

SrsRAN Cellphone Network Radio

From user's Wiki!

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Installation

Dependencies

- Ubuntu 18.04.5 LTS
- Photos:

```
sudo add-apt-repository -y ppa:pothosware/framework
sudo add-apt-repository -y ppa:pothosware/support
sudo apt-get update
sudo apt-get install pothos-all python3-pothos pothos-python-dev -y
```

- SoapySDR - part 1

```
sudo apt-get install soapyhdr-tools python-soapyhdr python-numpy python3-soapyhdr python3-numpy soapyhdr-module-remote soapyhdr-server -y
```

- LimeSDR Drivers:

```
sudo add-apt-repository -y ppa:myriadrf/drivers
sudo apt-get update
sudo apt-get install soapyhdr-tools python-soapyhdr python-numpy python3-soapyhdr python3-numpy soapyhdr-module-remote soapyhdr-server soapyhdr-module-all -y
```

- SoapySDR - part 2

```
sudo apt-get install soapyhdr soapyhdr-module-lms7 -y
```

Testing Drivers

- The following command will end without errors if the driver was installed properly:

```
SoapySDRUtil --probe
```

Installation from source code (need in case of unsupported SDR like LimeSDR Mini)

- Dependencies:

```
sudo apt-get install libsoapyhdr-dev cmake libfftw3-dev libmbedtls-dev libboost-program-options-dev libconfig++-dev libsctp-dev git build-essential -y
```

- Source code downloading and compiling:

```
git clone https://github.com/srsLTE/srsLTE.git
cd srsLTE
mkdir build
cd build
cmake ../
make
sudo make install
sudo ldconfig
sudo srsran_install_configs.sh user
```

Installation from binaries (if the SDR is supported)

```
sudo add-apt-repository ppa:softwareairadiosystems/srsran
sudo apt-get update
sudo apt-get install srslte -y
sudo apt-get install srslte-dev
```

- **Note:** apparently, the packages was renamed, the command indicated in the official documentation:

```
sudo apt-get install srsran -y
```

is **wrong**. The same error appear in some other steps of official documentation.

Configuration

LimeSDR Mini

- **Note:** they are changing the application name, so the configuration directory wasn't `~/config/srslte/` as expected, but `~/config/srsran/`

In the file `~/config/srsran/enb.conf` change the `[rf]` section in this way:

```
[rf]
dl_earfcn = 3050
tx_gain = 56
rx_gain = 38
device_name = soapy
device_args = rxant=LNAH,txant=BAND2
time_adv_nsamples = 70
```

Testing

- start the following command in two different terminals:

```
sudo srsepc
sudo srsenb
```

Author

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