



**Neutron Engineering Inc.**

# **FCC RF EXPOSURE REPORT**

**FCC ID: YZK7904WBRAS-N2V2**

**Issued Date : Mar. 12, 2012**  
**Project No. : 1202C141**  
**Equipment : 4-Port ADSL/ADSL2+ Wireless Router**  
**Model Name : SMC7904WBRAS-N2 v2**  
**Applicant : Edgecore Networks Corporation.**  
**Address : No. 1, Creation Rd. III, Hsinchu Science Park,  
Hsinchu 30077, Taiwan, R.O.C.**  
**Manufacturer : Edgecore Networks Corporation.**  
**Address : No.289, Sinhu 3rd Rd., Neihu District Taipei  
City 114, Taiwan, R.O.C**  
**According: : FCC Guidelines for Human Exposure IEEE C95.1**

***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

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Gongjin	800000000040L	Dipole	R-SMA	5.62



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### Test Result:

EUT:	4-Port ADSL/ADSL2+ Wireless Router	Model Name :	SMC7904WBRAS-N2 V2
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 <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
5.62	3.6475	19.08	80.9096	0.05874222	1	Complies
5.62	3.6475	18.28	67.2977	0.04885965	1	Complies
5.62	3.6475	18.54	71.4496	0.05187408	1	Complies

EUT:	4-Port ADSL/ADSL2+ Wireless Router	Model Name :	SMC7904WBRAS-N2 V2
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
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 <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
5.62	3.6475	20.96	124.7384	0.09056291	1	Complies
5.62	3.6475	21.00	125.8925	0.09140088	1	Complies
5.62	3.6475	20.66	116.4126	0.08451823	1	Complies



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EUT:	4-Port ADSL/ADSL2+ Wireless Router	Model Name :	SMC7904WBRAS-N2 V2
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N MODE-20MHz /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
5.62	3.6475	20.79	119.9499	0.08708641	1	Complies
5.62	3.6475	21.20	131.8257	0.09570847	1	Complies
5.62	3.6475	20.75	118.8502	0.08628799	1	Complies

EUT:	4-Port ADSL/ADSL2+ Wireless Router	Model Name :	SMC7904WBRAS-N2 V2
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N MODE-40MHz /CH03, CH06, CH09		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
5.62	3.6475	18.76	75.1623	0.05456955	1	Complies
5.62	3.6475	19.12	81.6582	0.05928576	1	Complies
5.62	3.6475	19.06	80.5378	0.05847233	1	Complies