

## RF Exposure Report

**Report No.:** SADLK-WTW-P20080511

**FCC ID:** KA2IS2650APA1

**Test Model:** DIS-2650AP

**Received Date:** Aug. 26, 2020

**Date of Evaluation:** Oct. 27, 2020

**Issued Date:** Oct. 30, 2020

**Applicant:** D-Link Corporation

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

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**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City  
33383, TAIWAN

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
SADLK-WTW-P20080511	Original Release	Oct. 30, 2020

## 1 Certificate of Conformity

**Product:** Wireless AC1200 Wave 2 Industrial indoor access point

**Brand:** D-Link

**Test Model:** DIS-2650AP

**Sample Status:** Engineering Sample

**Applicant:** D-Link Corporation

**Date of Evaluation:** Oct. 27, 2020

**Standards:** FCC Part 2 (Section 2.1091)

**References Test Guidance :** KDB 447498 D01 General RF Exposure Guidance v06  
IEEE C95.3 -2002

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 RF characteristics under the conditions specified in this report.

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Shelly Hsueh / Specialist

**Approved by :** Dylan Chiou , **Date:** Oct. 30, 2020  
Dylan Chiou / Senior Project Engineer

## 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 <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz ; \*Plane-wave equivalent power density

### 2.2 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

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

### CCD Mode:

Band	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN	2412-2462	19.73	4.11	20	0.048	1.00
	5180-5240	24.77	4.33	20	0.162	1.00
	5745-5825	25.65	5.74	20	0.274	1.00

#### Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 2.4GHz: Directional gain =  $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 4.11$  dBi  
 5180-5240 MHz: Directional gain =  $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 4.33$  dBi  
 5745-5825 MHz: Directional gain =  $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 5.74$  dBi

### Beamforming Mode:

Band	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN	2412-2462	19.72	7.12	20	0.096	1.00
	5180-5240	24.63	7.34	20	0.313	1.00
	5745-5825	25.65	8.75	20	0.548	1.00

#### Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 2.4GHz: Directional gain =  $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 7.12$  dBi  
 5180-5240 MHz: Directional gain =  $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 7.34$  dBi  
 5745-5825 MHz: Directional gain =  $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.75$  dBi

### Conclusion:

The formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

### CCD Mode:

$$WLAN\ 2.4GHz + WLAN\ 5GHz = 0.048/1 + 0.274/1 = 0.322$$

### Beamforming Mode:

$$WLAN\ 2.4GHz + WLAN\ 5GHz = 0.096/1 + 0.548/1 = 0.644$$

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

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