



# RF Exposure Evaluation Declaration

Product Name : Wireless Access Point

Model No. : AP305CX

FCC ID : QXO-AP305C

Applicant : Extreme Networks, Inc

Address : Extreme Networks, 6480 Via Del Oro / San  
Jose, CA 95119 U.S.A.

Date of Receipt : Oct. 14, 2020

Issued Date : Dec. 02, 2020

Report No. : 20A0241R-RF-US-P20V01

Report Version : V1.0

The test results presented in this report relate only to the object tested.

The measurement result is considered in conformance with the requirement if it is within the prescribed limit,

It is not necessary to account the uncertainty associated with the measurement result

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# Test Report Certification

Issued Date: Dec. 02, 2020

Report No.: 20A0241R-RF-US-P20V01



Product Name : Wireless Access Point  
Applicant : Extreme Networks, Inc  
Address : Extreme Networks, 6480 Via Del Oro / San Jose, CA  
95119 U.S.A.  
Manufacturer : Extreme Networks, Inc  
Address : Extreme Networks, 6480 Via Del Oro / San Jose, CA  
95119 U.S.A.  
Model No. : AP305CX  
Brand : Extreme Networks  
FCC ID : QXO-AP305C  
EUT Voltage : POE 48V  
Applicable Standard : KDB 447498D01V06  
FCC Part1.1310  
Test Result : Complied  
Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.  
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,  
215006, Jiangsu, China  
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098  
FCC Designation Number: CN1199

Documented By :



(Project Assistant: Kitty Li )

Reviewed By :



(Senior Engineer: Frank He )

Approved By :



( Engineer Supervisor: Jack Zhang )

## 1. RF Exposure Evaluation

### 1.1.Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 3.1416

R = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

## 1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

## 1.3. Test Result of RF Exposure Evaluation

Product	:	Wireless Access Point
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

## Antenna Information:

### 2.4GHz WiFi

#### ML-2452-PTA2M2-036:

Antenna Model No.	N/A								
Antenna Manufacturer	N/A								
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX		<input checked="" type="checkbox"/>	2*TX+2*RX		<input type="checkbox"/>	3*TX+3*RX	
Antenna Technology	<input checked="" type="checkbox"/>	SISO							
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology					
			<input type="checkbox"/>	Sectorized antenna systems					
			<input type="checkbox"/>	Cross-polarized antennas					
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers					
			<input checked="" type="checkbox"/>	Spatial Multiplexing					
			<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)					
Antenna Type	OMNI								
Categorization	Correlated								
Antenna Gain									
Antenna Technology			Ant Gain(Radio 0) (dBi)						
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant1	4					
		<input checked="" type="checkbox"/>	Ant2	4					
<input checked="" type="checkbox"/> CDD			4dBi for Power; 7.01dBi for PSD						
<input checked="" type="checkbox"/> Beam-forming			7.01dBi for Power; 7.01dBi for PSD						

**ML-2452-PTA4M4-036:**

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input checked="" type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna Technology	<input checked="" type="checkbox"/>	SISO			
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology	
			<input type="checkbox"/>	Sectorized antenna systems	
			<input type="checkbox"/>	Cross-polarized antennas	
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers	
			<input checked="" type="checkbox"/>	Spatial Multiplexing	
			<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)	
Antenna Type	OMNI				
Antenna Gain					
Antenna Technology	Ant Gain(Radio 0) (dBi)				
<input checked="" type="checkbox"/> SISO	<input checked="" type="checkbox"/> Ant1	5			
	<input checked="" type="checkbox"/> Ant2	5			
<input checked="" type="checkbox"/> CDD	5dBi for Power; 8.01dBi for PSD				
<input checked="" type="checkbox"/> Beam-forming	8.01dBi for Power; 8.01dBi for PSD				

**AI-DQ04360S:**

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input checked="" type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna Technology	<input checked="" type="checkbox"/>	SISO			
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology	
			<input type="checkbox"/>	Sectorized antenna systems	
			<input type="checkbox"/>	Cross-polarized antennas	
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers	
			<input checked="" type="checkbox"/>	Spatial Multiplexing	
			<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)	
Antenna Type	OMNI				
Categorization	Correlated				
Antenna Gain					
Antenna Technology	Ant Gain(Radio 0) (dBi)				
<input checked="" type="checkbox"/> SISO	<input checked="" type="checkbox"/>	Ant1	5.5		
	<input checked="" type="checkbox"/>	Ant2	5.5		
<input checked="" type="checkbox"/> CDD	5.5dBi for Power; 8.51dBi for PSD				
<input checked="" type="checkbox"/> Beam-forming	8.51dBi for Power; 8.51dBi for PSD				

**ML-2452-SEC6M4-036:**

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input checked="" type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna Technology	<input checked="" type="checkbox"/>	SISO			
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology	
			<input type="checkbox"/>	Sectorized antenna systems	
			<input type="checkbox"/>	Cross-polarized antennas	
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers	
			<input checked="" type="checkbox"/>	Spatial Multiplexing	
			<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)	
Antenna Type	Sector				
Categorization	Correlated				
Antenna Gain					
Antenna Technology		Ant Gain(Radio 0) (dBi)			
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant1	6.9	
		<input checked="" type="checkbox"/>	Ant2	6.9	
<input checked="" type="checkbox"/>	CDD		6.9dBi for Power; 9.91dBi for PSD		
<input checked="" type="checkbox"/>	Beam-forming		9.91dBi for Power; 9.91dBi for PSD		

**5GHz WiFi****ML-2452-PTA2M2-036:**

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input checked="" type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna Technology	<input checked="" type="checkbox"/>	SISO			
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology	
			<input type="checkbox"/>	Sectorized antenna systems	
			<input type="checkbox"/>	Cross-polarized antennas	
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers	
			<input checked="" type="checkbox"/>	Spatial Multiplexing	
			<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)	
Antenna Type	OMNI				
Categorization	Correlated				
Antenna Gain					
Antenna Technology			Ant Gain(Radio 0) (dBi)		
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant1	5	
		<input checked="" type="checkbox"/>	Ant2	5	
<input checked="" type="checkbox"/>	CDD		5dBi for Power; 8.01dBi for PSD		
<input checked="" type="checkbox"/>	Beam-forming		8.01dBi for Power; 8.01dBi for PSD		
Antenna Technology			Ant Gain(Radio 1) (dBi)		
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant3	5	
		<input checked="" type="checkbox"/>	Ant4	5	
<input checked="" type="checkbox"/>	CDD		5dBi for Power; 8.01dBi for PSD		
<input checked="" type="checkbox"/>	Beam-forming		8.01dBi for Power; 8.01dBi for PSD		



**ML-2452-PTA4M4-036:**

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input checked="" type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna Technology	<input checked="" type="checkbox"/>	SISO			
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology	
			<input type="checkbox"/>	Sectorized antenna systems	
			<input type="checkbox"/>	Cross-polarized antennas	
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers	
			<input checked="" type="checkbox"/>	Spatial Multiplexing	
			<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)	
Antenna Type	OMNI				
Categorization	Correlated				
Antenna Gain					
Antenna Technology		Ant Gain(Radio 0) (dBi)			
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant1	6.6	
		<input checked="" type="checkbox"/>	Ant2	6.6	
<input checked="" type="checkbox"/>	CDD	6.6dBi for Power; 9.61dBi for PSD			
<input checked="" type="checkbox"/>	Beam-forming	9.61dBi for Power; 9.61dBi for PSD			
Antenna Technology		Ant Gain(Radio 1) (dBi)			
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant3	6.6	
		<input checked="" type="checkbox"/>	Ant4	6.6	
<input checked="" type="checkbox"/>	CDD	6.6dBi for Power; 9.61dBi for PSD			
<input checked="" type="checkbox"/>	Beam-forming	9.61dBi for Power; 9.61dBi for PSD			

**AI-DQ04360S:**

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input checked="" type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna Technology	<input checked="" type="checkbox"/>	SISO			
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology	
			<input type="checkbox"/>	Sectorized antenna systems	
			<input type="checkbox"/>	Cross-polarized antennas	
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers	
			<input checked="" type="checkbox"/>	Spatial Multiplexing	
			<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)	
Antenna Type	OMNI				
Categorization	Correlated				
Antenna Gain					
Antenna Technology		Ant Gain(Radio 0) (dBi)			
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant1	6	
		<input checked="" type="checkbox"/>	Ant2	6	
<input checked="" type="checkbox"/>	CDD		6dBi for Power; 9.01dBi for PSD		
<input checked="" type="checkbox"/>	Beam-forming		9.01dBi for Power; 9.01dBi for PSD		
Antenna Technology		Ant Gain(Radio 1) (dBi)			
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant3	6	
		<input checked="" type="checkbox"/>	Ant4	6	
<input checked="" type="checkbox"/>	CDD		6dBi for Power; 9.01dBi for PSD		
<input checked="" type="checkbox"/>	Beam-forming		9.01dBi for Power; 9.01dBi for PSD		

**ML-2452-SEC6M4-036:**

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input checked="" type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna Technology	<input checked="" type="checkbox"/>	SISO			
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology	
			<input type="checkbox"/>	Sectorized antenna systems	
			<input type="checkbox"/>	Cross-polarized antennas	
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers	
			<input checked="" type="checkbox"/>	Spatial Multiplexing	
			<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)	
Antenna Type	Sector				
Categorization	Correlated				
Antenna Gain					
Antenna Technology		Ant Gain(Radio 0) (dBi)			
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant1	7.2	
		<input checked="" type="checkbox"/>	Ant2	7.2	
<input checked="" type="checkbox"/>	CDD		7.2dBi for Power; 7.2dBi for PSD		
<input checked="" type="checkbox"/>	Beam-forming		7.2dBi for Power; 7.2dBi for PSD		
Antenna Technology		Ant Gain(Radio 1) (dBi)			
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant3	7.2	
		<input checked="" type="checkbox"/>	Ant4	7.2	
<input checked="" type="checkbox"/>	CDD		7.2dBi for Power; 10.21dBi for PSD		
<input checked="" type="checkbox"/>	Beam-forming		10.21dBi for Power; 10.21dBi for PSD		

## Power Density

### Standalone modes:

#### AP305CX:

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20cm (mW/cm <sup>2</sup> )	Power Density Limit at R = 20 cm (mW/cm <sup>2</sup> )
802.11b/g/n/ac/ax	2400 ~ 2483.5	29.45	0.175	1.0
802.11a/n/ac/ax(Radio 0)	5150 ~ 5350	27.06	0.101	1.0
802.11a/n/ac/ax(Radio 1)	5150 ~ 5350 5470 ~ 5850	28.80	0.151	1.0
BLE	2400 ~ 2483.5	9.72	0.002	1.0

### Simultaneous transmission:

#### AP305CX:

Wireless Configure	Frequency Range (MHz)	Maximum EIRP (dBm)	Limit of Power Density S(mW/cm <sup>2</sup> )	Power Density S at R = 20 cm (mW/cm <sup>2</sup> )	Rate	Limit
WIFI(Radio 0)	5150 ~ 5350	27.06	1.0	0.101	0.252	1
WIFI(Radio 1)	5470 ~ 5850	28.32	1.0	0.151		

The EUT support simultaneously transmit with WIFI 2.4G+5G, WIFI 5G+WIFI 5G.

The worst combination should be shown in the report. The simultaneously safety distance is 20cm for installed for Wireless Access Point without any other radio equipment.

\_\_\_\_\_ The End \_\_\_\_\_