# RF Exposure Evaluation Declaration 

Product Name: Xen 802.11bgn Access Point
Model Numbers: XAP-1030, XAP-1031, XAP-1032
FCC ID: W59XAP103X

Applicant: Luxul Wireless<br>Address: 357 S 670 W<br>Suite 160<br>Lindon UT 84042 USA

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 $1 \mathrm{~mW} / \mathrm{cm}^{2}$ 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 $1 \mathrm{~mW} / \mathrm{cm}^{2}$.

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

$$
\operatorname{Pd}=\left(\text { Pout*}{ }^{*}\right) /\left(4 \star \mathrm{pi}^{\star} \mathrm{r}^{2}\right)
$$

Where
$\mathrm{Pd}=$ power density in $\mathrm{mW} / \mathrm{cm}^{2}$
Pout = output power to antenna in mW
$G=$ gain of antenna in linear scale
$\mathrm{Pi}=3.1416$
$R=$ distance between observation point and the center of the radiator in cm

| Frequency <br> $\mathbf{M H z}$ | Antenna <br> Type | Modulation <br> Type | Antenna <br> Max Linear Gain (dBi) | Numeric <br> Gain | Power <br> $\mathbf{( \mathbf { m W } )}$ | Separation <br> Distance $(\mathbf{c m})$ | Power Density <br> $\left(\mathbf{m w} / \mathbf{c m}^{\mathbf{2}}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2437 | Omni | 11 b | 5.0 | 3.2 | 916.22 | 20 | 0.5764 |
| 2437 | Omni | 11 gn | 5.0 | 3.2 | 959.40 | 20 | 0.6036 |
| 2437 | Omni | 11 n | 5.0 | 2.2 | 116.14 | 20 | 0.0731 |
| 2437 | Patch | 11 b | 4.0 | 2.5 | 916.22 | 20 | 0.4579 |
| 2437 | Patch | 11 gn | 4.0 | 2.5 | 959.40 | 20 | 0.4794 |
| 2437 | Patch | 11 n | 4.0 | 2.5 | 116.14 | 20 | 0.0580 |
| 2437 | Dual Patch | 11 b | 4.0 | 2.5 | 345.77 | 20 | 0.1728 |
| 2437 | Dual Patch | 11 gn | 4.0 | 2.5 | 461.16 | 20 | 0.2305 |
| 2437 | Dual Patch | 11 n | 4.0 | 2.5 | 43.05 | 20 | 0.0215 |

## 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.

