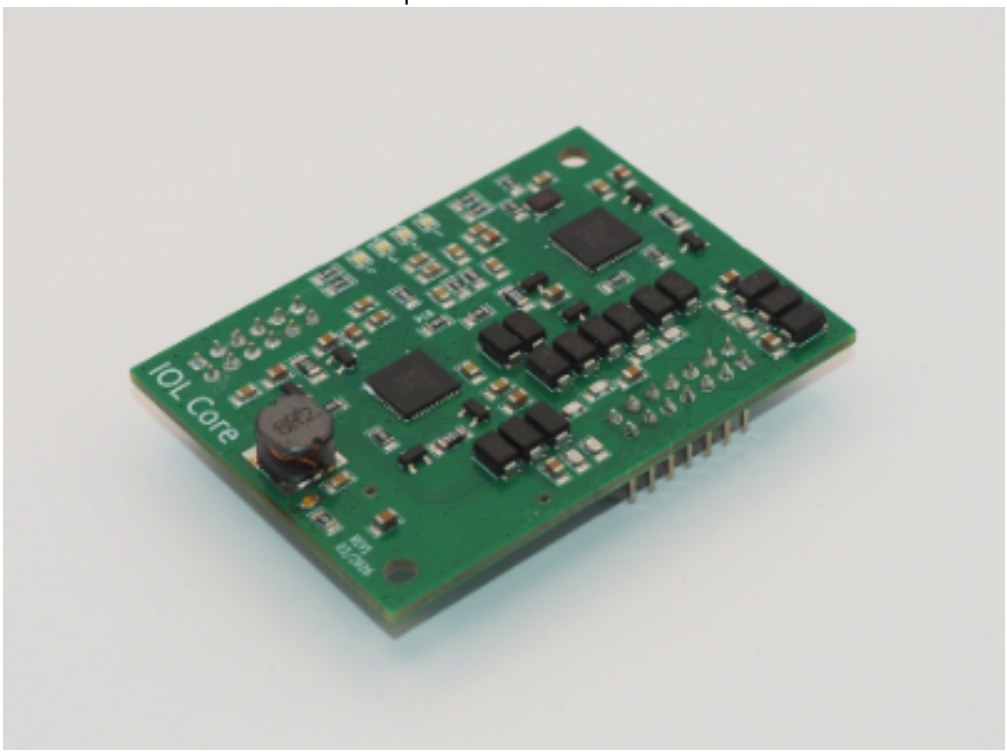
1.3 Setting up the IOL Connect Manager

Hardware manual

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1.3 Setting up the IOL Connect Manager

Install the software on the target system

The IOL Connect Manager is delivered comes as a tar archive. First, you need to unpack the software package on the target system.

- Transfer the tar file provided (contains the application, the folder structure and any additional files required) to the Raspberry Pi using scp
- Unpack:

  ```
  tar xfvz iol-connect-manager_x.y.z.tgz
  ```

  where x,y,z stand for the minor, major and build version

- Set up the IOL master application (iol-master-appl) as described in the github: https://github.com/Pinetek-Networks/iol-hat (SPI access, GPIO access)

Software dependencies (iol-master-appl)

The iol-connect-manager depends on the following libraries:

- linux-vdso.so.1
- libstdc++.so.6
- libgcc_s.so.1
- libc.so.6
- /lib/ld-linux-aarch64.so.1

Raspberry Pi Users

If a new user is created, it must be assigned to the user groups for SPI and GPIO access in order to be able to execute the iol-master-appl:

```
sudo usermod -aG gpio newuser
sudo usermod -aG spi newuser
```

Installing Node-RED on Raspberry Pi

If you want to use Node-RED in combination with IO-Link, you need to install Node-RED manually as described here: https://nodered.org/docs/getting-started/raspberrypi
Node-RED can either be installed as a service or called via terminal:

```
  node-red-pi –max-old-space-size=256
```

Node-RED can be accessed via port [Raspberry-Pi IP]:1880. Node-RED can also be installed as a service.

To use the SQLite functions, the SQLite nodes need to be installed on the Raspberry Pi over the Pallette Manager: flows.nodered.org/node/node-red-node-sqlite.

The database name for the SQLite database is /home/rpi/sqlite/database.db

Executing the software

To run the iol-hat-appl, the IO-Link master application (the communication stack) iol-master-app must first be started. The master application is comes with the package. Please note that for high demand application (e.g., COM3 sensors), the master application must run on its own core as described in the instructions:2.2 Arguments and Timing (IOL HAT Software manual)

The master application can be started with the following command (in this example running in sudo mode on core 4):

```
sudo ./iol-master-appl -r 3
```

The IOL Connect Manager can then be started (e.g. in another terminal). This is usually done in user space (without sudo).

```
./iol-connect manager
```

The IOL Connect Manager web interface can be reached at http://[Raspberry-Pi-IP]:18080



Please note that ***https*** (SSL) access to the webpage is usually not possible due to the operation of the Raspberry in private networks.