the 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. CONNECTIONS OF THE RS232 BREAKOUT BOARD



1. These connections have been routed separately to the outside to ensure that the now concealed connections on your Raspberry Pi can still be used.
2. This connection are used to send and receive the RS232 signals.
3. These connections have been routed separately to the outside to ensure that the now concealed connections of your Raspberry Pi can still be used.

**Please refer to the following table.**

P0	P1	P2	P3	P4	P5	P6	P7
GPIO17	GPIO18	GPIO27	GPIO22	GPIO23	GPIO24	GPIO25	GPIO4
GND	GND						
5V	5V	5V	5V	3V3	3V3	3V3	3V3

### 3. CODE EXAMPLE



This guide was written under Raspberry Pi OS Bookworm for the Raspberry Pi 4 and 5. It has not been checked with newer operating systems or hardware.

#### 3.1 Installing the required libraries

Firstly, you must activate the serial interface on your Raspberry Pi. To open the configuration, enter the following command:

```
sudo raspi-config
```

Select **3 Interface Options** → **I5 Serial Port**

```
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>
```

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

<Select>                                <Back>
```

You will be asked the question **Would you like a login shell to be accessible over serial?** Answer this with **No**.

Next you will be asked **Would you like the serial port hardware to be enabled?** Answer this with **Yes**.

You will then be asked whether you want to restart your Raspberry Pi. You should answer this with **Yes**.

```
Would you like a login shell to be accessible over serial?

<Yes>                                <No>
```

```
Would you like the serial port hardware to be enabled?

<Yes>                                <No>
```

Next, you need to download the required additional libraries by executing the following commands.

```
sudo apt install python3-serial
```

Once you have downloaded the libraries, you can now try out the two code examples below or download them [here](#).

Alternatively, you can download and unzip the example using the following commands:

```
wget https://joy-it.net/files/files/Produkte/RB-RS232/RB-RS232-Beispielcodes.zip
```

```
unzip RB-RS232-Beispielcodes.zip
```

Please note that depending on whether you are using a Raspberry Pi5 or an older model, you will need to adapt the port in the code accordingly. To do this, you can refer to the comments in the code example.

### 3.3 Code example transmitter

```
import serial

# Use this port only when using Raspberry Pi 4 or older
#port = serial.Serial("/dev/ttyS0", baudrate=9600, timeout=3.0)
# Use this port only when using Raspberry Pi 5
port = serial.Serial("/dev/tty0", baudrate=9600, timeout=3.0)

print("Starting test...")

while True:
    port.write("\r\n RS232-Test".encode('utf-8'))
    #rcv = port.read(10)
    #port.write(("r\nYou sent:" + repr(rcv)).encode('utf-8'))
```

### 3.4 Code example receiver

```
import serial

# Use this port only when using Raspberry Pi 4 or older
#port = serial.Serial("/dev/ttyS0", baudrate=9600, timeout=3.0)
# Use this port only when using Raspberry Pi 5
port = serial.Serial("/dev/tty0", baudrate=9600, timeout=3.0)

while True:
    rcv = port.readline()
    print(rcv)
```

## 4. ADDITIONAL INFORMATION

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



### 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 fulfills 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](mailto: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.

## 5. 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](mailto:service@joy-it.net)

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

Telephone: +49 (0)2845 9360-50 (Mon - Thur: 09:00 - 17:00 o'clock CET,  
Fri: 09:00 - 14:30 o'clock CET)

For further information please visit our website:

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