Exhibit 6.0 - Antennas

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6.1 Antenna Regulations – 47 CFR §15.203

Antenna Requirements

- Intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. **The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section.**

- The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. (does not apply to intentional radiators that must be professionally installed).

Compliance Method

The module has MMCX (nonstandard) style RF connectors that were specifically chosen for compliance with §15.203.

6.2 RF Safety Requirements – 47 CFR §1.1310

Radio-Frequency Radiation Exposure Limits

- The Maximum Permissible Exposure (MPE) limits are 1.0 mW/cm^2 as specified in §1.1310(b).

- These limits are generally based on recommended exposure guidelines published by the National Council on Radiation Protection and Measurements (NCRP)

Compliance Method

Compliance with RF safety requirements is being insured by specifying the minimum safe distance the antenna must be kept from the user for each antenna listed in the user's guide.

The minimum safe distance was calculated using the power density of $1mW/cm^2$ limit for maximum permissible exposure in an uncontrolled environment per FCC §1.1310(b).

The radio has a maximum peak output power of 250mW. By design, the maximum duty cycle for the transmitter is 50%.

6.2.1 Sample Calculation

For an Isotropic radiator the surface area of a sphere can be used to determine the area over which the transmitter energy is radiated.

- **Surface area of a sphere = 4 x pi x $(radius)^2$**

In the case where there is antenna gain, the worst-case energy density is increased by the antenna gain. The exposure level can be calculated as follows, accounting for the antenna gain:

$$\textbf{Distance} = \sqrt{\frac{(\text{OutputPower}) \times (\text{DutyCycle}) \times 10^{(\text{Gain}/10)}}{4 \times \text{pi} \times (\text{ExposureLimit})}}$$

(Note: Output Power is in mWatts)

For the 2 dBi Whip Antenna

MPE Distance = $[(250) \times (.5) \times 1.58 / (4 \times 3.14 \times 1)]^{1/2}$

MPE Distance = 4.0 cm

The safe distance to adhere, to comply with MPE limits, was calculated for each antenna. These distances are presented in the table in the next section.

6.3 Antenna Information

The certification application shall list all antennas, antenna gains, output power for each antenna, and total EIRP for each antenna and how each antenna complies with the RF Safety requirements. The RF safety requirements should take into account the use of each antenna/tx combination.

The EUT shall be tested with the antennas listed in the Operator's Manual. For antennas of the "same type", only the highest gain version need be tested.

Antenna Type	Antenna Tested (Y/N)	MFG.	Manufacturer Part Number	Connector Type	Gain (dBi)	Output Power (mW)	EIRP (Watts)	Safe Distance
½WL whip – articulating	YES	NCC	N24ARSMA1	Reverse polarity SMA	2	250	0.395	4.0cm
½ WL whip – articulating	NO	NCC	NOV2400SMA	Reverse thread SMA	2	250	0.395	4.0cm
½ WL whip – straight	NO	NCC	N2400SM8	Reverse polarity SMA	2	250	0.395	4.0cm
Collinear array	YES	Mobile Mark	OD9-2400	N	9	250	2.0	9.0 cm
Collinear array	NO	Maxrad	MFB-24008	N	8	250	1.6	8.0 cm
Collinear array	NO	Maxrad	MFB-24006	N	6	250	1 .0	6.5 cm
Collinear array – articulating	YES	NCC	N24HGASM1B	Reverse polarity SMA	5	250	0.8	6.0 cm
Collinear array – articulating	NO	NCC	NOV24HEARSMA2B	Reverse thread SMA	5	250	0.8	6.0 cm
Patch	YES	Maxrad	MP24013FSMA	Reverse thread SMA	13	250	5.0	15.0 cm
Patch	NO	Maxrad	MP24011FSMA	Reverse thread SMA	11	250	3.2	12.0 cm
Patch	NO	Maxrad	MP24008FSMA	Reverse thread SMA	8	250	1.6	8.0 cm
YAGI	YES	Astron	P-2415	N	15	250	8.0	18.0 cm

Note : WL = Wave Length