

RF Exposure Report

Report No.: SA170609C18

FCC ID: QXO-AP3915I

Test Model: AP3915i

Series Model: AP7632i

Received Date: Jun. 09, 2017

Test Date: Jun. 27 ~ Jul. 17, 2017

Issued Date: Jul. 28, 2017

Applicant: Extreme Networks, Inc.

Address: 6480 VIA DEL ORO SAN JOSE CA 95119 USA

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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Release Control Record

| Issue No. | Description | Date Issued |
|-------------|-------------------|---------------|
| SA170609C18 | Original release. | Jul. 28, 2017 |

1 Certificate of Conformity

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

Brand: Extreme Networks

Test Model: AP3915i

Series Model: AP7632i

Sample Status: Engineering sample

Applicant: Extreme Networks, Inc.

Test Date: Jun. 27 ~ Jul. 17, 2017

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Jul. 28, 2017
Celine Chou / Specialist

Approved by : Ken Liu , **Date:** Jul. 28, 2017
Ken Liu / Senior Manager

2 RF Exposure

2.1 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) |
|---|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| Limits For General Population / Uncontrolled Exposure | | | | |
| 300-1500 | ... | ... | F/1500 | 30 |
| 1500-100,000 | ... | ... | 1.0 | 30 |

F = Frequency in MHz

2.2 MPE Calculation Formula

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

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

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Conducted Power

| Function | Frequency Band (MHz) | Max Power (dBm) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) |
|----------|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| WLAN | CDD Mode | | | | | |
| | 2412-2462 | 25.47 | 7.21 | 20 | 0.369 | 1 |
| | 5180-5240 | 26.44 | 8.31 | 20 | 0.594 | 1 |
| | 5745-5825 | 25.64 | 8.31 | 20 | 0.494 | 1 |
| | Beamforming Mode | | | | | |
| | 2412-2462 | 22.17 | 7.21 | 20 | 0.172 | 1 |
| | 5180-5240 | 23.43 | 8.31 | 20 | 0.297 | 1 |
| | 5745-5825 | 22.56 | 8.31 | 20 | 0.243 | 1 |
| BT LE | 2402-2480 | 4.00 | 4.10 | 20 | 0.001 | 1 |
| Zigbee | 2405-2480 | 3.53 | 4.10 | 20 | 0.001 | 1 |

Note:

2.4GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N] = 7.21 \text{ dBi}$

5GHz: Directional gain = $5.3 \text{ dBi} + 10 \log(2) = 8.31 \text{ dBi}$

| Frequency Band | Max Power (dBm) | | | Total Power (dBm) | Power Limit (dBm) |
|----------------|-----------------|-------|--------|-------------------|-------------------|
| | WLAN | BT LE | Zigbee | | |
| 2.4GHz | 25.47 | 4.00 | - | 25.50 | 30 |
| 2.4GHz | 25.47 | - | 3.53 | 25.50 | 30 |

Conclusion:

2.4GHz & 5GHz & BT LE or 2.4GHz & 5GHz & Zigbee technology can transmit at same time.

BT LE and Zigbee cannot transmit simultaneously.

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

1. WALN 2.4GHz + WALN 5GHz + BT LE = $0.369 + 0.594 + 0.001 = 0.964$

2. WALN 2.4GHz + WALN 5GHz + Zigbee = $0.369 + 0.594 + 0.001 = 0.964$

Therefore the maximum calculations of above situations are less than the "1" limit.

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