

電波暴露量評估報告

器 材 名 稱: Wireless Access point

型 號: AP650

廠 牌: Aerohive

申 請 者: Aerohive Networks, Inc

地 址: 1011 McCarthy Boulevard, Milpitas, CA 95035, United States

受 理 日 期: 107 年 04 月 04 日

報告發行日期: 107 年 10 月 30 日

報 告 號 碼: 1890138R-SATWP05V00



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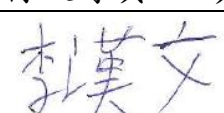
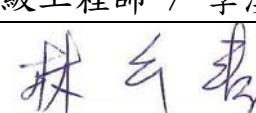
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產品名稱(中文)	Wireless Access point
申請者	Aerohive Networks, Inc
地址	1011 McCarthy Boulevard, Milpitas, CA 95035, United States
製造廠商	Aerohive Networks, Inc
額定電壓	DC 37~57 V (Power by PoE)
試驗電壓	AC 110V/60Hz
商標或廠牌	Aerohive
型式號	AP650
試驗標準	低功率射頻電機技術規範(107 年 01 月)
試驗結果	符合

報告製作者	:	
		高級行政專員 / 黃麗芬
測試工程師	:	
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實驗室簽署人	:	
		協理 / 林介書

1. 基本資料

1.1. 待測物裝置資料

申請者(或公司)	Aerohive Networks, Inc
地址	1011 McCarthy Boulevard, Milpitas, CA 95035, United States
製造廠商	Aerohive Networks, Inc
產品名稱	Wireless Access point
產品型號	AP650
頻率範圍	802.11b/g/n/ac/ax-20MHz :2412MHz~2462MHz, 802.11n/ac/ax-40MHz: 2422MHz~2452MHz 802.11a/n-20MHz/ac-20MHz/ax-20MHz:5180-5320MHz,5500-5720MHz, 5745-5825MHz 802.11n-40MHz/ac-40MHz/ax-40MHz: 5190-5310MHz, 5510-5670MHz, 5710-5795MHz 802.11ac-80MHz/ax-80MHz : 5210-5290MHz, 5530-5690MHz, 5775MHz 802.11 ac-160MHz/ax-160MHz : 5250MHz,5570MHz BLE : 2402 – 2480MHz
工作頻道	802.11b/g/n/ac/ax-20MHz: 11, 802.11n/ac/ax-40MHz: 9, 802.11a/n-20MHz/ac-20MHz/ax-20MHz: 25,802.11n-40MHz/ac-40MHz/ax-40MHz: 12, 802.11ac-80MHz/ax-80MHz : 6,802.11 ac-160MHz/ax-160MHz : 2 BLE : 40
調變方式	DSSS/OFDM/BPSK/QPSK/16QAM/64QAM/256QAM FHSS: GFSK(1Mbps)
天線樣式	Metal plate type F antenna
天線增益	Refer to the table “Antenna List”
頻道控制	Auto

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	RF electronic technology Co.	RF21S00719A	Metal plate type F antenna	3.08dBi for 2.4GHz 3.35dBi for 5.15~5.25GHz 4.10dBi for 5.25~5.35GHz 4.63dBi for 5.47~5.725GHz 5.13dBi for 5.725~5.850GHz

2. RF Exposure Evaluation

2.1. Limit

依據低功率射頻電機技術規範第 5.20.2 章節要求: 若受測物於正常操作模式下, 其發射機距離人體 20 公分以上者, 可測試最大暴露允許值(Maximum Permissible Exposure, MPE)以證明其符電波暴露量之要求。限制值如下:

(1) 職業性/可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	6
3-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500	-----	-----	f/300	6
1,500-100,000	-----	-----	5.0	6

註 1: 標記*表平面波等效功率密度。

註 2: f 表測試頻率, 單位: 百萬赫(MHz)。

(2) 一般人/不可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-1.34	614	1.63	*100	30
1.34-30	842/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500	-----	-----	f/1500	30
1,500-100,000	-----	-----	1.0	30

註 1: 標記*表平面波等效功率密度。

註 2: f 表測試頻率, 單位: 百萬赫(MHz)。

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 21°C and 53% RH.

2.3. Test Result of RF Exposure Evaluation

Product : Wireless Access point
Test Item : RF Exposure Evaluation

BLE Peak Gain : 3.08dBi

Band	Frequency (MHz)	Conducted maximum Peak Power (dBm)	Duty Cycle (%)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)	Pass/Fail
BLE	2440	5.94	62.68	6.264	0.0025	1	Pass

Note: The conducted output power is refer to original report No.: 1890138R-RFTWP01V00 from the DEKRA

WLAN 2.4G CDD 4x4 Peak Gain : 3.08dBi

Band	Frequency (MHz)	Conducted maximum Peak Power (dBm)	Worst case Duty Cycle (%)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)	Pass/Fail
WLAN 2.4G	2462	26.64	89.52	515.323	0.2084	1	Pass

Note: The conducted output power is refer to original report No.: 1890138R-RFTWP24V00 from the DEKRA.

WLAN 5G CDD 4x4 Peak Gain : 5.13dBi

Band	Frequency (MHz)	Conducted maximum Average Power (dBm)	Worst case Duty Cycle (%)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)	Pass/Fail
WLAN 5G	5795	25.87	83.56	462.383	0.2997	1	Pass

Note: The conducted output power is refer to original report No.: 1890138R-RFTWP51V00 from the DEKRA.