FCC Part 15 Subpart C
Transmitter Certification

Direct Sequence Spread Spectrum Transmitter

Test Report

FCC ID: HSW-ZMN2400

FCC Rule Part: 15.247

ACS Report Number: 05-0454-15C

Manufacturer: Cirronet, Inc.
Model: ZMN2400

RF Exposure

General Information:

Applicant: Cirronet, Inc.
ACS Project: 05-0454
FCC ID: HSW-ZMN2400
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

Technical Information:

Antenna Type: Omni-directional, Patch, Corner Reflector
Antenna Gain: 9dBi (Omni), 12dBi (Patch), 14dBi (Corner Reflector)
Transmitter Conducted Power: 0.68dBm
Maximum System EIRP: 14.68dBm
Operating Configuration: Mobile (Module)
Exposure Conditions: Greater than 20 centimeters

MPE Calculation

The Power Density (mW/cm^2) 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)**
2440	0.68	1.00	1.17	14	25.119	20	0.006

Installation Guidelines
The installation manual contains the following text advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

"RF Exposure (Intentional Radiators Only)
In accordance with FCC requirements of human exposure to radiofrequency fields, the radiating element shall be installed such that a minimum separation distance of 20cm is maintained from the general population."

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