FCC re Power Density Calculations
and Evaluation of (MPE)

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The following are power density calculations and evaluation (MPE) for Com Dev AP:

FCC ID: JJA-90010000XX
Po: 24.5 Watts (24.5 E³ mW)
Antenna: .5λ dipole gain =1.64x   (2.15 dB)

*Therefore, EIRP = 24.5 x 1.64 = 40.18 Watts EIRP (40.18 E³ mW)

$$S = \frac{1.64 \times ERP}{4\pi R^2} = \frac{40.180\ E^3}{4\pi\ 640.0\ E^3} = 4.996E^{-3}\ \text{mW/cm}^2\ (.004996\ \text{mW/cm}^2)$$

R = 8.0 m (800 cm) (R² = 640.0 E³ cm)
S = Power Density = mW/cm²
Maximum Power Density (MPE) is 1 mW/cm².

Calculated Power Density at 800 cm (8m.) is only 0.004996 mW/cm², which is 23.014 dB below maximum MPE of 1 mW/cm².

*See: FCC OET Bulletin 65 edition 97- 01 page 20 equation (5).

Note:
R for 8 meters was chosen as the OST specifies a height above ground for a non-building antenna to < 10 meters. A person's height is ≈ 2 meters. (10-2 meters = 8 meters) See page 70 ¶ 1 of OET 65 for PCS antenna height above ground <10 meters.

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