

Company: Aruba Networks, Inc.

Test of: APIN0214, APIN0215  
To: FCC CFR 47 Part 15 Subpart E 15.407

Report No.: ARUB206-2\_MPE Rev A

## MPE TEST REPORT



# MPE TEST REPORT



Test of: Aruba Networks, Inc. APIN0214, APIN0215

to

To: FCC CFR 47 Part 15 Subpart E 15.407

Test Report Serial No.: ARUB206-2\_MPE Rev A

This report supersedes: NONE

Applicant: Aruba Networks, Inc.  
1344 Crossman Ave.  
Sunnyvale, California 94089  
USA

Product Function: Wireless Access Point

Issue Date: 3<sup>rd</sup> May 2016

## **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>) =  $EIRP / (4 * \pi * d^2)$

$EIRP = P * G$

$P$  = Peak output power (mW)

$G$  = Antenna numeric gain (numeric)

$d$  = Separation distance (cm)

Numeric Gain =  $10^{(G \text{ (dBi)} / 10)}$

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

The calculations in the table below use the highest conducted power values together with the lowest antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

| Freq. Band (MHz) | Ant Gain (dBi) | Numeric Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Calculated Safe Distance @ 1mW/cm <sup>2</sup> | Calculated Power Density @ 20cm | Minimum Separation Distance (cm) |
|------------------|----------------|------------------------|-------------------------|------------------------|------------------------------------------------|---------------------------------|----------------------------------|
| 2400 – 2483.5    | 7.5            | 5.62                   | 23.32                   | 214.78                 | 9.80                                           | 0.31                            | 20.00                            |
| 5150.0 - 5250.0  | 2.00           | 1.58                   | 27.17                   | 521.19                 | 8.10                                           | 0.16                            | 20.00                            |
| 5725.0 - 5850.0  | 2.00           | 1.58                   | 27.58                   | 572.80                 | 8.49                                           | 0.18                            | 20.00                            |

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

### Assessment for simultaneous operation in 2.4 GHz and 5 GHz bands

The Aruba APIN0214, APIN0215 has two radio modules and can transmit simultaneously in the 2.4 GHz and 5 GHz bands. The following assessment is based on simultaneous operation in the 2.4 GHz and 5 GHz bands.

| Freq. Band (MHz)           | Antenna Gain (dBi) | Numeric Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Calculated Safe Distance @ 1mW/cm <sup>2</sup> Limit(cm) | Minimum Separation Distance (cm) |
|----------------------------|--------------------|------------------------|-------------------------|------------------------|----------------------------------------------------------|----------------------------------|
| 2400 – 2483.5              | 7.5                | 5.62                   | 23.32                   | 214.78                 | 9.80                                                     | 20.00                            |
| 5725.0 - 5850.0            | 2.00               | 1.58                   | 27.58                   | 572.80                 | 8.49                                                     | 20.00                            |
| <b>Combined EIRP Total</b> |                    |                        | 2112.1 mW/EIRP          |                        | 12.96                                                    | 20.0                             |



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**Specification**  
**Maximum Permissible Exposure Limits**

**FCC §1.1310** Limit =  $1\text{mW} / \text{cm}^2$  from 1.310 Table 1

**RSS-Gen §3.2** In addition to RSS-Gen, the requirements in Radio Standards Specification RSS-102 shall be met.

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