



Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: W59XAP1230A

Project No. : 1403C122
Equipment : High Power Wireless 300N Commercial Grade Access Point
Model Name : XAP-1230
Applicant : Luxul Wireless
Address : 14203 Minuteman Dr, Suite 201, Draper, Utah, United States
Manufacturer : Luxul Wireless
Address : 14203 Minuteman Dr, Suite 201, Draper, Utah, United States

According: : FCC Guidelines for Human Exposure IEEE C92.76

Neutron Engineering Inc.

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MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the 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

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	LUXUL	Q5003	Dipole	N/A	5.28	TX/RX
2	LUXUL	Q5003	Dipole	N/A	5.28	TX/RX

Note: The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R).

Operating Mode TX Mode	1TX	2TX
802.11b	V (ANT 1 or ANT 2)	-
802.11g	V (ANT 1 or ANT 2)	-
802.11n(20MHz)	-	V (ANT 1 + ANT 2)
802.11n(40MHz)	-	V (ANT 1 + ANT 2)



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TEST RESULTS

EUT:	High Power Wireless 300N Commercial Grade Access Point	Model Name :	XAP-1230
Temperature:	25 °C	Relative Humidity:	55 %
Pressure:	AC 120V/60Hz		
Test Mode :	TX B Mode		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5.28	3.3729	20.95	124.4515	0.08355075	1	Complies
5.28	3.3729	20.96	124.7384	0.08374336	1	Complies
5.28	3.3729	21.17	130.9182	0.08789221	1	Complies

EUT:	High Power Wireless 300N Commercial Grade Access Point	Model Name :	XAP-1230
Temperature:	25 °C	Relative Humidity:	55 %
Pressure:	AC 120V/60Hz		
Test Mode :	TX G Mode		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5.28	3.3729	23.08	203.2357	0.13644272	1	Complies
5.28	3.3729	26.9	489.7788	0.32881405	1	Complies
5.28	3.3729	23.1	204.1738	0.13707251	1	Complies



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EUT:	High Power Wireless 300N Commercial Grade Access Point	Model Name :	XAP-1230
Temperature:	25 °C	Relative Humidity:	55 %
Pressure:	AC 120V/60Hz		
Test Mode :	TX N-20M Mode_Total		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5.28	3.3729	24.3	269.1535	0.18069676	1	Complies
5.28	3.3729	28.96	787.0458	0.52838487	1	Complies
5.28	3.3729	24.61	289.0680	0.19406641	1	Complies

EUT:	High Power Wireless 300N Commercial Grade Access Point	Model Name :	XAP-1230
Temperature:	25 °C	Relative Humidity:	55 %
Pressure:	AC 120V/60Hz		
Test Mode :	TX N-40M Mode_Total		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5.28	3.3729	23.73	236.0478	0.15847121	1	Complies
5.28	3.3729	28.86	769.1304	0.51635736	1	Complies
5.28	3.3729	23.76	237.6840	0.15956968	1	Complies

Note: The calculated distance is 20cm