

RF Exposure Evaluation Declaration

Product Name: Shock-WavTM Outdoor Wi-Fi Signal Booster

Model Number: SWM-1000-O

FCC ID: W59SWM1000O

Applicant: Luxul Wireless

Address: 357 S 670 W
Suite 160
Lindon UT 84042 USA

Date of Declaration: 2 Dec 2009

The declaration results relate only to the samples calculated.

RF Exposure Evaluation

Limits

Per FCC 1.1310 Table 1B, the maximum permissible RF exposure for an uncontrolled environment is 1 mW/cm² for the frequencies used in this device. The worst-case power for the antenna at the center frequency of the band of operation is used for the calculation below. The power density at a 20 cm distance is shown for each of the antenna options. As shown, the calculated power density is below the FCC's limit for Class B exposure of 1mW/cm².

The actual power density for the EUT calculated as shown below.

$$Pd = (P_{out} * G) / (4 * \pi * r^2)$$

Where

Pd = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and the center of the radiator in cm

Frequency MHz	Antenna Type	Modulation Type	Antenna Max Linear Gain (dBi)	Numeric Gain	Power (mW)	Separation Distance (cm)	Power Density (mw/cm ²)
2437	Omni	11b	9	7.9	151.40	20	0.2393
2412	Omni	11g	9	7.9	407.40	20	0.6438
2437	Patch	11b	4	2.5	151.40	20	0.0757
2412	Patch	11g	4	2.5	407.40	20	0.2036
2437	Sector	11b	8	6.3	151.40	20	0.1900
2412	Sector	11g	8	6.3	407.40	20	0.5114
2437	Helical	11b	7	5.0	151.40	20	0.1510
2412	Helical	11g	7	5.0	407.40	20	0.4062

NOTICE:

Radiation Exposure Statement

This equipment shall only be installed and operated with the antenna types shown above and installed with a minimum of 20 cm of separation distance between the antenna and all persons during normal operation.