RF Exposure Report

Report No.:	SA160407E10B
FCC ID:	WBV-AP550
Test Model:	AP550
Received Date:	Apr. 07, 2016
Test Date:	May 04 ~ Jun. 22, 2016
Issued Date:	Jun. 27, 2016
Applicant:	Aerohive Networks Inc.
Address:	1011 McCarthy Blvd, Milpitas, CA 95035, USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
SA160407E10B	Original release	Jun. 27, 2016

1 Certificate of Conformity

Product:	Access Point
Brand:	Aerohive
Test Model:	AP550
Sample Status:	Engineering sample
Applicant:	Aerohive Networks Inc.
Test Date:	May 04 ~ Jun. 22, 2016
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 (October 23, 2015) 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:** Jun. 27, 2016

Celine Chou / Specialist

Approved by : , **Date:** Jun. 27, 2016

May Chen / 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

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

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

2.3 Classification

The antenna of this product, under normal use condition, is at least 37cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Tune up Power

Frequency Band (MHz)	Max Tune up Power per chain (dBm)	Max total Tune up Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
Radio 1						
2412-2462	22.00	28.02	9.80	37	0.352	1
5180-5240	20.00	26.02	11.71	37	0.345	1
5745-5825	22.00	28.02	11.81	37	0.559	1
Radio 2						
5180-5240	20.00	26.02	11.40	37	0.321	1
5745-5825	22.00	28.02	11.70	37	0.545	1
Radio 3						
BT EDR	5.00	5.00	5.83	37	0.001	1
BT LE	9.00	9.00	5.83	37	0.002	1

Note:
Radio 1
2412-2462MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 9.80dBi
5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 11.71dBi
5745-5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 11.81dBi
Radio 2
5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 11.40dBi
5745-5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 11.70dBi
Radio 3
BT EDR/BT LE: Gain = 5.83dBi

CONCULSION:

Both of the Radio 1 & Radio 2 & Radio 3 can transmit simultaneously, but Radio 1 & Radio 2 will not simultaneously in the same sub-band, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Mode 1:

Radio 1 2.4G (2412-2462MHz) & Radio 2 5G (5745-5825MHz) & Radio 3 BT LE is 0.352/1 + 0.545/1 + 0.002/1 = 0.899, which is less than “1”.

Mode 2:

Radio 1 5G (5180-5240MHz) & Radio 2 5G (5745-5825MHz) & Radio 3 BT LE is 0.345/1 + 0.545/1 + 0.002/1 = 0.892, which is less than “1”.

Mode 3:

Radio 1 5G (5745-5825MHz) & Radio 2 5G (5180-5240MHz) & Radio 3 BT LE is 0.559/1 + 0.321/1 + 0.002/1 = 0.882, which is less than “1”.

This confirmed that the device comply with FCC 1.1310 MPE limit.

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