

## **Collocated MPE Analysis:**

The modem may transmit simultaneously with other collocated radio transmitters within a host device, provided the following conditions are met:

- Each collocated radio transmitter has been certified by FCC for mobile application (that will be met since SQNS module will have its own FCC ID and host device will have its own FCC ID)
- At least 20 cm separation distance between the antennas of the collocated transmitters and the user's body must be maintained at all times (host installation should taking care of that)

The output power and antenna gain in a collocated configuration must not exceed the limits and configurations stipulated in the following table 1. The power density calculations for the individual transmitters per wireless technology at an exposure minimum separation distance of 20cm.

## **Exclusion of test condition:**

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 calculated or measured field strengths or power density, is  $\leq 1.0$ .

 $\Sigma$ MPE ratio1 + MPE ratio2+MPE ration <=1.0 The spreadsheet as FCC deduces, and releases is employed to conduct the measurement:

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## Table 1: Collocated MPE Calculation (Worst-case table)

Technology	Frequency (MHz)	Max Conducted Power (dBm)	Max Gain (dBi)	Duty Cycle	FCC Power Density @20cm (mW/cm^2)	FCC MPE Limit (mW/cm^2)
BT (BR)	2402	6.24	0.09	0.91	0.001	1.000
WLAN (802.11 b)	2462	15.99	6.23	0.88	0.029	1.000
UNII (802.11 n 20)	5180	12.97	8.36	0.95	0.026	1.000

## Scenario 1: BT +WLAN +UNII

	FCC	(BT)		FCC	(WLAN)		FCC		(BT	FCC
вт	MPE	/ MPE	WLAN	MPE	/ MPE	UNII	MPE	(UNII) /	+WLAN	Limit
(mW/c	Limit	Result	(mW/c	Limit	Result	(mW/c	Limit	MPE	+UNII)	(mW/c
m^2)	(mW/c		m^2)	(mW/c		m^2)	(mW/c	Result		m^2)
	m^2)			m^2)			m^2)			
0.001	1.000	0.001	0.029	1.000	0.029	0.026	1.000	0.026	0.056	1.000

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