ZHONE

Engineering Analysis MPE for Dual 802.11 Radio Access Point

FCC ID: PJZSZ1624

Zhone Technologies, Inc.
MODEL: SKYZHONE-1624

Skyzhone products will be professionally installed to insure the minimum separation distance from all persons potentially exposed to the unit. This guideline is included in the install manual shipped with every product.

Per OET-65, the 2.4 GHz and 4.9 GHz radios contained in this product falls in the range of frequencies between 1500 – 100,000 MHz. This requires a combined (from both radios) Power Density (S) of no more than 1.0 mW/cm^2.

Using the formula presented in OET-65,

$S = (P*G) / (4\pi R^2)$

The Skyzhone-1624 product uses two 5.3dBi antennae with a combined conducted worst-case power of 1400 mW for the 4.9 GHz radio. For the 2.4GHz radio two of three 5 dBi antennae are active at any one time. The 2.4 GHz radio has a worst-case, maximum, conducted Tx power of the combination or any two antennae is 364 mW. Since both radios may transmit simultaneously the combined power is computed. A 25 cm (9.84 inch) spacing is used per the product install guide.

$P * G = (1400 * 10^{0.53}) + (364 * 10^{0.5}) = 5895$ mW
R = 25 cm

$S = 0.751$ W/cm^2

This is below the 1.0 W/cm^2 limit.