

## **Certification Exhibit**

**FCC ID: P2SCMIU-VZW-1**

**FCC Rule Part: 47 CFR Part 2.1091**

**ACS Project Number: 15-3049**

Manufacturer: Neptune Technology Group  
Model: CMIU

## **RF Exposure**

**General Information:**

Applicant: Neptune Technology Group  
 Device Category: Mobile  
 Environment: General Population/Uncontrolled Exposure

The CMIU is collocated and transmits simultaneously with the Telit LTE radio.

**Technical Information:****Table 1: Technical Information**

	<b>Telit Communications, S.p.A. LTE modem Model LE910-SVG FCC ID: R17LE910SV</b>	<b>Neptune Group Bluetooth LE Radio FCC ID: P2SCMIU-VZW-1</b>
<b>Frequency Bands (MHz)</b>	Band 13: 777 to 787 MHz Band 4: 1710 to 1755 MHz	2402 to 2480
<b>Antenna Type(s)</b>	Ethertronics 1003076 (Diversity) Ethertronics 1003079 (Main)	Loaded Monopole
<b>Antenna Gain (dBi)</b>	Band 13: 1.28 Band 4: 1.9	-1.5
<b>Conducted Power (dBm)</b>	25	0

**MPE Calculation:**

The Power Density (mW/cm<sup>2</sup>) is calculated as follows:

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

Where:

S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

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/cm <sup>2</sup> )	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Radio
779.5	25	0.52	316.23	1.28	1.343	20	0.084	A
1712.5	25	1.00	316.23	1.9	1.549	20	0.097	B
2402	0	1.00	1.00	-1.5	0.708	20	0.00	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 (Telit Band 13)	x	
Radio B (Telit Band 4)		x
Radio C (CMIU BTLE )	x	x
Radio A MPE Ratio	0.163	
Radio B MPE Ratio		0.0974
Radio C MPE Ratio	0.000	0.000
MPE Ratio Summation:	0.163	0.0974