MPE CALCULATION

FCC ID : TMB-CONN2000

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: 2412-2462 MHz, 5260-5700 MHz, 5745-5825 MHz

Limits for General Population/Uncontrolled Exposure in the band of:

Frequency Range (MHz)	Power Density (mW/cm^2)
1,500-100,000	1.0
300-1,500	f/1500

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

Product Name : SecureMesh Wan Connector

Model: CONN-2000

Prediction distance 65cm

(WLan 2.4GHz): Output Power = 22.73 dBm, Antenna Gain = 2 dBi, Power density = 0.005598 mW/cm^2

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Tune-Up Tolerance	Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm^2)	MPE Limit (mW/cm^2)	Pass/Fail
WLAN 802.11n HT20 2.4 GHz	2412	22.23	2	±0.5dB	24.73	65	0.005598	1	Pass

(WLan 5GHz): Output Power = 29.55 dBm, Antenna Gain = 17 dBi, Power density =0.85122 mW/cm^2

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Tune-Up Tolerance	Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm^2)	MPE Limit (mW/cm^2)	Pass/Fail
WLAN 802.11HT40 5 GHz	5755	29.05	17	±0.5dB	46.55	65	0.85122	1	Pass

If WLAN (2.4GHz) and WLAN (5GHz) transmit simultaneously.

Total MPE =0.5598% + 85.122%% = 85.68%

The Above Result had shown that the Device complied with MPE requirement.

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Date: 03/22/2019