FCC RF EXPOSURE REPORT

For

Outdoor Wireless LAN Access Point

MODEL NUMBER: AP8030DN

FCC ID: QISAP8030DN

REPORT NUMBER: 4788310840.1-5

ISSUE DATE: July 15, 2018

Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
	07/15/2018	Initial Issue	

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	HUAWEI TECHNOLOGIES CO., LTD.
Address:	Administration Building, Huawei Technologies Co., Ltd. Bantian, Longgang District, Shenzhen, P.R. China, 518129

Manufacturer Information

Company Name:	HUAWEI TECHNOLOGIES CO., LTD.
Address:	Administration Building, Huawei Technologies Co., Ltd. Bantian, Longgang District, Shenzhen, P.R. China, 518129

EUT Description

EUT Name:	Outdoor Wireless LAN Access Point
Model:	AP8030DN
Brand Name:	HUAWEI
Sample Status:	Normal
Sample ID:	1358586
Sample Received Date:	January 04, 2018
Date of Tested:	January 04, 2018~ July 15, 2018

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC 47CFR§2.1091	Complies

Tested By:

Miller Ma
Engineer Project Associate

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo

Laboratory Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4102.01)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1187)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules **IC(Company No.: 21320)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320. **VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B, the VCCI registration No. is C-20012 and T-20011

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

4. REQUIREMENT

LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

RF EXPOSURE LIMIT

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	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	($180/f^2$)*	30
30 -- 300	27.5	0.073	0.2	30
300 -- 1500	--	--	f/1500	30
1500 -- 100,000	--	--	1.0	30

CALCULATION METHOD

$S=PG/4\pi R^2$

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

CALCULATED RESULTS

For 1TX Mode

2.4GHz WIFI					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
2412~2462	21.0	125.89	0.088	1.0	Complies

5GHzWIFI (UNII-1)					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
5180~5240	9.5	8.91	0.006	1.0	Complies

5GHzWIFI (UNII-3)					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
5725~5825	24.5	281.24	0.198	1.0	Complies

For 2TX Mode

2.4GHz WIFI					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
2412~2462	21.0	125.89	0.177	1.0	Complies

5GHzWIFI (UNII-1)					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
5180~5240	6.5	4.47	0.006	1.0	Complies

5GHzWIFI (UNII-3)					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
5725~5825	21.5	141.25	0.198	1.0	Complies

For 3TX Mode

2.4GHz WIFI					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
2412~2462	19.5	89.13	0.188	1.0	Complies

5GHzWIFI (UNII-1)					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
5180~5240	4.7	2.95	0.007	1.0	Complies

5GHzWIFI (UNII-3)					
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	--
5725~5825	19.5	89.13	0.187	1.0	Complies

For 2.4GHz and 5GHz WIFI can be transmitted simultaneously

2.4GHz+5GHzWIFI (UNII-3)						
Frequency	Max Tune Up Power		Power Density	Power Density （Sum）	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	mW/cm^2	--
2412~2462	19.5	89.13	0.188	0.386	1.0	Complies
5725~5825	24.5	281.24	0.198			Complies

Note: 1. direction =Antenna Gain+10 log(N_{ANT}) where N_{ANT} is the number of outputs, G_{ANT} is the Antenna gain. π=3.141, Antenna Gain=11.5dBi, N_{ANT}=1 for 1TX Mode, N_{ANT}=2 for 2TX Mode, N_{ANT}=3 for 3TX
3. The minimum separation distance of the device is greater than 40cm.
4. Calculate by WORST-CASE mode.
5. Owing to the maximum Calculated Result is below the limit, so it deemed to comply with the basic restrictions.
6. Max Tune Up Power by manufacturer's declaration
7. 2.4GHz and 5GHz WIFI can be transmitted simultaneously.

END OF REPORT