FCC Radio Test Report

FCC ID: KA2IRLX1870A2

This report concerns: Original Grant

Project No.	:	2005H044A
Equipment	:	1) AX1800 Whole Home Mesh Wi-Fi 6 Router 2) AX1800 Whole Home Mesh Wi-Fi 6 System
Brand Name	:	D-Link
Test Model	:	COVR-X1870
Series Model	:	COVR-X1872, COVR-X1873, DIR-LX1870, DIR-LX1872, DIR-LX1873
Applicant	:	D-Link Corporation
Address	:	17595 Mt. Herrmann, Fountain Valley, California United State 92708
Manufacturer	:	D-Link Corporation
Address	:	17595 Mt. Herrmann, Fountain Valley, California United State 92708
Date of Receipt	:	Jul. 31, 2020
Date of Test	:	Jul. 31, 2020~Sep. 4, 2020
Issued Date	:	Sep.28, 2020
Report Version	:	R00
Test Sample	:	Engineering Sample No.: SH2020052550 for EUT; SH2020052550-1/ SH20200609295-2 for adapter.
Standard(s)	:	FCC Part15, Subpart C (15.247) ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Allen Wei

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Ryan. Wang

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Certificate # 5123.03

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, A2LA, or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.
Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	In this case, 2.4G project was updated the output power of 802.11n (HT40) 2452 MHz and U-NII2A,U-NII2C was added based on the original case (FCC ID: KA2IRLX1870A1). These changes do not affect the data in this report,.Please refer to the regular report (BTL-FCCP-4-2005H044) for all the test results	Sep.28, 2020

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart C (15.247)				
Standard(s) Section	**Test Item**	**Test Result**	**Judgment**	**Remark**
15.207	AC Power Line Conducted Emissions	APPENDIX A	PASS	------
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	------
15.247(a)(2)	Bandwidth	APPENDIX E	PASS	------
15.247(b)(3)	Maximum Output Power	APPENDIX F	PASS	------
15.247(d)	Conducted Spurious Emissions	APPENDIX G	PASS	------
15.247(e)	Power Spectral Density	APPENDIX H	PASS	------
15.203	Antenna Requirement	------	PASS	Note(2)

Note:

(1) “N/A” denotes test is not applicable in this test report.

(2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210,China
BTL's Test Firm Registration Number for FCC: 476765
BTL's Designation Number for FCC: CN1241

1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
SH-CB01	CISPR	9 KHz~30 MHz	V	3.79
		9 KHz~30 MHz	H	3.57
		30 MHz~200 MHz	V	4.04
		30 MHz~200 MHz	H	3.76
		200 MHz~1,000 MHz	V	4.24
		200 MHz~1,000 MHz	H	3.84
		1 GHz~18 GHz	V	4.46
		1 GHz~18 GHz	H	4.40
		18 GHz~40 GHz	V	3.95
		18 GHz~40 GHz	H	3.95

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	23°C	56%	AC 120V/60Hz	Forest Li
Radiated Emissions-30 MHz to 1GHz	24°C	58%	AC 120V/60Hz	Forest Li
Radiated Emissions-Above 1000 MHz	24°C	58%	AC 120V/60Hz	Forest Li
Bandwidth	24°C	56%	AC 120V/60Hz	Forest Li
Maximum output power	24°C	56%	AC 120V/60Hz	Forest Li
Conducted Spurious Emissions	24°C	56%	AC 120V/60Hz	Forest Li
Power Spectral Density	24°C	56%	AC 120V/60Hz	Forest Li

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	1) AX1800 Whole Home Mesh Wi-Fi 6 Router 2) AX1800 Whole Home Mesh Wi-Fi 6 System
Brand Name	D-Link
Test Model	COVR-X1870
Series Model	COVR-X1872, COVR-X1873, DIR-LX1870, DIR-LX1872, DIR-LX1873
Model Difference(s)	COVR-X1870 /DIR-LX1870：Single Pack； COVR-X1872/DIR-LX1872: double Pack; DIR-LX1873 /COVR-X1873： treble Pack All versions of the Models are electrically equal except for the model name and number of packages.
Software Version	1
Hardware Version	A1
Power Source	DC voltage supplied from AC/DC adapter. 1# Brand/Model: Gongjin/S12A12-120A100-CJ 2# Brand/Model: Gongjin/WB-12G12R
Power Rating	1# I/P: 100-240V~50/60Hz max 0.5A O/P:12V⎓1A 2# I/P: 100-240V~50-60Hz 0.3A Max. O/P:12.0V⎓1.0A 12.0W
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	OFDM,OFDMA
Bit Rate of Transmitter	Up to 574Mbps
Maximum Avg Output Power Non-Beamforming	IEEE 802.11ax (HE20): 25.88 dBm (0.3873 W) IEEE 802.11ax (HE40): 23.17 dBm (0.2075 W)
Maximum Avg Output Power Beamforming	IEEE 802.11ax (HE20): 25.65 dBm (0.3673 W) IEEE 802.11ax (HE40): 22.79 dBm (0.1901 W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. Channel List:

CH01 - CH11 for IEEE 802.11ax (HE20) CH03 - CH09 for IEEE 802.11ax (HE40)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. RU configuration

Operating Mode	Resource Unit	52 Tone(4M)
IEEE 802.11ax (HE20)	Specific Resource Unit	37
		38
		40
	Resource Unit	106 Tone(8M)
	Specific Resource Unit	53
		54
	Resource Unit	242 Tone(20M)
	Specific Resource Unit	61
Operating Mode	Resource Unit	52 Tone(4M)
IEEE 802.11ax (HE40)	Specific Resource Unit	37
		40
		44
	Resource Unit	106 Tone(8M)
	Specific Resource Unit	53
		54
		56
	Resource Unit	242 Tone(20M)
	Specific Resource Unit	61
		62
	Resource Unit	484 Tone(40M)
	Specific Resource Unit	65

4. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Dipole	IPEX	3
2	N/A	N/A	Dipole	IPEX	3

Note:

(1) Antenna Gain=3 dBi. This EUT supports MIMO 2X2, any transmit signals are correlated with each other, so Directional gain =GAnt.+10log(N)dBi,
that is Directional gain=3+10log(2)dBi=6.01. So output power limit is 30-6.01+6=29.99, the power spectral density limit is 8-6.01+6=7.99.

(2) Beamforming gain: 3dB.

End of Test Report