

# FCC RF Exposure Report

**FCC ID** : QXO-4200  
**Equipment** : Wireless 802.11 ac/a + b/g/n Access Point  
**Model No.** : WS-AP3805i, WS-AP3805e, WS-AP3801i,  
30912, 30913  
(refer to item 1.1.1 for more details)  
**Brand Name** : Extreme Networks  
**Applicant** : Extreme Networks, Inc.  
**Address** : 9 Northeastern Blvd., Salem, New Hampshire,  
United States, 03079  
**Standard** : 47 CFR FCC Part 2.1091  
**Received Date** : Jun. 13, 2014  
**Tested Date** : Jun. 13 ~ Oct. 23, 2014

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Approved & Reviewed by:

  
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Gary Chang / Manager



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## Release Record

Report No.	Version	Description	Issued Date
FA482702-04	Rev. 01	Initial issue	Mar. 25, 2016

# 1 General Description

## 1.1 Information

This report is issued as a duplicate report to the original ICC report no. FA482702. The modification is only concerned with adding multiple-listing models (30912 & 30913) for marketing purpose.

### 1.1.1 Product Details

The following models are provided to this EUT. (**New additional models are marked in boldface.**)

Brand Name	Model Name	Description	Product Name	Remarks
Extreme Networks	WS-AP3805i	---	Wireless 802.11 ac/a + b/g/n Access Point	Internal PIFA antenna
	30912	WS-AP3805i-FCC		
	30913	WS-AP3805-ROW		
	WS-AP3801i	---		Internal PIFA antenna
	WS-AP3805e	---		External Dipole antenna
Note: The AP3805i and AP3801i use identical hardware. The only difference is the AP3801i is software limited to prevent simultaneous operation in the 2.4 GHz and 5GHz bands.				

## 2 MPE EVALUATION OF MOBILE DEVICES

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

### 2.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm <sup>2</sup> )	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

### 2.2 MPE EVALUATION FORMULA

$$Pd = \frac{Pt}{4 * \pi * R^2}$$

Where

Pd= Power density in mW/cm<sup>2</sup>

Pt= EIRP in Mw

π= 3.1416

R= Measurement distance

## 2.3 MPE EVALUATION RESULTS

### MPE Evaluation of Single Transmission

Antenna	Frequency Range (MHz)	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
PIFA	2412~2462	26.53	3.52	20	0.201	1
	5180~5240	27.58	5.40	20	0.395	1
	5745~5825	25.94	5.68	20	0.289	1
Dipole	2412~2462	25.85	4.42	20	0.212	1
	5180~5240	28.15	3.18	20	0.270	1
	5745~5825	25.76	2.95	20	0.148	1
Directional Panel (model WS-AI-DQ04360)	2412~2462	23.71	4	20	0.117	1
	5180~5240	26.13	7	20	0.409	1
	5745~5825	25.76	7	20	0.376	1
Directional Panel (model WS-AI-DD05120)	2412~2462	23.24	5	20	0.133	1
	5180~5240	27.49	5	20	0.353	1
	5745~5825	27.53	5	20	0.356	1

### MPE Evaluation of Simultaneous Transmission

2.4 and 5GHz can transmit at the same time, MPE evaluation is as below formula

$PD1 / \text{Limit}1 + PD2 / \text{Limit} 2 + \dots < 1$ , PD = Power density

MPE Evaluation = Maximum MPE of 2.4GHz + Maximum MPE of 5 GHz

For PIFA antenna (Model: WS-AP3805i only) =  $0.201 / 1 + 0.395 / 1 = 0.596 < 1$

For Dipole antenna =  $0.212 / 1 + 0.270 / 1 = 0.482 < 1$

For Directional Panel antenna (model WS-AI-DQ04360) =  $0.117 / 1 + 0.409 / 1 = 0.526 < 1$

For Directional Panel antenna (model WS-AI-DD05120) =  $0.133 / 1 + 0.356 / 1 = 0.489 < 1$

### Conclusion

MPE evaluations of single and simultaneous transmission meet the requirement of standard.

### 3 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp, it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan Hsiang. Location map can be found on our website <http://www.icertifi.com.tw>.

#### **Linkou**

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin Kou  
District, New Taipei City, Taiwan,  
R.O.C.

#### **Kwei Shan**

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd  
St., Kwei Shan Hsiang, Tao Yuan  
Hsien 333, Taiwan, R.O.C.

#### **Kwei Shan Site II**

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd  
St., Kwei Shan Hsiang, Tao Yuan  
Hsien 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC\_Service@icertifi.com.tw

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