Audix Technology (Shenzhen) Co., Ltd.
No. 6, Kefeng Road, Science & Technology Park,
Nanshan District , Shenzhen, Guangdong, China

Tel: 0755 26639496
Fax: 0755 26632877

Maximum Permissive Exposure

FCC ID: XVG500102BC22
EUT: BCM dual band 2*2 WiFi
M/N: 50-0102-BC-22

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 Exposures (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

Amino Communications 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.

RF Exposure Calculations: $S = (P * G) / (4* \pi * r^2)$ or $r = \sqrt{(P * G) / (4 * \pi * S)}$

2.1. Estimation Result

2.4GHz:

Test Mode	CH	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11b	CH1	2412	19.80	95.50	6.25	4.22	0.0802
	CH6	2437	19.86	96.83	6.25	4.22	0.0813
	CH11	2462	19.66	92.47	6.25	4.22	0.0776
11g	CH1	2412	18.97	78.89	6.25	4.22	0.0662
	CH6	2437	18.93	78.16	6.25	4.22	0.0656
	CH11	2462	18.70	74.13	6.25	4.22	0.0622
11n HT20	CH1	2412	19.19	82.99	6.25	4.22	0.0697
	CH6	2437	19.16	82.41	6.25	4.22	0.0692
	CH11	2462	18.8	75.86	6.25	4.22	0.0637
11n HT40	CH3	2422	15.27	33.65	6.25	4.22	0.0282
	CH6	2437	15.26	33.57	6.25	4.22	0.0282
	CH9	2452	15.08	32.21	6.25	4.22	0.0270

Notes: 1. Antenna 1 Gain= 4dBi
Antenna 2 Gain= 2.4Bi
Directional Gain= $10 \log[(10^{4/20}+10^{2.4/20})^2/2]$dBi
= 6.25dBi>6dBi.
2. The transmit signals are correlated.

For Wi-Fi 2.4GHz:

Based on safety distance (r) **20cm**, the antenna gain (G) is **4.92 Numerical**, and the highest power output (P) is **96.83mW**, the power density (S) is **0.0813mW/cm^2**.

5GHz Band 1:

Test Mode	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11a	5180	16.65	46.24	6.96	4.97	0.0457
	5200	16.84	48.31	6.96	4.97	0.0477
	5240	17.51	56.36	6.96	4.97	0.0557
11n HT20	5180	16.22	41.88	6.96	4.97	0.0414
	5200	16.36	43.25	6.96	4.97	0.0428
	5240	17.08	51.05	6.96	4.97	0.0505
11n HT40	5190	15.59	36.22	6.96	4.97	0.0358
	5230	16.16	41.30	6.96	4.97	0.0408
11ac VHT20	5180	16.34	43.05	6.96	4.97	0.0426
	5200	16.44	44.06	6.96	4.97	0.0435
	5240	17.11	51.40	6.96	4.97	0.0508
11ac VHT40	5190	15.61	36.39	6.96	4.97	0.0360
	5230	16.19	41.59	6.96	4.97	0.0411
11ac VHT80	5210	15.98	39.63	6.96	4.97	0.0392

Notes:

1. Antenna 1 Gain= 4.1dBi
   Antenna 2 Gain= 3.8dBi
   Directional Gain= 10 log$[(10^{4.1/20}+10^{3.8/20})^2/2]$dBi
   = 6.96dBi>6dBi.
2. The transmit signals are correlated.

5GHz Band 2:

Test Mode	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11a	5260	17.69	58.75	6.96	4.97	0.0581
	5300	17.80	60.26	6.96	4.97	0.0596
	5320	17.93	62.09	6.96	4.97	0.0614
11n HT20	5260	17.05	50.70	6.96	4.97	0.0501
	5300	17.34	54.20	6.96	4.97	0.0536
	5320	17.34	54.20	6.96	4.97	0.0536
11n HT40	5270	16.72	46.99	6.96	4.97	0.0464
	5310	16.79	47.75	6.96	4.97	0.0472
11ac VHT20	5260	17.48	55.98	6.96	4.97	0.0553
	5300	17.52	56.49	6.96	4.97	0.0558
	5320	17.56	57.02	6.96	4.97	0.0564
11ac VHT40	5270	16.75	47.32	6.96	4.97	0.0468
	5310	16.90	48.98	6.96	4.97	0.0484
11ac VHT80	5290	16.58	45.50	6.96	4.97	0.0450

Notes:

1. Antenna 1 Gain= 4.1dBi
   Antenna 2 Gain= 3.8dBi
   Directional Gain= $10 \log[(10^{4.1/20}+10^{3.8/20})^2/2]$dBi
   = 6.96dBi>6dBi.
2. The transmit signals are correlated.

5GHz Band 3:

Test Mode	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11a	5500	17.31	53.83	6.96	4.97	0.0532
	5600	16.89	48.87	6.96	4.97	0.0483
	5700	16.74	47.21	6.96	4.97	0.0467
11n HT20	5500	16.75	47.32	6.96	4.97	0.0468
	5600	16.38	43.45	6.96	4.97	0.0429
	5700	16.33	42.95	6.96	4.97	0.0425
11n HT40	5510	16.20	41.69	6.96	4.97	0.0412
	5590	15.91	38.99	6.96	4.97	0.0385
	5670	15.48	35.32	6.96	4.97	0.0349
11ac VHT20	5500	16.98	49.89	6.96	4.97	0.0493
	5600	16.55	45.19	6.96	4.97	0.0447
	5700	16.40	43.65	6.96	4.97	0.0431
11ac VHT40	5510	16.22	41.88	6.96	4.97	0.0414
	5590	15.98	39.63	6.96	4.97	0.0392
	5670	15.62	36.48	6.96	4.97	0.0361
11ac VHT80	5530	16.13	41.02	6.96	4.97	0.0405
	5610	15.78	37.84	6.96	4.97	0.0374

Notes:

1. Antenna 1 Gain= 4.1dBi
   Antenna 2 Gain= 3.8dBi
   Directional Gain= $10\log[(10^{4.1/20}+10^{3.8/20})^2/2]$dBi
   = 6.96dBi>6dBi.
2. The transmit signals are correlated.

5GHz Band 4:

Test Mode	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11a	5745	17.35	54.33	6.96	4.97	0.0537
	5785	17.43	55.34	6.96	4.97	0.0547
	5825	17.43	55.34	6.96	4.97	0.0547
11n HT20	5745	16.98	49.89	6.96	4.97	0.0493
	5785	17.04	50.58	6.96	4.97	0.0500
	5825	17.05	50.70	6.96	4.97	0.0501
11n HT40	5755	16.16	41.30	6.96	4.97	0.0408
	5795	16.43	43.95	6.96	4.97	0.0434
11ac VHT20	5745	16.97	49.77	6.96	4.97	0.0492
	5785	17.12	51.52	6.96	4.97	0.0509
	5825	17.03	50.47	6.96	4.97	0.0499
11ac VHT40	5755	16.31	42.76	6.96	4.97	0.0423
	5795	16.39	43.55	6.96	4.97	0.0430
11ac VHT80	5775	16.46	44.26	6.96	4.97	0.0437

Notes:

1. Antenna 1 Gain= 4.1dBi
   Antenna 2 Gain= 3.8dBi
   Directional Gain= $10 \log[(10^{4.1/20}+10^{3.8/20})^2/2]$dBi
   = 6.96dBi>6dBi.
2. The transmit signals are correlated.

For Wi-Fi 5GHz:

Based on safety distance (r) **20cm**, the antenna gain (G) is **4.97 Numerical**, and the highest power output (P) is **62.09mW**, the power density (S) is **0.0614mW/cm^2**.

For Wi-Fi 2.4GHz + Wi-Fi 5GHz:

the highest power density (S) is **0.0813mW/cm^2 + 0.0614mW/cm^2 = 0.1427mW/cm^2.**