



Co-location Report

FCC ID: Q9DAPIN0735
Applicant: Hewlett Packard Enterprise Company
Product: ACCESS POINT
Model No.: APIN0735
Trademark:  , 
FCC Rule Part(s): Part 15 Subpart C (Section 15.247)
Part 15 Subpart E (Section 15.407)
Result: Complies
Received Date: 2023-11-09
Test Date: 2024-06-14

Reviewed By:

Jame Yuan

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2311RSU031-U9	V01	Initial Report	2024-06-17	Valid

CONTENTS

Description	Page
1. General Information	4
1.1. Applicant	4
1.2. Manufacturer	4
1.3. Testing Facility	4
1.4. Product Information.....	5
2. Test Configuration	6
2.1. Test Mode.....	6
1.5. Test System Connection Diagram.....	6
2.2. Applied Standards.....	7
2.3. Test Environment Condition	7
3. Measuring Instrument	8
4. Decision Rules and Measurement Uncertainty	9
4.1. Decision Rules	9
4.2. Measurement Uncertainty.....	9
5. Radiated Spurious Emissions Measurement (Co-location)	10
5.1. Test Limit	10
5.2. Test Procedure.....	11
5.3. Test Setting	11
5.4. Test Setup	12
5.5. Test Result	13
Appendix A - Test Setup Photograph	15
Appendix B - EUT Photograph	16

1. General Information

1.1. Applicant

Hewlett Packard Enterprise Company
6280 America Center Drive, San Jose CA 95002, United States

1.2. Manufacturer

Hewlett Packard Enterprise Company
6280 America Center Drive, San Jose CA 95002, United States

1.3. Testing Facility

<input checked="" type="checkbox"/>	Test Site – MRT Suzhou Laboratory
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian’edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: <input type="checkbox"/> R-20025 <input type="checkbox"/> G-20034 <input type="checkbox"/> C-20020 <input type="checkbox"/> T-20020 <input type="checkbox"/> R-20141 <input type="checkbox"/> G-20134 <input type="checkbox"/> C-20103 <input type="checkbox"/> T-20104
<input type="checkbox"/>	Test Site – MRT Shenzhen Laboratory
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
<input type="checkbox"/>	Test Site – MRT Taiwan Laboratory
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	ACCESS POINT
Model No.	APIN0735
Serial No.	CNRJM5200D
Software Version	BCM4711A0_11_02_2023
Wi-Fi Specification	802.11a/b/g/n/ac/ax/be
Bluetooth Specification	BLE only
ZigBee Specification	802.15.4
GNSS Specification	GPS, Galileo
Power Type	AC Adapter Input or PoE Input
Operating Environment	Indoor Use
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

2. Test Configuration

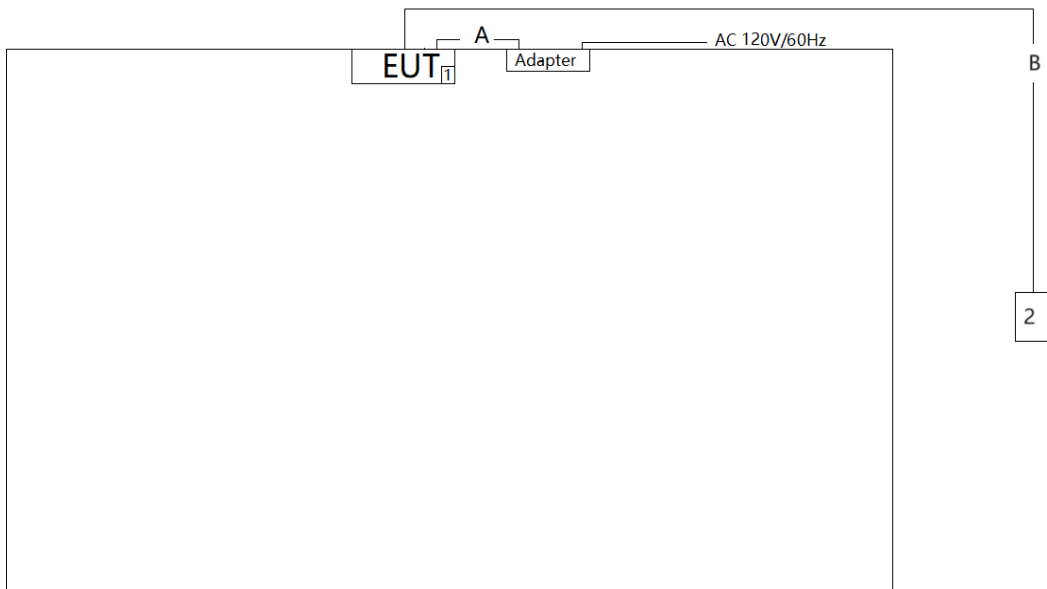
2.1. Test Mode

Test Mode 1: Transmit by ZigBee at 2405MHz (Core 0) + Transmit by BLE at 2402MHz (Core 1) + Transmit by 802.11b at 2462MHz (Radio 0) + Transmit by 802.11a at 5180MHz (Radio 1) + Transmit by 802.11ax-HE20 at 5955MHz (Radio 2)

Test Mode 2: Transmit by ZigBee at 2480MHz (Core 0) + Transmit by BLE at 2480MHz (Core 1) + Transmit by 802.11b at 2462MHz (Radio 0) + Transmit by 802.11a at 5180MHz (Radio 1) + Transmit by 802.11ax-HE20 at 5955MHz (Radio 2)

1.5. Test System Connection Diagram

Connection Diagram



No.	Cable Type	Cable Spec.	Length
A	Power Cable	Non-Shielded	1.2m
B	LAN Cable	Non-Shielded, Cat 6	>10.0m
No.	Product	Manufacturer	Model No.
1	USB Flash	SanDisk	16G
2	Notebook	DELL	Latitude 5491

2.2. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC Part 15 Subpart E §15.407
- KDB 789033 D02v02r01
- KDB 558074 D01v05r02
- ANSI C63.10-2013

2.3. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20% ~ 75%RH

3. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2024-12-17	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2024-08-09	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2024-10-11	WZ-AC1
Preamplifier	Agilent	83017A	MRTSUE06076	1 year	2024-11-09	WZ-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2025-05-15	WZ-AC1
Anechoic Chamber	TDK	WZ-AC1	MRTSUE06212	1 year	2025-04-19	WZ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2024-10-23	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11039	1 year	2024-10-25	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2024-11-04	WZ-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2025-01-11	WZ-AC1
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07076	1 year	2024-12-04	WZ-AC1

Software	Version	Function
EMI V3	V 3.0.0	EMI Test Software
Controller_MF 7802	2.03C	RE Antenna & Turntable

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Radiated Emission Measurement

The maximum measurement uncertainty is evaluated as:

Coaxial: 9kHz~30MHz: 2.61dB

Coplanar: 9kHz~30MHz: 2.62dB

Horizontal: 30MHz~200MHz: 3.79dB

200MHz~1GHz: 3.91dB

1GHz~40GHz: 4.99dB

Vertical: 30MHz~200MHz: 4.06dB

200MHz~1GHz: 5.21dB

1GHz~40GHz: 4.90dB

5. Radiated Spurious Emissions Measurement (Co-location)

5.1. Test Limit

For 15.247(d) requirement

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [$\mu\text{V}/\text{m}$]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For 15.407(b) requirement

For transmitters operating in the 5.15–5.25 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25–5.35 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47–5.725 GHz band: All emissions outside of the 5.47–5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating solely in the 5.725–5.850 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

For transmitters operating solely in the 5.850–5.895 GHz band or operating on a channel that spans across 5.725–5.895 GHz: For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of -7 dBm/MHz at or above

5.925 GHz.

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

5.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

5.3. Test Setting

Peak Measurements above 1GHz

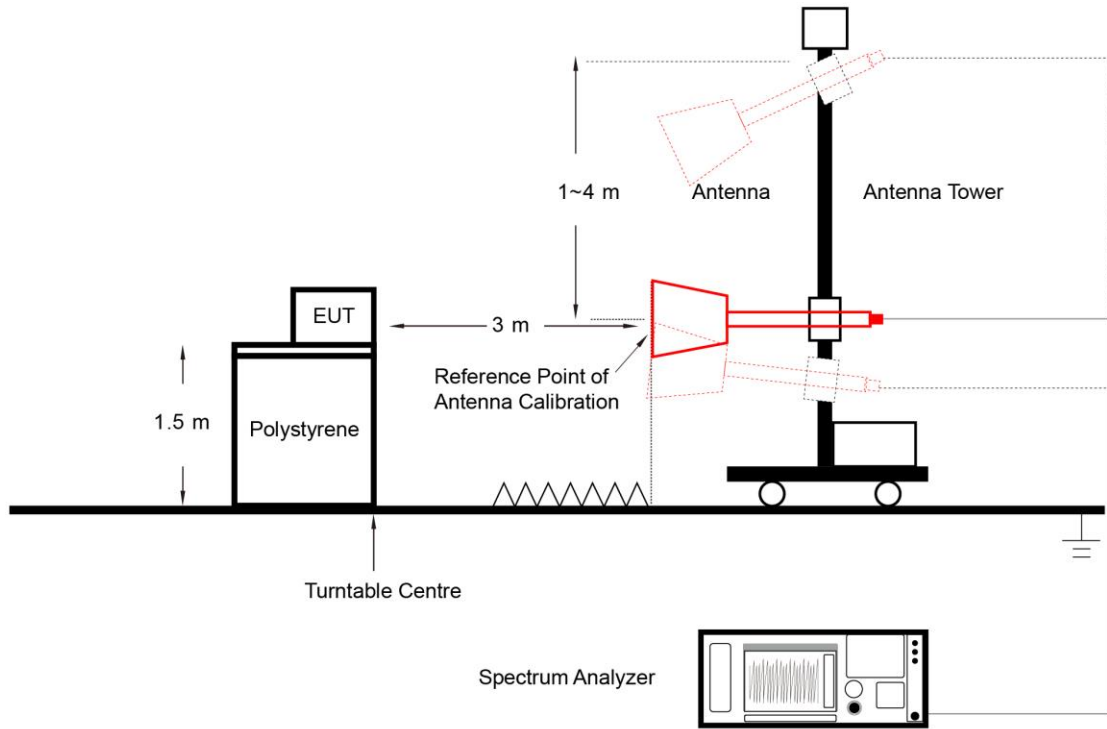
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

5.4. Test Setup

Above 1GHz Test Setup:



5.5. Test Result

Test Site	WZ-AC1	Test Engineer	Dick Shen
Test Date	2024-06-14	Test Configuration	Mode 1

Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Polarization
1573.0	41.8	-5.4	36.4	74.0	-37.6	Peak	Horizontal
3808.0	38.0	1.4	39.4	74.0	-34.6	Peak	Horizontal
4642.0	36.0	3.6	39.6	74.0	-34.4	Peak	Horizontal
1348.0	42.8	-5.6	37.2	74.0	-36.8	Peak	Vertical
3811.0	38.6	1.4	40.0	74.0	-34.0	Peak	Vertical
4615.0	36.7	3.4	40.1	74.0	-33.9	Peak	Vertical
7383.5	37.5	9.3	46.8	74.0	-27.2	Peak	Horizontal
11914.0	39.3	13.3	52.6	74.0	-21.4	Peak	Horizontal
11914.0	32.3	13.3	45.6	54.0	-8.4	Average	Horizontal
15543.5	43.3	12.4	55.7	74.0	-18.3	Peak	Horizontal
15543.5	27.2	12.4	39.6	54.0	-14.4	Average	Horizontal
8165.5	35.6	10.2	45.8	74.0	-28.2	Peak	Vertical
11922.5	35.9	13.5	49.4	74.0	-24.6	Peak	Vertical
15543.5	38.9	12.4	51.3	74.0	-22.7	Peak	Vertical
15543.5	32.3	12.4	44.7	54.0	-9.3	Average	Vertical

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Test Site	WZ-AC1	Test Engineer	Dick Shen
Test Date	2024-06-14	Test Configuration	Mode 2

Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Polarization
1327.0	42.7	-5.8	36.9	74.0	-37.1	Peak	Horizontal
3838.0	38.2	1.0	39.2	74.0	-34.8	Peak	Horizontal
1369.0	42.4	-5.6	36.8	74.0	-37.2	Peak	Vertical
4054.0	36.9	2.0	38.9	74.0	-35.1	Peak	Vertical
8335.5	35.9	9.8	45.7	74.0	-28.3	Peak	Horizontal
10962.0	34.4	15.2	49.6	74.0	-24.4	Peak	Horizontal
11922.5	38.7	13.5	52.2	74.0	-21.8	Peak	Horizontal
11922.5	33.6	13.5	47.1	54.0	-6.9	Average	Horizontal
8276.0	35.8	9.9	45.7	74.0	-28.3	Peak	Vertical
10885.5	35.9	15.2	51.1	74.0	-22.9	Peak	Vertical
10885.5	29.3	15.2	44.5	54.0	-9.5	Average	Vertical
11914.0	35.7	13.3	49.0	74.0	-25.0	Peak	Vertical

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Appendix A - Test Setup Photograph

Refer to "2311RSU031-UT" file.

Appendix B - EUT Photograph

Refer to "2311RSU031-UE" file.

————— The End —————