Compliance with 47 CFR 2.1091, 1.1310, 15.247(i), and 15.407(f)

The EUT is a 802.11 a/b/g radio card. The EUT will only be used with a separation distance of 20 centimeters or greater between the antenna and the body of the user or nearby persons and can therefore be considered a mobile transmitter per 47 CFR 2.1091(b). The antenna is permanently attached to the unit. The antenna has a gain of 2.54 dBi. The maximum peak conducted output power is 53.4 mW.

The maximum peak power is 96.4 mW (EIRP) for FCC ID:PGUWA11ABG09. It operates in the 2400 – 2483.5 MHz and 5725 – 5850 MHz bands as a 15.247 DTS radio. It also operates in the 5150 – 5250 MHz, 5250 – 5350 MHz, and 5470 – 5725 MHz bands as a 15.407 UNII radio.

The MPE estimates are as follows:

Table 1 in 47 CFR 1.1310 defines the maximum permissible exposure (MPE) for the general population as 1 mW/cm^2. The exposure level at a 20 cm distance from the EUT's transmitting antenna is calculated using the general equation:

$S = (PG)/4\pi R^2$
Where: S = power density (mW/cm^2)
P = power input to the antenna (mW)
G = numeric power gain relative to an isotropic radiator
R = distance to the center of the radiation of the antenna (20 cm = limit for MPE estimates)
PG = EIRP

Solving for S, the maximum power density 20 cm from the transmitting antenna is summarized in the following table:

MPE Estimate

FCC ID: PGUWA11ABG09

Antenna Type	Antenna Manufacturer	Antenna Part No.	Transmit Frequency (MHz)	Max Peak Conducted Output Power (mW)	Antenna Gain (dBi)	Minimum Antenna Cable Loss (dB)	Power Density @ 20 cm (mW/cm^2)	General Population Exposure Limit from 1.1310 (mW/cm^2)
PIFA	Ethertronics	GB04001	2462	53.4	2.54	0	0.019	1
			5150	30.62	2.54	0	0.011	1
			5825	40.18	2.54	0	0.014	1

The power density does not exceed 0.019 mW/cm^2 at 20 cm. Per 47 CFR 15.407(f), the fundamental emissions and unwanted emissions meet all applicable FCC requirements for RF exposure.