



RF Exposure Evaluation Declaration

FCC ID: Q9DAPIN0635
APPLICANT: Hewlett Packard Enterprise Company
Product: ACCESS POINT
Model No.: APIN0635

Trademark:  

FCC Classification: Digital Transmission System (DTS)
Unlicensed National Information Infrastructure (NII)
15E 6GHz Low Power Indoor Access Point (6ID)

Reviewed By:

Jame Yuan

Approved By:

Robin Wu



The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Taiwan) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2201RSU050-U2	Rev. 01	Initial report	2022-02-15	Valid

CONTENTS

Description	Page
1. General Information.....	4
1.1. Applicant.....	4
1.2. Manufacturer	4
1.3. Testing Facility	4
2. Product Information	5
2.1. Equipment Description	5
2.2. Description of Available Antennas	5
3. RF Exposure Evaluation	6
3.1. Test Limit	6
3.2. Test Result.....	7

1. General Information

1.1. Applicant

Hewlett Packard Enterprise Company
 3333 Scott Blvd, Santa Clara, CA 95054, USA

1.2. Manufacturer

Hewlett Packard Enterprise Company
 3333 Scott Blvd, Santa Clara, CA 95054, USA

1.3. Testing Facility

<input checked="" type="checkbox"/>	<p>Test Site – MRT Suzhou Laboratory</p> <p>Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China</p> <p>Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China</p> <p>Laboratory Accreditations</p> <p>A2LA: 3628.01 CNAS: L10551</p> <p>FCC: CN1166 ISED: CN0001</p> <p>VCCI: <input type="checkbox"/>R-20025 <input type="checkbox"/>G-20034 <input type="checkbox"/>C-20020 <input type="checkbox"/>T-20020</p> <p style="margin-left: 25px;"><input type="checkbox"/>R-20141 <input type="checkbox"/>G-20134 <input type="checkbox"/>C-20103 <input type="checkbox"/>T-20104</p>
<input type="checkbox"/>	<p>Test Site – MRT Shenzhen Laboratory</p> <p>Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China</p> <p>Laboratory Accreditations</p> <p>A2LA: 3628.02 CNAS: L10551</p> <p>FCC: CN1284 ISED: CN0105</p>
<input type="checkbox"/>	<p>Test Site – MRT Taiwan Laboratory</p> <p>Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)</p> <p>Laboratory Accreditations</p> <p>TAF: L3261-190725</p> <p>FCC: 291082, TW3261 ISED: TW3261</p>

2. Product Information

2.1. Equipment Description

Product Name	ACCESS POINT
Model No.	APIN0635
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	v5.0 single mode, BLE only
Zigbee Specification	802.15.4
GNSS Specification	GPS, GLONASS, Galileo
Operating Temperature	0 ~ 50 °C
Power Type	AC Adapter 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.	

2.2. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	Max Peak Gain (dBi)	CDD Directional Gain (dBi)		BF Directional Gain (dBi)
			For Power	For PSD	
Wi-Fi Internal Antenna (2*2 MIMO)					
PIFA	2.4 ~ 2.5	2.90	2.90	5.91	5.91
	5.15 ~ 5.9	4.90	4.90	7.91	7.91
	5.9 ~ 7.2	4.30	4.30	4.30	4.30
Bluetooth / ZigBee Internal Antenna					
PIFA	2.4 ~ 2.5	3.0			

Note:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.
2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac/ax, not include 802.11a/b/g. Directional gain = $G_{ANT} + BF$ Gain. For beamforming operation, Aruba OS automatically backs power down based on a $10\log(N)$ factor based on CDD power.
3. All antenna information is from antenna specification provided by the manufacturer.

3. RF Exposure Evaluation

3.1. Test Limit

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd is the limit of MPE, 1mW/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.

3.2. Test Result

Product	ACCESS POINT
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Max Conducted Power (dBm)	Antenna Gain (dBi)	Max EIRP (dBm)
Bluetooth-LE	2402 ~ 2480	8.0	3.0	11.0
ZigBee	2405 ~ 2480	8.0	3.0	11.0
802.11b/g/n/ax	2412 ~ 2462	22.0	2.9	24.9
802.11a/n/ac/ax	5180 ~ 5320, 5500 ~ 5720, 5745 ~ 5825, 5845 ~ 5885	22.0	4.9	26.9
802.11ax	5955~7095	21.0	4.3	25.3

Note: Turn-up power from operation description was taken into account for above max conducted power.

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
Bluetooth-LE	2402 ~ 2480	11.0	0.0025	1
ZigBee	2405 ~ 2480	11.0	0.0025	1
802.11b/g/n/ax	2412 ~ 2462	24.9	0.0615	1
802.11a/n/ac/ax	5180 ~ 5320, 5500 ~ 5720, 5745 ~ 5825, 5845 ~ 5885	26.9	0.0974	1
802.11ax	5955~7095	25.3	0.0611	1

CONCLUSION:

WLAN 2.4GHz, WLAN 5GHz, WLAN 6GHz and Bluetooth-LE or ZigBee can transmit simultaneously.

The max Power Density at R (20 cm) = $0.0025\text{mW/cm}^2 + 0.0615\text{mW/cm}^2 + 0.0974\text{mW/cm}^2 + 0.0611\text{mW/cm}^2 = 0.2226\text{mW/cm}^2 < 1\text{mW/cm}^2$.

Therefore, the Min Compliance Distance is 20cm.

————— The End —————