

Maximum Permissive Exposure

FCC ID: WL6LIVA-Q1APLUS

Product Description: Ultra tiny PC

Model No: (1)LIVA Q1AXXXXX (2)PB01AX (X=A to Z,a-z,0-9 or blank)

- According to FCC CFR 47 §1.1310, the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

Table 1 Limits for Maximum Permissible Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits For Occupational / Control Exposures (f = frequency)				
30-300	61.4	0.163	1.0	6
300-1500	...	...	f/300	6
1500-100,000	...	...	5.0	6
(B) Limits For General Population / Uncontrolled Exposure (f = frequency)				
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

2. MPE Calculation

Elitegroup Computer Systems Co., Ltd. declares that the product described above has been evaluated and found to comply with the RF exposure limits for humans, as specified based on ANSI/FCC recommendation.

Mode	Max Output Power (dBm)	Tune-up factor	Tune-up max power (dBm)
WIFI 2.4G	24.73	1.031	25.5
BT	9.57	1.097	10.5
BLE	6.63	1.131	7.5

**The value presented in the MPE is the maximum tune-up power.

2.1. WIFI 2.4G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.524 Numerical**, and the highest power output (P) is **354.81mW**, the power density (S) is **0.107575mW/cm²**.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where :

Based on safety distance (r) =	20	cm		
Highest Power Output (P) =	25.5	dBm	=	354.81 mW
Antenna Gain (G) =	1.83	dBi	=	1.524 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	(354.81*1.524)/(4*π*20²) =			0.107575 mW/cm ²

2.2. BT MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.524 Numerical**, and the highest power output (P) is **11.22mW**, the power density (S) is **0.003402mW/cm²**.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Based on safety distance (r) =	20	cm		
Highest Power Output (P) =	10.5	dBm	=	11.22 mW
Antenna Gain (G) =	1.83	dBi	=	1.524 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	(11.22*1.524)/(4*π*20²) =			0.003402 mW/cm ²

2.3. BLE MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.524 Numerical**, and the highest power output (P) is **5.62mW**, the power density (S) is **0.001704mW/cm²**

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Based on safety distance (r) =	20	cm		
Highest Power Output (P) =	7.5	dBm	=	5.62 mW
Antenna Gain (G) =	1.83	dBi	=	1.524 Numerical
MPE (S) = (P*G) / (4* π *r ²) =	(5.62*1.524)/(4*π*20²) =			0.001704 mW/cm ²

2.4. Simultaneous Transmission

WLAN 2.4G (mW/cm ²)	BT (mW/cm ²)	Total (mW/cm ²)
0.107575	0.003402	0.1110

Sincerely Yours,



Mr. Johnny Hsueh
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