FCC Part 24E
Transmitter Certification

Test Report

FCC ID: DNY020MPBE

FCC Rule Part: CFR 47 Part 24 Subpart E

ACS Report Number: 07-0091-24E

Manufacturer: EMS Wireless
Equipment Type: PCS Bi-Directional Repeater
Tradename: MirrorCell® II
Model: 020MPBE

RF Exposure

General Information:

Applicant:	EMS Technologies, Inc.
ACS Project:	07-0091
FCC ID:	DNY020MPBE
Device Category:	Fixed
Exposure Conditions:	Uncontrolled/General Population

Technical Information:

UPLINK:

Antenna Type:	Yagi
Antenna Gain Maximum:	15.1dBi
Max Transmitter Output Power:	24.87dBm
Max System EIRP:	39.97dBm / 9.93W
Operating Configuration:	Fixed

DOWNLINK:

Antenna Type:	Panel
Antenna Gain Maximum:	7.5dBi
Max Transmitter Output Power:	43.56dBm
Max System EIRP:	51.06dBm / 127W
Operating Configuration:	Fixed

NOTE: Multiple antennas are available for both the uplink and downlink applications. Listed above are antennas with the highest gain.

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)

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/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)	Configuaration
1870.2	24.87	1.00	306.90	15.1	32.359	29	0.940	Uplink
1960	43.56	1.00	22698.65	7.5	5.623	101	0.996	Downlink

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