RF EXPOSURE REPORT

REPORT NO.: SA111102C24A

MODEL NO.: DIR-825, DIR-825/N

FCC ID: KA2IR825C1

RECEIVED: Nov. 16, 2011

TESTED: Nov. 16 ~ Dec. 21, 2011

ISSUED: Dec. 26, 2011

APPLICANT: D-Link Corporation

ADDRESS: 17595 Mt. Herrmann, Fountain Valley, CA 92708, U.S.A.

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	NA	Dec. 26, 2011

1. CERTIFICATION

PRODUCT:	Xtreme N Dual Band Gigabit Router
MODEL:	DIR-825, DIR-825/N
BRAND:	D-Link
APPLICANT:	D-Link Corporation
TESTED:	Nov. 16 ~ Dec. 21, 2011
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 2 (Section 2.1091)**
	FCC OET Bulletin 65, Supplement C (01-01)
	IEEE C95.1

The above equipment (Model: DIR-825) 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: Dec. 26, 2011
Pettie Chen / Specialist

APPROVED BY : _____ , DATE: Dec. 26, 2011
Gary Chang / Technical 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*r2)

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**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MODULATION MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	802.11b: 1TX	22.7	2	20	0.059	1
	802.11b: 2TX	19.5	5.01	20	0.056	1
	802.11g	27.0	5.01	20	0.316	1
	802.11n (20MHz)	26.6	2	20	0.144	1
	802.11n (40MHz)	25.5	2	20	0.112	1
5180-5240	802.11a	14.8	5.01	20	0.019	1
	802.11n (20MHz)	14.8	2	20	0.010	1
	802.11n (40MHz)	16.4	2	20	0.014	1
5745-5825	802.11a	28.6	5.01	20	0.457	1
	802.11n (20MHz)	28.9	2	20	0.245	1
	802.11n (40MHz)	28.8	2	20	0.239	1

NOTE:
802.11b: 2TX & 802.11g & 802.11a: Directional gain =2dBi + 10log(2)=5.01dBi

CONCULSION:

Both of the WLAN 2.4G & 5.0G can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. WLAN 2.4G + WLAN 5.0G = 0.316 + 0.457 = 0.773

Therefore, the maximum calculation of this situation is 0.773, which is less than the “1” limit.