

APPENDIX A: FCC PART 1.1307, 1.1310, 2.1091, 2.1093 RF EXPOSURE

Two identical antennas are used with the device (Nearson S467FL-L-RMM-915S). Both antennas will never transmit simultaneously.

The EUT also contains an Axonn LLC G-SENS STU satellite transceiver that is subject to Part 15 and Part 25 verification. US Tech performed this testing in August 2002 (see results for exposure below). Both Nearson antennas are located at the same distance from the satellite transceiver.

From FCC 1.1310 Table 1B, the maximum permissible RF exposure for an uncontrolled environment for a device operating in the frequency band 902 – 928 MHz is 0.60 mW/cm² (calculation based on 902 MHz). The actual power density for the EUT and single antenna option is calculated as shown below. As shown by the calculation and table below, the EUT meets this requirement.

$$S = (P \times G) / (4 \times \pi \times d^2)$$

where:

S = power density

P = transmitter conducted power in (W)

G = antenna numeric gain

d = distance to radiation center (m)

Antenna Manufacturer	Antenna Type	Antenna Model	Gain (dBi)	Numeric Gain	Power (W)	Separation Distance (m)	Power Density (mW/cm ²)	Power Density Ratio compared to limit
Nearson	half wave dipole	S467AH-915S	2.0	1.585	0.050	0.03	0.016	2.6%

Antenna Manufacturer	Antenna Type	Antenna Model	Gain (dBi)	Numeric Gain	Power (W)	Separation Distance (m)	Power Density (mW/cm ²)	Power Density Ratio compared to limit
Axonn LLC G-SENS STU	N/A	N/A	4	2.51	0.146	0.056	0.073	7.3%

Therefore for collocation, the total ratios/limits = 9.9%.