

SILA BOX

Technical Description



i-Gripper



SiLA BOX

Basic Converter

- Pi Zero w. Case
- USB Power cable
- Micro USB to USB-A



Media Kit for Microdrop

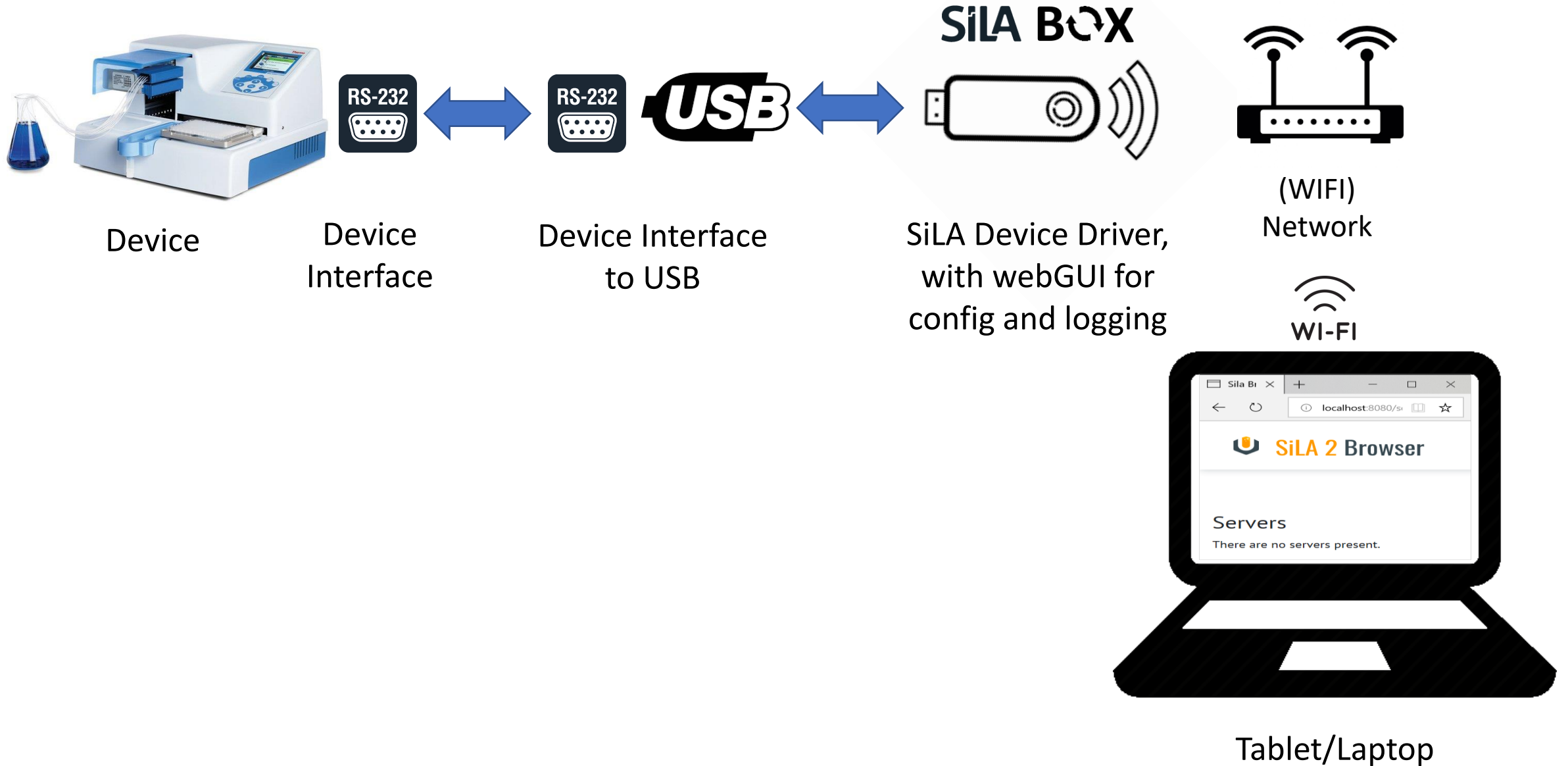
- USB to Serial converter
- Null modem adaptor
- DB9toDB25 adaptor

- Alpha version as giveaway / appetizer for early adopters at SLAS
- Current functionality just for Multidrop, other java SiLA drivers can be installed on the SiLA BOX via a web interface
- Connection only over WLAN
- Easy initial configuration via Wi-Fi Hotspot
- Control of device via Unitelabs SiLA Browser

How-to install from scratch

1. Purchase all components.
2. Download the image from http://zwergebu.de:90/images/sila_node_latest.img.zip
3. Write the image to the SD Card. Windows use e.g. balenaEtcher
<https://www.balena.io/etcher/>
4. Assemble all components and power up (first boot opens up hotspot if USB2serial is connected or not)

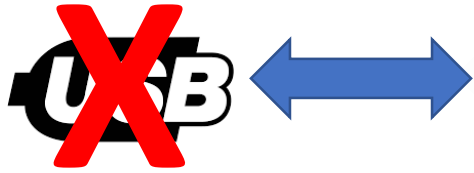
Technical Concept



Bootup to Hotspot-mode

After initial config, a Hotspot is opened if a USB converter is NOT attached

-> Fallback status to prevent lock-out



Device Interface To USB



SILA BOX

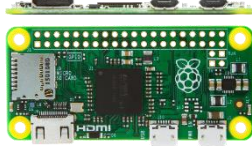






Hotspot silabox_ with webGUI for (Wi-Fi-) config, driver install and logging



webGUI over Tablet/Laptop/Handy

Contents

Raspberry PI Zero WH	
SD Card 32GB (min 4GB)	
Housing	
Power supply USB Cable, Micro-USB to USB-A	
USB to Serial, DB9toDB25 and nullmodem adapter based on FTDI Chip	

Howto – Integrated in network

Important: Disable IPv6 at your PC / the control device

1. Power on SiLA BOX
2. After 1 min the SiLA BOX opens up a public Wi-Fi Hotspot beginning with silabox_
3. Connect your device to the silabox_ hotspot, password: silamaster
4. Open a Browser and navigate to <http://192.168.10.1>
5. Download Unitelabs SiLA Browser from the SiLA BOX website to your PC
6. Configure the SILABOX to your WLAN (SSID and password)
7. Power-Cycle SiLA BOX
8. Connect to your local Wi-Fi network and AFTER this start Unitlelabs Browser on your PC
9. Control your device via Unitelabs Browser: <http://localhost:8080>

Standalone

Important: Disable IPv6 at your PC / the control device

1. Power on SiLA BOX **WITHOUT** USB to serial converter plugged in
2. SiLA BOX opens up a hotspot starting with **silabox_**
3. Connect to the **silabox_** hotspot with the password **silamaster**
4. Direct your browser to <http://192.168.10.1> to download Unitelabs SiLA Browser (exe or java version)
5. Select 'Enable Hotspot'. Click 'save' and power off the SiLA Box
6. Plug-in all components, wait for ~60s
7. Connect again to the **silamaster_** hotspot. **AFTER** the connection is established, start `silabrowser.exe` or run `java -jar silabrowser.jar`
8. Direct your browser to <http://127.0.0.1:8080> and control your device

At any time you can bring the SiLA BOX to the Hotspot mode by unplugging the USB to serial adaptor. The SiLA BOX will default to Hotspot mode, allowing to change Wi-Fi configuration

Web GUI

SiLA - Box



SiLA

Node

multidrop.jar

Param

-n wlan0

Enable SiLA Browser at boot - Port: or **download** it and start it with "java -jar sila_browser.jar".

Network

Enable HotSpot

SSID

PSK

Save

Node Upload

Filename: Keine ausgewählt

Note: Only .jar format is allowed.

System

Update

Super short manual how-to

Standalone

Microdrop control without integration in local network

Important: Disable IPv6 at your PC / the control device

1. Power on SiLA BOX **WITHOUT** USB to serial converter plugged
2. SiLA BOX opens up a hotspot starting with **silabox_**
3. Connect to the **silabox_** hotspot with the password **silamaster**
4. Go to <http://192.168.10.1> and download Unitelabs SiLA Browser
5. Select 'Enable Hotspot', click 'save' and power off the SiLA BOX
6. Plug-in all components, wait for ~60s
7. Connect again to the **silabox_** hotspot. **AFTER** the connection is established, start `sila_browser.exe` **OR** run `java -jar sila_browser.jar`
8. Go to <http://127.0.0.1:8080> and control your device

Problems? Unplug USB to serial will default device to Hotspot mode or look at <https://sila-standard.com/dipitems/silabox/>

Developer? Download Java source from <https://gitlab.com/SiLA> compile, and install new SiLA drivers over the webGUI

Integrated

Microdrop control integrated in your local network

Important: Disable IPv6 at your PC / the control device

1. Follow the steps of Standalone mode on the back until 3. Uncheck 'Enable Hotspot' & configure Wi-Fi to your local network
2. Go to <http://192.168.10.1> and download Unitelabs SiLA Browser
3. Click 'save' and power off the SiLA Box
4. Plug-in all components, wait for ~60s
7. Connect to your local network. **AFTER** the connection is established, start `sila_browser.exe` **OR** run `java -jar sila_browser.jar`
8. Go to <http://127.0.0.1:8080> and control your device

Problems? Unplug USB to serial will default device to Hotspot mode or look at <https://sila-standard.com/dipitems/silabox/>

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