



Excellence in Compliance Testing

Certification Exhibit

FCC ID: R7PEG1R1S6

FCC Rule Part: 15.247

ACS Project Number(s): 15-0242

Manufacturer: Landis+Gyr Technology, Inc.
Model: G5 Integrated Focus AXe

RF Exposure

General Information:

Applicant: Landis+Gyr Technology, Inc.
 Device Category: Mobile
 Environment: General Population/Uncontrolled Exposure
Required Separation Distance: 20 cm

The 900 MHz frequency hopping spread spectrum radio is collocated and transmits simultaneously with the separate on-board Landis+Gyr direct sequence spread spectrum 2.4 GHz Zigbee radio.

Technical Information:

Table 1: Technical Information

	Landis+Gyr LAN radio 900 MHz	Landis+Gyr Zigbee radio 2.4 GHz
Antenna Type	PIFA	PIFA
Antenna Gain	6 dBi	6 dBi
Conducted Power	677.64 mW	68.23 mW
Maximum EIRP	2697.74 mW	271.64 mW

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
902.2	28.31	0.60	677.64	6	3.981	20	0.537	A
2405	18.34	1.00	68.23	6	3.981	20	0.054	B

Summation of MPE Ratios – Simultaneous Transmissions

This device contains multiple transmitters which can operate simultaneously; therefore MPE compliance 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
Radio A (900 MHz LAN)	x
Radio B (2.4 GHz Zigbee)	x
Radio A MPE Ratio	0.90
Radio B MPE Ratio	0.05
MPE Ratio Summation:	0.95