



Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: KA2IR605LB1

Project No. : 1303C144
Equipment : Wireless N 300 Cloud Router
Model : DIR-605L;DIR-905L
Applicant : D-LINK CORPORATION
Address : No. 289, Sinhu 3rd Rd., Neihu District, Taiwan

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:

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

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

Table for Filed Antenna

Group 1						
Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1		260-31069	Dipole	N/A	3.29	60mm
2		260-31068	Dipole	N/A	3.12	135mm

Group 2						
Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1		C037-511238-A (SSR-30090)	Dipole	N/A	5	60mm
2		C037-511237-A (SSR-30089)	Dipole	N/A	5	135mm

The Group 1 and Group 2 is the same type antenna, Group 2 is recorded as the worst case since which gain is higher than Group 1.

The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R). all transmit signals are completely uncorrelated, then,

Direction gain = G_{ANT}, that is Directional gain=5.

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 (ANT1 & ANT 2)
802.11n(40MHz)	-	V (ANT1 & ANT 2)



TEST RESULTS

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 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	3.1623	20.87	122.1800	0.07690425	1	Complies
5	3.1623	20.36	108.6426	0.06838335	1	Complies
5	3.1623	19.89	97.4990	0.06136919	1	Complies

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 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 ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.10	323.5937	0.20368093	1	Complies
5	3.1623	25.14	326.5878	0.20556557	1	Complies
5	3.1623	24.26	266.6859	0.16786122	1	Complies



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EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20MHz 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	3.1623	26.40	436.5158	0.27475801	1	Complies
5	3.1623	26.54	450.8167	0.28375947	1	Complies
5	3.1623	26.53	449.7799	0.28310684	1	Complies

EUT:	Wireless N 300 Cloud Router	Model Name :	DIR-605L
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40MHz MODE CH03/CH06/CH09		

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	3.1623	26.03	400.8667	0.25231924	1	Complies
5	3.1623	26.49	445.6562	0.28051131	1	Complies
5	3.1623	26.41	437.5221	0.27539140	1	Complies

Note: the calculation distance is 20cm