

# MPE CALCULATION

FCC ID: Y47RN340

RF Exposure Requirements:	47 CFR §1.1307(b)
RF Radiation Exposure Limits:	47 CFR §1.1310
RF Radiation Exposure Guidelines:	FCC OST/OET Bulletin Number 65
EUT Frequency Band: LTE	1930- 1995MHz, 2110-2180MHz, 746-756MHz 758-768MHz
Limits for General Population/Uncontrolled Exposure in the band of:	300 - 1500 MHz
Power Density Limit:	f/1500 mW / cm <sup>2</sup>
Limits for General Population/Uncontrolled Exposure in the band of:	1500 - 100,000 MHz
Power Density Limit:	1 mW / cm <sup>2</sup>

Equation:  $S = PG / 4\pi R^2$  or  $R = \sqrt{PG / 4\pi S}$   
Where, S = Power Density  
P = Power Input to Antenna  
G = Antenna Gain  
R = distance to the center of radiated antenna

## EUT: SpiderCloud Radio Node, Model No.: SCRN-340-13142566 & SCRN-340-13142566-EQ

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Directional Gain (dBi)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )	Pass/Fail
LTE B66	2120	27.53	3	6	±1dB	28.53	20	0.56	1	Pass
LTE B25	1990	26.74	3	6	±1dB	27.74	20	0.47	1	Pass
LTE B13	753.5	26.95	2	5	±1dB	27.95	20	0.39	0.50	Pass
LTE B14	760.5	26.64	2	5	±1dB	27.64	20	0.36	0.50	Pass

Max MPE= 0.56 mW/cm<sup>2</sup>

Different bands cannot transmit simultaneously. The Above Result had shown that the Device complied with MPE requirement.



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