



Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: PJZ67X8

Project No. : 1205C057
Equipment : (1)XDSL 4-Port 802.11N WiFi IAD;
(2)XDSL 4-Port 802.11N WiFi Gateway;
(3)XDSL Bonded 4-Port WiFi Gateway
(4)XDSL Bonded (17A) 4-Port WiFi Gateway
Model : (1)6748-W1-NA;
(2)6718-W1-NA;
(3)6728-W1-NA;
(4)6778-W1-NA
Applicant : Zhone Technologies, Inc.
Address : 7195 Oakport Street Oakland, CA 94621 USA
According: : **FCC Guidelines for Human Exposure IEEE C95.1**

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MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

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

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	Airgain	N2430GNS	Integral	N/A	5.0	
2	Airgain	N2430GNS	Integral	N/A	5.0	

TEST RESULTS

EUT:	XDSL 4-Port 802.11N WiFi IAD	Model Name :	6748-W1-NA
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B MODE /CH01, CH06, CH11		

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
5.0	3.1623	17.47	55.8470	0.035152	1	Complies
5.0	3.1623	18.12	64.8634	0.040827	1	Complies
5.0	3.1623	17.70	58.8844	0.037064	1	Complies



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Test Mode :	TX G MODE /CH01, CH06, CH11		

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
5.0	3.1623	23.54	225.9436	0.142217	1	Complies
5.0	3.1623	23.61	229.6149	0.144527	1	Complies
5.0	3.1623	23.59	228.5599	0.143863	1	Complies

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Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11--ANT 1		

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
5.0	3.1623	22.03	159.5879	0.100450	1	Complies
5.0	3.1623	22.34	171.3957	0.107882	1	Complies
5.0	3.1623	22.14	163.6817	0.103027	1	Complies

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Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11--ANT 2		

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
5.0	3.1623	22.24	167.4943	0.105427	1	Complies
5.0	3.1623	22.53	179.0606	0.112707	1	Complies
5.0	3.1623	22.35	171.7908	0.108131	1	Complies



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Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09--ANT 1		

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
5.0	3.1623	22.53	179.0606	0.112707	1	Complies
5.0	3.1623	22.41	174.1807	0.109635	1	Complies
5.0	3.1623	22.57	180.7174	0.113750	1	Complies

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Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09--ANT 2		

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
5.0	3.1623	22.70	186.2087	0.117206	1	Complies
5.0	3.1623	22.64	183.6538	0.115598	1	Complies
5.0	3.1623	22.75	188.3649	0.118563	1	Complies

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Temperature:	24 °C	Relative Humidity:	60 %
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Test Mode :	TX N-20M MODE /CH03, CH06, CH09 -- ANT 1+ ANT 2		

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
5.0	3.1623	24.01	251.7677	0.158471	1	Complies
5.0	3.1623	24.37	273.5269	0.172167	1	Complies
5.0	3.1623	24.33	271.0192	0.170589	1	Complies



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Test Mode :	TX N-40M MODE /CH03, CH06, CH09 -- ANT 1+ ANT 2		

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
5.0	3.1623	24.76	299.2265	0.188343	1	Complies
5.0	3.1623	24.91	309.7419	0.194962	1	Complies
5.0	3.1623	24.90	309.0295	0.194514	1	Complies