

RF Exposure Report

Report No.: SA150422E07

FCC ID: KA2IR868LC1

Test Model: DIR-868L, DAP-1750

Received Date: Apr. 22, 2015

Test Date: May 07, 2015

Issued Date: May 21, 2015

Applicant: D-Link Corporation

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Release Control Record

Issue No.	Description	Date Issued
SA150422E07	Original release.	May 21, 2015



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1 Certificate of Conformity

Product: Wireless AC1750 Dual Band Gigabit Cloud Router USB 3.0

Brand: D-Link

Test Model: DIR-868L, DAP-1750

Sample Status: ENGINEERING SAMPLE

Applicant: D-Link Corporation

Test Date: May 07, 2015

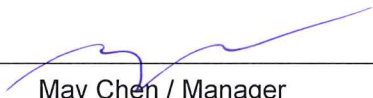
Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D03

IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : , **Date:** May 21, 2015
Lori Chung / Specialist

Approved by : , **Date:** May 21, 2015
May Chen / Manager

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

2.2 MPE Calculation 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

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.

So, this device is classified as **Mobile Device**.

3 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

Antenna No.	Transmitter Circuit	Brand	Model	Ant. Gain(dBi) <Including cable loss>	Frequency range (GHz to GHz)	Antenna Type	Connector Type	Cable Length (mm)
1	Chain (0)	Alpha	WRGAC35-ANT 1	2.5	2.4~2.4835	PCB	Ipx(MHF)	60
				2.5	5.15~5.85			
2	Chain (1)		WRGAC35-ANT 2	2.5	2.4~2.4835			120
				2.5	5.15~5.85			
3	Chain (2)		WRGAC35-ANT 3	2.5	2.4~2.4835			110
				2.5	5.15~5.85			

4 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	260.338	7.27	20	0.27623	1
5180-5240	414.695	7.27	20	0.44001	1
5745-5825	522.641	7.27	20	0.55454	1

NOTE:

2.4GHz: Directional gain = 2.5dBi + 10log(3) = 7.27dBi

5GHz: Directional gain = 2.5dBi + 10log(3) = 7.27dBi

Conclusion:

Both of the 2.4GHz and 5GHz can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is $0.27623 / 1 + 0.55454 / 1 = 0.831$, which is less than "1".

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