RF Exposure Evaluation Report

Equipment	: Access Point
Brand Name	: Aerohive
Model No.	: AP150W
FCC ID	: WBV-AP150W
Standard	: 47 CFR Part 2.1091
Applicant	: Aerohive Networks Inc. 1011 McCarthy Blvd, Milpitas, CA 95035
Manufacturer	: Aerohive Networks Inc. 1011 McCarthy Blvd, Milpitas, CA 95035

The product sample received on Jun. 13, 2017 and completely tested on Jul. 20, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with 47 CFR Part 2.1091 and pass the limit.

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA761315-01	Rev. 01	Initial issue of report	Oct. 02, 2017

1 General Description

1.1 EUT General Information

RF General Information			
Evaluation Mode	**Frequency Range (MHz)**	**Operating Frequency (MHz)**	**Modulation Type**
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5240 5260-5320 5500-5720 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Bluetooth	2400-2483.5	2402-2480	LE: DSSS (GFSK)

1.2 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FA761315

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Add Band 2 and Band 3 (5250~5350 MHz, 5470~5725 MHz) for this device	Do not have to retest assessed.

Note: RF Exposure Evaluation of 5GHz Band 1, 4 and 2.4GHz Band are based on original test report.

1.3 Testing Location

Testing Location			
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-327-0973	
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085	

2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

E (V/m) = $\frac{\sqrt{30 \times P \times G}}{d}$ Power Density: *Pd* (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

Pd = $\frac{30 \times P \times G}{377 \times d^2}$

2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	EIRP (W)	Distance (cm)	S (mW/cm^2)	S Limit (mW/cm^2)
2.4G;G1D	3.63	23.68	27.31	0.53827	20	0.10709	1.00000
5.2G;D1D	10.64	25.14	35.78	3.78443	20	0.75289	1.00000
5.3G;D1D	10.64	19.26	29.90	0.97724	20	0.19442	1.00000
5.6G;D1D	10.64	19.22	29.86	0.96828	20	0.19263	1.00000
5.8G;D1D	10.64	25.05	35.69	3.70681	20	0.73745	1.00000
2.4G;BT-LE	2.33	3.83	6.16	0.00413	20	0.00082	1.00000

Simultaneous Transmission Analysis Mode: WLAN 2.4GHz+WLAN 5GHz+Bluetooth

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	EIRP (W)	Distance (cm)	S (mW/cm^2)	S Limit (mW/cm^2)	Ratio (S/Limit)
2.4G;G1D	3.63	23.68	27.31	0.53827	20	0.10709	1.00000	0.10709
5.2G;D1D	10.64	25.14	35.78	3.78443	20	0.75289	1.00000	0.75289
2.4G;BT-LE	2.33	3.83	6.16	0.00413	20	0.00082	1.00000	0.00082
							Sum Ratio	0.8608
							Ratio Limit	1