

FCC ID: AHL-ALMOND2014

IC: 10114A-ALMOND2014

Simultaneous Transmission Evaluation

According to 447489 D01, provision 7.2, Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0 .

The MPE ratio of each transmitter is ratio of field strength or power density to MPE limit at that frequency.

MPE ratio on 802.11b: $0.013866mW/cm^2 / 1mW/cm^2 = 0.013866$

MPE ratio on 802.11n20 (Main): 0.0052838mW/cm^2 / 1.0mW/cm^2 = 0.0052838

MPE ratio on 802.11n20 (Aux): 0.0052114mW/cm^2 / 1.0 mW/cm^2 = 0.0052114

MPE radio on Zigbee: 0.0012763mW/cm^2 / 1.0mW/cm^2 = 0.0012763

Scenario1: 802.11b #1+ Zigbee #2, where k is number of transmitter + antenna collocated within the host = 0.013866 + 0.0012763 = 0.015142

Scenario2: 802.11n20 #1+ 802.11n20#2+Zigbee, where k is number of transmitter + antenna collocated within the host =0.0052838 + 0.0052114 + 0.0012763 = 0.011772

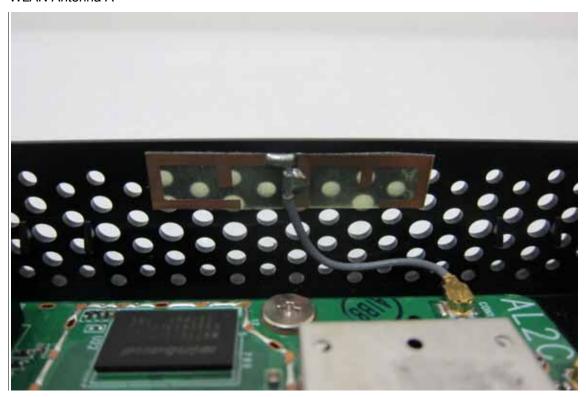
All three scenario are less than 1, and therefore the MPE with collocated (transmitter+antenna) is compliant with existing policy of RF exposure.



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Location of distribution of transmitter + antenna WLAN Antenna A



WLAN Antenna B





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Zigbee Antenna



	(-3.0, 7.5)↓	(-3.0, 7.5)₽	(-1.5, 7.5)₽	(-1.5, 7.5)↔	19.5, 7.5↩	(21 7.5 (23.5, 7.5) (25, 7.5)
	(-3.0, 5.0)₽	(-1.5, 5.0)↔	(-1.5, 5.0)√	(-1.5, 5.0)↔	(19.5, 5.0)₽	(21.0, 5+) (23.5, 5)+) (25, 5)+)
	(-3.0, 2.5) ₽	(-1.5, 2.5)↔	(1.5, 2.5)₽	(3.0, 2.5)↔		21.0, 2.5)-(23.5, 2.5)-25, 2.5-
	(-3.0, 0)↔	(-1.5, 0)√	(1.5, 0)₽	(3.0, 0)₽	(19.5, 0)₽	(21.0, 0)4 (23.5, 0)4(25, 0)4
	Ant 4⊷	Ant 34	Ant2⊷	Ant1₊	-	
(0,0)↔						