

FCC Part 24 Transmitter Certification

Test Report

FCC ID: DNY0A1MINIM1900

FCC Rule Part: CFR 47 Part 24E

ACS Report Number: 06-0115-24E

Manufacturer: EMS Technologies, Inc.
Model: EkoMini M1.9

RF Exposure

General Information:

Applicant: EMS Technologies, Inc.
 ACS Project: 06-0115
 FCC ID: DNY0A1MINIM1900
 Device Category: Fixed
 Exposure Conditions: Uncontrolled/General Population

Technical Information:**UPLINK:**

Antenna Type: Yagi
 Antenna Gain Maximum: 15.1dBi
 Max Transmitter Output Power: 22.81dBm
 Max System EIRP: 37.91dBm / 6.18W
 Operating Configuration: Fixed

DOWNLINK:

Antenna Type: Multiple
 Antenna Gain Maximum: 7.5dBi
 Max Transmitter Output Power: 26.69dBm
 Max System EIRP: 34.19dBm / 2.62W
 Operating Configuration: Fixed

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/cm^2)

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)

Calculations were performed at the frequencies with the highest output power as determined during testing.

Maximum Permissible Exposure (MPE) General Population/Uncontrolled Exposure								
Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/cm^2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)	Configuration
1880	22.81	1.00	190.99	15.1	32.359	23	0.930	Uplink
1960	26.69	1.00	466.66	7.5	5.623	20	0.522	Downlink

Installation Guidelines

End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

Conclusion

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