ARUB170-1 **Maximum Permissible Exposure**

FCC, Part 15 §1.1310
Industry Canada RSS-Gen §5.6

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm^2) = EIRP/(4πd^2)

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

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

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

The calculations in the table below use highest gain antennas for the client EUT. Where the antenna gain exceeds 6dBi the transmitter power is reduced where necessary to meet the EIRP requirements. These calculations represent worst case in terms of the exposure levels.

Freq. Band (MHz)	Antenna Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm^2 Limit(cm)	Minimum Separation Distance (cm)
2400 – 2483.5	7.5	5.62	21.63	146	8.1	20
5725 - 5850	7.5	5.62	24.09	257	10.8	20
5150 - 5250	7.5	5.62	16.38	43.5	4.5	20
5250 - 5350	7.5	5.62	22.35	172	8.8	20
5470 -5725	7.5	5.62	21.67	147	8.1	20

Assessment for simultaneous operation in 2.4 GHz and 5 GHz bands

The Aruba APIN0204, APIN0205 has two radio modules and can transmit simultaneously in the 2.4 GHz and 5 GHz bands. The following assessment is based on simultaneous operation in the 2.4 GHz and 5 GHz bands.

Freq. Band (MHz)	Antenna Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm^2 Limit(cm)	Minimum Separation Distance (cm)
2400 – 2483.5	7.5	5.62	21.63	146	8.1	20
5725 - 5850	7.5	5.62	24.09	257	10.8	20
Combined Total	**7.5**	**5.62**	**26.05**	**403**	**13.5**	**20.0**

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

FCC §1.1310 Limit = 1mW / cm^2 from 1.310 Table 1 **RSS-Gen §5.6** Category I and Category II equipment shall comply with the applicable requirements of RSS-102.

Laboratory Measurement Uncertainty for Power Measurements

Measurement uncertainty	±1.33 dB