



FCC ID: 2AMOD-CM600

FCC RF Exposure Evaluation

1. Product Information

FCC ID	2AMOD-CM600		
Product name	Chasing CM600		
Model number	CM600		
Power supply	Input: 100-240V~50/60Hz, 4A		
Hardware version	1		
Software version	1		
FCC Operation frequency	2412~2462 MHz		
Channel Number	11 Channels for 20MHz bandwidth (2412~2462MHz)		
Mag rea	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)		
Modulation Type	IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK)		
	IEEE 802.11n: OFDM (64QAM, 16QAM,QPSK,BPSK)		
Antenna Type	Internal Antenna		
Antenna Gain	1.8dBi(Max.)		
Exposure category	General population/uncontrolled environment		
EUT Type	Production Unit		
Device Type	Mobile Devices		
Till Daning Lab	LCS Testing Lab		

















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2. Evaluation Method

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

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In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modelled or measured field strengths or power density, is ≤ 1.0. The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.

3. Limit

3. 1 Refer Evaluation Method

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

FCC CFR 47 part1 1.1310: Radiofrequency radiation exposure limits.

FCC CFR 47 part2 2.1091: Radiofrequency radiation exposure evaluation: mobile devices

3. 2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency	Electric Field	Magnetic Field	Power Density	Averaging Time	
Range(MHz)	Strength(V/m)	Strength(A/m)	(mW/cm²)	(minute)	
Limits for Occupational/Controlled Exposure					
0.3 - 3.0	614	1.63	(100) *	6	
3.0 - 30	1842/f	4.89/f	(900/f ²)*	6	
30 – 300	61.4	0.163	1.0	6	
300 – 1500	/	/	f/300	6	
1500 - 100,000	/	1 13 to	5	6	

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

	See at 43 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7				
3	Frequency	Electric Field	Magnetic Field	Power Density	Averaging Time
4	Range(MHz)	Strength(V/m)	Strength(V/m) Strength(A/m)		(minute)
1		Limits for Oc	for Occupational/Controlled Exposu		
	0.3 - 3.0	614	1.63	(100) *	30
	3.0 - 30	824/f	2.19/f	(180/f ²)*	30
	30 - 300	27.5	0.073	0.2	30
	300 – 1500	/	/	f/1500	30
L	1500 – 100,000	1	1	1.0	30

F=frequency in MHz



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^{*=}Plane-wave equivalent power density





4. MPE Calculation Method

Predication of MPE limit at a given distance Equation from page 18 of OET Bulletin 65, Edition 97-01

S=PG/4πR²

Where: S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

5. Antenna Information

Internal Antenna can only use antennas certificated as follows provided by manufacturer;

		0 ((NA	24.5 26.51 27.1	
	Internal	Antenna type and	Operate frequency	Maximum antenna	Note
	Identification	antenna number	band	gain	INOLE
	Antenna	Internal Antenna	2400MHz-2500MHz	1.8dBi	WIFI Antenna

6. Conducted Power

<2.4G WIFI>

Mode	Channel	Frequency(MHz)	Max Conducted Power (dBm)
	1	2412	15.89
IEEE 802.11b	6	2437	15.54
B Lab	11	2462	15.15
1/3	I red	2412	15.11
IEEE 802.11g	6	2437	15.42
	11	2462	15.44
1555 000 44	1	2412	15.31
IEEE 802.11n HT20	6	2437	15.78
	11	2462	15.68

上CS Testing Lab

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LOS Testing Lab



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7. Manufacturing Tolerance

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	<2.4G	WIFI>			
	11B (I	Peak)			
Channel	Channel 1	Channel 6	Channel 11		
Target (dBm)	15.0	15.0	15.0		
Tolerance ±(dB)	1.0	1.0	1.0		
	11G (Peak)				
Channel	Channel 1	Channel 6	Channel 11		
Target (dBm)	15.0	15.0	15.0		
Tolerance ±(dB)	1.0	1.0	1.0		
11N20SISO (Peak)					
Channel	Channel 1	Channel 6	Channel 11		
Target (dBm)	15.0	15.0	15.0		
Tolerance ±(dB)	1.0	1.0	1.0		

8. Measurement Results

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, r =20cm, as well as the gain of the used antenna refer to antenna information, the RF power density can be obtained.

立河南流河 Back		<2.4G \	VIFI>		
Band/Mode	RF ou	utput power	Antenna Gain	MPE	MPE Limits
Barraymodo	dBm	mW	(dBi)	(mW/cm2)	(mW/cm2)
IEEE 802.11b	16.0	39.8107	1.8	0.0120	1.0000
IEEE 802.11g	16.0	39.8107	1.8	0.0120	1.0000
IEEE 802.11n HT20	16.0	39.8107	1.8	0.0120	1.0000

Remark:

- 1. Output power including tune-up tolerance;
- 2. MPE evaluate distance is 20cm from user manual provide by manufacturer;

9. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

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