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Maximum Permissible Exposure Evaluation

The RF exposure calculation for the co-locating of the following three (3) Two Technologies FCC Certified module/devices:

1. FCC ID: RYJ-PLAT2008, embedded BGB203 BT radio in the FC-2500 case
2. FCC ID: RYJ-SDMCF10G, WiFi radio module
3. FCC ID: AZP-FDQ02T, radio module (in the RS-1 Pack).

Based on the FCC OET Bulletin 65, Edition 97-01, the following formula is used to calculate RF exposure at a distance of 20cm from the transmitting antenna:

$$\mathbf{S = PG/4\pi R^2}$$

Where:
S = Power Density (mW/cm^2)
P = Power output to the antenna
G = Antenna Numeric Gain
R = Distance from the transmitting antenna (cm)

Note: The RF transmit power and the antenna gain used are from the original test reports submitted to the FCC for certification.

FCC ID	Power Output **P** (mW)	Antenna Gain (dBi)	Antenna Gain **G**	Power Density **S** (mW/cm^2)	Limit (mW/cm^2)	Percentage of Limit
RYJ-PLAT2008	1.07	0	1	0.00021	1	0.021%
RYJ-SDMCF10G	80	0	1	0.0159	1	1.59%
AZP-FDQ02T	61	2.14	1.64	0.0199	1	1.99%

Total RF Exposure Percentage: 3.601%

Conclusion: The total RF exposure percentage is 3.6% of the allowable limit, therefore the RF exposure calculation for the co-locating of the (3) Two Technologies FCC certified modules/devices complies with the FCC MPE requirements.

$dBi = 10\ _{log10}(\mathbf{G})$