

FCC Part 15.247 Certification
Test Report

FCC ID: R7PER1R2S4

FCC Rule Part: 15.247

ACS Report Number: 07-0292-15C

Manufacturer: Cellnet Technology, Inc.
Model: L+G Focus AX w/ Zigbee Utilinet Endpoint

RF Exposure Information

General Information:

Applicant: Cellnet
 ACS Project: 07-0292
 FCC ID: R7PER1R2S4
 Device Category: Mobile
 Environment: General Population/Uncontrolled Exposure

Technical Information 900 MHz Utilinet:

Antenna Type: PCB Slot
 Antenna Gain: 3dBi
 Transmitter Conducted Power: 17.95dBm
 Maximum System EIRP: 20.95dBm
 Operating Configuration: Fixed mounted
 Exposure Conditions: Greater than 20 centimeters

Technical Information 2400 MHz Zigbee:

Antenna Type: PCB Inverted F
 Antenna Gain: 4dBi
 Transmitter Conducted Power: 3.55dBm
 Maximum System EIRP: 7.55dBm
 Operating Configuration: Fixed mounted
 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)
902.1	17.95	0.60	62.37	3	1.995	20	0.025
2405	3.55	1.00	2.26	4	2.512	20	0.001

Installation Guidelines

The installation manual should contain text similar to the following advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

RF Exposure

In accordance with FCC requirements of human exposure to radio frequency fields, the radiating element shall be installed such that a minimum separation distance of 20 centimeters will be maintained.

Conclusion

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