

# LTE in your Linux based system



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QMI **LTE** libmbim  
data-rate kernel  
IoT **qmi\_wwan** MBIM latency  
ModemManager **cdc-mbim**  
AT **Mobile Broadband** M2M  
3GPP **USB** user-space  
libqmi

# MBIM & QMI



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- **Control:**
  - /dev/cdc-wdm character device
  - Custom binary protocol
- **Network:**
  - wwan net interface
  - DHCP or static IP setup

# MBIM & QMI



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- **MBIM (Mobile Broadband Interface Model)**

- USB Implementors Forum
- Vendors: Sierra Wireless, Ericsson, Huawei...
- Linux  $\geq$  3.8, `cdc_mbim`

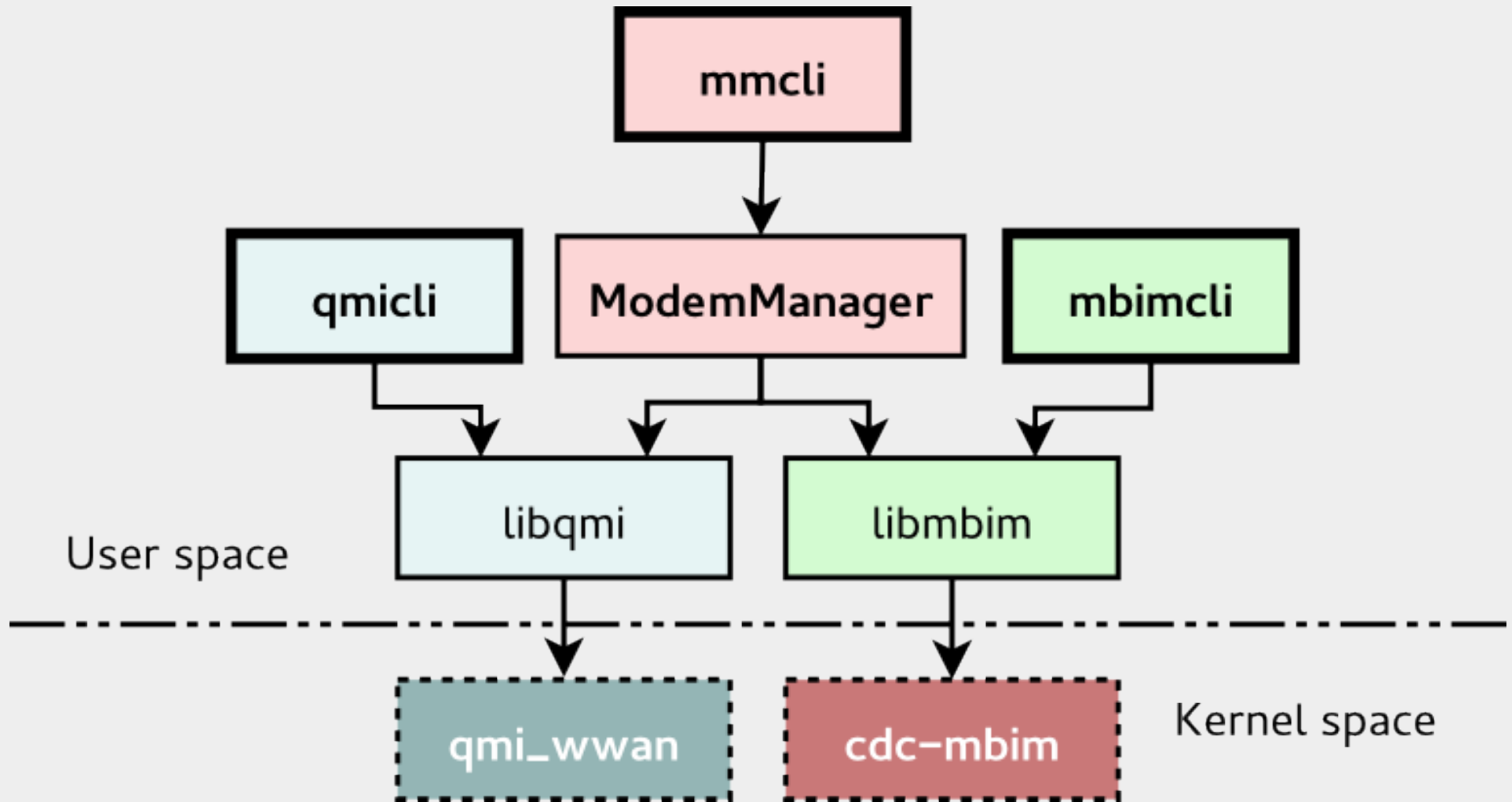
- **QMI (Qualcomm MSM Interface)**

- Qualcomm
- Vendors: Sierra Wireless, ZTE, Pantech, Novatel...
- Linux  $\geq$  3.4, `qmi_wwan`

# MBIM & QMI



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# mbimcli



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- PIN unlock

```
# mbimcli -d /dev/cdc-wdm0 --enter-pin=1234
```

- Connect

```
# mbimcli -d /dev/cdc-wdm0 --connect="your.apn"
```

- Disconnect

```
# mbimcli -d /dev/cdc-wdm0 --disconnect
```

# qmicli



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- PIN unlock

```
# qmicli -d /dev/cdc-wdm0 \  
    --dms-uim-verify-pin="PIN,1234"
```

- Connect

```
# qmicli -d /dev/cdc-wdm0 \  
    --wds-start-network=="your.apn" \  
    --client-no-release-cid
```

- Disconnect

```
# qmicli -d /dev/cdc-wdm0 \  
    --wds-stop-network=12345678 \  
    --client-id=15
```

# mmcli (through DBus)



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- PIN unlock

```
# mmcli -i 0 --pin=1234
```

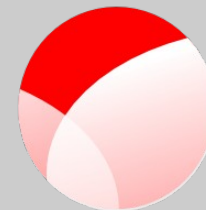
- Connect

```
# mmcli -m 0 --simple-connect="apn=your.apn"
```

- Disconnect

```
# mmcli -m 0 --simple-disconnect
```

# Thanks!



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