



Excellence in Compliance Testing

Certification Exhibit

**FCC ID: R7PEC6R1S2
IC: 5294A-EC6R1S2**

**FCC Rule Part: 15.247
IC Radio Standards Specification: RSS-210**

ACS Project Number: 12-0296

**Manufacturer: Landis+Gyr Technology, Inc.
Model: Gridstream RF Enhanced A3**

RF Exposure

General Information:

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

Technical Information 900MHz:

Antenna Type: PCB Inverted F (External)
 Antenna Gain: +1dBi
 Maximum Transmitter Conducted Power: 26.68 dBm, 465.586 mW
 Maximum System EIRP: 27.68 dBm, 586.138 mW
 Exposure Conditions: Greater than 20 centimeters

Technical Information 2400MHz ZigBee:

Antenna Type: Printed Inverted F
 Antenna Gain: +2dBi
 Maximum Transmitter Conducted Power: 19.58 dBm, 90.7821 mW
 Maximum System EIRP: 21.58 dBm, 143.88 mW
 Exposure Conditions: Greater than 20 centimeters

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)

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
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)
902.2	26.68	0.60	465.59	1	1.259	20	0.117
2405	19.58	1.00	90.78	2	1.585	20	0.029

Simultaneous Transmissions

This device contains multiple transmitters which can operate simultaneously and 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.

The summation of MPE ratios is as follows:

900 MHz and 2.4 GHz Zigbee Radio operating simultaneously:
 900 MHz MPE Ratio + 2.4 GHz Zigbee MPE Ratio
 (0.117 / 0.60) + (0.029 / 1.00) = (0.195) + (0.029) = 0.224
 0.224 < 1

Conclusion

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.