

October 21, 2008

#### ARUB25 AP-85FX

#### **Maximum Permissible Exposure**

FCC, Part 15 Subpart C §15.247(i)

Industry Canada RSS-Gen §5.5

# Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm<sup>2</sup>) = EIRP/( $4\pi d^2$ )

EIRP = P \* G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain =  $10 ^ (G (dBi)/10)$ 

The Aruba AP-85FX has two transmitters. The peak power in the table below is calculated by assuming a worst case scenario where the two transmitters are operating simultaneously in the same band. The Peak Power in mW is calculated by taking the maximum allowable conducted power in each band and multiplying by 2.

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0  $\rm mW/cm^2$ 

| Freq.<br>Band<br>(GHz) | Antenna<br>Gain<br>(dBi) | Numeric<br>Gain<br>(numeric) | Peak<br>Output<br>Power<br>(dBm) | Peak<br>Output<br>Power<br>(mW) | Calculated Safe Distance @ 1mW/cm <sup>2</sup> Limit(cm) | Minimum<br>Separation<br>Distance<br>(cm) |
|------------------------|--------------------------|------------------------------|----------------------------------|---------------------------------|----------------------------------------------------------|-------------------------------------------|
| 2.4(b)                 | 18                       | 63.10                        | +18.0                            | 126.2                           | 25.2                                                     | 25.2                                      |
| 2.4(g)                 | 18                       | 63.10                        | +18.0                            | 126.2                           | 25.2                                                     | 25.2                                      |
| 5.8                    | 16                       | 39.81                        | +20.0                            | 200.0                           | 25.2                                                     | 25.2                                      |

<sup>\*</sup>Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

### **Specification**

# **Maximum Permissible Exposure Limits**

**§15.247(i)** Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency levels in excess of the Commission's guidelines.

FCC §1.1310 Limit = 1mW / cm<sup>2</sup> from 1.310 Table 1

RSS-Gen §5.5 Before equipment certification is granted, the applicable requirements of RSS-102 shall be met.