

FCC RF EXPOSURE REPORT

For

Outdoor Wireless LAN Access Point

MODEL NUMBER: AP8030DN

FCC ID: QISAP8030DN

REPORT NUMBER: 4788310840.1-6

ISSUE DATE: July 22, 2018

Prepared for

HUAWEI TECHNOLOGIES CO., LTD.

Administration Building, Huawei Technologies Co., Ltd. Bantian, Longgang
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Prepared by

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Revision History

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

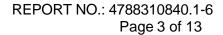




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1. ATTESTATION OF TEST RESULTS

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 22, 2018

APPLICABLE STANDARDS

STANDARD

TEST RESULTS

FCC 47CFR§2.1091

Complies

Tested By: Checked By:

Miller Ma

Engineer Project Associate

Miller Ma

Shawn Wen

Laboratory Leader

Shemmy les

Approved By:

Stephen Guo

Laboratory Manager



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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 Accreditation Certification Cert	inch. ubject on inch.
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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



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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/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 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/4πR²

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

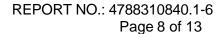
For 1TX Mode

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-2)							
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result		
MHz	dBm	mW	mW/cm ²	mW/cm ²			
5260~5320	18.5	70.79	0.050	1.0	Complies		

5GHzWIFI (UNII-2)							
Frequency	Max Tui	ne Up Power	Power Density	Power Density Limit	Test Result		
MHz	dBm	mW	mW/cm ²	mW/cm ²			
5500~5720	18.5	70.79	0.050	1.0	Complies		





5GHzWIFI (UNII-3) Power Power Test Frequency Max Tune Up Power Density Density Result Limit mW/cm² mW/cm² mW MHz dBm 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-2)							
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result		
MHz	dBm	mW	mW/cm ²	mW/cm ²			
5260~5320	15.5	35.48	0.050	1.0	Complies		

5GHzWIFI (UNII-2)							
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result		
MHz	dBm	mW	mW/cm ²	mW/cm ²	1		
5500~5720	15.5	35.48	0.050	1.0	Complies		



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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-2)						
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result	
MHz	dBm mW		mW/cm ²	mW/cm ²		
5260~5320	13.5	22.39	0.047	1.0	Complies	

5GHzWIFI (UNII-2)						
Frequency	Max Tune Up Power		Power Density	Power Density Limit	Test Result	
MHz	dBm mW		mW/cm ²	mW/cm ²		
5500~5720	13.5	22.39	0.047	1.0	Complies	



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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	



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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	0.206	1.0	Complies	
5725~5825	24.5	281.24	0.198	0.386	1.0	Complies	

Note: 1. direction =Antenna Gain+10 log(Nant) where Nant is the number of outputs, Gant is the Antenna gain. π =3.141, Antenna Gain=11.5dBi, Nant=1 for 1TX Mode, Nant=2 for 2TX Mode, Nant=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