Attachment 1: RF EXPOSURE INFORMATION

RADIO FREQUENCY EXPOSURE (HAZARD) INFORMATION

Testing was performed in accordance with the requirements of FCC Part 15.247(b)(5)

Spread spectrum transmitters operating in the 2400 - 2483.5 MHz and 5725 – 5850 MHz bands are required to be operated in a manner that ensures that the public is not exposed to RF energy levels in accordance with CFR 47, Section 1.1307(b)(1).

Transmitter # 1: The WLAN is a mobile device. The antennas are located on the top edge of LCD screen (2 antennas left and right) projected distance of greater than 20cm from user.

Transmitter # 2: The Bluetooth is a mobile device. The antenna is located on the top center of LCD screen projected distance of greater than 20cm from user.

The separation distance between the WLAN and BT antennas is less than 20cm. Therefore, they are co-located transmitters. Testing was performed with both WLAN and BT transmitters transmitting continuously.

SAR is not required as both transmitters are mobile devices and also the power for BT is below the low threshold.

The MPE calculation shown below is the aggregate of WLAN and BT power densities for mobile devices for a separation distance of greater than 20cm.

In accordance with Section 1.1310, the Maximum Permissible Exposure (MPE) limit for the General Population/Uncontrolled Exposure of 1.0 has been applied, i.e 1mW/cm^2.

Friis transmission formula: $Pd = (P*G) / (4*\pi*r^2)$

where: Pd = power density (mW/cm^2)
P = power input to the antenna (mW)
G = antenna gain (numeric)
r = distance to the center of radiation of the antenna (cm)

The result was extracted from section 5.0 of EMC Technologies Report No: M050422_Cert_WLL4070_11abg_DTS_BT (WLAN Module):
Maximum peak output power = 20.7 dBm = 117.5 mW

The result was extracted from section 5.0 of EMC Technologies Report No: M050422_Cert_BT_WLL4070_11abg (BT Transmitter):
Maximum peak output power = 8.1 dBm = 6.5 mW

Sum of WLAN and BT powers = 117.5mW + 6.5mW = 124 mW = 20.9 dBm

Antenna (Taiyo Yuden Monopole) gain (max) = -1.3 dBi = 0.741 numeric
Prediction distance = 20 cm
Prediction frequency = 2462 MHz
MPE limit for uncontrolled exposure at prediction frequency = 1 mW/cm^2

The power density calculated = 0.018 mW/cm^2

Results: Calculations show that the Radio devices with described antennas complied with Maximum Permissible Exposure (MPE) limit for the General Population/Uncontrolled Exposure