



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

		DEKRA
Product Name Applicant Address	: : :	Wireless Access Point Extreme Networks, Inc Extreme Networks, 6480 Via Del Oro / San Jose, CA 95119 U.S.A.
Manufacturer Address	:	Extreme Networks, Inc Extreme Networks, 6480 Via Del Oro / San Jose, CA 95119 U.S.A.
Model No. Brand FCC ID EUT Voltage Applicable Standard		AP305CX Extreme Networks QXO-AP305C POE 48V KDB 447498D01V06
Test Result Performed Location	:	FCC Part1.1310 Complied 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
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		(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)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Average Time (Minutes)						
(A) Limits for C	(A) Limits for Occupational/ Control Exposures									
300-1500			F/300	6						
1500-100,000			5	6						
(B) Limits for C	General Populatior	n/ Uncontrolled Ex	posures							
300-1500			F/1500	6						
1500-100,000			1	30						

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout^{*}G)/(4^{*}pi^{*}r^{2})$

Where

Pd = power density in mW/cm2

Pout = 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

Pd is the limit of MPE, 1 mW/cm2. 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 Manufactu	urer	N/A									
Antenna Delivery		\square	1*TX+1*R	X	\boxtimes	2*TX+2*RX		3*TX+3*RX			
Antenna Technolog	ду	\square	SISO				-				
					Basic	methodology					
					Secto	rized antenna sy	/stems	6			
		\boxtimes	MIMO		Cross	-polarized anter	nas				
					Unequ	ual antenna gain	ns, witł	n equal transmit powers			
				\square	Spatial Multiplexing						
				\square	Cyclic Delay Diversity (CDD)						
Antenna Type		OMNI									
Categorization		Correlated									
Antenna Gain											
Antonno Tochnolo	a) (Ant Gain(Radio 0)									
Antenna Technolog	gу	(dBi)									
	Ant1		4								
	Ant2					4					
	4dBi for Power; 7.01dBi for PSD										
Beam-forming	7.01dBi for Power; 7.01dBi for PSD										



ML-2452-PTA4M4-036:

Ante	enna Model No		N/A										
Ante	enna Manufactu	urer	N/A										
Ante	enna Delivery		□ 1*TX+1*RX □ 2*TX+2*RX □ 3*TX+3*RX										
Ante	enna Technolog	ду	\boxtimes	SISO									
						Basic	methodology						
						Secto	rized antenna	syste	ems				
			\boxtimes	MIMO		Cross	-polarized ant	enna	S				
						Unequal antenna gains, with equal transmit powers							
					\square	Spatial Multiplexing							
					\square	Cyclic Delay Diversity (CDD)							
Ante	enna Type		OMNI										
Ante	enna Gain												
Anata	nno Tochnolo	~~ (Ant Gain(Radio 0)										
Ante	enna Technolog	ду	(dBi)										
	0100	Ant1					5						
	SISO	Ant2					5						
\square	CDD	•	5dBi for Power; 8.01dBi for PSD										
\square	Beam-forming			8.01dBi for Power; 8.01dBi for PSD									



AI-DQ04360S:

Ante	enna Model N	0.	N/A										
Ante	enna Manufac	turer	N/A										
Ante	enna Delivery			1*TX+1*	RX	\square	2*TX+2*RX		3*TX+3*RX				
Ante	enna Technolo	ogy		SISO									
						Basic	methodology						
						Secto	rized antenna sy	/stems	3				
						Cross	-polarized anter	nas					
				MIMO		Unequal antenna gains, with equal transmit powers							
					\boxtimes	Spatial Multiplexing							
					\boxtimes	Cyclic Delay Diversity (CDD)							
Ante	enna Type		OMNI										
Cat	egorization		Correlated										
Ante	enna Gain												
			Ant Gain(Radio 0)										
Ante	enna Technolo	ogy	(dBi)										
		Ant1		5.5									
	SISO	Ant2					5.5						
\square	CDD	1 1			5.	5dBi fo	or Power; 8.51dl	Bi for I	PSD				
\boxtimes	Beam-forming	9		8.51dBi for Power; 8.51dBi for PSD									



ML-2452-SEC6M4-036:

Ante	enna Model N	0.	N/A									
Ante	enna Manufac	turer	N/A									
Ante	enna Delivery			1*TX+1*F	۶X	\boxtimes	2*TX+2*RX		3*TX+3*RX			
Ante	enna Technolo	ogy	\square	SISO								
						Basic	methodology					
						Secto	rized antenna sy	stems	3			
						Cross	-polarized anten	nas				
				MIMO		Unequal antenna gains, with equal transmit powers						
					\square	Spatial Multiplexing						
					\square	Cyclic Delay Diversity (CDD)						
Ante	enna Type		Sector									
Cat	egorization		Correlated									
Ante	enna Gain											
			Ant Gain(Radio 0)									
Anto	enna Technolo	ogy	(dBi)									
		Ant1					6.9					
	SISO	Ant2					6.9					
\square	CDD			6.9dBi for Power; 9.91dBi for PSD								
\square	Beam-forming	9		9.91dBi for Power; 9.91dBi for PSD								



5GHz WiFi ML-2452-PTA2M2-036:

Ante	enna Model N	0.		N/A									
Ante	enna Manufac	ture	r	N/A									
Ante	enna Delivery			\square	1*TX+1*F	RΧ	\boxtimes	2*TX-	+2*RX		3*TX+3*RX		
Ante	enna Technolo	ogy		\square	SISO								
							Basic methodology						
							Secto	rized a	ntenna sys	stems	6		
				\boxtimes	MIMO		Cross	-polariz	ed antenn	as			
							Uneq	ual ante	enna gains	, with	n equal transmit powers		
						\square	Spatia	al Multip	olexing				
						\square	Cyclic	: Delay	Diversity (CDD)		
Ante	enna Type			OM	INMC								
Cate	egorization			Correlated									
Ante	enna Gain												
A	anna Tachnal			Ant Gain(Radio 0)									
Ante	enna Technolo	Jgy		(dBi)									
		\square	Ant1	5									
	SISO	\square	Ant2	5									
\boxtimes	CDD					5	dBi fo	r Powe	r; 8.01dBi	for P	SD		
\boxtimes	Beam-forming	g		8.01dBi for Power; 8.01dBi for PSD									
				Ant Gain(Radio 1)									
Ante	enna Technolo	ogy		(dBi)									
Ant		Ant3						5					
	SISO	\square	Ant4						5				
\square	CDD	ı 1				5	dBi fo	r Powe	r; 8.01dBi	for P	SD		
\square	Beam-forming	q							ver; 8.01dE				



ML-2452-PTA4M4-036:

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



AI-DQ04360S:

Antenna Model No.				N/A									
Antenna Manufacturer				N/A									
Antenna Delivery				□ 1*TX+1*RX □ 2*TX+2*RX □ 3*TX+3*RX						3*TX+3*RX			
Antenna Technology			SISO										
							Basic methodology						
							Sectorized antenna systems						
				\boxtimes	MIMO		Cross-polarized antennas						
					MINO		Unequal antenna gains, with equal transmit powersSpatial Multiplexing						
						\square							
						\square	Cyclic Delay Diversity (CDD)						
Antenna Type					OMNI								
Cat	egorization			Correlated									
Antenna Gain													
Ant	Antenna Technology			Ant Gain(Radio 0)									
Am		Jgy		(dBi)									
	SISO	\boxtimes	Ant1		6								
	5150	\boxtimes	Ant2	6									
\boxtimes				6dBi for Power; 9.01dBi for PSD									
\square	Beam-forming	g		9.01dBi for Power; 9.01dBi for PSD									
Antenna Technology			Ant Gain(Radio 1)										
			(dBi)										
			Ant3	6									
	SISO	\boxtimes	Ant4						6				
			6dBi for Power; 9.01dBi for PSD										
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				⊠ 1*TX+1*RX ⊠ 2*TX+2*RX □ 3*TX+3*RX						3*TX+3*RX			
Antenna Technology			SISO										
							Basic methodology						
							Sectorized antenna systems						
					MIMO		Cross-polarized antennas						
					MIMO		Unequal antenna gains, with equal transmit power						
						\square	Spat						
						\square	Cycli	ic	Delay Div	versity (CDD)	
Ant	enna Type			Sector									
Cat	egorization			Correlated									
Antenna Gain													
			Ant Gain(Radio 0)										
Ant	Antenna Technology			(dBi)									
		\square	Ant1	7.2									
	SISO	\square	Ant2	7.2									
\boxtimes	CDD			7.2dBi for Power; 7.2dBi for PSD									
\boxtimes	Beam-forming	g		7.2dBi for Power; 7.2dBi for PSD									
Antenna Technology			Ant Gain(Radio 1)										
			(dBi)										
			Ant3	7.2									
	SISO	\boxtimes	Ant4	7.2									
			7.2dBi for Power; 10.21dBi for PSD										
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/cm2)	Power Density Limit at R = 20 cm (mW/cm2)
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/cm2)	Power Density S at R = 20 cm (mW/cm2)	Rate	Limit
WIFI(Radi o 0)	5150 ~ 5350	27.06	1.0	0.101	0.050	4
WIFI(Radi o 1)	5470 ~ 5850	28.32	1.0	0.151	0.252	1

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