RF Exposure Report

Report No.: SA160418E10

FCC ID: KA2CHG022A1

Test Model: DCH-G022

Received Date: Apr. 18, 2016

Test Date: May 11, 2016

Issued Date: Oct. 17, 2016

Applicant: D-Link Corporation

Address: No.289, Sinhu 3rd Rd., Neihu District, Taipei City 114, Taiwan, R.O.C.

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

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Release Control Record

Issue No.	Description	Date Issued
SA160418E10	Original release.	Oct. 17, 2016

1 Certificate of Conformity

Product:	mydlink Connected Home Hub , mydlink Home Connected Home Hub 2
Brand:	D-Link
Test Model:	DCH-G022
Sample Status:	ENGINEERING SAMPLE
Applicant:	D-Link Corporation
Test Date:	May 11, 2016
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1-1992

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:** Oct. 17, 2016

Claire Kuan / Specialist

Approved by : _____ , **Date:** Oct. 17, 2016

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/cm^2

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 Antenna Gain

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

Antenna No.	Ant. Gain (dBi)	Frequency range (GHz to GHz)	Antenna Type	Antenna Connector
1	2.8	2.4~2.4835	PCB	NA
	3	865~925	PCB	NA
2	3	2.4~2.4835	PCB	NA

3 Calculation Result

WLAN

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	579.47	5.91	20	0.44953	1

NOTE: Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$)^2 / 2] = 5.91dBi

Z-Wave

Frequency (MHz)	Field Strength of Fundamental (dBuv/m)	Pout EIRP (dBm)	Pout EIRP (mW)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
908.42	93.3	-1.93	0.641	20	0.00013	0.60561
908.4	93.2	-2.03	0.627	20	0.00012	0.6056
916	93.4	-1.83	0.656	20	0.00013	0.61066

Note: 1. Limit of Power Density =F/1500

Conclusion:

Both of the WLAN and Z-Wave 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

Therefore, the worst-case situation is 0.44953 / 1 + 0.00013 / 0.60561 = 0.44974, which is less than “1”.

Therefore the maximum calculations of above situations are less than the “1” limit.

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