

# 6.4 GSM

WCC Lite comes with an optional GSM module.  
There are a few hardware configurations available:

- Without a GSM modem.
- With single SIM modem (HW version 1.0 - 1.2) - 2G/3G (GPRS, EDGE / UMTS, HSDPA, HSUPA) version - 5.76Mb/s upload, 7.2Mb/s download. UMTS/HSPA bands 900, 2100. GSM bands 900, 1800. Modem chip - Ublox Sara-U270.
- With single SIM modem (HW version 1.0 - 1.2) - 2G/4G (GPRS, EDGE / LTE) Cat 1 version - 10.3Mb/s upload, 5.2Mb/s download. LTE bands 3, 7, 20. GSM bands 900, 1800. Modem chip - Ublox Lara-R211.
- With dual SIM modem (HW version 1.0 - 1.2) - 2G/3G (GPRS, EDGE / UMTS, HSDPA, HSUPA) version - 5.76Mb/s upload, 7.2Mb/s download. UMTS/HSPA bands 900, 2100. GSM bands 900, 1800. Modem chip - Ublox Sara-U270.
- With dual SIM modem (HW version 1.0 - 1.2) - 2G/4G (GPRS, EDGE / LTE) Cat 1 version - 10.3Mb/s upload, 5.2Mb/s download. LTE bands 3, 7, 20. GSM bands 900, 1800. Modem chip - Ublox Lara-R211.
- With dual SIM modem (HW version 1.3 - 1.4) - 2G/3G/4G (GPRS, EDGE / UMTS, HSDPA, HSUPA / LTE) Cat 4 version - 50Mb/s (max) upload, 150Mb/s (max) download. LTE bands 1, 3, 5, 7, 8, 20, 38, 40, 41. GSM bands 3, 8. UMTS bands 1, 5, 8. Modem chip - Quectel EC25-E.

They are based on a mini PCI-e standard connector and are compatible with any other device. Check the label on the package for current modifications.



Figure 12: GSM antenna connector

Connect an antenna to the SMA connector labelled "ANT1". Select a good antenna placement spot considering the operation environment and network coverage of your mobile provider in the area. To enable MIMO functionality for 4G (LTE) modems a second antenna should be connected to the SMA connector labelled "ANT2".

- 4G (LTE) Cat 1 version modem both antennas are used for LTE communication. In such cases, an internal WIFI antenna is used. The network can be limited in distance and speed, especially in metal-based panels.

Make sure the signal level is over -80dBm to have a stable connection to the network.