



RADIO TEST REPORT

Report No: STS2106125H02

Issued for

D-Link Corporation

14420 Myford Road Suite 100 Irvine California United States
92606

Product Name:	2K QHD Outdoor Wi-Fi Camera
Brand Name:	D-Link
Model Name:	DCS-8620LH
Series Model:	N/A
FCC ID:	KA2-CS8620LHA1
Test Standard:	FCC 47CFR §2.1091

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Test Report Certification

Applicant's Name..... : D-Link Corporation
 Address : 14420 Myford Road Suite 100 Irvine California United States 92606
Manufacturer's Name : Shenzhen Aoni Electronic Co.,Ltd
 Address : Building 5, Honghui Industrial Park, 2nd Road Liuxian, Baoan District, Shenzhen, P.R. China, 518101

Product Description

Product Name..... : 2K QHD Outdoor Wi-Fi Camera
 Brand Name : D-Link
 Model Name : DCS-8620LH
 Series Model..... : N/A

Standards..... : FCC 47CFR §2.1091

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Date of Test..... :

Date of receipt of test item : 18 June 2021
 Date (s) of performance of tests..... : 18 June 2021 ~ 12 July 2021
 Date of Issue..... : 12 July 2021
 Test Result..... : **Pass**

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

Authorized Signatory :

(Vita Li)





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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	12 July 2021	STS2106125H02	ALL	Initial Issue





1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	2K QHD Outdoor Wi-Fi Camera	
Brand Name	D-Link	
Model Name	DCS-8620LH	
Series Model	N/A	
Model Difference	N/A	
Product Description	The EUT is Wi-Fi Camera	
	Operation Frequency:	BLE: 2402~2480 MHz 2.4G WIFI: 802.11b/g/n 20: 2412~2462 MHz 802.11n(40MHz):2422~2452MHz 5G WIFI: 802.11a/n (20MHz): 5180~5240MHz 802.11n(40MHz):5190~5230MHz 802.11ac(VHT80): 5210MHz 802.11a/n (20MHz): 5260~5320MHz 802.11n(40MHz):5270~5310MHz 802.11ac(VHT80): 5290MHz 802.11a/n (20MHz): 5500~5700MHz 802.11n(40MHz):5510~5670MHz 802.11ac(VHT80): 5530~5610MHz
	Modulation Type:	BLE: GFSK 2.4G WIFI: 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 5G WIFI: 802.11a(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM
	Antenna gain:	BLE: 2dBi 2.4G/5G WIFI: ANT A: 2 dBi,ANT B: 2 dBi, MIMO A+B: 5.01 dBi,
	Antenna Designation:	FPC Antenna
Adapter	Input: 100-240V 50/60Hz Output:12.0V 1.0A 12.0W	
Hardware Version	A1	
Software Version	V1.0	



1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01





2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission 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 the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.



2.5 TEST RESULT

The worst case is as below:

Turn up

Mode	Detector	Turn up Power
DSSS(GFSK)	AV	-41±1dBm
2.4G WIFI(802.11n20)	AV	14±1dBm
5.2G WIFI(802.11n20)	AV	20±1dBm
5.3G WIFI(802.11ac80)	AV	18±1dBm
5.6G WIFI(802.11ac80)	AV	15±1dBm

ANT Gain (G)

BLE: 2dBi (gain of antenna in linear scale=1.585)

2.4G/5G WIFI:

ANT A: 2 dBi, ANT B: 2 dBi, (gain of antenna in linear scale=1.585)

MIMO A+B: 5.01 dBi, (gain of antenna in linear scale=3.170)

Protocol	Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain(gain of antenna in linear scale)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
DSSS(GFSK)	-40	0.0001	1.585	0.00000003	1	Pass
2.4G WIFI(802.11n20)	15	31.623	1.585	0.0099	1	Pass
5.2G WIFI(802.11n20)	21	125.893	1.585	0.03969	1	Pass
5.3G WIFI(802.11ac80)	19	79.43282	1.585	0.02505	1	Pass
5.6G WIFI(802.11ac80)	16	39.81072	1.585	0.01255	1	Pass

The Bluetooth and WLAN can't simultaneous transmission at the same time.

※※※※END OF THE REPORT※※※※