

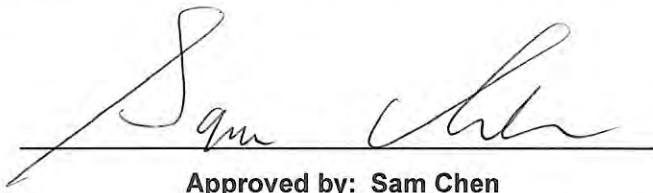


# RADIO EXPOSURE TEST REPORT

**FCC ID** : QXO-AP5010U  
**Equipment** : Access Point  
**Brand Name** : Extreme Networks  
**Model Name** : AP5010U  
**Applicant** : Extreme Networks, Inc.  
2121 RDU Center Drive Morrisville North Carolina  
United States 27560  
**Manufacturer** : Extreme Networks, Inc.  
2121 RDU Center Drive Morrisville North Carolina  
United States 27560  
**Standard** : 47 CFR Part 2.1091

The product was received on Dec. 03, 2021, and testing was started from Dec. 11, 2021 and completed on May 21, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

**Sporton International Inc. Hsinchu Laboratory**  
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### Photographs of EUT v01





### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

**Declaration of Conformity:**

1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to report "Measurement Uncertainty".

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: **Sam Chen**

Report Producer: **Viola Huang**



# 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) VHT: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5250 5250-5320 5500-5720 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
6GHz WLAN	5925-7125	5955-7095	802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Bluetooth	2400-2483.5	2402-2480	LE: GFSK
IEEE802.15.4	2400-2483.5	2405-2480	O-QPSK
UWB	3100-10600	6489.6, 7987.2	BPSK



### 1.2 Antenna Information

Ant.	Port						Brand Name	Model Name	Antenna Type	Connector	Gain (dBi)
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)	WLAN 5GHz (Radio 2)	WLAN 6E (Radio 3)	WLAN 5GHz / WLAN 6GHz (Scanning Radio 1)	BT / IEEE802.15.4 (Radio 4)	UWB (Radio 5)					
1	3	3	-	-	-	-	WNC	95XEAJ15.30	PIFA	I-PEX	Note 1
2	1	1	-	-	-	-	WNC	95XEAJ15.31	PIFA	I-PEX	
3	2	2	-	-	-	-	WNC	95XEAJ15.32	PIFA	I-PEX	
4	4	4	-	-	-	-	WNC	95XEAJ15.33	PIFA	I-PEX	
5	-	-	2	-	-	-	WNC	95XEAJ15.34	PIFA	I-PEX	
6	-	-	1	-	-	-	WNC	95XEAJ15.35	PIFA	I-PEX	
7	-	-	4	-	-	-	WNC	95XEAJ15.36	PIFA	I-PEX	
8	-	-	3	-	-	-	WNC	95XEAJ15.37	PIFA	I-PEX	
9	-	-	-	1	-	-	WNC	95XEAJ15.38	PIFA	I-PEX	
10	-	-	-	2	-	-	WNC	95XEAJ15.39	PIFA	I-PEX	
11	-	-	-	-	1	-	WNC	95XEAJ15.40	PIFA	I-PEX	
12	-	-	-	-	-	1	WNC	95XEAJ15.41	PIFA	I-PEX	

Note 1:

Ant.	Antenna Gain (dBi)									
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)	WLAN 5GHz (Radio 2)				WLAN 6E (Radio 3)	WLAN 5GHz (Scanning Radio 1)	WLAN 6GHz (Scanning Radio 1)	BT / IEEE802.15.4 (Radio 4)	UWB (Radio 5)
		UNII 1	UNII 2A	UNII 2C	UNII 3					
1	2.12	2.98	2.63	2.13	2.48	-	-	-	-	-
2	2.97	2.59	2.78	1.18	1.38	-	-	-	-	-
3	3.07	3.23	3.25	2.01	1.61	-	-	-	-	-
4	2.73	2.52	2.93	1.67	1.64	-	-	-	-	-
5	-	-	-	-	-	5.2	-	-	-	-
6	-	-	-	-	-	5.2	-	-	-	-
7	-	-	-	-	-	5.2	-	-	-	-
8	-	-	-	-	-	5.2	-	-	-	-
9	-	-	-	-	-	-	5.9	6.0	-	-
10	-	-	-	-	-	-	5.9	6.0	-	-
11	-	-	-	-	-	-	-	-	4.2	-
12	-	-	-	-	-	-	-	-	-	4.7



Ant.	Directional Gain (dBi)									
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)		WLAN 5GHz (Radio 2)							
			UNII 1		UNII 2A		UNII 2C		UNII 3	
	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S
2	5.57	2.58	4.98	2.07	4.99	2.08	3.67	0.78	3.86	0.88
3										

Ant.	Directional Gain (dBi)														
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)			WLAN 5GHz (Radio 2)											
				UNII 1			UNII 2A			UNII 2C			UNII 3		
	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S
1	7.68	4.68	1.72	6.37	3.37	0.60	6.09	3.25	0.35	6.00	3.00	0.08	6.27	3.27	0.29
2															
3															
4															

Note 2: The EUT has twelve antennas.

Note 3: The above information (except gain of Radio 1 2.4GHz, Scanning Radio 1 2.4GHz, Radio 2) was declared by manufacturer.

Note 4: Radio 1 2.4GHz, Scanning Radio 1 2.4GHz, Radio 2: Maximum Directional Gain following KDB662911 D03.

The antenna report is provided in the operational description for this application.

Note 5: Scanning Radio 1 5GHz: Maximum Directional Gain following KDB662911 D01.



Note 6: Scanning Radio 1 5GHz: Directional gain information.

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4	$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{ANT}} E_{j,k} \right\}^2}{N_{ANT}} \right]$

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{ANT}} E_{j,k} \right\}^2}{N_{ANT}} \right]$$

$$NSS1(g1,1) = 10^{G1/20} ; NSS1(g1,2) = 10^{G2/20} ; NSS1(g1,2) = 10^{G3/20} ; NSS1(g1,2) = 10^{G4/20}$$

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2 / N_{ANT}] => 10$$

$$\log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / N_{ANT}]$$

Where ;

$$G1 = 5.9 ; G2 = 5.9$$

5 GHz U-NII-1 DG = 8.91 dBi

5 GHz U-NII-2A DG = 8.91 dBi

5 GHz U-NII-2C DG = 8.91 dBi

5 GHz U-NII-3 DG = 8.91 dBi





**For Radio 1**

**For 2.4GHz:**

**For IEEE 802.11b/g/n/VHT/ax mode (1TX/4RX):**

Only Port 1 can be use as transmitting antenna.

Port 1, Port 2 could transmit simultaneously.

Port 1, Port 2, Port 3, Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3, Port 4 could receive simultaneously.

**For IEEE 802.11b/g/n/VHT/ax mode (2TX/4RX):**

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

Port 1, Port 2, Port 3, Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3, Port 4 could receive simultaneously.

**For IEEE 802.11b/g/n/VHT/ax mode (4TX/4RX):**

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For Scanning Radio 1**

**For 2.4GHz:**

**For IEEE 802.11b/g/n/VHT/ax mode (4TX/4RX):**

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For 5GHz UNII 1~3:**

**For IEEE 802.11a/n/ac/ax mode (2TX/2RX):**

Port 1, Port 2 can be used as transmitting/receiving antenna.

Port 1, Port 2 could transmit/receive simultaneously.

**For 6GHz UNII 5~8:**

**For IEEE 802.11ax mode (2TX/2RX):**

Port 1, Port 2 can be used as transmitting/receiving antenna.

Port 1, Port 2 could transmit/receive simultaneously.

**For Radio 2**

**For 5GHz UNII 1~3:**

**For IEEE 802.11a/n/ac/ax mode (1TX/4RX):**

Only Port 1 can be use as transmitting antenna.

Port 1, Port 2, Port 3, Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3, Port 4 could receive simultaneously.



**For IEEE 802.11a/n/ac/ax mode (2TX/4RX):**

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

Port 1, Port 2, Port 3, Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3, Port 4 could receive simultaneously.

**For IEEE 802.11a/n/ac/ax mode (4TX/4RX):**

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For Radio 3**

**For 6GHz UNII 5~8:**

**For IEEE 802.11ax mode (1TX/4RX):**

Only Port 1 can be use as transmitting antenna.

Port 1, Port 2, Port 3, Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3, Port 4 could receive simultaneously.

**For IEEE 802.11ax mode (2TX/4RX):**

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

Port 1, Port 2, Port 3, Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3, Port 4 could receive simultaneously.

**For IEEE 802.11ax mode (4TX/4RX):**

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**For Radio 4**

**Bluetooth / IEEE802.15.4 (1TX):**

Only Port 1 can be used as transmitting antenna.

**For Radio 5**

**UWB (1TX/1RX):**

Only Port 1 can be used as transmitting/receiving antenna.



1.3 Table for EUT support function

Function
AP
Bridge
Mesh

Note: The above information was declared by manufacturer.

1.4 Table for Radio function

Radio (R)	WLAN 2.4GHz	5GHz UNII 1~3	Scanning radio (WLAN 2.4GHz 4TX / 5GHz UNII 1~3 2TX/ 6E UNII 5~8 2TX)	6E (UNII 5~8)	Bluetooth / IEEE802.15.4	UWB
R1	V (AP, Bridge, Mesh)	-	V (2.4GHz: AP, Bridge, Mesh/5GHz, 6E: AP)	-	-	-
R2	-	V AP for UNII 1~3 Bridge, Mesh for UNII 1, 3	-	-	-	-
R3	-	-	-	V (AP)	-	-
R4	-	-	-	-	V	-
R5	-	-	-	-	-	V

Note: The above information was declared by manufacturer.

1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FA1N2902

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

Modifications	Performance Checking
1. Add UNII 2A and UNII 2C (5250~5350MHz and 5470~5725MHz) for this device. 2. Add 160MHz for Radio 2.	RF Exposure

Note: RF Exposure Evaluation of 5GHz UNII 1, UNII 3 and 2.4GHz Band are based on original test report



### 1.6 Accessories

Accessories
Bracket*1

### 1.7 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2.1091
- ♦ KDB 447498 D04 Interim General RF Exposure Guidance v01

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ 47 CFR Part 1.1307
- ♦ 47 CFR Part 1.1310

### 1.8 Testing Location

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065      FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.



## 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/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<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/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	<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 45 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

**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 MPE Exemption

Option (A): 1.1307(b)(3)(i)(A): Available maximum time-averaged power is < 1 mW

Option (B): 1.1307(b)(3)(i)(B): Device operates between 300 MHz and 6 GHz and the maximum time-averaged power or effective radiated power (ERP), whichever is greater, <= Pth.

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

Option (C): 1.1307(b)(3)(i)(C): ERP is below a threshold calculated based on the distance R between the person and the antenna / radiating structure, where  $R > \lambda / 2 \pi$ .

Single RF Sources Subject to Routine Environmental Evaluation	
RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R <sup>2</sup> .
1.34-30	3,450 R <sup>2</sup> /f <sup>2</sup> .
30-300	3.83 R <sup>2</sup> .
300-1,500	0.0128 R <sup>2</sup> f.
1,500-100,000	19.2R <sup>2</sup> .

Note: R is in meters, f is in MHz.



## 2.4 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

For Radio 1 and Scanning Radio 1

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
2.4G;D1D-BF 4T1S	7.68	25.57	33.25	0.00	33.25	2.11349	45	0.08305	1.00000
5.2G;D1D 2T1S	5.90	24.27	30.17	0.50	30.67	1.16681	45	0.04585	1.00000
5.3G;D1D 2T2S	5.90	22.77	28.67	0.50	29.17	0.82604	45	0.03246	1.00000
5.6G;D1D 2T2S	5.90	23.54	29.44	0.50	29.94	0.98628	45	0.03876	1.00000
5.8G;D1D 2T2S	5.90	25.59	31.49	0.50	31.99	1.58125	45	0.06214	1.00000
6.2G;D1D 2T2S	-	-	26.35	0.50	26.85	0.48417	45	0.01903	1.00000
6.4G;D1D 2T2S	-	-	26.32	0.50	26.82	0.48084	45	0.01890	1.00000
6.7G;D1D 2T2S	-	-	26.41	0.50	26.91	0.49091	45	0.01929	1.00000
7.0G;D1D 2T2S	-	-	26.40	0.50	26.90	0.48978	45	0.01925	1.00000

For Radio 2

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
5.2G;D1D-BF 4T1S	6.37	26.44	32.81	0.50	33.31	2.14289	45	0.08421	1.00000
5.3G;D1D 4T1S	6.09	23.77	29.86	0.50	30.36	1.08643	45	0.04466	1.00000
5.6G;D1D 4T1S	6.00	23.89	29.89	0.50	30.39	1.09396	45	0.04496	1.00000
5.8G;D1D-BF 4T1S	6.27	28.78	35.05	0.00	35.05	3.19890	45	0.12571	1.00000

For Radio 3

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
6.2G;D1D 2T2S	-	-	27.56	0.50	28.06	0.63973	45	0.02514	1.00000
6.4G;D1D 1T1S	-	-	27.84	0.50	28.34	0.68234	45	0.02681	1.00000
6.7G;D1D 1T1S	-	-	29.06	0.00	29.06	0.80538	45	0.03165	1.00000
7.0G;D1D-BF 2T1S	-	-	26.27	0.50	26.77	0.47534	45	0.01868	1.00000



**For Radio 4**

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
2.4G;BT-LE	4.20	3.25	7.45	0.00	7.45	0.00556	45	0.00022	1.00000
802.15.4	4.20	3.28	7.48	0.00	7.48	0.00560	45	0.00022	1.00000

**For Radio 5**

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
UWB	-	-	10.92	0.50	11.42	0.01387	45	0.00054	1.00000

**For Radio 1 and Scanning Radio 1**

MPE Exemption Option C							
Frequency (MHz)	$\lambda/2\pi$ (m)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	MPE Exemption
2437	0.0196	0.45	33.25	31.10	1.288	3.888	Complies
5755	0.0083		31.99	29.84	0.964	3.888	Complies
6665	0.0072		26.91	24.76	0.299	3.888	Complies

**For Radio 2**

MPE Exemption Option C							
Frequency (MHz)	$\lambda/2\pi$ (m)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	MPE Exemption
5755	0.0083	0.45	35.05	32.90	1.950	3.888	Complies

**For Radio 3**

MPE Exemption Option C							
Frequency (MHz)	$\lambda/2\pi$ (m)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	MPE Exemption
6665	0.0072	0.45	29.06	26.91	0.491	3.888	Complies

**For Radio 4**

MPE Exemption Option C							
Frequency (MHz)	$\lambda/2\pi$ (m)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	MPE Exemption
2402	0.0199	0.45	7.45	5.30	0.003	3.888	Complies
2405	0.0198		7.48	5.33	0.003	3.888	Complies





**For Radio 5**

MPE Exemption Option C							
Frequency (MHz)	$\lambda/2\pi$ (m)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	MPE Exemption
7987.2	0.0060	0.45	11.42	9.27	0.0085	3.888	Complies

**Simultaneous Transmission Analysis**

**Mode 1: R1: (2.4GHz) + R2 + R3) + R4: (Bluetooth)**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
2437	0.45	33.25	31.10	1.288	3.888	0.96	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
2402		7.45	5.30	0.003	3.888		

**Mode 2: R1: (2.4GHz) + R2 + R3) + R4: (IEEE802.15.4)**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
2437	0.45	33.25	31.10	1.288	3.888	0.96	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
2405		7.48	5.33	0.003	3.888		

**Mode 3: R1: (2.4GHz) + R2 + R3) + R4: (UWB)**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
2437	0.45	33.25	31.10	1.288	3.888	0.96	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
7987.2		11.42	9.27	0.0085	3.888		



**Mode 4: Scanning radio 1: (5GHz UNII 1~UNII 3) + R2 + R3 + R4: (Bluetooth)**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
5755	0.45	31.49	29.34	0.859	3.888	0.85	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
2402		7.45	5.30	0.003	3.888		

**Mode 5: Scanning radio 1: (5GHz UNII 1~UNII 3) + R2 + R3 + R4: (IEEE802.15.4)**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
5755	0.45	31.49	29.34	0.859	3.888	0.85	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
2405		7.48	5.33	0.003	3.888		

**Mode 6: Scanning radio 1: (5GHz UNII 1~UNII 3) + R2 + R3 + R4: (R4: (UWB))**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
5755	0.45	31.49	29.34	0.859	3.888	0.85	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
7987.2		11.42	9.27	0.0085	3.888		

**Mode 7: Scanning radio 1: (6GHz UNII 5~UNII 8) + R2 + R3 + R4: (Bluetooth)**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
6665	0.45	26.91	24.76	0.299	3.888	0.71	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
2402		7.45	5.30	0.003	3.888		



**Mode 8: Scanning radio 1: (6GHz UNII 5~UNII 8) + R2 + R3 + R4: (IEEE802.15.4)**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
6665	0.45	26.91	24.76	0.299	3.888	0.71	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
2405		7.48	5.33	0.003	3.888		

**Mode 9: Scanning radio 1: (6GHz UNII 5~UNII 8) + R2 + R3 + R4: (R4: (UWB))**

Simultaneous Transmissions Option C							
Frequency (MHz)	R (m)	Tune-up EIRP (dBm)	Tune-up ERP (dBm)	Tune-up ERP (W)	ERP Threshold (W)	Simultaneous Transmissions	Simultaneous Transmissions Limit
6665	0.45	26.91	24.76	0.299	3.888	0.71	<= 1
5755		35.05	32.90	1.950	3.888		
6665		29.06	26.91	0.491	3.888		
7987.2		11.42	9.27	0.0085	3.888		

—————THE END—————