

## Descriptive Information

### Technical Description

The RF platform of GEN11 supports highly integrated LTE/UMTS/GSM-transceiver, with all necessary features to enable multi mode, multi band car telematics applications. It incorporates a fully integrated dual mode receiver, multi band TX outputs, TCVCXO control, a measurement interface, Qualcomm(Transceiver / Modem) compliant high speed data and control interface, a multi mode timer unit and all necessary front end signals for the complete RF Engine control. Overall the GEN11 directly supports RF engines with up to GSM bands, WCDMA bands and LTE bands.

#### 1. RF Transceiver

##### Multimode operation

- 3GPP2 CDMA 1X, 1X Advanced, and 1xEV-DO0/-DOA/-DOB
- 3GPP GSM, GPRS, and EDGE (WTR3925/WTR3905 only)
  - 3GPP WCDMA Rel 99, HSDPA, HSUPA, HSPA+, DC-HSPA+, and 3C-HSPA+
  - 3GPP LTE FDD and TDD, with carrier aggregation (WTR3925 only)
  - TD-SCDMA
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##### LTE carrier aggregation

- Downlink inter-band (20 MHz and 20 MHz)
- Downlink intra-band
  - Non-contiguous 20 MHz + 20 MHz
  - Contiguous, 40 MHz for certain bands
- Uplink intra-band (contiguous, 40 MHz for certain bands)
- Uplink inter-band support with added RFIC (WTR4905)
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#### 2. Antenna requirement

- An antenna may be connected to FAKRA connector within following condition.

- This product has been tested with antenna and cable configuration listed below. Host manufacturer shall use antenna and cable that has gain less or equal to the configuration.
- Antenna gain calculated with cable loss and gain shall not be greater than final antenna gain listed below.

Test Item	Frequency (MHz)	Antenna Gain (dB i)
GSM 850	836.6	-6.15
GSM 1900	1 850.2	-7.09
WCDMA 2	1 852.4	-7.09
WCDMA 5	826.4	-6.15
LTE 2	1 850.7	-7.09
LTE 4	1 710.7	-8.05
LTE 5	824.7	-6.15

**FCC Part 15.21 statement**

Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

**FCC Part 15.19 statement**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**RF Exposure (MPE)**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum 20 cm between the radiator and your body. This transmitter must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the FCC