

Company: Hewlett Packard Enterprise

MPE Evaluation of: APINH303

To: FCC CFR 47 Chapter 1 Subpart §1.1310

Report No.: HWPD85-MPE All Bands Rev A

**MPE TEST REPORT**



# MPE TEST REPORT

FROM



MPE Evaluation of: Hewlett Packard Enterprise APINH303

To: FCC CFR 47 Chapter 1 Subpart §1.1310

Test Report Serial No.: HWPD85-MPE All Bands Rev A

This report supersedes: NONE

Applicant: Hewlett Packard Enterprise  
8000 Foothills Blvd  
Roseville, California 95747  
USA

Product Function: 802.11 a/b/g/n/ac Wireless Access Point

Issue Date: 27<sup>th</sup> March 2017

## This Test Report is Issued Under the Authority of:

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## 1. MAXIMUM PERMISSABLE EXPOSURE

### Calculations for Maximum Permissible Exposure Levels

Power Density =  $P_d$  (mW/cm<sup>2</sup>) = EIRP/(4\*π\*d<sup>2</sup>)

EIRP = P \* G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = 10 ^ (G (dBi)/10)

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm<sup>2</sup>

These calculations represent worst case in terms of the exposure levels.

Freq. Band (MHz)	Total Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density @ 20cm	Power Density Limit (mW/cm <sup>2</sup> )	Calculated Safe Distance @ 1mW/cm <sup>2</sup>	Minimum Separation Distance (cm)
5150.0 - 5250.0	7.6	5.75	16.78	47.64	0.055	1.00	4.67	20.00
5250.0 - 5350.0	7.6	5.75	19.40	87.10	0.100	1.00	6.32	20.00
5725.0 - 5850.0	7.6	5.75	21.38	137.40	0.157	1.00	7.93	20.00
5470.0 - 5725.0	7.6	5.75	20.16	103.75	0.119	1.00	6.89	20.00
2400.0 - 2483.5	6.2	4.17	15.10	32.36	0.027	1.00	3.28	20.00
Total Gain (dBi) = Beamforming Gain + Antenna Gain								

Assessment for simultaneous operation:

Freq. Band (MHz)	Total Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm <sup>2</sup>	Power Density Limit (mW/cm <sup>2</sup> ) E <sub>ref</sub>	Power Density (mW/cm <sup>2</sup> ) @New Distance E <sub>i</sub>	Summation E <sub>i</sub> /E <sub>ref</sub>
5725.0 - 5850.0	7.6	5.75	21.38	137.40	20	1.00	0.157	0.157
2400.0 - 2483.5	6.2	4.17	15.10	32.36	20	1.00	0.027	0.027
<b>Total Evaluation:</b>								0.184

The Total Evaluation was calculated using the formula:

$$\sum_{i=1}^n \frac{E_i}{E_{ref}} \leq 1$$

Where

E<sub>i</sub>: calculated E-field Strength for transmitter

E<sub>ref</sub>: E-field strength related limit

**Note:** for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

### Specification

#### Maximum Permissible Exposure Limits

FCC §1.1310 Limit = 1mW / cm<sup>2</sup> from 1.310 Table 1

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