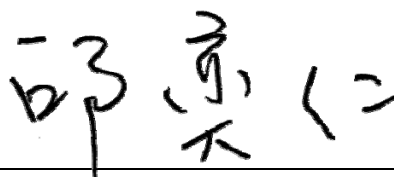


MPE REPORT

案 號： 1806C057B
產 品 名 稱： AC1200全家庭Mesh Wi-Fi系統
型 號： Deco M4R
申請廠商（名稱）： 聯洲國際有限公司
申請廠商（地址）： 新北市板橋區中山路一段156號13樓

According to: LP0002 第 5.20.2 節

實驗室報告簽署人：



發 行 日 期：

107 年 10 月 17 日

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TAF實驗室認可編號：0659

MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:

S = power density

P = power input to the 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

Table for Filed Antenna:

For 2.4G:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	N/A	N/A	PCB	N/A	1.47
2	N/A	N/A	PCB	N/A	1.47

Note:

This EUT supports MIMO 2X2, any transmit signals are correlated with each other, so Directional gain = $G_{ANT} + 10\log(N)$ dBi, that is Directional gain = $1.47 + 10\log(2)$ dBi = 4.48.

For 5G:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	N/A	N/A	PCB	N/A	0.89
2	N/A	N/A	PCB	N/A	0.91

Note:

- (1) This EUT supports MIMO 2X2, any transmit signals are correlated with each other, so Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N]$ dBi, that is Directional gain = $10\log[(10^{0.89/20} + 10^{0.91/20})^2 / 2]$ dBi = 3.91.
- (2) Beamforming Gain: 3.01dBi, so Directional gain = $3.01 + 0.91 = 3.92$.

TEST RESULTS:

For 2.4G

測試頻道: IEEE 802.11g
 檢 測 器: RMS
 環境溫度: 24°C

測試模式: TX
 測試日期: 107/07/24
 環境濕度: 52%

Antenna Gain (dBi)	Antenna Gain (numeric)	AVG Output Power (dBm)	AVG Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.48	2.8054	27.87	612.3504	0.34194	1	Complies

For 5G Non-Beamforming

5150 MHz 至 5250 MHz :

測試頻道: IEEE 802.11a
 檢 測 器: RMS
 環境溫度: 24°C

測試模式: TX
 測試日期: 107/06/20
 環境濕度: 52%

Antenna Gain (dBi)	Antenna Gain (numeric)	Max Output Power (dBm)	Max Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.91	2.4604	26.85	484.1724	0.23711	1	Complies

5725 MHz 至 5850 MHz :

測試頻道: IEEE 802.11a
 檢 測 器: RMS
 環境溫度: 24°C

測試模式: TX
 測試日期: 107/06/20
 環境濕度: 52%

Antenna Gain (dBi)	Antenna Gain (numeric)	Max Output Power (dBm)	Max Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.91	2.4604	26.96	496.5923	0.24319	1	Complies

For 5G with Beamforming

5150 MHz 至 5250 MHz :

測試頻道: IEEE 802.11n (20 MHz)

測試模式: TX

檢 測 器: RMS

測試日期: 107/06/20

環境溫度: 24°C

環境濕度: 52%

Antenna Gain (dBi)	Antenna Gain (numeric)	Max Output Power (dBm)	Max Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.92	2.4660	26.37	433.5109	0.21279	1	Complies

5725 MHz 至 5850 MHz :

測試頻道: IEEE 802.11n (40 MHz)

測試模式: TX

檢 測 器: RMS

測試日期: 107/06/20

環境溫度: 24°C

環境濕度: 52%

Antenna Gain (dBi)	Antenna Gain (numeric)	Max Output Power (dBm)	Max Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.92	2.4660	26.65	462.3810	0.22696	1	Complies

Note: The evaluated distance is 20cm.