



Excellence in Compliance Testing

Certification Exhibit

FCC ID: R7PER6R1S4

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 15-0421

Manufacturer: Landis+Gyr Technology, Inc.
Model: 26-7500

RF Exposure

General Information:

Applicant: Landis+Gyr Technology, Inc.
 Device Category: Mobile
 Environment: General Population/Uncontrolled Exposure

The 26-7500 is collocated and transmits simultaneously with the Sierra Wireless SL8080 (FCC ID: N7NSL8080) radio.

Technical Information:

Table 1: Technical Information

| | <i>2.4GHz Zigbee Radio</i> | <i>Sierra Wireless Cellular Radio</i> |
|------------------------------------|----------------------------|--|
| Frequency Band(s) (MHz) | 2405-2475 | 824.2 – 848.8 MHz 826.4 – 846.6 MHz 1850.2 – 1909.8 MHz 1852.4 – 1907.6 MHz |
| Antenna Type(s) | IFA | 824 – 849MHz: Custom 1850 – 1910 MHz: Custom |
| Antenna Gain (dBi) | -3.07 | 824 – 849MHz: -3.16dBi 1850 – 1910 MHz: -2.41dBi |
| Conducted Power (dBm) | 21.59 | 824.2 – 848.8MHz: 32.41 dBm 1850.2 – 1909.8 MHz: 29.19 dBm |
| Conducted Power (mW) | 144.21 | 824.2 – 848.8MHz: 1741.81mW 1850.2 – 1909.8 MHz: 829.85mW |
| Maximum Peak EIRP (mW) | 71.12 | 824.2 – 848.8MHz: 841.40mW 1850.2 – 1909.8 MHz: 476.43mW |
| Maximum Peak ERP (mW) | 43.35 | 824.2 – 848.8MHz: 512.86mW 1850.2 – 1909.8 MHz: 290.40mW |

* Power for Sierra Wireless SL8080 radio is power as listed on the FCC grant and measured in the original certification filing. For the purpose of this application, the highest power for each frequency band was utilized.

MPE Calculation:

The Power Density (mW/cm²) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Table 2: MPE Calculation (Including Collocated Devices)

| Transmit Frequency (MHz) | Radio Power (dBm) | Power Density Limit (mW/Cm2) | Radio Power (mW) | Antenna Gain (dBi) | Antenna Gain (mW eq.) | Distance (cm) | Power Density (mW/cm ²) | Radio |
|--------------------------|-------------------|------------------------------|------------------|--------------------|-----------------------|---------------|-------------------------------------|-------|
| 824 | 32.41 | 0.55 | 1741.81 | -3.16 | 0.483 | 20 | 0.167 | A |
| 1950 | 29.19 | 1.00 | 829.85 | -2.41 | 0.574 | 20 | 0.095 | B |
| 2405 | 21.59 | 1.00 | 144.21 | -3.07 | 0.493 | 20 | 0.014 | C |

Summation of MPE ratios – Simultaneous Transmissions

This device contains multiple transmitters which can operate simultaneously; therefore the maximum RF exposure is determined by the summation of MPE ratios. The limit is such that the summation of MPE ratios is ≤ 1.0.

Table 3: Summation of MPE Ratios

| | Scenario 1 | Scenario 2 |
|----------------------|------------|------------|
| Radio A | x | |
| Radio B | | x |
| Radio C | x | x |
| Radio A MPE Ratio | 0.305 | |
| Radio B MPE Ratio | | 0.095 |
| Radio C MPE Ratio | 0.014 | 0.014 |
| MPE Ratio Summation: | 0.319 | 0.109 |