Setup

Remote Access

You are not going to connect a keyboard and monitor to your Raspberry PI.You are going to use the Raspberry PI **Headless**

Raspberry Pi OS - SD Card

The Raspberry Pi needs an operating system to work.

Raspberry Pi OS is the official supported operating system.

Install Raspberry Pi OS using Raspberry Pi Imager

Raspberry Pi Imager is the quick and easy way to install Raspberry Pi OS and other operating systems to a microSD card, ready to use with the Raspberry Pi.

Download and install Raspberry Pi Imager to a computer with an SD card reader. Put the SD card you'll use with your Raspberry Pi into the reader and run Raspberry Pi Imager.

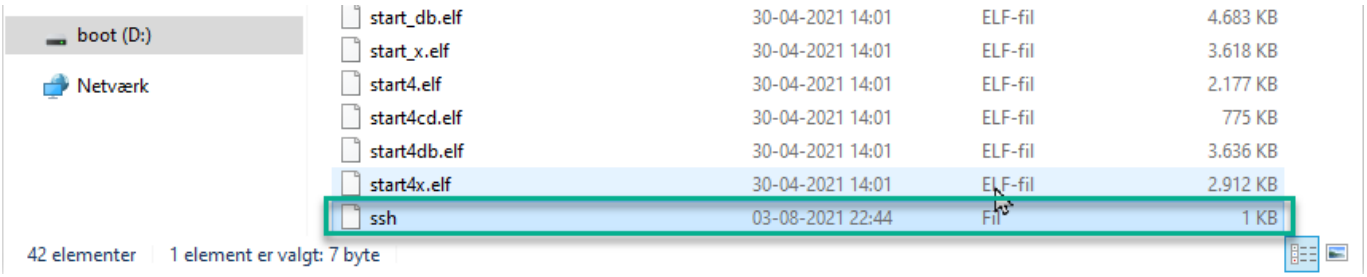
www.raspberrypi.org/software

Configure remote SSH access

In the root directory of the microSD card (normally labelled boot) create an empty file called **ssh**.

When the Pi boots, it looks for the **ssh** file. If it is found, **SSH is enabled** and the file is deleted.

The content of the file does not matter - *it can contain text, or nothing at all*



SSH Access

Standard username and password:

- *pi*
- *raspberry*

Remember to change that!

You can use a terminal og a Windows program like PuTTY (www.putty.org)

Wi-Fi

In the root directory of the microSD card (*normally labelled boot*) create an empty file called **wpa_supplicant.conf**

The content of the file:

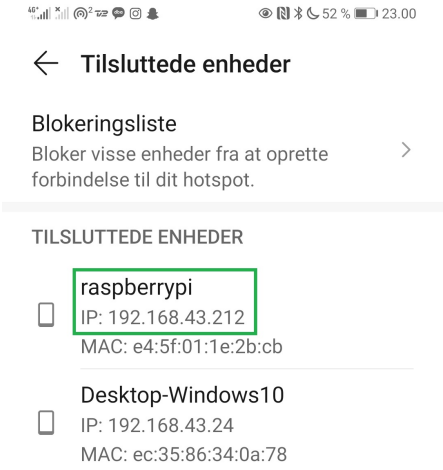
```
country=DK
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1

network={
    ssid="your_wifi_name"
    psk="your_wifi_password"
}
```

Mobile HotSpot

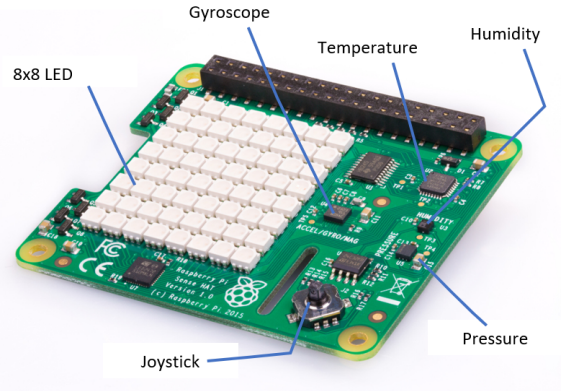
Setup your phone to be a WiFi hotspot. Connect the Raspberry Pi and your computer to that hotspot.

You can now use SSH to connect to the Raspberry Pi

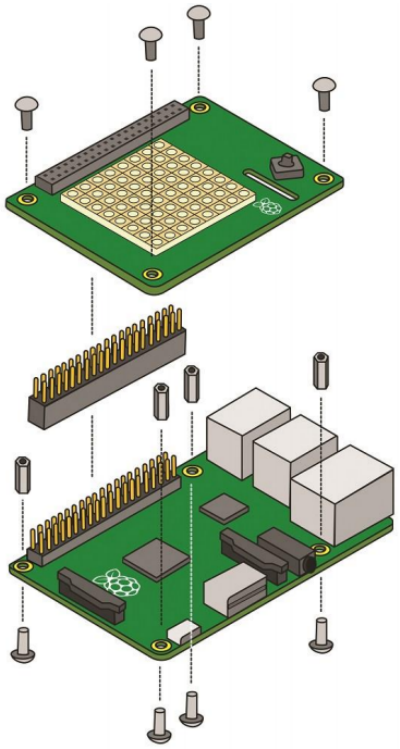


Sense HAT

Sense HAT layout



Sense HAT put together



Sense Hat - error

If the Sense Hat return an error like: *OSError: Cannot detect RPi-Sense FB device*

Run this command in a terminal window:

- *sudo nano /boot/config.txt*

Scroll to the bottom of the file and add this line;

- *dtoverlay=rpi-sense*

Save the file and reboot the Raspberry Pi

Python Demo

Use this Python demo script.

Create a Python file:

```
from sense_hat import SenseHat
sense = SenseHat()
sense.show_message("Hello world")
```

Run it

VNC

Sometimes it is not convenient to work directly on the Raspberry Pi. Maybe you would like to work on it from another device by remote control.

VNC is a graphical desktop sharing system that allows you to remotely control the desktop interface of one computer (running VNC Server) from another computer or mobile device (running VNC Viewer).

VNC Viewer transmits the keyboard and either mouse or touch events to VNC Server, and receives updates to the screen in return.

See more at VNC

Documentation

Use www.raspberrypi.org as your primary source.