Maximum Permissive Exposure

FCC ID: 2AE3B-AEX-AR95X
Product Name: 450Mbps Three Chain, Dual-Band, 802.11abgn WLAN , Full Size
MiniPCI Express Module
Model No: (1)AEX-AR95X (2)AEX-AR9590-NX (3)AEX-AR9590-NI
(4)AEX-AR9590-NIB (5)AEX-AR9580-NX

1. 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

VoxMicro 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.

2. MPE Calculation

2.1. WIFI 2.4G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **5.984Numerical,** and the highest power output (P) is **446.684mW**, the power density (S) is **0.531768mW/cm^2.**

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)=	26.50	dBm =	**446.684**	mW
Antenna Gain (G)=	7.77	dBi =	**5.984**	Numerical
MPE (S) = (P*G) / (4*π*r^2) =	**= (446.684*5.984)/(4*π*20^2)=**		0.531768	mW/cm^2

2.2. WIFI 5G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **9.484Numerical**, and the highest power output (P) is **70.795mW**, the power density (S) is **0.133575mW/cm^2**.

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)=	18.50 dBm =	**70.795**	mW
Antenna Gain (G)=	9.77 dBi =	**9.484**	Numerical
MPE (S) = (P*G) / (4*π*r^2) =	= (70.795*9.484)/(4*π*20^2)=	0.133575	mW/cm^2

Sincerely Yours,

Mr. Ben Cheng
Manager
AUDIX Technology Corporation